

Characterising policy solutions for city specific health needs

Shaun Paul Danielli

A Thesis submitted in fulfilment of requirements for the degree of Doctor of
Philosophy

Supervisors: Hutan Ashrafian and Prof Lord Ara Darzi

Centre for Health Policy
Institute of Global Health Innovation
Imperial College London

2025

Statement of originality

I hereby declare that this thesis and the research it describes are the products of my own work and that where it has been the result of collaboration with others, this is fully described.

References from work by other researchers are fully acknowledged in accordance with standard referencing practice.

Copyright declaration

The copyright of this thesis rests with the author. Unless otherwise indicated, its contents are licensed under a Creative Commons Attribution-Non Commercial 4.0 International Licence (CC BY-NC).

Under this licence, you may copy and redistribute the material in any medium or format. You may also create and distribute modified versions of the work. This is on the condition that: you credit the author and do not use it, or any derivative works, for a commercial purpose.

When reusing or sharing this work, ensure you make the licence terms clear to others by naming the licence and linking to the licence text. Where a work has been adapted, you should indicate that the work has been changed and describe those changes.

Please seek permission from the copyright holder for uses of this work that are not included in this licence or permitted under UK Copyright Law.

Publications related to this thesis

Danielli S, Ashrafian H, Darzi A. 2023. Healthy City: Global Systematic Scoping Review of City Initiatives to Improve Health with Policy Recommendations. BMC Public Health 23, 1277

Danielli S, Radyte E, Donnelly P, Coffey T, Ashrafian H, Darzi A. 2022. Improving health in London: reflections from three mini case studies (HIV, mental health, healthcare estate). Cities & Health 2022: 1-6.

Danielli S, Ashrafian H, Darzi A. 2022. Population health: transformation will happen at the speed of trust. Journal of Public Health 2022.

Danielli S, Coffey T, Ashrafian H, Darzi A. 2021. Systematic review into city interventions to address obesity. EClinicalMedicine 2021; 32.

Acharya A, Lam K, Danielli S, Ashrafian H, Darzi A. 2021. COVID-19 vaccinations among Black Asian and Minority Ethnic (BAME) groups: Learning the lessons from influenza. International Journal of Clinical Practice; n/a(n/a): e14641.

Danielli S, Donnelly P, Coffey T, Horn S, Ashrafian H, Darzi A. 2020. Perspectives Measuring more than just economic growth to improve well-being. Journal of Public Health 2020.

Danielli S, Patria R, Donnelly P, Ashrafian H, Darzi A. 2020. Economic interventions to ameliorate the impact of COVID-19 on the economy and health: an international comparison. Journal of Public Health 2020.

Other associated work related to this Thesis

Awarded the NIHR Pan-London Cancer Research Fellowship 2021/22. Submitted a proposal to host and supervise a pre-PhD student to examine how co-creation and participatory design methods and tools can improve access to cancer screening and treatment for urban ethnic minority communities.

Abstract

“the 19th century was defined by empires, and the 20th by nation-states, the 21st century will be remembered for the rise of cities”

(Sadiq Khan, Mayor of London, London conference 7/11/18)

Global health will increasingly be determined by cities. Currently over half the world's population, over 4 billion people, live in cities and this is projected to grow to over two thirds of the world's population by 2050. This thesis examines how cities can and have improved health and healthcare, aiming to address research gaps and provide practical insights for city health officials and mayors to drive real world change. The thesis begins with background information on the author's research journey and the relationship between cities and health, explaining the motivation behind the thesis. Chapter 2 presents a systematic scoping review of health-related evidence accumulated over 130 years. This review includes 1,614 original citations from 227 cities, categorizing and indexing initiatives for the first time and identifying knowledge gaps that guide the following chapters. Chapter 3 builds on this with a systematic review of initiatives to combat obesity, proposing a composite model. Chapter 4 continues the focus on obesity with a cross-sectional survey of nearly 200 urban health and physical activity professionals. Chapter 5 presents another cross-sectional survey of health priorities from eleven diverse cities across five continents. Chapter 6 examines health and healthcare reviews and strategies in London over 200 years. Chapters 7 and 8 examine the role of mayors, focused on London's Mayor, firstly using a constructivist grounded theory to develop a framework to understand their influence on health and healthcare. The framework is then used to examine the impact of each of the three London Mayors impact. The thesis concludes by discussing the implications of these findings and exploring future research opportunities.

Acknowledgements

Doing a PhD is, like many things in life and some parts of this thesis, a bit of a contradiction. It is a highly individual endeavour, yet it would not be possible without the support of many people. There are a number of people I would like to thank.

Firstly, I want to thank my bosses, Dr. Anne Rainsberry, Andrew Bland and Jill Lockett, who supported and encouraged me as I completed this PhD whilst working full time. I also extend my thanks to the wonderful team at Healthy London Partnership, who directly and indirectly helped and encouraged me throughout.

I am deeply grateful to Professor Lord Ara Darzi, who after we first worked together in 2014 encouraged me to pursue this PhD and kindly offered to be my supervisor. His steely stare continues to ensure I am never not prepared for our meetings. I am especially thankful to the gods of good fortune for introducing me to Hutan Ashrafian, who possesses both an extraordinary intellect and a generous heart. He agreed to be my co-supervisor, and without his encouragement and guidance, this PhD would simply not have been completed. My warm gratitude also goes to Stephanie Archer from Cambridge University for provide guidance and expertise on the qualitative research studies of this thesis.

I would also like to thank the current Mayor of London, Sadiq Khan, and his Senior Advisor, Dr. Tom Coffey, for allowing me to contribute evidence-based urban health initiatives as part of my 'Researcher in Residence' role and for their support in completing my studies.

Finally, to Suzanne and my family, thank you for humouring me each year when we do our "New Year aspirations" and the first on my list is always "complete the PhD," which never fails to get a chuckle. I finally did it ! Your practical support, along with proofreading this and countless versions of journal manuscripts, has been invaluable and appreciated.

This thesis is dedicated to two very special people, Esme and Felix, who teach me infinitely more than I could ever teach them. They are a gift. Remember...

Confidence, determination and focus.

Table of contents

COPYRIGHT DECLARATION.....	3
PUBLICATIONS RELATED TO THIS THESIS	4
ABSTRACT	5
ACKNOWLEDGEMENTS	6
TABLE OF CONTENTS	7
LIST OF FIGURES	17
LIST OF TABLES.....	19
TABLE OF ABBREVIATIONS.....	22
GLOSSARY	24
CHAPTER 1: INTRODUCTION AND BACKGROUND	30
1. CHAPTER ONE: INTRODUCTION AND BACKGROUND.....	31
1.1. INTRODUCTION AND BACKGROUND	31
1.2. AUTHOR INTRODUCTION, BACKGROUND AND MOTIVATION FOR THIS RESEARCH.....	31
1.2.1. AUTHOR BIOGRAPHY	32
1.2.2. PHILOSOPHICAL UNDERPINNINGS OF RESEARCH AND WORLDVIEW AND PARADIGMS.....	34
1.2.3. ONTOLOGY	35
1.2.4. EPISTEMOLOGY.....	36
1.2.5. METHODOLOGY	37
1.2.6. PARADIGMS	38
1.2.7. DEFINING MY PARADIGM.....	40
1.2.8. PRAGMATIC APPROACH TO MY PARADIGMS	41
1.2.9. RIGOUR IN RESEARCH	42
1.3. BACKGROUND AND CONTEXT: HEALTH, CITIES AND POLICY	44
1.3.1. HEALTH AND HEALTHCARE CHALLENGES.....	44
1.3.2. CITIES	45
1.3.3. CITIES AND HEALTH	47
1.3.4. CITY/URBAN HEALTH AND POLICY	48
1.3.5. NOVEL NATURE OF THIS THESIS: RESEARCH GAP AND REAL WORLD BENEFIT.....	49
1.4. AIMS OF THIS THESIS AND RESEARCH QUESTIONS.....	49
1.5. STRUCTURE OF THIS THESIS	50
CHAPTER 2: GLOBAL SYSTEMATIC SCOPING REVIEW OF CITY INITIATIVES TO IMPROVE HEALTH WITH POLICY RECOMMENDATIONS.....	52
2. PLAIN ENGLISH ABSTRACT.....	53
2.1. INTRODUCTION	53
2.2. AIM AND OBJECTIVES OF THIS RESEARCH.....	53
2.3. PRELIMINARY SCOPING	54

2.4.	RESEARCH QUESTION AND SCOPE.....	55
2.5.	METHODS	57
2.5.1.	STUDY DESIGN	57
2.5.2.	INCLUSION AND EXCLUSION CRITERIA	58
2.5.3.	SEARCH STRATEGY.....	59
2.5.4.	PUBLICATION SELECTION	60
2.5.5.	DATA ANALYSIS.....	61
2.6.	RESULTS.....	62
2.6.1.	RESULTS ONE – SUBJECT AREAS OF HEALTH IMPROVEMENT	62
2.6.2.	RESULTS TWO – TYPE OF INITIATIVE.....	65
2.6.3.	RESULTS THREE – HOW THE INITIATIVE WAS INSTIGATED	66
2.6.4.	RESULTS FOUR – LOCATION.....	68
2.6.5.	RESULTS FIVE – OUTCOME OF INITIATIVE	68
2.7.	DISCUSSION	69
2.8.	IMPLICATION OF THIS STUDY FOR CITY HEALTH OFFICIALS	74
2.9.	IMPLICATION OF THIS STUDY FOR NATIONAL POLICY MAKERS.....	75
2.10.	IMPLICATION OF THIS STUDY FOR ACADEMICS/RESEARCH AND FUTURE WORK	75
2.11.	STRENGTHS AND WEAKNESSES/LIMITATIONS	75
2.12.	CONCLUSIONS.....	76
2.13.	REFLECTIONS FROM CARRYING OUT THIS STUDY	76
2.14.	ACKNOWLEDGEMENTS.....	77
	CHAPTER 3: SYSTEMATIC REVIEW INTO CITY INITIATIVES TO ADDRESS OBESITY	78
3.	PLAIN ENGLISH ABSTRACT.....	79
3.1.	INTRODUCTION	79
3.2.	AIM AND OBJECTIVES OF THIS RESEARCH.....	80
3.3.	RESEARCH QUESTION AND SCOPE.....	80
3.4.	METHODS	81
3.4.1.	STUDY DESIGN	81
3.4.2.	INCLUSION AND EXCLUSION CRITERIA	81
3.4.3.	SEARCH STRATEGY.....	82
3.5.	RESULTS.....	82
3.5.1.	RESULTS 1- SCHOOL AND CHILDCARE SETTINGS	83
3.5.2.	RESULTS 2 - MARKETING AND NUTRITIONAL INFORMATION LABELLING.....	84
3.5.3.	RESULTS 3 – HEALTHY FOOD AVAILABILITY.....	85
3.5.4.	RESULTS 4 – RESTAURANTS AND FOOD OUTLETS	85
3.5.5.	RESULTS 5 – EDUCATION AND SUPPORT PROGRAMMES.....	86
3.5.6.	RESULTS 6 – CHANGE IN PHYSICAL INFRASTRUCTURE.....	86
3.5.7.	RESULTS 7 – MULTICOMPONENT OR COMPREHENSIVE APPROACH	87

3.6.	DISCUSSION	89
3.7.	IMPLICATION OF THIS STUDY FOR CITY HEALTH OFFICIALS	92
3.8.	IMPLICATION OF THIS STUDY FOR NATIONAL POLICY MAKERS.....	95
3.9.	IMPLICATION OF THIS STUDY FOR ACADEMICS/RESEARCH AND FUTURE WORK	95
3.10.	STRENGTHS AND WEAKNESSES/LIMITATIONS	96
3.11.	CONCLUSIONS.....	96
3.12.	REFLECTIONS FROM CARRYING OUT THIS STUDY	97
3.13.	ACKNOWLEDGEMENTS.....	98
CHAPTER 4: MAXIMISING PHYSICAL ACTIVITY FROM HEALTHCARE IN LONDON		99
4.	PLAIN ENGLISH ABSTRACT.....	100
4.1.	INTRODUCTION	100
4.2.	AIM OF THIS STUDY.....	101
4.3.	RESEARCH QUESTION AND RESEARCH OBJECTIVES	101
4.4.	METHODS	102
4.4.1.	STUDY DESIGN	102
4.4.2.	DATA AND ANALYSIS	102
4.5.	ETHICS.....	102
4.6.	RESULTS.....	103
4.6.1.	RESULTS 1 – SURVEY RESPONDENTS.....	103
4.6.2.	RESULTS 2 – HEALTH CONDITIONS	107
4.6.3.	RESULT 3 - HEALTH SECTOR CONFIDENCE IN UNDERSTANDING THE PHYSICAL ACTIVITY NEEDS OF SERVICE USERS.....	108
4.6.4.	RESULT 4 - OUTSIDE THE HEALTH SECTOR CONFIDENCE IN ROLE OF PHYSICAL ACTIVITY IN RELATION TO HEALTH.....	110
4.6.5.	RESULTS 5 - PRIORITIES TO ENABLE PHYSICAL ACTIVITY TO BETTER SUPPORT DELIVERY OF HEALTH OUTCOMES.....	111
4.6.6.	RESULTS 6 - SPECIFIC POPULATION GROUPS TO BE TARGETED THROUGH BETTER INTEGRATION OF HEALTHCARE AND PHYSICAL ACTIVITY PROVIDERS.....	114
4.6.7.	RESULTS 7 - CHALLENGES TO USING PHYSICAL ACTIVITY MORE WIDELY IN LONDON.....	115
4.7.	RESULTS 8 - OPPORTUNITIES FOR HEALTH AND PHYSICAL ACTIVITY SERVICES TO INFLUENCE THE WIDER SYSTEM.....	117
4.8.	DISCUSSION	117
4.9.	IMPLICATION OF THIS STUDY FOR HEALTHCARE AND PHYSICAL ACTIVITY PROVIDERS.....	122
4.10.	IMPLICATION OF THIS STUDY FOR NATIONAL POLICY MAKERS	123
4.11.	IMPLICATION OF THIS STUDY FOR ACADEMIA AND FUTURE RESEARCH.....	123
4.12.	STRENGTHS AND WEAKNESSES/LIMITATIONS.....	123
4.13.	CONCLUSIONS.....	124
4.14.	PERSONAL REFLECTION FROM CARRYING OUT THIS STUDY	124

4.15.	ACKNOWLEDGEMENTS.....	124
CHAPTER 5: CITY HEALTH SURVEY		126
5.	PLAIN ENGLISH ABSTRACT.....	127
5.1.	INTRODUCTION	127
5.2.	AIM OF THIS STUDY	127
5.3.	RESEARCH QUESTION AND RESEARCH OBJECTIVES	128
5.4.	METHODS	128
5.4.1.	STUDY DESIGN	128
5.4.2.	QUESTIONNAIRE DEVELOPMENT AND PILOTING	129
5.4.3.	FINAL QUESTIONNAIRE	129
5.4.4.	IDENTIFYING POTENTIAL PARTICIPANTS & PARTICIPANT ELIGIBILITY	130
5.4.5.	PARTICIPANTS INVITED	131
5.4.6.	PARTICIPANTS RESPONSES AND DATA ANALYSIS	131
5.4.6.1.	PARTICIPANTS RESPONSES.....	131
5.4.6.2.	DATA ANALYSIS.....	133
5.5.	ETHICS	133
5.6.	RESULTS.....	134
5.6.1.	RESULTS ONE – SURVEY RESPONDENTS.....	134
5.6.2.	RESULTS TWO - IMPACT OF COVID-19.....	136
5.6.2.1.	HOW LONG WILL IT TAKE FOR CITY HEALTHCARE SERVICES TO RECOVER FROM COVID-19	136
5.6.2.2.	WAYS OF WORKING TO RESPOND TO COVID-19 THAT CITIES WOULD LIKE TO CONTINUE.	137
5.6.2.3.	RESILIENCE TO FUTURE PANDEMICS	139
5.6.2.4.	LASTING IMPACT OF COVID-19 PANDEMIC	141
5.6.2.5.	CITY HEALTH VISION OR STRATEGY	143
5.6.3.	RESULTS THREE – STRATEGIC PRIORITIES & HEALTH INITIATIVES	143
5.6.4.	RESULTS FOUR – INITIATIVES TO REDUCE RISK FACTORS	144
5.6.4.1.	TOBACCO.....	145
5.6.4.2.	HIGH BLOOD PRESSURE.....	147
5.6.4.3.	UNHEALTHY DIET	148
5.6.4.4.	HARMFUL ALCOHOL CONSUMPTION	151
5.6.4.5.	HARMFUL DRUG USE.....	153
5.6.4.6.	PHYSICAL INACTIVITY	154
5.6.4.7.	OBESITY.....	156
5.6.4.8.	TRAVEL AND PLANNING	157
5.6.4.9.	MENTAL HEALTH	159
5.6.4.10.	HIV/AIDS	161
5.6.4.11.	INFECTIOUS DISEASES (EXCLUDING HIV/AIDS).....	162
5.6.4.12.	WIDER DETERMINANTS	163

5.6.4.13.	PLANETARY HEALTH & CLIMATE CHANGE	165
5.6.4.14.	MISCELLANEOUS	167
5.6.5.	RESULTS 5 – COMBINING PRIORITY AND NUMBER OF CITY-LED INITIATIVES	169
5.6.6.	RESULTS 6 – PRIORITIES FOR THE NEXT 12 – 24 MONTHS AND PROCESS FOR PRIORITISATION.....	169
5.6.6.1.	PROCESS FOR PRIORITISATION	169
5.6.6.2.	PRIORITIES FOR THE NEXT 12 – 24 MONTHS	170
5.6.7.	RESULTS 7 - ROLE OF THE MAYOR	171
5.7.	DISCUSSION	172
5.7.1.	COVID-19 PANDEMIC	172
5.7.2.	STRATEGIC PRIORITIES AND HEALTH INITIATIVES.....	174
5.7.2.1.	TOBACCO.....	175
5.7.2.2.	HIGH BLOOD PRESSURE.....	175
5.7.2.3.	UNHEALTHY DIET	176
5.7.2.4.	HARMFUL ALCOHOL CONSUMPTION	176
5.7.2.5.	HARMFUL DRUG USE.....	176
5.7.2.6.	PHYSICAL INACTIVITY	177
5.7.2.7.	OBESITY.....	177
5.7.2.8.	TRAVEL AND PLANNING	178
5.7.2.9.	MENTAL HEALTH	178
5.7.2.10.	HIV / AIDS.....	178
5.7.2.11.	INFECTIOUS DISEASES.....	179
5.7.2.12.	WIDER DETERMINANTS	179
5.7.2.13.	PLANETARY HEALTH & CLIMATE CHANGE	179
5.7.2.14.	MISCELLANEOUS	180
5.7.3.	PROCESS FOR PRIORITISATION	181
5.7.3.1.	PRIORITIES FOR THE NEXT 12 – 24 MONTHS	181
5.7.4.	ROLE OF THE MAYOR.....	182
5.8.	IMPLICATION OF THIS STUDY FOR CITY HEALTH OFFICIALS	182
5.9.	IMPLICATIONS OF THIS STUDY FOR NATIONAL POLICY MAKERS.....	183
5.10.	IMPLICATION OF THIS STUDY FOR ACADEMIA AND FUTURE RESEARCH.....	183
5.11.	STRENGTHS AND WEAKNESSES/LIMITATIONS.....	184
5.12.	CONCLUSIONS.....	185
5.13.	PERSONAL REFLECTION FROM COMPLETING THIS STUDY.	187
5.14.	ACKNOWLEDGEMENTS.....	188
CHAPTER 6:	REVIEWS OF LONDON HEALTH AND HEALTHCARE	189
6.	PLAIN ENGLISH ABSTRACT.....	190
6.1.	INTRODUCTION	190
6.2.	AIM AND OBJECTIVES OF THIS RESEARCH.....	191

6.3.	RESEARCH QUESTION AND SCOPE.....	191
6.4.	METHODS	192
6.4.1.	STUDY DESIGN	192
6.4.2.	INCLUSION AND EXCLUSION CRITERIA	192
6.4.3.	SEARCH STRATEGY, DATA SOURCES AND CURATION	192
6.5.	RESULTS.....	194
6.6.	DISCUSSION	212
6.6.1.	LONDON’S POPULATION	212
6.6.2.	CITIES AND LONDON’S ROLE IN HEALTH INNOVATION	214
6.6.3.	OVERSIGHT OF HEALTH AND HEALTHCARE IN LONDON	215
6.6.4.	RECURRING THEMES FROM LONDON REVIEWS OF THE LAST 200 YEAR	215
6.6.4.1.	VARIABILITY IN QUALITY AND ACCESSIBILITY OF HEALTH SERVICES.....	216
6.6.4.2.	INEFFICIENT USE OF RESOURCES AVAILABLE	217
6.6.4.2.1.	RATIONALISATION AND CENTRALISATION OF ACUTE SERVICES	217
6.6.4.2.2.	DEVELOPING PRIMARY, COMMUNITY AND PREVENTATIVE SERVICES	218
6.6.4.2.3.	INTEGRATED CARE	219
6.6.4.2.3.1.	INTEGRATED COMMUNITY HUBS	219
6.6.4.3.	LEADERSHIP, CO-ORDINATION AND COHERENT PLANNING ACROSS LONDON.....	220
6.6.4.4.	INEQUALITY IN HEALTH OUTCOMES	221
6.6.4.5.	OVER FOCUS ON HEALTHCARE TO THE DETRIMENT OF HEALTH	222
6.7.	IMPLICATIONS OF THIS STUDY FOR CITY HEALTH OFFICIALS, NATIONAL POLICY MAKERS AND ACADEMIC RESEARCH	222
6.8.	STRENGTHS AND WEAKNESSES/LIMITATIONS	223
6.9.	CONFLICTS.....	223
6.10.	CONCLUSIONS.....	223
6.11.	REFLECTIONS FROM CARRYING OUT THIS STUDY	225
6.12.	ACKNOWLEDGEMENTS.....	225
6.13.	BIBLIOGRAPHY	226
CHAPTER 7: GROUNDED THEORY INTERVIEW STUDY: HOW MAYORS HAVE USED THEIR POSITION TO IMPROVE CITY HEALTH.....		227
7.	PLAIN ENGLISH ABSTRACT.....	228
7.1.	INTRODUCTION	228
7.2.	AIM OF THIS STUDY	228
7.3.	RESEARCH QUESTION	228
7.4.	METHODOLOGY – INDUCTIVE APPROACH.....	229
7.5.	QUALITATIVE ANALYSIS	229
7.5.1.	CONSTRUCTIVIST GROUNDED THEORY (CGT).....	230
7.5.2.	RATIONALE FOR CONSTRUCTIVIST GROUNDED THEORY	232

7.6.	ETHICAL CONSIDERATIONS	233
7.7.	METHODS	235
7.7.1.	STUDY DESIGN – INTERVIEW	236
7.7.2.	RESEARCHERS.....	237
7.7.3.	PILOT	237
7.7.4.	INTERVIEW PROCESS	238
7.7.4.1.	INTERVIEW TOPIC GUIDE	238
7.7.4.2.	INTERVIEW PARTICIPANTS’ RECRUITMENT & ELIGIBILITY	239
7.7.4.3.	CONDUCTING THE SEMI-STRUCTURED INTERVIEWS	240
7.7.4.4.	SAMPLE SIZE.....	240
7.7.5.	DATA COLLECTION	242
7.7.6.	INTERVIEW DATA CODING & ANALYSIS	242
7.7.6.1.	CONSTANT COMPARISON METHOD.....	244
7.7.6.2.	MEMO WRITING	244
7.7.6.3.	INITIAL CODING.....	245
7.7.6.4.	FOCUSED CODING AND ADVANCED MEMOS	246
7.7.6.5.	THEORETICAL CODING	248
7.7.6.6.	THEORY DEVELOPMENT AND THEORETICAL SORTING	248
7.7.7.	MAINTAINING RIGOUR	250
7.7.8.	TRANSCRIPTION NOTATION	251
7.8.	RESULTS.....	251
7.8.1.	RESULTS 1 - INTERVIEWEE DEMOGRAPHIC DETAILS	252
7.8.2.	RESULTS 2 – FIVE MAIN THEMES OF MAYORAL BEHAVIOURS.....	254
7.8.2.1.	CONVENE (& CONNECT).....	254
7.8.2.2.	CHAMPION	258
7.8.2.3.	COLLABORATE	262
7.8.2.4.	CHALLENGE.....	265
7.8.2.5.	COMMAND (AND CONTROL).....	266
7.8.3.	RESULTS 3 - MORE HEALTH AND HEALTHCARE POWERS FOR THE MAYOR ?	270
7.8.3.1.	THE “YES !” GROUP.....	270
7.8.3.2.	THE “NO !” GROUP	273
7.8.4.	RESULTS 4 – RELATIONSHIPS AND TRUST	274
7.8.4.1.	PEOPLE AROUND THE MAYOR	274
7.8.4.2.	THE MAYOR AND LOCAL AUTHORITY AND LONDON COUNCILS.....	275
7.8.4.3.	THE MAYOR AND THE NHS.....	277
7.8.4.4.	TRUST	279
7.9.	DISCUSSION	280

7.10.	IMPLICATION OF THIS STUDY FOR CURRENT AND FUTURE MAYORS, NATIONAL POLICY MAKERS AND ACADEMIC RESEARCH.	287
7.11.	STRENGTHS AND WEAKNESSES LIMITATIONS.....	288
7.12.	CONCLUSIONS.....	289
7.13.	REFLECTION FROM CARRYING OUT THIS STUDY	290
7.14.	ACKNOWLEDGEMENT	291
CHAPTER 8: IMPACT OF THE LONDON MAYORALTY AND LONDON MAYORS ON LONDONERS' HEALTH.....		292
8.	PLAIN ENGLISH ABSTRACT.....	293
8.1.	INTRODUCTION	293
8.2.	RESEARCH QUESTION	293
8.3.	METHODOLOGY	294
8.3.1.	ETHICAL CONSIDERATIONS	295
8.4.	METHODS	295
8.4.1.	STUDY DESIGN – DOCUMENT ANALYSIS	295
8.4.2.	STUDY DESIGN – INTERVIEW	296
8.4.3.	MAINTAINING RIGOUR	296
8.5.	RESULTS.....	296
8.5.1.	RESULTS 1 – DOCUMENT ANALYSIS.....	297
8.5.2.	RESULTS 2 : INTERVIEWEE DEMOGRAPHIC DETAILS.....	302
8.5.3.	RESULTS 3: WHAT IMPACT HAS THE LONDON MAYORALTY HAD ON LONDONERS' HEALTH ?	302
8.5.3.1.	THE BMJ QUESTION	307
8.5.4.	RESULTS 4 – MAYOR LIVINGSTONE.....	309
8.5.4.1.	INTRODUCTION: MAYOR LIVINGSTONE.....	309
8.5.4.2.	EARLY DAYS AND CONTEXT – MAYOR LIVINGSTONE - BIG BOLD IDEAS	309
8.5.4.3.	HEALTH AND HEALTHCARE – A MAYOR LIVINGSTONE PRIORITY ?	311
8.5.4.4.	HEALTHCARE	313
8.5.4.5.	HOUSING ECONOMY AND REGENERATION	313
8.5.4.6.	LONDON HEALTH COMMISSION AND HEALTH IMPACT ASSESSMENTS.....	314
8.5.4.6.1.	HEALTH IMPACT ASSESSMENTS	315
8.5.4.6.2.	THE BIG SMOKE DEBATE.....	316
8.5.4.7.	TRANSPORT.....	317
8.5.4.7.1.	CONGESTION CHARGING.....	317
8.5.4.7.2.	PUBLIC TRANSPORT	317
8.5.4.7.3.	CYCLING.....	319
8.5.4.8.	OLYMPICS	321
8.5.4.9.	CHANGES TO THE GLA ACT (2007)	322
8.5.4.10.	MAYOR LIVINGSTONE – THE END.....	323
8.5.5.	RESULTS 5 - MAYOR JOHNSON	324

8.5.5.1.	INTRODUCTION: BORIS JOHNSON	324
8.5.5.2.	EARLY DAYS AND CONTEXT – MAYOR JOHNSON	324
8.5.5.3.	INHERITANCE	325
8.5.5.4.	HEALTH OR HEALTHCARE – A MAYOR JOHNSON PRIORITY ?.....	326
8.5.5.5.	HEALTHCARE	327
8.5.5.6.	HEALTH & SOCIAL CARE ACT 2012 (THE LANSLEY REFORMS)	328
8.5.5.7.	LONDON HEALTH IMPROVEMENT BOARD	329
8.5.5.8.	LONDON HEALTH BOARD	330
8.5.5.9.	LONDON HEALTH COMMISSION (LHC).....	332
8.5.5.10.	DEVOLUTION	335
8.5.5.11.	HEALTH IN ALL POLICIES (HIAP) AND HEALTH INEQUALITIES STRATEGY (HIS)	336
8.5.5.12.	OLYMPICS	336
8.5.5.13.	TRANSPORT.....	338
8.5.5.14.	MAYOR JOHNSON – APPROACH.....	339
8.5.5.15.	MAYOR JOHNSON – THE END.....	343
8.5.6.	RESULTS 6 – MAYOR KHAN	343
8.5.6.1.	INTRODUCTION	343
8.5.6.2.	MAYOR KHAN EARLY DAYS AND CONTEXT.....	343
8.5.6.3.	INHERITANCE	344
8.5.6.4.	HEALTH AND HEALTHCARE – A MAYOR KHAN PRIORITY ?	345
8.5.6.5.	HEALTHCARE	346
8.5.6.6.	LONDON HEALTH BOARD (MARK II)	348
8.5.6.7.	HIV & FAST TRACK CITIES	350
8.5.6.8.	OBESITY.....	351
8.5.6.9.	MENTAL HEALTH & THRIVELDN	353
8.5.6.10.	HEALTH IN ALL POLICIES (HIAP) & GLA PUBLIC HEALTH GROUP	354
8.5.6.11.	ULEZ	355
8.5.6.12.	MAJOR KHAN APPROACH	357
8.5.6.13.	COVID-19 PANDEMIC.....	358
8.5.7.	RESULTS 7 – MAPPING TO 5C MAYORAL FRAMEWORK FOR ACTION ON HEALTH	361
8.6.	DISCUSSION	366
8.6.1.	THE 5C MAYORAL FRAMEWORK FOR ACTION ON HEALTH (MFfAH)	376
8.7.	IMPLICATION OF THIS STUDY FOR CURRENT AND FUTURE MAYORS	378
8.8.	IMPLICATION OF THIS STUDY FOR POLICY MAKERS	379
8.9.	IMPLICATION OF THIS STUDY FOR ACADEMICS/RESEARCH AND FUTURE WORK	379
8.10.	STRENGTHS AND WEAKNESSES/LIMITATIONS	379
8.11.	CONCLUSIONS.....	380
8.12.	RESEARCHER REFLECTION	381

8.13.	ACKNOWLEDGEMENT	381
CHAPTER 9: CONCLUSIONS.....		382
9.	INTRODUCTION	383
9.1.	THESIS AIMS.....	383
9.2.	SUMMARY OF THIS THESIS.....	384
9.3.	SUMMARY OF FINDINGS AND DISCUSSION.....	385
9.3.1.	RQ 2 – WHAT DOES THE EXISTING BODY OF KNOWLEDGE TELL US ABOUT CITY-WIDE HEALTH AND HEALTHCARE TRANSFORMATION.....	386
9.3.2.	RQ 3 – WHAT INITIATIVES ARE CITIES UNDERTAKING TO STEM THE RISE IN OBESITY ?	387
9.3.3.	RQ 4 – WHAT OPPORTUNITIES ARE THERE FOR URBAN HEALTHCARE TO WORK WITH PHYSICAL ACTIVITY PROVIDERS ?	389
9.3.4.	RQ 5 – WHAT INITIATIVES ARE CITIES UNDERTAKING TO IMPROVE POPULATION HEALTH, INCLUDING THEIR RESPONSE TO COVID-19 AND THE ROLE OF THE MAYOR ? WHAT IMPACT HAVE THESE INITIATIVES HAD ? 390	
9.3.5.	RQ 6 – WHAT COMPREHENSIVE REVIEWS, STRATEGIES OR VISIONS FOR HEALTH AND HEALTHCARE HAVE BEEN DEVELOPED FOR LONDON OVER THE LAST 200 YEARS ?	391
9.3.6.	RQ 7 – HOW HAVE MAYORS USED THEIR POSITIONS TO IMPROVE CITY RESIDENTS HEALTH AND HEALTHCARE ? AND RQ 8 – WHAT IMPACT HAS THE LONDON MAYORALTY AND EACH OF THE 3 LONDON MAYORS HAD ON THE HEALTH OF LONDONERS ?	392
9.3.7.	RQ 1 – IN WHAT WAYS ARE CITIES IMPROVING THE HEALTH AND HEALTHCARE OF THEIR RESIDENTS AND WHAT FURTHER OPPORTUNITIES ARE THERE ?.....	393
9.3.8.	CITY 10 – 15 YEAR OUTLINE ACTION PLAN FOR HEALTH AND HEALTHCARE.....	394
9.4.	THESIS LIMITATIONS.....	396
9.5.	IMPLICATIONS FOR ACADEMICS AND POTENTIAL FUTURE WORK.....	398
9.6.	PERSONAL REFLECTIONS.....	399
9.7.	FINAL CONCLUSIONS	401
APPENDICES.....		403
10.	APPENDICES.....	404
10.1.	APPENDIX ONE: CONSIDERATION OF DIFFERENT QUALITATIVE ANALYSIS	404
10.2.	APPENDIX TWO: DATABASE SEARCH STRINGS.....	410
10.3.	APPENDIX THREE: SURVEY QUESTIONNAIRE	414
10.4.	APPENDIX FOUR: SURVEY INVITATION LETTER.....	422
10.5.	APPENDIX FIVE: SURVEY PARTICIPANT INFORMATION LEAFLET	423
10.6.	APPENDIX SIX: FULL LIST OF DOCUMENTS IDENTIFIED FOR CHAPTER SIX	428
10.7.	APPENDIX SEVEN – INTERVIEW INVITATION LETTER	434
10.8.	APPENDIX EIGHT: INTERVIEW PARTICIPANT INFORMATION SHEET	435
10.9.	APPENDIX NINE: SEMI-STRUCTURED INTERVIEW QUESTIONS.....	441
10.10.	APPENDIX TEN: IMAGE OF GROUPING OF CODING	444

List of figures

FIGURE 1.1 – URBAN AND RURAL LOCATIONS IN ENGLAND AND WALES	46
FIGURE 1.2 – THESIS FLOW DIAGRAM	51
FIGURE 1.3 – THESIS FLOW DIAGRAM: CHAPTER FOCUS	51
FIGURE 2.1 – AREA OF RESEARCH INTEREST.....	55
FIGURE 2.2 – PRISMA ¹¹³ STUDY ATTRITION FLOW CHART	60
FIGURE 2.3 - HEALTH RISK FACTOR OR HEALTHCARE AREAS CITIES WERE SEEKING TO ADDRESS	63
FIGURE 2.4 - NON-COMMUNICABLE HEALTH RISK OR HEALTH AREA THAT CITIES WERE SEEKING TO ADDRESS	64
FIGURE 2.5 - SUBJECT AREAS THAT WERE BEING ADDRESSED THROUGH IMPROVING HEALTHCARE	64
FIGURE 2.6 - TYPE OF INITIATIVE BY YEAR	66
FIGURE 2.7 - HOW INITIATIVES WERE INSTIGATED EACH YEAR.....	67
FIGURE 3.1 – PRISMA ¹¹³ STUDY ATTRITION FLOW CHART	82
FIGURE 3.2 – LOCATION OF CITY INITIATIVES TO ADDRESS OBESITY	83
FIGURE 4.1 – NUMBER OF RESPONDENTS REPRESENTING A SINGLE BOROUGH.....	104
FIGURE 4.2 - FIELD OF WORK OF RESPONDENTS.....	105
FIGURE 4.3 - ROLE / PROFESSIONAL INTEREST IN RELATION TO PHYSICAL ACTIVITY.	106
FIGURE 4.4 - HEALTH CONDITIONS THAT THE RESPONDENT EITHER COMMISSIONS, REFERS INTO OR PROVIDES	107
FIGURE 4.5 - HEALTH SECTORS CONFIDENCE IN UNDERSTANDING NEED OF PATIENTS IN RELATION TO PHYSICAL ACTIVITY	108
FIGURE 4.6 - HEALTH SECTOR CONFIDENCE IN FOLLOWING UP ON IDENTIFIED NEEDS WITH MANAGERS/COMMISSIONERS/PROVIDERS OF PHYSICAL ACTIVITY.....	109
FIGURE 4.7 - NON HEALTH SECTOR RESPONDENTS CONFIDENCE IN THE ROLE OF PHYSICAL ACTIVITY TO HEALTH.....	110
FIGURE 4.8 - HOW CONFIDENT THOSE THAT WORK OUTSIDE THE HEALTH SECTOR FEEL ABOUT ENGAGING WITH THE HEALTH SECTOR REGARDING PHYSICAL ACTIVITY?	111
FIGURE 4.9 - MILES & HUBERMAN MODEL FOR THEMATIC ANALYSIS	113
FIGURE 4.10 – SCREEN SHOT OF MANUAL GROUNDED THEORY ANALYSIS	114
FIGURE 4.11 - POPULATIONS GROUPS THAT SHOULD BE TARGETED THROUGH THE INTEGRATION OF PHYSICAL ACTIVITY INTO HEALTH CARE (BAR CHART)	115
FIGURE 4.12 - POPULATIONS GROUPS THAT SHOULD BE TARGETED THROUGH THE INTEGRATION OF PHYSICAL ACTIVITY INTO HEALTH CARE	115
FIGURE 4.13 - BIGGEST CHALLENGES TO USING PHYSICAL ACTIVITY MORE WIDELY IN HEALTHCARE	116
FIGURE 4.14 – BIGGEST CHALLENGES PRESENTED AS BAR CHART AND ACTUAL NUMBERS NOT PERCENTAGES.	116
FIGURE 4.15 – COLLABORATIVE OPPORTUNITIES TO INFLUENCE THE WIDER SYSTEM.....	117
FIGURE 4.16 - RESPONDENT ORGANISATIONS TYPE AND THREE PRIORITIES POPULATION.....	121
FIGURE 5.1 – CITIES THAT RESPONDED TO THE SURVEY	135

FIGURE 6.1 – THIRTY REVIEWS OF LONDON’S HEALTH AND HEALTHCARE OVER THE LAST 200 YEARS	196
FIGURE 6.2 – CHANGES TO LIFE EXPECTANCY ALONG THE JUBILEE TUBE LINE	209
FIGURE 6.3 – TIMELINE OF PUBLICATIONS OF REVIEWS WITH RECOMMENDATIONS	212
FIGURE 6.4 – LONDON’S POPULATION OVER THE LAST 200 YEARS.....	213
FIGURE 6.5 - POPULATION DENSITY (PERSONS PER KM ²) BY LONDON BOROUGH, 2021 CENSUS.....	213
FIGURE 6.6 – HEALTH AND HEALTHCARE INNOVATIONS IN LONDON OVER THE LAST 200 YEARS	214
FIGURE 7.1 – GROUNDED THEORY PROCESS (TAKEN FROM P11 ⁵⁴⁹)	231
FIGURE 7.2 - PHOTO OF FINAL VERSION OF FOCUSED CODING USING POST-IT NOTES	247
FIGURE 7.3 - FINAL VERSION OF FOCUSED CODING WITH THE GROUPS/THEMES CLEARLY IDENTIFIED	247
FIGURE 7.4 - THE REFINEMENTS AND CONSOLIDATION OF THE GROUPINGS.....	248
FIGURE 7.5 - FINAL DRAFT VERSION OF THE THEORETIC FRAMEWORK.....	249
FIGURE 7.6 – PARTICIPANTS TIME WORKING DIRECTLY OR INDIRECTLY WITH THE MAYOR.....	252
FIGURE 7.1 - 5C MAYORAL FRAMEWORK FOR ACTION ON HEALTH (5C MFFAH)	284
FIGURE 8.1 – POPULATED 5C MAYORAL FRAMEWORK FOR ACTION ON HEALTH	361
FIGURE 9.1 – THESIS FLOW DIAGRAM: CHAPTER STUDY TYPE	400

List of tables

TABLE 1.1 – PARADIGMS AND THEIR ONTOLOGY, EPISTEMOLOGY AND METHODOLOGY	39
TABLE 1.2 – COMPONENTS OF RIGOUR AND MANAGING BIAS	43
TABLE 2.1 - PICOS TABLE	56
TABLE 2.2 - TYPE OF CITY-WIDE INITIATIVE.....	65
TABLE 2.3 - HOW INITIATIVES WERE INSTIGATED.	67
TABLE 2.4 - TYPE OF INITIATIVE AND HOW IT WAS INSTIGATED.....	72
TABLE 4.1 - LOCATION OF RESPONDENTS.....	103
TABLE 4.2 - FIELD OF WORK OF RESPONDENTS.....	104
TABLE 4.3 - ROLE / PROFESSIONAL INTEREST IN RELATION TO PHYSICAL ACTIVITY	105
TABLE 4.4 - ROLE/PROFESSIONAL INTEREST THAT PROVIDE, COMMISSION OR REFERS TO PHYSICAL ACTIVITY.	106
TABLE 4.5 - HEALTH CONDITIONS THAT THE RESPONDENT EITHER COMMISSIONS, REFERS IN TO OR PROVIDE.	107
TABLE 4.6 - HEALTH SECTORS CONFIDENCE IN UNDERSTANDING THE PHYSICAL ACTIVITY NEEDS OF USERS ...	108
TABLE 4.7 - HEALTH SECTOR CONFIDENCE IN FOLLOWING UP ON IDENTIFIED NEEDS OF PHYSICAL ACTIVITY .	109
TABLE 4.8 - NON HEALTH SECTOR RESPONDENTS CONFIDENCE IN THE ROLE OF PHYSICAL ACTIVITY TO HEALTH.	110
TABLE 4.9 - HOW CONFIDENT THOSE THAT WORK OUTSIDE THE HEALTH SECTOR FEEL ABOUT ENGAGING WITH THE HEALTH SECTOR REGARDING PHYSICAL ACTIVITY?	111
TABLE 4.10 - POPULATION GROUPS THAT SHOULD BE TARGETED THROUGH THE INTEGRATION OF PHYSICAL ACTIVITY INTO HEALTH CARE.....	114
TABLE 4.11 – BIGGEST CHALLENGES TO USING PHYSICAL ACTIVITY MORE WIDELY IN HEALTHCARE	116
TABLE 4.12 – COLLABORATIVE OPPORTUNITIES TO INFLUENCE THE WIDER SYSTEM	117
TABLE 4.13 - HEALTH SECTORS CONFIDENCE IN UNDERSTANDING NEEDS OF PATIENTS IN RELATION TO PHYSICAL ACTIVITY – SPLIT BY ROLE/PROFESSIONAL INTEREST.	119
TABLE 4.14 - HEALTH SECTOR CONFIDENCE IN FOLLOWING UP ON IDENTIFIED NEEDS – SPLIT BY ROLE/PROFESSIONAL INTEREST.....	119
TABLE 4.15 - NON HEALTH SECTOR RESPONDENTS CONFIDENCE IN THE ROLE OF PHYSICAL ACTIVITY TO HEALTH.....	120
TABLE 4.16 - NON HEALTH SECTOR CONFIDENCE IN ENGAGING WITH HEALTHCARE ON PHYSICAL ACTIVITY. ..	120
TABLE 4.17 - RESPONDENT ORGANISATIONS TYPE AND THREE PRIORITIES POPULATION	121
TABLE 4.18 - BIGGEST CHALLENGES TO USING PHYSICAL ACTIVITY MORE WIDELY IN HEALTHCARE SPLIT BY 'TARGET GROUP'.....	122
TABLE 4.19 - BIGGEST CHALLENGES TO USING PHYSICAL ACTIVITY MORE WIDELY IN HEALTHCARE SPLIT BY 'FIELD OF WORK'.....	122
TABLE 5.2 - HEALTH SYSTEM WAYS OF WORKING PUT IN PLACE IN RESPONSE TO COVID-19 WHICH CITIES WOULD LIKE TO MAINTAIN.....	138
TABLE 5.3 - WHAT ARE THE HEALTH OR HEALTH SERVICE INITIATIVES THAT NEED TO BE PUT IN PLACE TO ENSURE THEIR CITY WAS MORE RESILIENT TO ANY FUTURE PANDEMICS?.....	141
TABLE 5.4 - HEALTH RISK FACTORS – RELATIVE PRIORITY TO THE CITY	143

TABLE 5.5 – NATION OR STATE INITIATIVES TO REDUCE TOBACCO USE PREVALENCE	146
TABLE 5.6 – CITY LED INITIATIVES TO REDUCE TOBACCO USE PREVALENCE.....	146
TABLE 5.7 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE TOBACCO USE PREVALENCE.....	146
TABLE 5.8 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS TOBACCO USE	147
TABLE 5.9 – NATION OR STATE INITIATIVES TO REDUCE HIGH BLOOD PRESSURE.	148
TABLE 5.10 – CITY LED INITIATIVES TO REDUCE HIGH BLOOD PRESSURE.	148
TABLE 5.11 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE HIGH BLOOD PRESSURE.	148
TABLE 5.12 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS HIGH BLOOD PRESSURE.	148
TABLE 5.13 – NATION OR STATE INITIATIVES TO REDUCE AN UNHEALTHY DIET.	149
TABLE 5.14 – CITY LED INITIATIVES TO REDUCE AN UNHEALTHY DIET.	150
TABLE 5.15 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE AN UNHEALTHY DIET.	150
TABLE 5.16 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS AN UNHEALTHY DIET.	150
TABLE 5.17 – NATION OR STATE INITIATIVES TO REDUCE HARMFUL ALCOHOL CONSUMPTION.....	151
TABLE 5.18 – CITY LED INITIATIVES TO REDUCE HARMFUL ALCOHOL CONSUMPTION.	152
TABLE 5.19 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE HARMFUL ALCOHOL CONSUMPTION.....	152
TABLE 5.20 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS HARMFUL ALCOHOL CONSUMPTION.....	152
TABLE 5.21 – NATION OR STATE INITIATIVES TO REDUCE HARMFUL DRUG USE.	153
TABLE 5.22 – CITY LED INITIATIVES TO REDUCE HARMFUL DRUG USE.	153
TABLE 5.23 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE HARMFUL DRUG USE.	154
TABLE 5.24 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS HARMFUL DRUG USE.	154
TABLE 5.25 – NATION OR STATE INITIATIVES TO ADDRESS PHYSICAL INACTIVITY	155
TABLE 5.26 – CITY LED INITIATIVES TO INCREASE PHYSICAL ACTIVITY	155
TABLE 5.27 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE PHYSICAL INACTIVITY.	155
TABLE 5.28 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS PHYSICAL INACTIVITY.	156
TABLE 5.29 – NATION OR STATE INITIATIVES TO REDUCE OBESITY	156
TABLE 5.30 – CITY LED INITIATIVES TO REDUCE OBESITY PREVALENCE	157
TABLE 5.31 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE OBESITY PREVALENCE	157
TABLE 5.32 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS OBESITY PREVALENCE.	157
TABLE 5.33 – NATION OR STATE INITIATIVES TO PROMOTE HEALTH THROUGH TRAVEL AND PLANNING.....	158
TABLE 5.34 – CITY LED INITIATIVES TO PROMOTE HEALTH THROUGH TRAVEL AND PLANNING POLICY.....	158
TABLE 5.35 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO PROMOTE HEALTH THROUGH TRAVEL AND PLANNING POLICY	159
TABLE 5.36 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO PROMOTE HEALTH THROUGH TRAVEL AND PLANNING POLICY.....	159
TABLE 5.37 – NATION OR STATE INITIATIVES TO PROMOTE GOOD MENTAL HEALTH	160
TABLE 5.38 – CITY LED INITIATIVES TO PROMOTE GOOD MENTAL HEALTH.....	160
TABLE 5.39 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO PROMOTE GOOD MENTAL HEALTH.....	160

TABLE 5.40 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO PROMOTE GOOD MENTAL HEALTH	160
TABLE 5.41 – NATION OR STATE INITIATIVES TO REDUCE HIV / AIDS PREVALENCE	161
TABLE 5.42 – CITY LED INITIATIVES TO REDUCE HIV / AIDS PREVALENCE	161
TABLE 5.43 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE HIV / AIDS PREVALENCE	161
TABLE 5.44 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS HIV / AIDS PREVALENCE	162
TABLE 5.45 – NATION OR STATE INITIATIVES TO REDUCE INFECTIOUS DISEASES (EXCLUDING HIV / AIDS).....	162
TABLE 5.46 – CITY LED INITIATIVES TO REDUCE INFECTIOUS DISEASES (EXCLUDING HIV / AIDS)	163
TABLE 5.47 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO REDUCE INFECTIOUS DISEASES (EXCLUDING HIV / AIDS)	163
TABLE 5.48 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS REDUCE INFECTIOUS DISEASES (EXCLUDING HIV / AIDS).	163
TABLE 5.49 – NATION OR STATE INITIATIVES TO ADDRESS WIDER DETERMINANTS OF HEALTH	164
TABLE 5.50 – CITY LED INITIATIVES TO ADDRESS WIDER DETERMINANTS OF HEALTH	164
TABLE 5.51 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO ADDRESS WIDER DETERMINANTS OF HEALTH	164
TABLE 5.52 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS WIDER DETERMINANTS OF HEALTH.....	165
TABLE 5.53 – NATION OR STATE INITIATIVES TO ADDRESS PLANETARY HEALTH AND CLIMATE CHANGE	166
TABLE 5.54 – CITY LED INITIATIVES TO ADDRESS PLANETARY HEALTH AND CLIMATE CHANGE.....	166
TABLE 5.55 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO ADDRESS PLANETARY HEALTH AND CLIMATE CHANGE	166
TABLE 5.56 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS PLANETARY HEALTH AND CLIMATE CHANGE	167
TABLE 5.57 – NATION OR STATE INITIATIVES TO ADDRESS A RANGE OF MISCELLANEOUS ISSUES.....	168
TABLE 5.58 – CITY LED INITIATIVES TO ADDRESS A RANGE OF MISCELLANEOUS ISSUES	168
TABLE 5.59 – SELF REPORTED IMPACT OF CITY LED INITIATIVES TO ADDRESS A RANGE OF MISC ISSUES	168
TABLE 5.60 – LIKELIHOOD OF CITY TO IMPLEMENT THE INITIATIVE TO ADDRESS A RANGE OF MISC ISSUES	168
TABLE 5.61 – HEALTH RISK AND NUMBER OF CITY-LED INITIATIVES.....	169
TABLE 5.62 – HOW DO CITIES PRIORITISE HEALTH POLICY INITIATIVES	170
TABLE 5.64 – STRENGTH OF MAYORAL SUPPORT AND IMPORTANCE OF MAYORAL SUPPORT	172
TABLE 6.1 – REVIEWS OF LONDON’S HEALTH OR HEALTHCARE.....	195
TABLE 7.1 - DESCRIPTION OF GROUNDED THEORY TOOLS	230
TABLE 7.2 - ETHICAL CONSIDERATION; RISKS AND MITIGATIONS.....	233
TABLE 7.3 - TRANSCRIPTION QUOTES NOTATION	251
TABLE 7.4 - PARTICIPANTS ORGANISATION TYPE	253
TABLE 7.5 - ROLES OF PARTICIPANTS.	253
TABLE 7.6 - SEX OF PARTICIPANTS.....	253
TABLE 7.7 - ORGANISATION OF POTENTIAL PARTICIPANT THAT DID NOT RESPOND TO INVITATION	254
TABLE 7.8 - ROLES OF POTENTIAL PARTICIPANTS THAT DID NOT RESPOND TO INVITATION	254

Table of abbreviations

AHSN	Academic Health Sciences Network
AIDs	Acquired Immune Deficiency Syndrome
BBV	Blood Born Viruses
CCG	Clinical Commissioning Group
CME	Continued Medical Education
COREQ	Consolidated Criteria for Reporting Qualitative Research
Covid-19	Coronavirus disease (COVID-19)
DGH	District General Hospital
EBM	Evidence Based Medicine
EPODE	Ensemble Prévenons l'Obésité Des Enfants
GBD	Global Burden of Disease
GDP	Gross Domestic Product
GLA	Greater London Authority
HfL	Healthcare for London
HFSS	High Fat Sugar Salt
HIA	Health Impact Assessment
HiaP	Health in all Policies
HIS	Health Inequalities Strategy
HIV	Human immunology virus
HLP	Healthy London Partnership
ICB	Integrated Care Board
ICP	Integrated Care Partnership
ICREC	Imperial College Research Ethics Committee
IT	Information Technology
LEZ	Low Emission Zone
LHB	London Health Board
LHIB	London Health Improvement Board
MUP	Minimum Unit Pricing
NBA	National Basketball Association
NCDs	Non Communicable Diseases
NHS	National Health Service
NLP	Natural Language Processing
PCT	Primary Care Trust

PrEP	Pre-Exposure Prophylaxis
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analysis
RCT	Randomised Control Trials
RTA	Road Traffic Accident
SHA	Strategic Health Authority
SpAd	Special Advisor
SPC	Statistical Process Control
STP	Sustainability & Transformation Partnership
TB	Tuberculosis
TfL	Transport for London
UK	United Kingdom
ULEZ	Ultra Low Emission Zone
UN	United Nations
UPF	Ultra Processed Food
USA	United States of America
VCSE	Voluntary & Community Sector Enterprises
WHO	World Health Organisation

Glossary

1 Minute and 15 Minute City	1 Minute and 15 Minute City are concepts whereby most things a resident could need are within either 1 minute or 15 minutes of their homes.
Academic Health Science Centre (AHSC)	An AHSC is a partnership between NHS organisations and a university to develop excellence in healthcare, research, health education and patient care.
Active Travel	Active Travel is a concept that promotes walking or cycling as a way of commuting between destinations in cities.
Airbus and A380 superjumbo	Airbus is a commercial organisation that designs, manufactures and supplies commercial and military aircraft. The A380 superjumbo is the world's largest passenger aircraft which was launched in 2007.
Anchor Institution	An anchor Institution is an organisation that is part of the fabric of the community in which it resides and which can use its assets (employment, buildings, procurement) to support the wellbeing of the community.
Brexit	Brexit is the withdrawal of the UK from the European Union (EU).
Campbell Library	Campbell Library is a register of systematic reviews focused on social and behavioural sciences.
Ciclovía	Ciclovía is an initiative that temporarily closes streets to cars and other motorized vehicles so they can be used for active recreation, originating in Bogotá Colombia.
CINALH	CINALH is a database covering nursing and allied health literature journals and publications.
City Sprawl	City Sprawl is the outward development of cities characterised by low density housing and requiring personal car use.
Clinical Commissioning Group (CCG)	Clinical Commissioning Group replaced PCTs with responsibility for planning and commissioning

	(purchasing) healthcare services for a geographic area in England.
Cochrane Central Registers of Controlled Trials	Cochrane Central Registers of Controlled Trials is a comprehensive register of research studies, particularly RCTs and systematic reviews.
Commercial Determinants of Health	The actions of corporate organisations that influence and ultimately impact on health.
Commissioner and provider split	In the early 1990s, the Conservative government split the NHS into those parts that ‘provided’ care (such as hospitals) and those that ‘commissioned’ care (such as health authorities).
Core20Plus5	Core20Plus5 is an NHS approach to reducing health inequalities. It stands for the core20 most deprived population plus5 clinical areas or risk factors of: maternity, severe mental illness, respiratory disease, early cancer diagnosis, and hypertension.
Covid-19	Covid-19 was the pandemic caused by the novel coronavirus SARS-Cov-2 first identified in Wuhan in 2019 before becoming a global pandemic in 2020
District General Hospital (DGH)	A DGH typically has all the services associated with provision of secondary (hospital) care. It typically does not have specialist (tertiary) services.
Embase	Embase is a medical research database.
Embase Classic	Embase Classic is a database of biomedical published literature.
Emic	Emic is a research perspective from the point of view of those inside the situation or phenomena being studied.
Endnote	Endnote is a reference management software used on this thesis.
Etic	Etic is a research perspective from the point of view of observing a situation or phenomena from the outside.
Evidence Based Medicine (EBM)	EBM is the approach of using the best available evidence to direct clinical care.

Excel	Excel is a Microsoft spreadsheet programme used in this thesis.
Global Burden of Disease (GBD)	GBD is a series of ongoing studies to quantify ill health.
Gross Domestic Product (GDP)	GDP is the measure of the economic output of a geographic area (usually a country)
Health Business Elite	Health Business Elite is a database covering aspects of health care administration and other non-clinical aspects of health
Health Foundation	The Health Foundation is an independent charity focusing on supporting improvement in health and healthcare, founded in 1983.
Health Impact Assessment (HIA)	HIA are formal assessments of how a project, plan or change will (positively or negatively) impact on health.
Health in all Policies (HiaP)	HiaP is where promoting health and wellbeing is an integral part of all policy decisions and policy development.
Health Management Information Consortium (HMIC)	HMIC is database covering the Department of Health's Library and King's Fund Information and Library Service.
Hepatitis B	Hepatitis B is a liver infection caused by the hepatitis B virus (HBV)
Hepatitis C	Hepatitis C is a viral infection that affects the liver and is spread through contact with infected blood.
Integrated Care Board (ICB)	An ICB is a NHS organisation that plans and funds NHS services for a specific geography.
Integrated Care Partnership (ICP)	An ICP is part of the governance of every ICB and is a committee of wider health and care stakeholders within the ICB geography.
Inverse Care Law	The 'inverse care law' states that those with the greatest healthcare need have the least access to healthcare and those with the least need for healthcare have the most or closest access to healthcare. It was first described by

	Julian Tudor Hart (a general physician) in the Lancet in 1971. ¹
Kings Fund	The Kings Fund is an independent charity focusing on supporting improvement in health and healthcare, founded in 1897.
London Councils	London Councils is the organisation that represents and supports all London's local government (the 32 London boroughs and the city of London).
London Sport	London Sport is a charity that exists to help all Londoners live longer, healthier, and happier lives through being active.
Low Emission Zone (LEZ)	LEZ is a geographic area that restricts or charges vehicles based on their emissions.
Medline	MEDLINE is the National Library of Medicines bibliographic database.
Minimum Unit Pricing (MUP)	MUP is a policy initiative that sets a minimum price on alcohol sales.
Mixed Zoning	Mixed Zoning is the land or building regulations allowing and promoting mixed use in a geographic area.
NACCHO	The National Association of County and City Health Officials is the representative organisation of health departments in the USA.
National Health Service (NHS)	The NHS is the 'free at the point of need' healthcare service in the United Kingdom.
Natural Language Processing (NLP)	NLP is a computational technique that analyses and synthesises of natural language and speech (free text).
Noncommunicable disease	Noncommunicable diseases are not passed from one person to another. Also known as chronic disease.
Nuffield Trust	The Nuffield Trust is an independent, not-for-profit health think tank that aims to improve the quality of health care in the UK, founded in 1939
NVIVO	NVIVO is software used for management and coding of qualitative data.

Polyclinic	A polyclinic is a health centre that provides a wider range of healthcare services than a typical primary (GP) surgery.
Primary Care Trust (PCT)	A PCT was responsibility for planning and commissioning (purchasing) healthcare services for a geographic area in England. PCTs were replaced by CCGs.
Primary Care Trusts (PCT)	A PCT covered a geographic area in England with responsibility for planning and commissioning (purchasing) healthcare services. PCTs were replaced by Clinical Commissioning Groups (CCGs)
Prospero	Prospero is an international database of systematic reviews in health and social care.
PsycINFO	PsycINFO is a database covering the behavioural and social sciences.
PubMed	PubMed is a database of primarily biomedical and life sciences published literature.
Qualtrics	Qualtrics is a questionnaire software package licensed at Imperial College and used in this thesis.
Randomised Control Trials (RCTs)	RCTs are a scientific study, used widely in medicine, to assess the efficacy of a treatment.
Researcher in Residence	The Researcher in Residence model aims to connect academic research and knowledge to real world practice.
Robert Wood Johnson Foundation	Robert Wood Johnson Foundation is a USA based philanthropic organisation dedicated to transforming health
Royal Commission	A Royal Commission is a major public inquiry into a specific area.
Salzburg Global Seminar	Salzburg Global Seminar is a non-profit organization that aims to inspire leaders to create a better world by challenging them to solve global issues.
Scopus	Scopus is a database covering a wide range of peer-reviewed literature.

SpAd (Special Advisor)	A SpAd is a politically appointed Special Advisor to a Member of Parliament or Minister.
Spanish Pandemic	The Spanish pandemic was an influenza epidemic in 1918 that is estimated to have killed 50 million people.
Statistical Process Control (SPC)	SPC is a quantitative method to measure and monitor variation, usually specifically variation in quality to an agreed tolerance.
Strategic Health Authority (SHA)	A SHA was responsible for overseeing performance of NHS services within a geographic area. They were abolished in 2012.
Sustainability & Transformation Partnerships (STP)	STPs were created to develop NHS transformation plans in response to the national transformation plan The Five Year Forward View. They were replaced by ICBs
The London Plan	The London Plan is a strategic plan produced by the Mayor of London. It provides a framework for how the city will develop, covering areas such as economic development, planning, transport and environment.
ThriveLDN	Thrive LDN is a city-wide movement to destigmatise and improve mental health in London.
Trust Special Administrator	A Trust Special Administrator (TSA) is a temporary official appointed to run an NHS trust or foundation trust to address urgent issues and make recommendations for sustainable services.
Ultra Low Emission Zone (ULEZ)	ULEZ is a geographic area that restricts or charges vehicles based on their emissions, originating in London.
Universal Basic Income	Universal Basic Income provides a regular cash payment to citizens, regardless of their income, age, or work status
Unsustainable NHS Providers Regime	The Unsustainable NHS Providers Regime is legislation that allows for the government to appoint a Trust Special Administrator to take over a NHS organisation (typically a hospital) that is facing unacceptable financial or quality challenges

Chapter 1: Introduction and background

“If we knew what we were doing it wouldn't be research”

Albert Einstein (possibly)

1. Chapter One: Introduction and background

1.1. Introduction and Background

Upon commencing the research contained in this thesis and my ‘PhD journey’, my objective was to achieve a PhD to gain and demonstrate an expert understanding in health and healthcare transformation in cities. This was something I felt relatively comfortable about. As my biography in section 1.2.1 shows, I have nearly 20 years of senior experience in the field of urban health and healthcare transformation. However, what I came to understand early and throughout the process, and which was of equal importance, was learning and demonstrating my ability as a researcher. This was by far my greatest deficit in skill set and knowledge and hence my biggest learning journey. For this reason, the first section of this chapter is focused on the author as a researcher. A reflective approach on my paradigms, development and learning as a researcher is replicated throughout the thesis. The second section introduces city health and healthcare transformation, the subject area of this thesis. The chapter concludes by stating the aims, research questions and structure of this thesis. Because this chapter contains a significant portion of self-reflection it is written in the first person tense. The remainder of the thesis is written in the more formal third person tense.

1.2. Author introduction, background and motivation for this research

The first section of this introductory chapter begins with the author’s biography. In qualitative research, the researcher is often “the primary instrument for data collection”² Preparing the biography enabled me to reflect on and understand how my previous experience has affected my philosophical assumptions and created bias, so that I could consider how these would influence the research in this thesis. In general terms, a biography should also enable the reader to judge both how an individual’s background has influenced the research and research approach and also their ability to self-reflect, which is a key skill of any researcher. Following the biography, the philosophical underpinnings (the ontology, epistemology and methodology) of this thesis are described. The different types of qualitative analysis associated with these philosophical underpinnings are summarised in Appendix 1. Finally, I justify the use of a qualitative research approach and discusses the objective of ensuring rigour in the research.

1.2.1. Author biography

I am a systems engineer by background and spent the first half of my career (over 15 years) in service improvement and transformation roles across manufacturing (Airbus) and consultancy (Cranfield University Business Consultancy and PA Consulting). This experience allowed me to develop a pragmatic, problem solving approach, taking into account a system perspective and always wanting to make a difference and see the impact of my work.

During my time employed by Cranfield University, I was fortunate to be able to undertake a part time MSc (by research) which I completed in 2006. This research covered three in depth case studies of the application of service improvement. The three case studies were: 1. Autoglym (automotive industry) – Implemented ‘Flexible Manpower Line’ -103% productivity improvement & £101k annual cost saving, 2. Quadrant Connections (telecommunications industry) – Improvement in space utilization of 47%, productivity improvement of 86%, giving increased ‘value add’ of £289k and 3. Delta Design (electronics industry) – 30% reduction in space, 14% improvement in productivity, giving increased ‘value add’ of £233k.³

My first role in the NHS was in 2006 when I joined Guy’s and St Thomas’ and where I was able to transfer the service improvement and transformation methodologies from manufacturing to the NHS. This was during the time of the New Labour government and the focus was on choice and reducing waiting times. I led the development of the strategy and architecture of the service transformation to deliver the 18 Week waiting target. This comprised working with clinicians to map 300 disease and symptom pathways across the organisation, leading to a range of pathway redesigns. For example; nurse led post operative service for cataracts, direct access surgery for lumps and bumps, one stop pre-assessment for gynaecology, and changes to support functions, for example outpatient booking process where there was a reduced referral to booking process from 18 days to 3 days.

In 2009 I was recruited by NHS London, for a pan-London role, to work on ‘Healthcare London’. Healthcare for London (HfL) was the first review of London’s healthcare by Professor Lord Darzi⁴. I led on the design and implementation of the new service model of

[Major Trauma Centres](#) and Network across London.⁵ The changes resulted in [58 lives saved in the first year of operation](#) and the model being rolled out across England.⁶

In 2011, the new Secretary of State for Health (the Health Minister) Rt Hon Andrew Lansley halted HfL and instigated significant changes to the NHS. In July 2012, the Secretary of State for Health placed South London Healthcare NHS Trust in the Unsustainable NHS Providers Regime. I was then seconded to be Director of the [Office of the Trust Special Administrator \(South London Healthcare NHS Trust\)](#) and worked with the government appointed Trust Special Administrator to lead the programme and make recommendations to ensure high-quality sustainable services in south east London.

Between 2011-2014, I led a range of reviews of health and healthcare in London. This included a review of the [quality and safety of acute emergency services](#)⁷ during which my team developed a change model based on clinical expert and stakeholder panels, researched evidence and developed service standards implemented through contractual and peer review. This work led to me being invited by the Deputy Prime Minister of Western Australia (WA) to join a UK expert team to review acute and emergency care in Perth (WA) and make recommendations to health ministers. I also led a team working with around 50 clinicians to [review Cancer](#) services in London. This policy research resulted in the publication of a case for change and proposed model of care of integrated provider systems; a forerunner to the current Integrated Care Systems.

In September 2013, the then Mayor of London Boris Johnson commissioned Professor Lord Darzi to undertake a second review of health and healthcare in London. I was asked to be Programme Director for what was to be called the [London Health Commission](#) (secondment to the Greater London Authority).

Between 2015 and 2020, I was the Founder and Director of [Healthy London Partnership](#) (HLP). The Mayor and health and care partners established HLP in 2015 to support London to become the healthiest global city. The work of HLP included; the development of the London [devolution](#) agreement with national government; the engagement of over 120,000 Londoners and NHS staff in the [Great Weight Debate](#); supporting the comprehensive roll-out of NHS e-referral and [patient on-line](#) direct GP booking; developing [Good Thinking](#) a digital mental wellbeing service (supporting over 100k Londoners to tackle anxiety, stress and depression);

delivering [ThriveLDN](#), a Mayoral led social movement, to de-stigmatise and improve mental health; the training of 1500 GP practice staff and distribution of 60,000 [right to access](#) cards for London's homeless population.

Since 2020, I have been Director of Population Health and Equity at Kings Health Partners and NHS South East London. In addition to this full time role, I have held an honorary contract as Research Fellow at the Institute of Global Health & Innovation (IGHI) at Imperial College London since 2020 and been Researcher in Residence (RiR) for the Mayor of London since 2019. The RiR role has enabled me to find a passion for connecting evidence to policy interventions to improve health and reduce inequalities. Some areas of impact have been: adopting “health in all” policies, rapid reviews of evidence, proactive proposals in a range of areas, for example; high fat, sugar, salt advertising restrictions, water only schools, tobacco restrictions.

Finally, I have my own personal experiences of health and healthcare whilst living in London, as an inpatient, outpatient and, more recently as a father of a child with a rare genetic disease (BPAN) and complex developmental issues. These experiences have influenced my personal perspective on urban health and healthcare and will have created biases.

1.2.2. Philosophical underpinnings of research and worldview and paradigms

A researcher faces a “baffling array of options for conducting qualitative research.”^{8,9} Therefore, researchers should begin their research with an understanding of some key philosophical perspectives.⁹

All research begins from a philosophical viewpoint which relates to the nature of knowledge and how knowledge is gained: this viewpoint influences how the research is carried out.^{9 10} A philosophical viewpoint can bring bias which distorts both the process and interpretation of results of the research. As a result, researchers need to be aware of their worldview and need to be explicit so others can assess how these may have impacted the research. Scholars have described a range of philosophical viewpoints.⁹⁻¹⁵ I have chosen to use the commonly cited work of Lincoln, Lynham, and Denzin¹⁶ who describe five research paradigms: positivism, post-positivism, critical theory, constructivism and participatory.

A paradigm, sometimes referred to as ‘worldview’, is the set of fundamental beliefs of the individual on the nature of the world, our place in it and how we relate to it. These fundamental beliefs are anchored around three interconnected questions of ontology, epistemology and methodology¹⁶ which are collectively known as the ‘ologies’ and illustrated below.

- 1) The ontological questions: What is the nature of reality ? What do we believe about the nature of reality ? Put simply, ontology is about what we think we can know and our perception of reality. In other words, is there one reality or different perspectives on a reality?¹⁷
- 2) The epistemological questions: What is the nature of the relationship between the known, the researcher and what can be known ? How do we know what we know ? Put simply, epistemology is how we think we gain knowledge and understanding.¹⁷
- 3) The methodological questions: How can the researcher find out what they believe can be known ? Put simply, how should we design the study ?

These ‘ologies’ shape how a researcher sees the world and acts within the world.¹⁶ As mentioned, these ‘ologies’ are interconnected. Ontology tends to lead to particular epistemological positions and epistemology tends to dictate potential methodologies.¹⁷ What is important is the coherence (sometimes referred to as ‘fit’ or methodological integrity’) of the chosen ologies.^{16 17}

1.2.3. Ontology

Ontology refers to our beliefs about reality. There is a spectrum of ontological perspectives, with realism at one end and relativism at the other end. Realism is the belief of one single truth exists and this one truth can be discovered and objectively measured. Relativism is the belief that there are multiple versions or experiences of ‘the truth’ depending on perspective. This truth needs to be contextualised and can evolve but cannot be generalised because perspective and context affect how the truth is perceived.¹¹

In realism, an analogy for the researcher is that they are an archaeologist – digging and excavating to discover a pre-existing phenomenon.¹⁷ Whereas, in relativism, the phenomenon does not exist without the researcher making sense of it and creating a reality. There are therefore plural realities.

There are a number of points on the spectrum between these two end points. For example, even realism is itself an umbrella term for a number of ‘realism perspectives’, such as critical realism, naïve realism, pure realism, historical realism and simple realism.¹⁷ It is beyond the scope of this thesis to explore each of these differing perspectives.

1.2.4. Epistemology

Epistemology refers to how a researcher gets knowledge and understanding. Similar to ontology, to which it is strongly linked,¹⁷ epistemology is a spectrum. At one end, there is ‘etic’ or positivism – which is an objective perspective. The analogy being the researcher looking into a fish bowl from the outside to study the fish. At the other end of the spectrum, is ‘emic’ in which the researcher embeds themselves as part of the phenomenon being studied. So, using the fish bowl analogy, the researcher would be diving inside the bowl with the fish.

Ontological beliefs determine epistemological beliefs. Realism leads to etic. Relativism leads to emic. Emic is by definition subjective. The influence of the researcher is acknowledged and either avoided or embraced. For me personally, my experience and relationships in the research field of city/urban health have created an emic approach.

On the epistemology spectrum, there are three significant viewpoints: empiricism, rationalism and transcendentalism.

- 1) Empiricism. This is inductive, starting with data from the phenomenon in which the researcher has a passive observational role. The knowledge gained starts broadly and becomes more specific.
- 2) Rationalism. This is deductive, starting with a premise or theory to test.
- 3) Transcendentalism. Transcendental philosophy is the middle ground between Empiricism and Rationalism.

Epistemological positions broadly align with the ontological positions of realism, critical realism and relativism. The three commonly applied epistemologies in health and social science qualitative research are post positivism, contextualism and constructionism.¹⁷

Positivism, which is a realist ontological approach, i.e. reality exists independently from human interpretation, is the dominant epistemological position.¹⁷ Post positivism is a refinement on positivism whereby objective knowledge is accepted as being imperfect and influenced by the researcher's values and interpretation.¹⁷

Contextualism is said to be more aligned with a Big Q qualitative approach¹⁷ in that it emphasises the importance of context to both a phenomenon and to the interpretation of a phenomenon. Therefore, multiple versions of reality are possible, depending on context and perspective. None are wrong but some might be valued more than others, depending on the research question.¹⁸ In this way, the researcher is an integral part of the phenomenon. Contextualism is a middle ground between the epistemological positions of (post) positivism and constructionism and broadly aligns to a critical realist ontology.¹⁷

Constructivism is an approach in which knowledge is produced and constructed rather than discovered. If the analogy for realism was that of being an archaeologist – digging and excavating to discover a pre-existing phenomenon,¹⁹ the analogy of constructivism is that of a painter or sculpture, i.e., the researcher creates the reality.¹⁷

To add to the complexity, constructionism, realism and critical realism are considered ontologies by some, epistemologies by others, and both (ontology and epistemology) by others still.¹⁷

1.2.5. Methodology

Method and methodology have different meanings but are often confused. Method is specific to data gathering techniques (e.g., survey or interview etc). Methodology refers to philosophies for how knowledge is gained and analysed in a systematic way. Buckley et al²⁰ editorial provides a useful summary of methodology, citing the Buckley and Chiang²¹ definition as “a strategy or architectural design... to problem-finding or problem-solving” and Crotty²² as “a

comprehensive strategy related to the anticipated outcomes” and Noor²³ “related to the research question”.

As stated in section 1.2.2 all parts of a research philosophy need to be collectively coherent or ‘fit’ (sometimes referred to as methodological integrity’).^{16 17} Therefore, the chosen research methodology must ‘fit’ to the ontology and epistemology (which themselves must be fit for purpose to answer the research question). Broadly, there are two types of methodology:

- Experimental. An experiment starts with a theory which is deductive (i.e. starts with a hypothesis) to prove or disprove the hypothesis and is likely to be realist and quantitative.
- Dialogical and dialectical. These methodologies study discourse (verbal or written) to interpret or construct an experienced phenomenon. It therefore has a relativist stance and is typically qualitative and inductive.

1.2.6. Paradigms

The research paradigm is a product of the ‘ology’ questions, i.e., ontology (what is the nature of reality ?), epistemology (how do we know reality and how is it measured or understood?) and axiology (what are our values ?), gives the research paradigm. Put simply; ontology + epistemology + axiology = paradigm.^{8,11}

The different ontological, epistemological, methodological positions and resultant paradigms are presented in Table 1.1 below. based on Lincoln et al.¹⁶

Table 1.1 – Paradigms and their ontology, epistemology and methodology

'ology' & paradigm	Positivism	Post-Positivism	Critical Theory et al.	Constructivism	Participatory
Ontology	Naïve realist (purist realist)	Critical realist (imperfect realist)	Historical realist (realist shaped by values)	Relativist (local/specific realities)	Participatory (co-created and subjective)
Epistemology	Dualist / objectivist ('true' findings)	Modified dualist / objectivist ('probably true')	Transactional / subjectivist (value mediated findings)	Transactional / subjectivist (co-created findings)	Critical subjectivity (experiential and co-created)
Methodology	Experimental manipulative (verify a hypothesis)	Modified experimental manipulative	Dialogic / dialectical	Hermeneutical / dialectical	Political participation (shared experiential)

Table 1.1 Paradigms and their ontology, epistemology and methodology based on Lincoln et al.¹⁶

As can be seen, the 'ologies' have a material impact on how the research is carried out and therefore on the 'fit' to the research question and quality and appropriateness of the results and output. Positivist and post-positivist paradigms are linked to 'hard science' and quantitative research approaches typically look to answer a hypothesis with an objective 'one truth'. Whereas interpretivist paradigms (critical theory, constructivism and participatory) are typically qualitative and increasingly subjective with multiple realities and the researcher playing an active part in the phenomenon being studied.

Researchers should reflect on the paradigm that they bring to a study. This self-reflection is both a key skill of a qualitative researcher and necessary to demonstrate validity of the study process and outcomes. The next section examines my personal paradigm and its application to this thesis.

1.2.7. Defining my paradigm

A researcher's paradigm or worldview is shaped firstly by their personal and professional background and experiences. It is also shaped by the viewpoint of their academic supervisor and research group and peers and by the wider research context. All of these are interlinked. With the support of a coach, I have reflected on my own world view. This builds on the personal biography in section 1.2.1.

For the first half of my professional career I trained within a predominantly positivist paradigm. This was in the engineering and manufacturing sector (a hard science) in which the use of quantitative methods, such as statistical process control (SPC) were the primary methods and tools of analysis. This included my early stage research efforts, whereby I completed a MSc (by research) in 2006. This was case study methodology but with a focus on quantitative changes.³

The second half of my career has been within the NHS, joining Guy's and St Thomas' Foundation Trust to apply my experience and skills of service and operational improvement from manufacturing to the NHS. This was at the point that the NHS was moving into a phase of increased competition and commercialisation. Already within the NHS, the use of evidence based medicine (EBM) and the gold standard of randomised control trials (RCTs) created a predominantly positivist culture. All of this points towards the dominance of a realist ontology – i.e. quantitative with a single truth.

However, I believe as early as 2002, for me, this began to shift as I moved into service improvement and transformation, whereby to affect the performance or quantitative change required an appreciation and understanding of the 'softer' or qualitative elements of change management. This slight shifting can be seen within my MSc (by research): there is a primary realist ontological position, however the use of action research in the case studies demonstrates certain elements which are more relativist. There is a practical bias 'to make a change' (researcher as an active part of the phenomenon) and as described by McNiff and Whitehead²⁴ 'the multiple perspectives of action research'. In addition, whilst EBM and RCTs have a quantitative bias, the healthcare services and the NHS have increasingly taken a social sciences perspective, whereby, particularly in quality and service improvement, the complexity and different perspectives in health and healthcare have increasingly been identified.^{14 25}

Over time, my interpretivist paradigm has increasingly emerged. This is in large part why I wanted to use the opportunity of this research to learn how to be a researcher and in particular a qualitative researcher. This has influenced the research questions and therefore type of research I have developed.

This professional experience has led to a quite profound change in my perspective from operational and performance improvement ('show me the numbers of what has improved') positivist paradigm to a much more nuanced position whereby the same situation can be seen in different ways and therefore multiple perspectives exist on the same phenomena. I am therefore more comfortable with a relativist ontology and transactional subjectivist epistemology.

My main academic supervisors (Prof Lord Darzi and Hutan Ashrafian) are primarily clinical academics (surgeons), who will also bring their own biases. Healthcare typically sits within a positivist paradigm, with the use of evidence based medicine and quantitative methods, and a realist ontology.¹⁴ However, they are also both immersed in wider health policy issues which are more 'messy' and associated with a relativist ontology.

High quality qualitative research should not be left to the novice.²⁶ Therefore, bringing together my personal and professional background and experiences, the viewpoint of my academic supervisors and the wider research group of peers, my supervisor (Dr Hutan Ashrafian) suggested that I approach an experienced relativist qualitative researcher from Cambridge University (Dr Stephanie Archer) to provide additional supervisor support to the relevant chapters.

1.2.8. Pragmatic approach to my paradigms

In the tension between positivism and constructivism, positivists in the field of health research assert there can only be one 'real' reality; you either have cancer, obesity or pain or you don't.¹⁴ However, others in health research recognise there are both subjective and objective perspectives on health.^{27 28} In the above example, you could objectively have cancer, obesity

or pain but how an individual experiences cancer, obesity or pain will not be the same and there is a degree of subjectivity on a range of other factors.

This dichotomy between ontological and epistemological positions has been criticised²⁸ and highlights the importance of the research question. In the example above, if the research question was ‘how many people have cancer / obesity / pain ?’ this would lend itself to positivism, with a realist ontology, dualist epistemology and a quantitative methodology. However, if the research question was ‘how does cancer, obesity or pain affect a person’s life?’ this would lend itself to a constructivist, relativist ontology, subjectivist epistemology and a qualitative methodology. Therefore, in the research of this thesis the research question will be the primary determinant of the ‘ologies’. The ‘ologies’ for each study will also be stated and justified where appropriate.

1.2.9. Rigour in research

This section gives the author’s interpreted overview of the considerations of rigour and bias in qualitative research. The specific tools and approaches used for each study are included in the relevant chapters.

How to demonstrate rigour and the tools by which that is done in qualitative research is different from that in quantitative research.²⁹ The requirements of reliability, replication and validity associated with quantitative research are replaced with trustworthiness.²⁹

Rigour as it relates to qualitative research is the way in which the study was conducted to ensure the credibility of the findings.³⁰ Lack of rigour, is an often cited criticism of qualitative research.³⁰⁻³² This is in part due to the differing views of how to demonstrate rigour.³²

Rolfe³² identifies three positions: scholars who judge qualitative research to the same criteria as quantitative research; those who believe that a different set of criteria is required; and those who do not believe predetermined generic criteria to be appropriate at all. The author concludes “the search for a generic framework... should be abandoned...in favour of individual judgements of individual studies”³²

However, whilst scholars do not all agree on a consistent specific set of criteria (or even whether it is possible or correct to have a consistent specific set of criteria), there are some common component parts. These are presented in Table 1.2 below, with the strategy and how they have been applied to this research.

Table 1.2 – Components of rigour and managing bias

Component of rigour	Application to this research
Researcher reflexivity and engaging others to reduce bias ^{2,30 32 33}	This thesis begins with a personal researcher biography and self-reflection (section 1.2.1 and 1.2.7). Appreciation of my risk of bias and lack of experience so I sought an experience qualitative researcher (Dr Archer).
Accuracy of recording ^{2,30} or auditability ³¹ and precision of reporting. ³⁰	Interviews professionally transcribed and the author checked and corrected each transcription against the video recording. Clear audit trail of decisions is presented. Use of direct quotes presented and contrasting views presented.
Triangulation to seek out similarities and differences. ^{2,30}	Direct quotations used to highlight similarities and differences.
Clear research question and appropriate conceptual framework and appropriate methods. ^{2,30 31,33}	The research question is stated in each chapter. An understanding and rationale for the methodology and methods is presented.
Transferability ³⁰	The important contextual factors and considerations are presented and transferability to other settings discussed.

Demonstrating rigour in qualitative research, particularly as a novice researcher, is challenging.³⁰ The purpose of this section is to demonstrate an understanding of these challenges and to show the application of ‘components of rigour’ to this thesis. Continual

reflexivity and discussions with my supervisors have also been used to both reduce any bias and to aid in my development as a researcher.

1.3. Background and context: health, cities and policy

1.3.1. Health and healthcare challenges

Globally the population continues to increase,^{34,35} get older^{36,37} and experience increasing levels of chronic illness.³⁸ In addition, in recent years, we have had a once in a lifetime global pandemic, current war in Europe and wider global financial and societal challenges, all of which have had both immediate and lasting adverse impact on population health.

At the same time, healthcare demand is rising globally, becoming more expensive and increasingly unaffordable,^{39 40} especially in the context of the constrained economies highlighted in the previous paragraph. Quality of care also remains inconsistent, with significant inequalities in health outcomes.^{41,42 43} These pressures are compounded by a fatigued healthcare workforce and widespread shortages,⁴⁴ further exacerbating the strain on health services.

Healthy populations are fundamental to driving economic prosperity.^{45,46,47,48-50} However, as healthcare waiting lists grow and the burden of illness increases, economies struggle to keep up with rising demands, creating a vicious cycle: worsening health leads to greater economic strain, reduced resources, and deeper inequalities, particularly among those with the least resources and resilience.

The UK is not immune to these challenges.^{51,52} Even before recent crises, improvements in life expectancy had stalled for the first time in a century.⁵³ Compared to its European peers, the UK fares poorly in terms of population health.^{54,55,56} Additionally, the impact of 'Brexit' has continued to adversely affect health.⁵⁷ The economic cost of ill health in working-age individuals alone is estimated at £150 billion per year, equivalent to 7% of GDP.⁵⁸ Despite this, local governments, including public health services, have faced significant budget cuts over the past decade.⁴⁶

Healthcare is important but only plays a minority part in what affects our health.⁵⁹ And yet, the discourse on health has typically been medicalised and ‘health’ and ‘healthcare’ conflated,^{60,61} such that any debate on health is incorrectly focused solely on healthcare. This means the drivers of poor health are never fully addressed and increasing poor health and healthcare costs coupled with poor performance are perpetuated.

These interconnected challenges cannot be addressed by a single organization or sector.^{55 62} A systemic, population-wide approach is necessary. However, government policies have typically focused on individual responsibility and education on ‘life style choices’, rather than broader societal changes.⁶³ As England's Chief Medical Officer, Chris Whitty, has recently urged, elected officials must take bold action to reduce ill health,⁶⁴ a stance echoed by public opinion⁶⁵ which expects the government to play an active role in improving population health.

1.3.2. Cities

There are different definitions of cities. The UN uses three basic concepts to define urban areas.⁶⁶

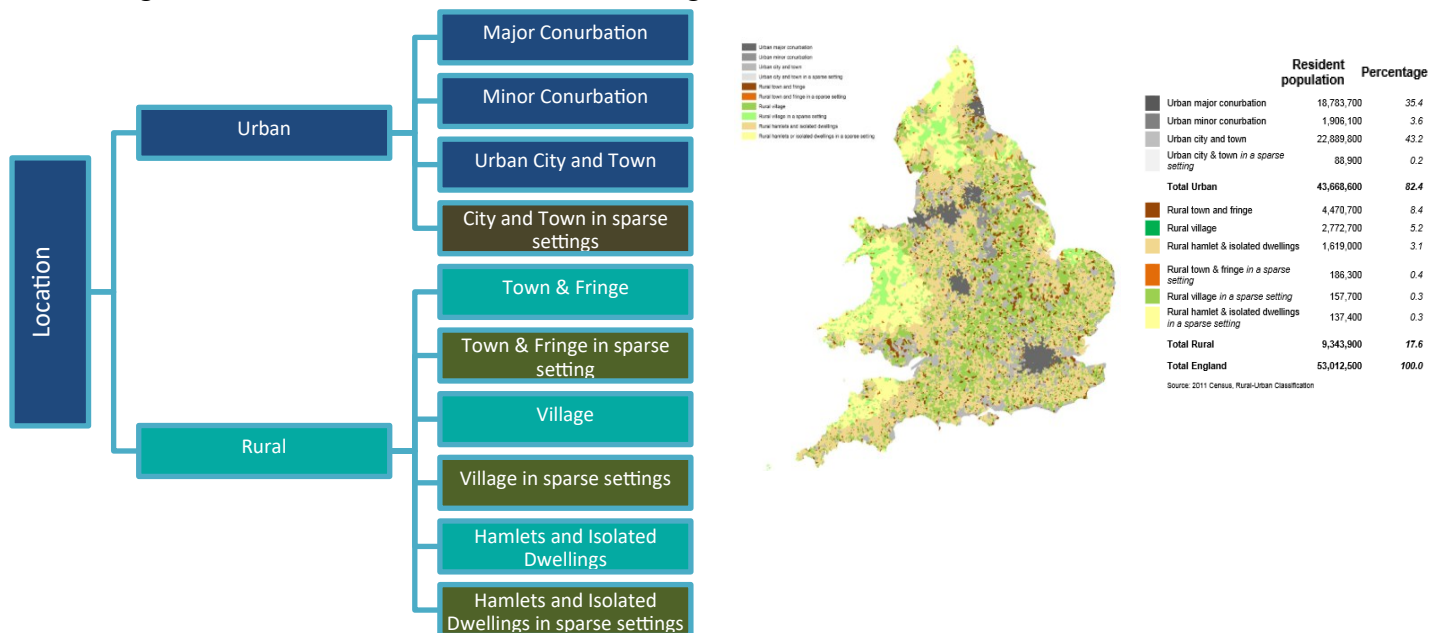
1. City Proper
2. Urban agglomeration
3. Metropolitan area
 - a. Mega city (> ten million pop)

City proper is defined by United Nations as “the single political jurisdiction which contains the historical centre”. Urban agglomerate is an extended city area comprised of the built-up area of a central place, whereas Metropolitan area is a region consisting of a densely populated urban core and it’s less-populated surrounding territories. The term “megacity” is often used to describe a city with a population of over 10 million.⁶⁷ Similarly, the term ‘global city’ is used to describe a city considered to be important to global economy.⁶⁸

In the UK, the government classifies geographical locations into ‘Urban’ or ‘Rural’ areas.⁶⁹ Urban areas are the connected built up areas identified by the ordinance survey mapping that have resident populations above 10,000, whereas rural areas are those areas that are not urban. i.e. settlements where population is below 10,000. Urban areas are further divided into

conurbations. A conurbation is a region that includes many cities, large towns and through population growth and physical expansion, has merged to form one continuous urban area. Figure 1.1 presents the latest available urban and rural map of England and Wales.

Figure 1.1 – Urban and rural locations in England and Wales



Source of figure 1.1 - <https://www.gov.uk/government/statistics/2011-rural-urban-classification>

To be called a city has different criteria around the world. In the UK, a city has been erroneously associated with a range of factors, such as having a cathedral or being a certain size. In fact, in the UK, the Monarch grants 'city status' based on advice from government.⁷⁰ Currently there are 55 cities in England, with Southend-on-Sea being the most recent gaining city status in 2022.

What is clear is that cities have been central to human and societal progress for over the last millennia. Predating their nations, they are central hubs for trade, culture, innovation and political power.⁷¹ The industrial revolution and introduction of transport infrastructure led to a rapid rise in the number and size of cities.⁷² This is expected to continue, with a rapid growth in cities, particularly in Africa, Asia and south America.⁷³

Whilst there is not a single definition of a city, they do all typically share some common characteristics, such as population density, city governance (typically a Mayor), transport and other infrastructure, art and cultural assets.⁷⁴ As well as these structural aspects, cities have also

long been seen as social systems.⁷⁴ For the purposes of this thesis, the author adopts a broad definition and inclusive approach in the definition of a city.

Currently over half of the world's population live in a city and this is projected to increase to 68 percent by 2050.⁷⁵ This growth is a result of cities growing in both size and number in all regions⁷⁶ but there is particularly rapid growth in Asia, Africa and South America.⁷³ To illustrate the rapid growth to date and in the future, between 1950 and 2005 the percentage of the population of China living in cities rose from 13% to 40% and it is projected to reach 60.3 percent by 2030.⁷⁶ To put the scale of this urbanisation challenge and opportunity in context, over the last 20 years, more cement has been poured in China every two years than was poured in the USA during the entire 20th century.⁷⁷ To illustrate the interconnected nature of factors affecting health, which is a recurrent theme of this thesis, concrete manufacture accounts for at least 8% of global carbon emissions.⁷⁸ Climate change is the most significant threat to health.^{79,80 81,82} Therefore, building and evolving cities and how they then enable or restrict good health will have a determining impact on population health.

1.3.3. Cities and health

The cities we live in have a direct impact on health. Historically, city living was considered to be detrimental to health.⁸³ This dramatically improved from the late 19th century with the advent of clean water, sewage systems, improved housing and immunisations. However, there remains debate on whether there is still a negative impact on health in living in cities, a so called 'urban health penalty'.⁸⁴ Cities continue to have higher rates of infectious diseases,⁸⁵ poor mental health,⁸⁶ conditions associated with poor air quality⁸⁷ and obesity.⁸⁸

However, there are, or should be, many positive health aspects of city living, utilising the assets of a city, social contact and proximity to healthcare. Cities offer the potential for a 'urban health advantage'^{87,89} particularly in the areas of predicted growth in cities.⁹⁰ These cities face the same challenges of those cities that developed over the last century.⁹¹ In the author's view, this presents a significant opportunity for shared learning.

1.3.4. City/Urban Health and policy

There is extensive health literature on the ‘evidence-policy gap’, i.e. the disconnect between research evidence and policy actions.⁹² This is despite the long held aspiration to use evidence to inform policy, particularly health policy.^{93 94} The COVID-19 pandemic has created new relationships between academia and policymakers⁹⁵ but challenges remain.^{96,95}

In their systematic review, Oliver et al⁹⁷ found the most frequently reported barriers to evidence uptake were poor access to good quality relevant research and lack of timely research output. This is supported by more recent work where the researchers found two core differences; time frame, researchers operating in years whilst policy makers operate in months, and differing views of what constitutes evidence, with researchers taking a more cautious view and applying the precautionary principle.⁹⁵

This misalignment has led to some scholars to conclude that the direct impact of research evidence on policy decision is limited⁹⁸ and others to believe evidence is used selectively to support predetermined policy decisions.⁹⁹ This is clearly suboptimal.

Effective use of evidence in policy making requires sustained dialogue and relationship building between researcher and policymaker.^{98 100 101,97 102} However, these interactions are often hampered by differences in language, priorities and timescales.¹⁰³ Pragmatism is needed to bridge this gap, combining scientific evidence with governance principles, and simplifying complex research into actionable insights.⁹²

The key factors influencing evidence use in policymaking appear to be timely access to good quality, relevant and understandable research evidence and collaborative relationships that foster ongoing exchange between researchers and policymakers. Additionally, policy is determined as much by the decision-making context as by research evidence.⁹⁷ Policy making is rarely a ‘one off event’ or straightforward linear process. Policy tends to evolve through an iterative process, subject to continuous review and incremental change¹⁰⁴ which goes to reinforce the need for two way relationships. Policy decisions are also inherently political decisions; the timing of implementing is as much dictated by political and public considerations as the state of the evidence.^{105,106}

1.3.5. Novel nature of this thesis: research gap and real world benefit

The first substantive study in this thesis is the systematic scoping review (chapter 2). This is the first time such a comprehensive study, which includes categorising and indexing, has been undertaken. The gaps and opportunities identified in this systematic scoping review then led to the subsequent studies of this thesis. This therefore identifies and fills the gaps in the current body of knowledge related to characterising city policy solutions to city specific health needs in order to achieve real world impact.

Local health leaders with policy makers and politicians can provide the leadership to achieve a whole system transformation of health and health inequalities.^{107,62 108} The potential for real world benefit is clear: with the majority of the population living in cities: global health will increasingly be determined by cities. However, as illustrated by section 1.3.4 simply producing evidence is not enough. Therefore, the author will produce 'plain English' abstracts for the thesis and each of the studies, publish on policy platforms and weave in the implications and opportunities through his 'Researcher in Residence' role with the Mayor of London and connect to other cities.

1.4. Aims of this thesis and research questions

The overarching aim of this thesis is to **identify and understand in what way cities are improving the health of their residents**. As well as filling the academic research gap identified in the initial scoping, an additional aim of this research is to **bridge the gap between academic research and policy interventions for real-world impact**. Therefore, in addition to academics, city politicians and other policymakers and city health professionals are in the target audience group.

Associated with the above aim, the primary research question of this thesis is:

- 1) In what ways are cities improving the health and healthcare of their residents and what further opportunities are there ?

Although this thesis covers both health and healthcare, the primary focus is on health. This emphasis naturally emerged from the study results, where health was a more prominent theme.

This primary research questions are supported by the below secondary research questions:

- 2) What does the existing body of knowledge tell us about city-wide health and healthcare transformation?
- 3) What initiatives are cities undertaking to stem the rise in obesity ?
- 4) What opportunities are there for urban healthcare to work with physical activity providers ?
- 5) What initiatives are cities undertaking to improve population health, including their response to Covid-19 and the role of the Mayor ? What impact have these initiatives had ?
- 6) What comprehensive reviews, strategies or visions for health and healthcare have been developed for London over the last 200 years ?
- 7) How have Mayors used their positions to improve city residents' health and healthcare?
- 8) What impact has the London Mayoralty and each of the 3 London Mayors had on the health of Londoners ?

A total of eight studies were designed and undertaken to achieve this aim and answer the research questions. These studies are described in the following section, together with how they relate and fit together.

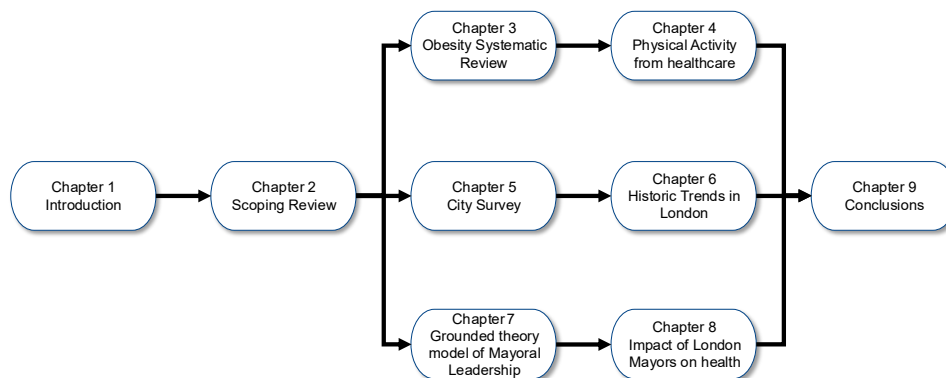
1.5. Structure of this thesis

This thesis consists of 9 chapters including this introduction chapter. This introductory chapter sets the scene and background for the thesis, covering two main subjects; the research area, aim and research questions and the author as the principal tool of the research. Chapter 2 is a systematic scoping review examining the current body of evidence related to cities improving health and healthcare. This chapter sets the foundation and identifies the gaps which are then filled by the subsequent chapters. One such gap identified in this systematic scoping review and initial literature review was obesity, which is addressed through a systematic review in chapter 3. This theme is continued in chapter 4 which presents a questionnaire study of physical activity and healthcare in the city of London. Chapter 5 presents an exploratory city survey. Using the findings of the initiatives from the systematic scoping review combined with the health risk factors identified in the Global Burden of Disease,¹⁰⁹ eleven cities reported on the relative priority of health issues, initiatives to address these health issues (including response

to the Covid-19 pandemic) and the role of their Mayors. Chapter 6 has a focus on London and the previous reviews of health and healthcare over the last 200 years. Chapter 7 and chapter 8 are focused on the role of Mayors in city health and healthcare improvement. Chapter 7 uses constructivist grounded theory to develop a framework for how Mayors can use their position to improve city health and healthcare. Chapter 8 provides a thematic analysis of the three London Mayors and applies and tests the grounded theory framework developed in the previous chapter. The thesis is concluded and all elements of research brought together with potential areas of future study identified in chapter 9.

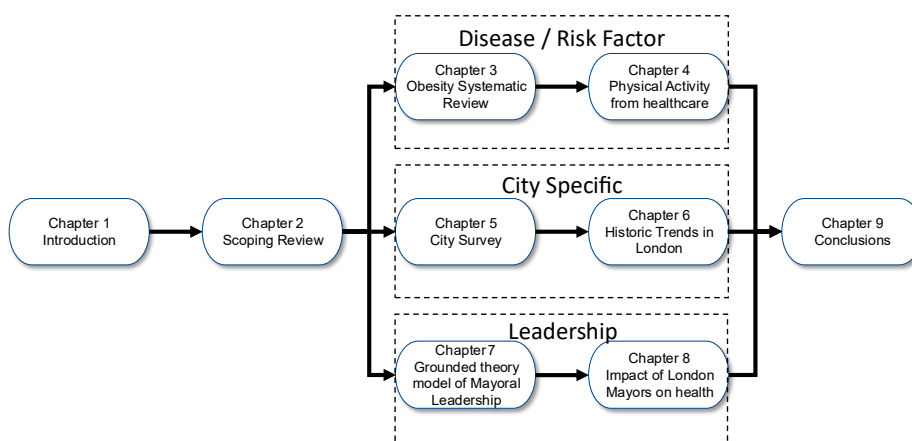
The flow and structure of the thesis is presented in Figure 1.2

Figure 1.2 – Thesis flow diagram



Each of the studies in the chapters were developed to pick up on a theme identified in the systematic scoping review, as show in Figure 1.3

Figure 1.3 – Thesis flow diagram: chapter focus



Chapter 2: Global systematic scoping review of city initiatives to improve health with policy recommendations

“Any intelligent fool can make things bigger and more complex... it takes a touch of genius, and a lot of courage to move in the opposite direction.”

E.F. Schumacher.

2. Plain English abstract

This systematic scoping review examined the existing body of evidence related to city health and health care initiatives for their populations. Following a preliminary scoping review, the review considered the issues that cities were addressing and any initiatives utilised to deal with those issues. The findings from the data showed a substantial number of themes that cities were seeking to address. The majority were addressing non-communicable diseases. The kinds of initiatives could be organised into different themes with education being the most frequently noted initiative. Although they were not always stated, initiatives were instigated in a number of different ways with service reform, policy change and city health department input often noted. The findings from the review enabled key findings and associated policy recommendations to be made.

2.1. Introduction

This chapter is the foundation for the entire thesis. It provides a novel output and identifies the gaps that the subsequent chapters aim to fill. The chapter begins by describing the aims and preliminary scoping work undertaken. This, along with the final research question and the research paradigm (chapter 1), dictated the study design and methods which are described and justified. The results and analysis are presented before the author discusses the outputs and implications of the research for a range of stakeholders. Finally, personal reflections on the beginnings of the author's researcher developmental journey are presented.

2.2. Aim and objectives of this research

The aim of this systematic scoping review was to identify, critically review and synthesize the existing body of evidence on city initiatives to transform the health and healthcare for their populations. The objective was to examine both the 'what' and 'how' of these city initiatives. It does not compare cities' health and healthcare.

2.3. Preliminary scoping

When a review is focused beyond assessing comparative measures of effectiveness it is increasingly recognised that carrying out preliminary scoping – to assess the nature and volume of current evidence before committing to a final set of research questions - is sensible.¹¹⁰

The search term: ‘health\$ AND transform\$ OR improve\$ AND city OR cities was developed to test in a deliberately broad range of academic and grey literature sources of:

- Databases: Cochrane Central Register of Controlled Trials (CENTRAL); Campbell; Pubmed via OVID; EMBASE (date) via Ovid
- Internet: Google; Google scholar; Health Service Journal (HSJ)
- Think tanks and databases; Kings Fund; Health Foundation; Nuffield Trust; British Library Thesis

The first search resulted in over a million (1,126,270) results from just one database (EMBASE Classic). This was clearly an unmanageable number. Analysis was carried out on a subset (n=100) of these results to identify search terms that produced a false positive result and these were removed. A second search, using the modified search term, on the same database produced 44,883 results. A more manageable number. Therefore, searches were carried out in the other databases (Medline – 49,346 results) (PyschINFO – 5,942) (Cochrane – 7) (Campbell – 0), (Scopus – 19,876), (CINALH – 16) (Health Business Elite – 10) (HMIC – 6) and (Prospero – 1). Duplicates were removed which left 78,127. These were downloaded to excel and the first 2,000 titles and abstracts were reviewed. It soon became apparent that the search terms were still too broad - less than 1% (0.7% - n=14) met the inclusion criteria and reviewing just over 78,000 was going to be an unmanageable number to review. A third, very focused, search was carried out with the following search term: city AND transform* AND health*. It was restricted to title and abstract and was carried out through Embase Classic. This search produced 267 results, of which 27 met the inclusion criteria (10.11% success rate).

The preliminary scoping was crucial as a means of more tightly defining the research questions and the development of a manageable search strategy, starting with a broad search – in order to be as inclusive as possible. However, this was a considerable undertaking, difficult to

manage because of the sheer number of papers and also very time consuming. Upon reflection, the author would likely next time start with a very targeted search and then get broader thereafter if appropriate.

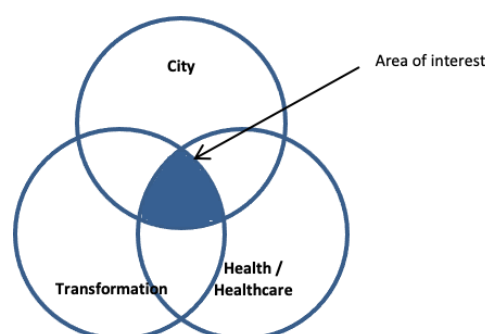
2.4. Research question and scope

Following the preliminary scoping, the research questions of this systematic scoping review were refined to:

- 1) What does the existing body of knowledge tell us about city-wide health and healthcare transformation?
 - a. What are the issues that cities are aiming to address ?
 - b. What initiatives are cities taking to address these issues ?
 - c. How are cities instigating such initiatives ?

The key words in these research questions are; city; transformation; health / healthcare. The area of research interest can best be shown by Figure 2.1 below

Figure 2.1 – Area of research interest



There are both advantages and disadvantages of using either narrow or broad research questions.¹¹¹ Narrowly focused questions will produce a smaller number of research papers,

which may increase the impact of bias and reduce generalisability. However, broad questions may produce an unmanageable number of research papers.

It is recognised that this review has a narrow focus, that will, for example, exclude studies from other city-wide public sector (but non health) transformations. This has been a deliberate choice to ensure there is one body of synthesised evidence focused exclusively on the transformation of health and healthcare of a city. However, it is also recognised that there may be some evidence of other sector city-wide transformation that could be highly relevant to any attempts at health and care transformation. Greenhalgh et al¹¹² identifies that learning from other sectors can sometimes provide the best evidence.

The aim of the evidence gathering described is to collate all evidence that fits pre-defined eligibility criteria to answer the specific research questions.¹¹³ To ensure methodological rigour this review is based on the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement.¹¹³ For the purposes of this systematic scoping review, the population, intervention, comparators, outcomes and study design (PICOS) framework which informed the review objectives is presented in Table 2.1 below.

Table 2.1 - PICOS Table

Population	Intervention	Comparison	Outcomes	Study design
Residents of cities. Also includes the ‘commuter’ population, that work (regularly) in a city but don’t live in a city. Including	Inventions that transform ¹ the health of the population or the healthcare services for the population of a city	The health of the population before the intervention or the quality of the healthcare services prior to the invention	Health: - Improved health - Prevention or delay of poor health - Reduced inequalities Healthcare:	All types of study design will be included

¹The term ‘transformation’ is often used loosely and interchangeably with other terms, e.g. ‘improvement’. It is defined, for the purposes of this systematic literature review, as any study that meets the outcomes listed in table 2.1.

migrant and homeless populations. Excludes: tourist visitors to cities.			- Improved safety - Improved effectiveness - Improved patient experience Unintended adverse outcomes - Negative impact on any of the above outcomes	

2.5. Methods

2.5.1. Study design

Scoping reviews are best suited and increasingly popular in order to answer broad exploratory questions¹¹⁴ to provide a comprehensive overview of a topic.¹¹⁵ Reflecting on my worldview and experience in the field (chapter 1), my emerging constructivist and interpretist paradigm aligns well with the flexible and iterative nature of scoping reviews.¹¹⁴

Considering the research question, the preliminary scoping of the existing body of knowledge and my research paradigm, the author decided that a scoping review was the most suitable way of answering the research questions. This was felt to be the “best fit” approach. The author has used the term ‘systematic scoping review’ as utilised by others¹¹⁶ to emphasise the systematic nature of the review.

Systematic and scoping review protocols are identified as an important first stage in carrying out a systematic scoping review.^{111 113} A significant amount of time and effort went into the development and testing of a protocol for this study, drawing heavily from the PRISMA statement.¹¹⁷

Reviews are also likely to be more relevant and of higher quality if they are informed by advice from people with a range of experiences and backgrounds.¹¹¹ Therefore, stakeholders ranging from user, clinical, city public health, policy-makers and other international regions, were consulted in the development of the research protocol. The protocol and study were completed in accordance with the PRISMA extension for scoping reviews¹¹⁷ and the protocol was registered at PROSPERO (number CRD42020166210).

2.5.2. Inclusion and exclusion criteria

The area that this study is interested in is: city-wide improvement or transformation of health or healthcare. To be included it must be city-wide but could be a subset of the population (e.g., children) or a subset of health services (e.g. stroke services) but it must be city-wide. All types of study have been included, regardless of methodological quality. Importantly, the included evidence needed to describe an initiative to address and improve an issue (i.e. take action to change something) and it not just be a benchmarking exercise.

Studies that were not city-wide, i.e. they only covered a single organisation or part of a geography of a city (e.g. a borough(s) or district(s)) were excluded. The rationale for this exclusion is that if it is a single organisation or local area that has transformed the health service or health of its population this could be done in any organisation or area and is not necessarily pertinent to the city as a whole. Studies that cover a specific clinical trial or procedure – without any ‘system / pathway’ changes – were also excluded for the same reason. Studies that examine a current situation (for example the impact of air pollution on health or current workforce challenges in health services of cities) and make recommendations as to what action should or could be taken but do not actually describe action that was taken were excluded. Studies that primarily focus on an environmental or societal change that have occurred ‘naturally’ over the course of time, for example global warming, were excluded. The reason for this exclusion is that the author was interested in how direct specific action has been taken to improve health or

healthcare, not where it is a natural by-product of another intervention. The author is also interested in what can be learnt about direct interventions. In light of this, studies that include how, for example, planning laws have been used to improve health were included. Editorials, newspaper articles and other forms of popular media were excluded.

Certain services or disease types were excluded. These were:

- Mosquito borne diseases, such as malaria, dengue, chikungunya, yellow fever and zika
- Family planning, fertility, and abortion services
- Religious services
- Blood transfusion services
- Services that were set up for exceptional circumstances or force majeure, e.g. tsunami or religious pilgrimages or mass gatherings (as the author is interested in the normal day to day rather than the exceptions)

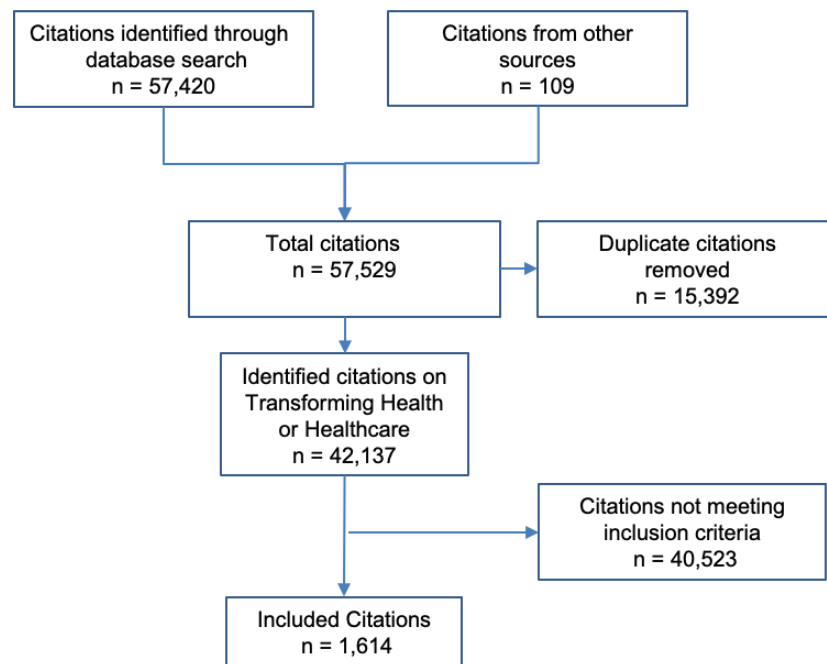
Finally, papers that are not written in English were excluded. This was simply due to the translation limitations of the author.

2.5.3. Search strategy

Ten databases were searched: Campbell Library, CINALH, Cochrane Database (CENTRAL), Embase, Health Business Elite, Health Management Information Consortium (HMIC), Ovid Medline, PsychINFO, Prospero and Scopus. Based on the preliminary scoping (section 2.3), research questions (section 2.4) and inclusions and exclusion criteria (section 2.5.2), specific and pre-determined search terms were developed, tested and finalised for each database. These are available in Appendix two.

All databases were initially searched on 10 – 12 February 2016, for entries from database inception to February 2016 (tranche 1). The search was updated on 16 March 2019, for entries from February 2016 to March 2019 (tranche 2). Hand searching journals is identified as a necessary adjunct to electronic searches.¹¹¹ Therefore, extensive hand searching was also completed. The PRISMA study attrition is shown in figure 2.2. The database results were uploaded to Endnote (version 9).

Figure 2.2 – PRISMA¹¹³ Study Attrition Flow Chart



2.5.4. Publication selection

All types of study design were included, and studies were not screened or excluded based on methodological quality. The key factor was that the study needed to describe a city-wide initiative to improve health or healthcare. The primary outcome indicators that were sought and extracted were: improved health or reduced health inequalities; improved healthcare (safety, effectiveness, patient experience); failed initiative or negative or unintended consequences.

The first tranche (31,251 original citations) was assessed independently by the author and HLP² against the inclusion criteria. The level of inter-reviewer agreement on the articles was on average 96% (range 91% - 98%). Where there was a disagreement, the two reviewers discussed and agreed on a final outcome. The second tranche was assessed by the author. Where it was not entirely clear whether the initiatives were city-wide, they were included. The

² See acknowledgements for full list

default position was that as long as the study described what appeared to be a city-wide initiative, or an attempted initiative to improve health or healthcare it was included. The rationale for this broad approach to publication inclusion was to capture the most comprehensive view, including from typically underrepresented areas, of the subject area.

2.5.5. Data analysis

The following predetermined data fields were extracted into excel; initiative; how the initiative was implemented; quantitative outcome; author's qualitative conclusion: city; city population; country; continent; type of publication; date of publication. Where any of this data was not presented, it was coded as 'not stated'. The only exception to this was with city population. Where this was not presented, the information was sought through the world statistics organisation.¹¹⁸ The latest available population data was used irrespective of when the initiative took place. The 'quantitative outcome' was extracted and coded into either; 1) no outcome stated; 2) input or process measure; 3) outcome measure; or 4) negative outcome. Definition for 2) input or process measure is, for example, Feyerherm et al¹¹⁹ which reported on the number of organisations that participated and carried through some subsequent action (input measure). Or, for example, Sacks and Nonas¹²⁰ who reported on the outcome of number of adults reported as eating fruit and vegetables (process measure). Definition for 3) outcome measure is, defined as a measure of health or a measure with a direct health benefit (e.g. reduced smoking, reduced obesity). For example, Duncan¹²¹ who reported a 40% reduction in emergency department visits by high users (outcome related to healthcare). Or Coady et al¹²² who reported a 27% decrease in smokers (direct health benefit). Or Weinstein¹²³ who reported on reduced infant mortality. An example of a negative outcome would be De Salazar¹²⁴ who reported that sedentary lifestyles actually increased following the intervention.

The author extracted, systematically coded and analysed the data to identify themes. Inductive thematic analysis, in line with the guidelines of Braun and Clarke,¹²⁵ was carried out as it offered optimum flexibility and breadth. The included studies were not critically appraised for quality. However, major methodological issues, source of study heterogeneity and necessary contextual information for interpreting the results are highlighted throughout this thesis text as well as those of the related peer reviewed publications.^{126 127} Mays et al¹¹⁰ and Strech and Tilburt¹²⁸ identify the trade-off between using a smaller number of academically rigorous high

quality studies and a more inclusive and therefore larger volume of studies which could be susceptible to bias. The author, in discussion with his supervisors, agreed a more inclusive approach was better suited to this study. Also, with the input and support of his supervisors, the data was used to debate and agree the key findings and policy actions (section 2.7).

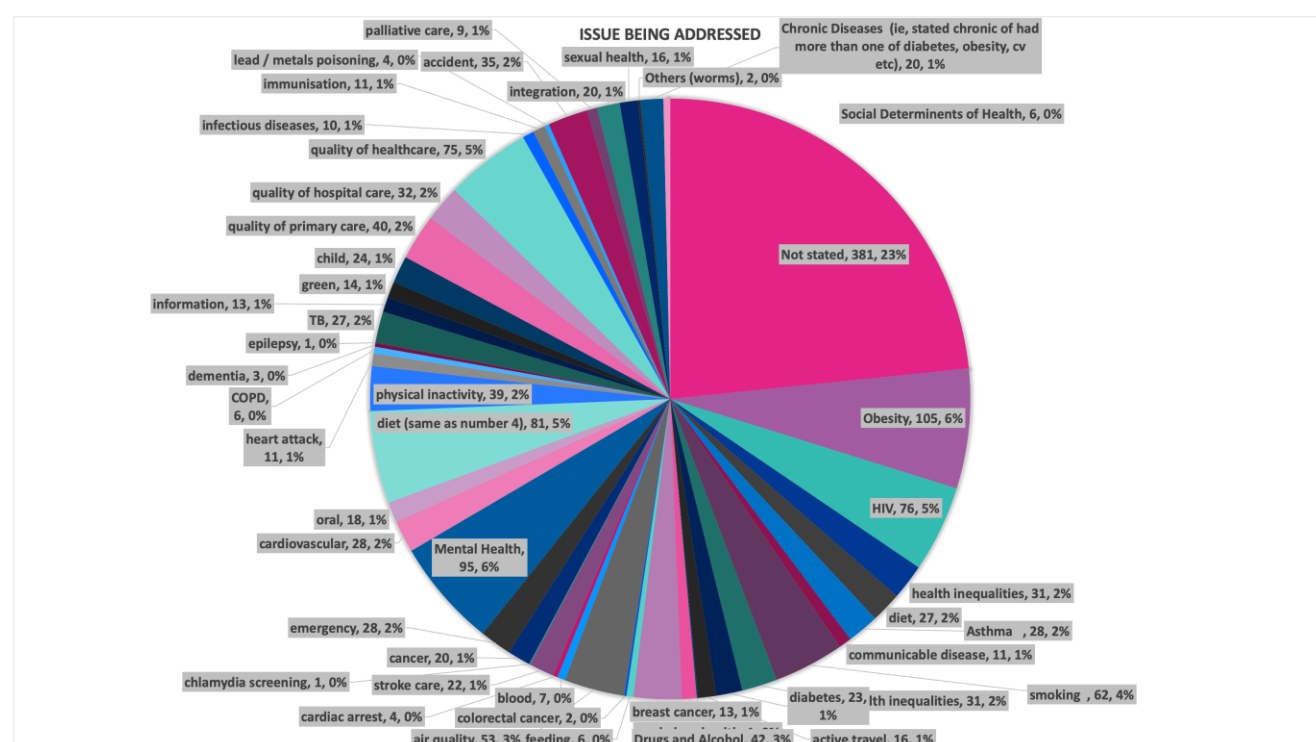
2.6. Results

The database searches yielded a total of 42,028 original citations after duplicates were removed through Endnote standard duplicate check. In addition to these results of the database searches, an additional 109 citations were identified through expert recommendations or internet searches, giving a total of 42,137 original citations. These citations were assessed against the inclusion and exclusion criteria, resulting in 1,614 citations meeting the inclusion criteria. The publication date of these citations spanned over 100 years (date range from 1892 to 2019) of which the vast majority (90%, n=1,455) were citations of journal articles.

2.6.1. Results One – Subject areas of health improvement

A total of 47 themes emerged as the areas, either health risk factor or healthcare area, that cities were seeking to address. Just over two thirds (69% n=1,113) of the subject areas were related to health risk factors and improving health, with the remaining 31% (n=501) related to improving health services. Across improving health and improving healthcare, 92% (n=1483) were addressing non-communicable diseases. Figure 2.3 shows the 47 themes.

Figure 2.3 - Health risk factor or healthcare areas cities were seeking to address



Of those related to health risk factors and improving health, 1043 (94%) were focused on non-communicable diseases and 70 (6%) were focused on communicable diseases. In relation to non-communicable diseases, there were 39 different subject areas addressed. A significant proportion (n=354 equivalent to 33%) did not state a specific health risk factor or area of health they were seeking to address. Obesity (n=104), followed by diet (n=102), smoking (n=61) and then air quality (n=53) were the most frequently stated specific health risk or health area, where one was stated. The non-communicable health subject areas are presented in Figure 2.4 below. The most frequently stated communicable diseases were HIV (n=44), TB (n=12) and Influenza, Small Pox, Typhoid and others (n=10)

Non-communicable health issues cities were seeking to address

Health Issue	Percentage of Cities
Obesity	105
Diet	102
Smoking	60
Air Quality	52
Mental Health	43
Health Inequalities	40
Physical Inactivity	37
Accidents	27
Drugs and Alcohol	25
Cardiovascular Disease	21
Asthma	17
Chronic Diseases	17
Active Travel	16
Green Spaces	14
Infant and child health	13
Oral Health	12
Diabetes	10
Sexual Health	10
Cancer	8
Data and information	5
Breast Cancer	5
Social Determinants	4
Breast Feeding	4

Those relating to improving health services (n=501) were split across forty thematic areas as shown in Figure 2.5.

Topic	Percentage
quality of healthcare	15%
quality of hospital care	6%
quality of primary care	8%
Mental Health	10%
Not states	5%
HIV	6%
stroke care	4%
diabetes	2%
cancer	2%
cardiac arrest	1%
breast cancer	1%
blood	1%
cardiovascular	1%
epilepsy	0%
dementia	0%
COPD	1%
heart attack	2%
oral	1%
diet (same as number 4)	0%
cardiovascular	1%
cancer	2%
cardiac arrest	1%
blood	1%
breast feeding	0%
breast cancer	1%
diabetes	2%
health inequalities	1%
communicable disease	1%
Asthma	2%
die	1%
Obesity	0%
Chronic Diseases (ie, stated chronic of had more than one of diabetes, obesity, cv etc)	0%
Others (worms)	0%
sexual health	1%
integration	4%
palliative care	1%
accident	1%
immunisation	2%
infectious diseases	1%

2.6.2. Results Two – Type of initiative

In respect of the type of initiative, six categories were inductively identified, as shown in Table 2.2. below. Education was the most frequently cited initiative accounting for over a quarter (26%), followed closely by service reform (23%) and change to physical environment (21%). A significant proportion (17%) either did not state the type of initiative or it was unclear what the type of initiative was. Less than a tenth (8%) described a comprehensive initiative and the smallest volume of initiatives were related to digital, data or IT (6%).

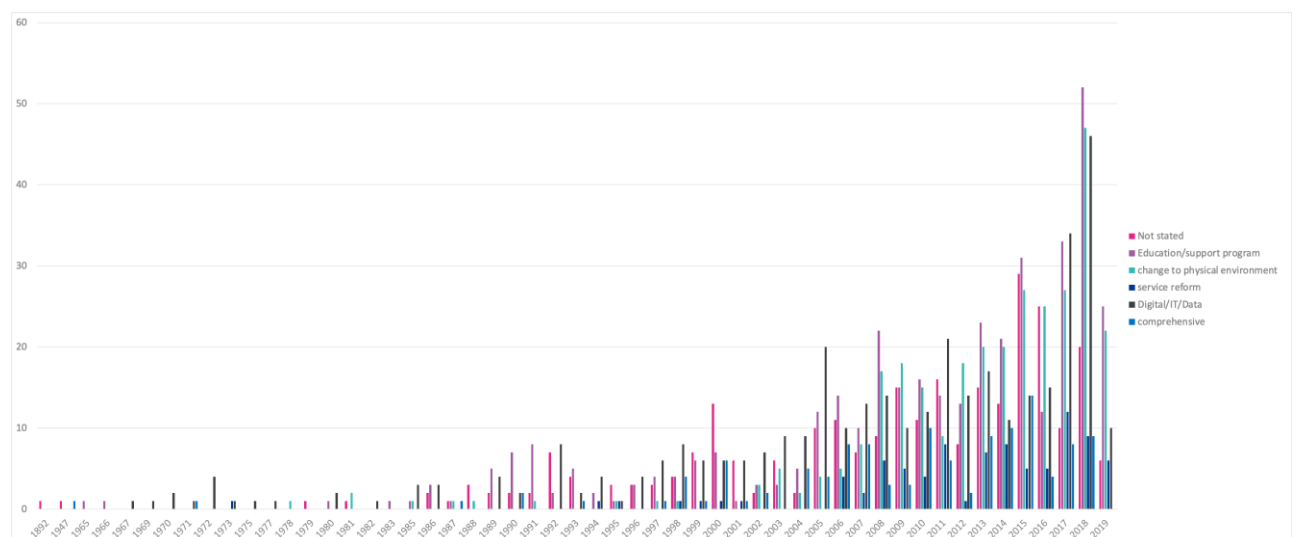
Table 2.2 - Type of city-wide initiative

Category	Definition of category	# of papers	%
Education / support program	A programme to education or support the individual(s), either patient / population or workforce. For example, the education initiative to improve healthy lifestyles with a focus on school children. ¹²⁹	414	26%
Service reform	A change or addition to a health service, i.e. improved patient flow redesign or additional outpatient clinic. For example, the description of Shanghai's service reforms. ¹³⁰	366	23%
Change to physical environment	A change to the physical environment to change the world in which the individual interacts. For example, Los Angeles banning fast-food restaurants. ¹³¹	336	21%
Comprehensive	The initiative was described as, and believed to be, a comprehensive initiative (i.e. more than one single initiative). For example, the urban health strategy in Detroit. ¹³²	124	8%

Digital / IT / Data	A digital or data initiative, or the use of IT more generally, to improve health or healthcare.	92	6%
Not stated / unclear	There was not an initiative or if there was it was not stated in the title or abstract. For example, Taipei's multi-channel digital risk communications to prevent the spread of a communicable disease. ¹³³	282	17%

Figure 2.6 presents the type of initiative by year.

Figure 2.6 - Type of initiative by year



2.6.3. Results Three – How the initiative was instigated

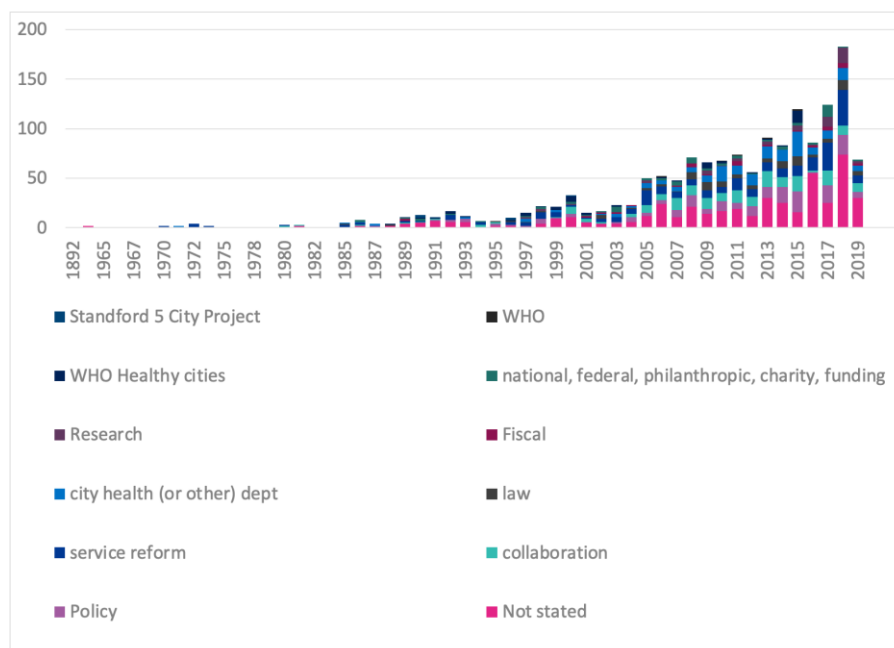
Through the preliminary scoping, eight categories showing how an initiative was instigated were identified prior to data extraction. During data extraction, a further four categories (nationally or philanthropically funded, research, WHO, Stanford 5 city project) were identified. Over a third (34%) of the citations did not state how the initiative was instigated. The full results showing how the initiative was instigated are presented in Table 2.3. Of the citations, only 44 (3%) referenced a Mayor as having a significant role.

Table 2.3 - How initiatives were instigated.

Categories of 'how' initiative was instigated	# of papers	%
Policy	178	11%
Collaboration	181	11%
Service Reform	247	15%
Law	91	6%
City Health (or other) Department	163	10%
WHO Healthy Cities	51	3%
National or Philanthropic	68	4%
Fiscal / Financial levers	38	2%
Research	55	3%
WHO (but not Healthy Cities)	6	0%
Stanford 5 City Project	7	0%
Not stated	529	33%

How initiatives were instigated in each year is presented in figure 2.7.

Figure 2.7 - How initiatives were instigated each year



2.6.4. Results Four – Location

There were 227 cities which were identified as leading city-wide initiatives from the 1,614 citations identified. The majority of cities (#179) were just referenced in one citation. However, New York City accounted for nearly one fifth (17% 279 of 1614) of the total papers, followed by Baltimore (#51) and London (#48). Collectively, these three 3 cities (less than 1% of total number of cities) account for nearly a quarter (23%) of all the citations.

The 227 cities come from 80 countries across five continents. The USA accounts for the highest number of citations (n=690), significantly more than the next highest (England with 135 citations). North America accounts for 57% of all the citations.

The populations of cities ranged significantly from the global mega cities of Shanghai (China) in Tsung-Mei¹³⁰ with a population of 23,019,196 to Stevenson, WA, (USA) in Tran¹³⁴ with a population of only 1,465. This highlights the significant variation in population size of cities and heterogeneity of what constitutes a city.

2.6.5. Results Five – Outcome of initiative

As described in section 2.5.5 initiative outcomes were extracted and coded into the following groups: 1) no outcome stated, 2) input or process measure; 3) positive outcome measure; or 4) negative outcome. Over half (57%) did not have an outcome recorded. Input or process measures accounted for just over a third (34%) with an outcome measure reported in less than ten percent (8%) and one percent reported a negative impact.

It is not possible to describe all of the 1,614 initiatives in detail in this thesis. Therefore, to support the result and give access to the full set of records, data extracted and analysis that is the basis of this study, the full excel file is provided as an appendix to associated peer reviewed publication.¹²⁶ The hope is that this online and freely available appendix will be used as a resource for policy makers and researchers to further interrogate and build on the data and evidence.

2.7. Discussion

The author presents his perspective on the main points of what this synthesised body of evidence shows in this section. However, if there is interest in city and urban health improvement the author would encourage the reader to assess and interrogate the resource. To demonstrate the utility of this online excel database, it was also used as the basis for the systematic review into city initiatives to address obesity presented in chapter 3.

There is growing interest in the initiatives that cities are taking to improve health and healthcare. This is unsurprising given the current and projected importance of cities in determining global health. The House of Lords Select Committee *Report on Metropolitan Hospitals, Provident and Other Public Dispensaries and Charitable Institutions for the Sick Poor*,¹³⁵ published in 1892, which focused on how London could improve health and healthcare, was the earliest city-wide initiative identified. Interestingly, whilst social context and healthcare delivery have developed significantly, the issues identified in this report, including the need for co-ordination between services and unacceptable inequalities, remain as relevant today. The report and themes from London are discussed further in chapter 6.

Education was the most frequently used city-wide initiative (26%) to improve health and was an increasing trend over time. With non-communicable diseases – often referred to as ‘life style choices’^{136 137} - being such a high proportion (92%) of the subject areas that initiatives were seeking to address, it is perhaps not surprising that education features so strongly. Also, education initiatives tend to be straightforward to write up and evaluate,¹³⁸ which lends towards publication. They are also commonly associated with funding¹³⁹ that requires some kind of evaluation or report, which again lends towards publication. However, in the author’s experience and increasingly recognised in the evidence,¹⁴⁰ trying to educate to change individual behaviour without changing the system or environment within which people live has limited impact. The term ‘life style choices’ is a misnomer. The reality is that everyone is strongly influenced by explicit and implicit prompts in their environment and other powerful ‘commercial determinants’ of health. Even when we look at just the last 15 years, education still features as one of the most reported initiatives. Where those with the least resources typically also have the least choices (for example access to affordable healthy food) continuing only to educate without an appreciation of socioeconomic and environmental context is not, in the author’s view, ever going to achieve the positive outcomes desired.

On this issue, the category of changing the physical environment does also change the environment within which we live. It was therefore somewhat surprising to the author that these types of initiatives accounted for only 21% (n=336) of the total initiatives and that only 21 of the 336 reported an outcome measure. There are some examples of such initiatives achieving positive results. In relation to smoking, restricting where individuals could smoke.^{141,142,143} In relation to obesity introducing sugar tax.^{144,145} And in relation to active travel, introducing bike lanes to reduce traffic related accidents.^{146,147,148,149 150} The initiatives to change the physical environment to improve health were instigated by policy or legal changes in just under half (43%) of the initiatives identified. In the author's view, introducing changes to the physical environment through policy or legal levers offers a strong and effective approach to improve city health. In considering the balance between individual education and system changes to physical environment, more focus and effort should be placed on changing the physical environment in order to 'make the healthy choice the easy choice'.

Service reform to health or prevention services which accounted for a just under a quarter (23%) of the initiatives had the strongest reporting on creating an outcome measure (n=34). The types of initiative ranged from mass nicotine replacement therapy¹⁵¹ to reduce the prevalence of smoking through to decentralising care for diabetes¹⁵² and dementia¹⁵³ to centralising heart attack and stroke services.^{154,155} Service reform, which is defined as 'a change or addition to a health service', is similar to a change to the physical environment or system within which we live. It is also most directly linked to health or direct delivery prevention services. Therefore, service reforms have a direct and clear link to any changes in outcomes and as such are easier to measure and attribute causality. This is not to say service reform changes are easy or straightforward, particularly in the context of potentially controversial changes that understandably attract public and political interest. In the author's experience, clinical leadership and genuine public and political engagement are key success factors.

Only a relatively small number (n=124) of initiatives were coded as having a comprehensive range of initiatives to address an issue or issues. City health departments were most notable in leading these comprehensive approaches, from a diverse range of cities; for example New York City (USA),¹⁵⁶ Geelong (Australia),¹⁵⁷ Barcelona (Spain),¹⁵⁸ Taipei (Taiwan)¹⁵⁹ and Nizwa (Oman).¹⁶⁰ It was striking that although a comprehensive approach only represented 8% of the total, they represent almost a quarter (23%) of the number of citations with an outcome measure. There could be a number of reasons why outcome measures feature strongly when a

comprehensive suite of initiatives is undertaken, including that a range of combined initiatives to address an issue is more likely to bring about a change in outcome compared to a single initiative.

Mayors are strongly associated with cities. However, of the 1614 citations only 44 (3%) referenced a Mayor as having any kind of role. Considering Mayors are such an integral feature of cities, this was surprising. It was also notable that initiatives across all areas appeared quite piecemeal and carried out in isolation, without reference to a wider strategy or aim or other supporting initiatives. This could be because of the way that the initiatives were reported. However, in reality it is unlikely that a single isolated initiative would make a sustainable impact on long standing health issues or risks. In addition, cities are a meta-system with health affected by multiple inter-related factors. A change to one part of the system could both result in multiple unintended consequences or no impact on outcomes at all. Improving health in cities requires multiple actions, by multiple actors, at multiple levels. No single organisation, sector or initiative can solve the complex interlinked issues and therefore the political and system leadership from a Mayor could be seen as crucial. In the author's view, the role and impact of Mayors in city residents' health would warrant further investigation. Chapters 7 and 8 look more specifically at the role of the Mayoralty in London.

As can be seen earlier with initiatives to change the physical environment, where there was a strong association with policy (22%) and law (21%), the type of initiative influenced how the initiative was instigated. "Not stated" featured highly across all groups, ranging up to 54% in education and support and totalling 529 (33%) across all initiatives, and therefore care should be taken when interpreting these results. Initiatives that were part of a comprehensive approach were broadly split one fifth policy, collaboration and city health department, with 20%, 18%, 27%, respectively. Health departments were most commonly associated with instigating digital, IT and data approaches. Education initiatives were most associated with collaboration (15%), city health department (9%) and policy (6%). Table 2.4 presents analysis of how the different types of initiative were instigated.

Table 2.4 - Type of initiative and how it was instigated

Type of initiative	# of papers	%	How intervention instigated	# instigated in this category	% instigated in this category	# with outcome measure	Percentage of the total with outcome measure
Comprehensive	124	8%	Policy	25	20.2%	3	2.4%
			Collaboration	22	17.7%	1	0.8%
			Service Reform	6	4.8%	0	0.0%
			Law (4)	1	0.8%	1	0.8%
			City Health Dept	34	27.4%	17	13.7%
			Fiscal (6)	0	0.0%	0	0.0%
			Research	1	0.8%	0	0.0%
			National or philanthropic	7	5.6%	0	0.0%
			WHO Healthy Cities (9)	6	4.8%	0	0.0%
			WHO	1	0.8%	0	0.0%
			Stanford (11)	0	0.0%	0	0.0%
			Not stated	27	21.8%	7	5.6%
			Policy	26	6.3%	2	1.6%
			Collaboration	63	15.2%	4	3.2%
Education / support program	414	26%	Service Reform	9	2.2%	0	0.0%
			Law (4)	8	1.9%	0	0.0%
			City Health Dept	36	8.7%	2	1.6%
			Fiscal (6)	3	0.7%	4	3.2%
			Research	16	3.9%	0	0.0%
			National or philanthropic	19	4.6%	1	0.8%
			WHO Healthy Cities (9)	3	0.7%	0	0.0%
			WHO	2	0.5%	0	0.0%
			Stanford (11)	7	1.7%	2	2.4%
			Not stated	222	53.6%	34	11.3%
			Policy	75	22.3%	1	0.8%
			Collaboration	17	5.1%	1	0.8%
			Service Reform	4	1.2%	1	0.8%
			Law (4)	69	20.3%	4	3.2%
Change to physical environment	336	21%	City Health Dept	27	8.0%	0	0.0%
			Fiscal (6)	16	4.8%	1	0.8%
			Research	8	2.4%	0	0.0%
			National or philanthropic	10	3.0%	2	1.6%
			WHO Healthy Cities (9)	4	1.2%	0	0.0%
			WHO	1	0.3%	0	0.0%
			Stanford (11)	0	0.0%	0	0.0%
			Not stated	185	31.3%	11	8.9%
			Policy	36	12.8%	2	1.6%
			Collaboration	27	9.6%	0	0.0%
			Service Reform	0	0.0%	2	1.6%
			Law (4)	6	2.1%	0	0.0%
			City Health Dept	16	5.7%	0	0.0%
			Fiscal (6)	0	0.0%	0	0.0%
Not stated / no intervention	282	17%	Research	21	7.4%	0	0.0%
			National or philanthropic	9	3.2%	0	0.0%
			WHO Healthy Cities (9)	35	12.4%	0	0.0%
			WHO	2	0.7%	0	0.0%
			Stanford (11)	0	0.0%	0	0.0%
			Not stated	130	46.1%	2	1.4%
			Policy	47	16.7%	4	3.2%
			Collaboration	229	80.3%	25	20.2%
			Law (4)	7	1.9%	1	0.8%
			City Health Dept	31	8.5%	3	2.4%
			Fiscal (6)	10	4.9%	0	0.0%
			Research	2	0.5%	0	0.0%
			National or philanthropic	19	5.2%	1	0.8%
			WHO Healthy Cities (9)	0	0.0%	0	0.0%
			WHO	0	0.0%	0	0.0%
			Stanford (11)	0	0.0%	0	0.0%
			Not stated	0	0.0%	0	0.0%
			Policy	2	2.2%	0	0.0%
			Collaboration	5	5.4%	1	0.8%
			Service Reform	6	6.5%	0	0.0%
			Law (4)	6	6.0%	0	0.0%
			City Health Dept	19	20.7%	1	0.8%
			Fiscal (6)	1	1.1%	0	0.0%
			Research	7	7.6%	0	0.0%
			National or philanthropic	4	4.3%	0	0.0%
			WHO Healthy Cities (9)	3	3.3%	0	0.0%
			WHO	0	0.0%	0	0.0%
			Stanford (11)	0	0.0%	0	0.0%
			Not stated	45	48.9%	2	1.6%
			Policy	36	12.8%	2	1.6%
			Collaboration	27	9.6%	0	0.0%
			Service Reform	0	0.0%	2	1.6%
			Law (4)	6	2.1%	0	0.0%
			City Health Dept	16	5.7%	0	0.0%
			Fiscal (6)	0	0.0%	0	0.0%
			Research	21	7.4%	0	0.0%
			National or philanthropic	9	3.2%	0	0.0%
			WHO Healthy Cities (9)	35	12.4%	0	0.0%
			WHO	2	0.7%	0	0.0%
			Stanford (11)	0	0.0%	0	0.0%
			Not stated	130	46.1%	2	1.6%

This scoping review identified a bias of citations reporting from North America (57% of total, almost double the total of Europe). New York City alone accounted for 17% (n=279) of the total, more than the entire WHO Healthy City output found. Whilst it can be seen that New York, particularly linked to the time of Mayor Bloomberg, was associated with a range of different city-wide initiatives to improve health, it is not possible to say with certainty whether the over representation was because as a city they were undertaking more initiatives or whether they were proficient at reporting on their endeavours. In all likelihood, it was both. This again gives rise to an interest in the role of Mayors. It also highlights the opportunity for a further survey study to understand what initiatives cities are undertaking to improve population health where there is not the same appetite for publication. Chapter 5 presents a survey of cities.

The complexity of the factors affecting health coupled with the complexity of cities as a system, together with the breadth of health issues or risk factors which are being addressed from a number of different perspectives, all of which are inter-related is noted. For example, diet is known to impact on obesity,¹⁶¹ and cancer,¹⁶² and cardiovascular disease.¹⁶³ Similarly, obesity is known to impact on cancer,¹⁶⁴ cardiovascular disease,¹⁶⁵ mental health¹⁶⁶ and mental health is known to impact on obesity.¹⁶⁷ Therefore, an initiative to improve diet could also be an initiative to address obesity, cancer, cardiovascular disease, mental health or health generally. This complexity can be simplified when the major causes of chronic diseases are well known.

Indeed, the four main risk factors (tobacco use; harmful alcohol use; physical inactivity and unhealthy diet) account for at least 80% of all heart disease, stroke and type 2 diabetes and 40% of cancers.¹⁶⁸ The author would add a fifth risk factor; *planetary health*. Planetary health is widely acknowledged to be a significant risk to human health^{169,170,171} particularly impacting cities.^{172 173} The four health risk factors of tobacco, alcohol, physical activity and diet, are also directly linked to planetary health factors, for example diet¹⁷⁴ and evidence shows policies to promote sustainable food supply can improve personal and planetary health.¹⁷⁵ This is why the author calls these ‘The Vital 5’ for personal and population health, both today and for decades to come. These ‘Vital 5’ are most concentrated in deprived areas¹⁷⁶ and show the greatest increase is in low and middle income countries, even faster than has historically occurred in high income countries.¹⁷⁷ Therefore, action on these ‘Vital 5’ will be action on inequalities.

The reporting on outcomes was limited, with just under a quarter (23%) reported as ‘not stated’ Notwithstanding this caveat, the author provides a synthesis of the results of this systematic scoping review which crystallised into five key findings and five associated policy recommendations:

- 1) **Key Finding 1:** The overwhelming majority of the issues and initiatives are addressing ‘non-communicable disease’ (NCD) risk factors that are interrelated and overlapping.

- **Recommended Policy Action 1:** The same level of ambition that was applied to HIV and Covid-19 should be applied to the ‘Vital 5’ risk factors; smoking, alcohol, physical inactivity, unhealthy diet (both covering obesity) and planetary health.

The NCDs areas of obesity and physical activity are explored further in chapter 3 and chapter 4

- 2) **Key Finding 2:** Education was the most commonly reported initiative to address perceived lifestyle choices.

- **Recommended Policy Action 2:** The term ‘lifestyle choices’ is a misnomer. More focus and resource should be put on comprehensive system and environmental changes to ‘make the healthy choice the easiest choice’.

Chapter 6 examines previous comprehensive reviews and visions of London health and healthcare

- 3) **Key Finding 3:** City health departments are making an increasing contribution in improving city population health.
- **Recommended Policy Action 3:** Cities should collaborate and share learning in real world experience of initiatives to improve urban health.
The cross sectional city survey of chapter 5 begins to connect cities on common issues and share learning.
- 4) **Key Finding 4:** The contribution of Mayors in respect of city health and healthcare improvement appears to be limited
- **Recommended Policy Action 4:** The role and impact of Mayors in the health of their populations warrants further study.
Chapter 7 and 8 look at the role of Mayors.
- 5) **Key Finding 5:** New York City stands out with nearly one fifth (18%) of the total citations.
- **Recommended Policy Action 5:** Further real world research to understand and obtain a comprehensive view on what cities are doing to improve population health would be of value.
Chapter 5 details a comprehensive survey of priorities and initiatives in cities.

2.8. Implication of this study for City Health Officials

This global systematic scoping review provides a comprehensive review of the evidence of what cities are doing to improve health and how they are instigating measures. The information is provided in a searchable format (excel) which is freely accessible. This allows city health officials, or anyone interested in city and urban health, access to a unique resource that they can review, interrogate and further develop to support city and urban health improvement.

Cities should, in collaboration with national and other partners, develop a comprehensive and ambitious ‘health creation plan’ targeted at addressing the Vital 5.

2.9. Implication of this study for National Policy Makers

This study should also be of interest to national policy makers. Cities account for an ever increasing proportion of the national population and the action taken in cities can often lead the way on national initiatives. Cities have historically been a hot bed of innovation, whether that is through the development of sewages systems in the 19th/20th century or more recent innovations, for example the London Ultra Low Emission Zone.

2.10. Implication of this study for academics/research and future work

The collective body of evidence identified in this systematic scoping review, built up over the last 130 years, has to the author's knowledge never been systematically identified and categorised. Through the associated peer review publication, the database of categorised citations is freely available for further academic study.

2.11. Strengths and Weaknesses/Limitations

This study has several limitations. As explained, the initial decision, after preliminary scoping, was to take a broad and inclusive approach to the evidence collection. This was purposeful and carefully considered but it did mean less academically rigorous studies were included. What this also led to, and which was perhaps not so well appreciated by the author, was the sheer volume of papers to both review against the inclusion criteria and extract data. This impacted on the timeline, with the overall study taking over three years, and concessions were made around undertaking formal quality assessment of the included studies. Another practical limitation was that only studies in English language were included.

The results of the study produced a large proportion of citations from one city (New York City) and one continent (North America) which along with publication bias will introduce geographic bias. Given the heterogeneity of the study designs and data sources, meta-analysis was not undertaken, which is a limitation. Finally, despite the author's best efforts with a comprehensive and systematic approach and considerable time dedicated to this study it seems likely that it may have missed some relevant examples of city-wide initiatives to improve health or healthcare.

2.12. Conclusions

This global systematic scoping review provides both an overview of the existing evidence of city initiatives to improve health and healthcare and, through the online excel database, the ability to take a ‘deep dive’ into the data and interrogate it. Based on a synthesis of the results, 5 key findings and 5 recommended policy actions are provided to policy makers. The outputs of this systematic scoping review can be used to inform city and urban health policy for future decades. The outputs also provide a foundation and identify gaps for the further work of this thesis. Chapter 3 and chapter 4 pick up on key finding one and focus on NCDs and specifically what can be done in respect of obesity and increasing physical activity, respectively. Chapter 6 uses London to examine comprehensive reviews and visions to improve health or healthcare in the city over the last 200 years, to develop understanding of key finding two. The city health department survey, in chapter 5, speaks to key finding 3 and key finding 5 by connecting participating cities to share experiences and collaborate and gathering real world research to obtain a comprehensive view on what cities are doing to improve population health. Finally, the role and impact of Mayors in the health of their populations is examined the grounded theory study of chapter 7, the output of which is tested in chapter 8.

2.13. Reflections from carrying out this study

Like many reviewers of complex bodies of evidence, the author found it hard to get started. There were several reasons for this; firstly, the need to ‘research the process of research’ before diving into the content of the research question; the ambiguous nature of the research area, for example what is and defines a city. Is the term ‘a city’ useful, are cities even comparable? Similarly, what qualifies as transformation as opposed to simple improvement? Finally, the heterogeneity of research in the area of city-wide health and healthcare transformation. The learning from this was the importance of having a precise, well defined, feasible, and thought through research question.

2.14. Acknowledgements

The author would like to thank the members of the Healthy London Partnership (HLP) who helped on providing a second review of titles and abstracts. Without them, the completion of this study would have likely taken another three years!

Chapter 3: Systematic review into city initiatives to address obesity

“To steal ideas from one person is plagiarism; to steal from many is research”

Wilson Mizner

3. Plain English abstract

This systematic review identified almost a hundred initiatives used by cities to reduce the rise in obesity. It also sought to develop an understanding of which initiatives are more successful in addressing obesity. Output gained from the systematic scoping review relating to all city initiatives was utilised in order to focus more specifically on obesity. The findings from the data showed a range of types of initiatives with school and childcare settings being the most frequently reported setting. However, in total, seven types of initiatives were covered in the review. In terms of impact on outcomes, the results were variable but cities that took a multi-component, long term approach showed the strongest impact. The findings from the data enabled the design of a composite model of initiatives that city and policy makers could look to when considering initiatives to reduce obesity.

3.1. Introduction

Obesity has rapidly become a global epidemic which threatens to undo the gains in life expectancy that have been achieved over the last two centuries.^{178,179} Globally, one in eight (over 1 billion people) are living with obesity¹⁸⁰ and it disproportionately affects lower socioeconomic and ethnic minority groups.^{181,182,183,184,185} Obesity has both short and long term negative consequences across the life course. Children who are overweight do less well at school and are more likely to be bullied, to miss school, and are less likely to complete higher education.¹⁸⁶ If you have obesity as a child, you are five times more likely to have obesity, and the associated health issues, as an adult.¹⁸³ Urbanisation has increased obesity¹⁸⁷ and it has quickly become one of the most important global health challenges of the 21st century. Yet it is largely preventable.¹⁸⁸

In this context, it is perhaps unsurprising that in the systematic scoping review described in the previous chapter, obesity was the most commonly cited health risk factor that cities were seeking to address. Scoping reviews provide a first foundational step for follow up systematic reviews.¹¹⁵ Also in the previous chapter, the author suggested that researchers and others interested in city health could interrogate the database of initiatives to further develop and support city and urban health improvement. This chapter aims to prove this point by using the foundation of the scoping review and associated database to develop a systematic review into city initiatives to address obesity.

3.2. Aim and objectives of this research

The aim of this systematic review was to identify the initiatives being taken by cities to reduce the prevalence of obesity and provide recommendations that will be useful to academics, policy makers, politicians, city health officials and anyone interested in improving the health of city populations. Whilst obesity is not confined to city populations, cities are home to more than half of the world's population with concentrated groups at high risk of obesity.¹⁸⁹ Cities are at the heart of the social and environmental changes that have driven the current obesogenic environment.¹⁹⁰ A focus on city level initiatives brings the benefit of scale and impact on the global population that are disproportionately affected by obesity.

An underpinning objective of this thesis is the connection between academic research and real-world policy opportunities. The objective of this specific study was therefore to understand the initiatives and settings that cities were adopting to address obesity. And thereafter to develop a composite model of initiatives, based on a synthesis of the gathered evidence, that cities could use to address obesity.

3.3. Research question and scope

The research question for this systematic review was:

- 2) What initiatives are cities undertaking to stem the rise in obesity?

This research question is supported by the following objectives:

- 1) Develop an understanding of what initiatives are most successful in addressing obesity in city settings.
- 2) Examine whether it is possible to develop a composite model or framework of interventions that cities can take to address obesity.

3.4. Methods

3.4.1. Study design

Systematic reviews are considered the ‘gold standard’ when undertaking a review of the literature. They aim to answer a specific research question or questions by gathering all empirical evidence that fits pre-determined eligibility criteria, using explicit and systematic methods to minimize bias, so that reliable findings can be used to draw conclusions and make decisions.¹¹³

This systematic review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.¹¹³ It utilised the output of the systematic scoping review, detailed in the previous chapter, which was registered with PROSPERO (CRD42020166210), and is therefore not repeated here. The data used in this study was the subset of data coded as relating to addressing obesity. The author carried out inductive thematic analysis in line with the guidelines of Braun and Clarke,¹²⁵ as it offered optimum flexibility and breadth. The source of study heterogeneity and necessary contextual information for interpreting the results have been highlighted through the chapter. The author applied a modified thematic approach to this data to arrive at the composite of initiatives. The reporting of this study conforms to the STROBE statement.¹⁹¹

3.4.2. Inclusion and exclusion criteria

The inclusion criteria were city-wide initiatives which had the primary purpose of supporting a reduction in obesity. All study designs were included. The primary outcome indicators that were sought and extracted were: reduction in obesity, reduction in weight and reduction in BMI. Studies that were an evaluation of how obesity has changed over time, without any description of an initiative, were excluded. Only studies in English language were included.

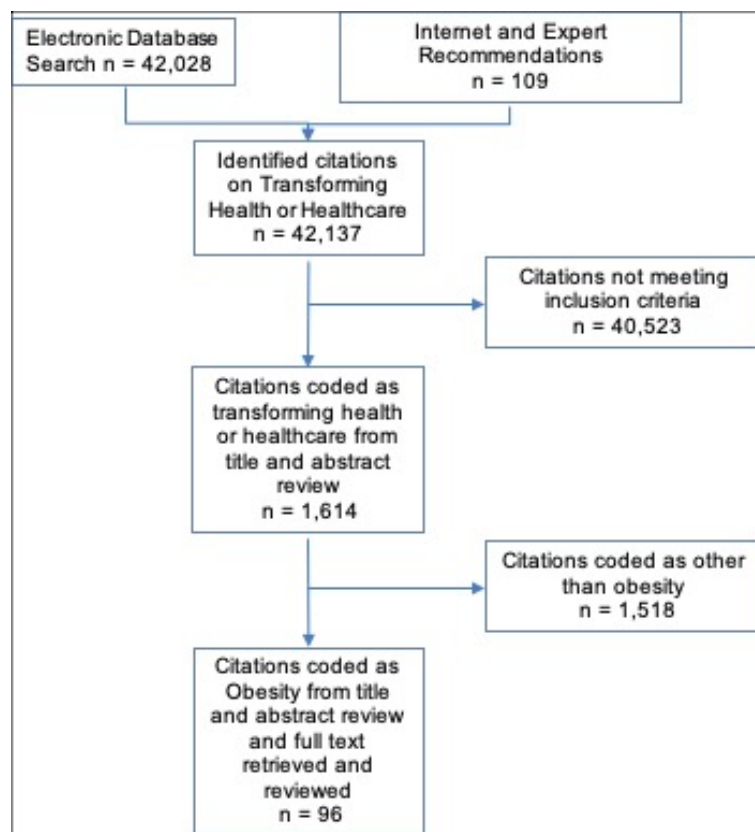
3.4.3. Search strategy

The search strategy is described in section 2.5.3 of the previous chapter and so is not repeated here.

3.5. Results

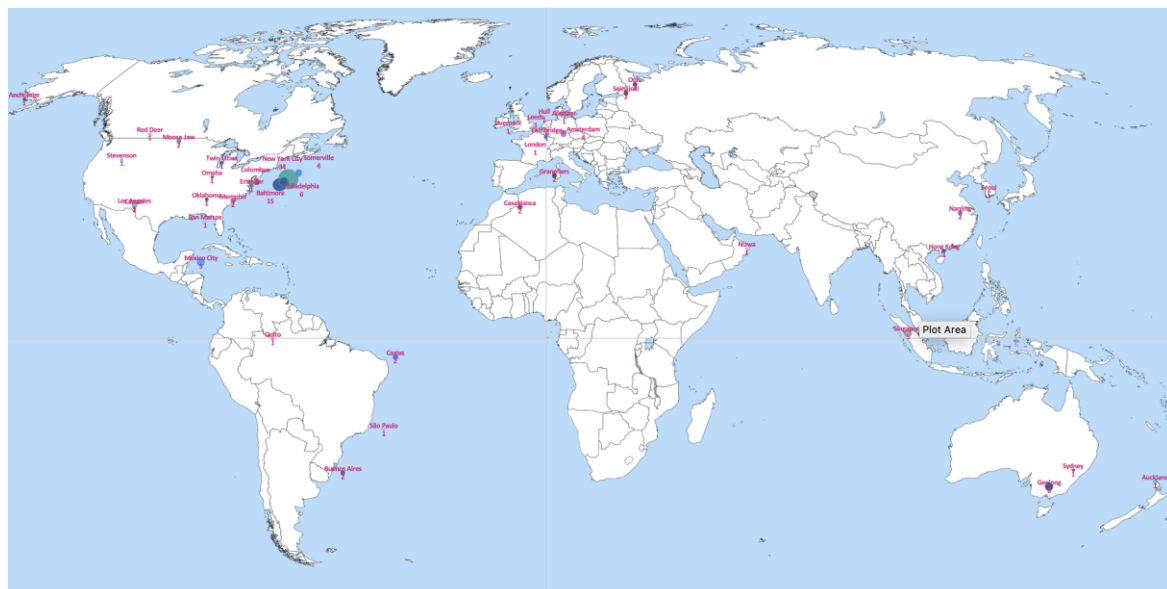
The results of the wider scoping review are described in section 2.6 of the previous chapter so are not repeated here. Upon detailed review, eight papers were recoded and therefore 96 citations were included in this systematic review. Figure 3.1 shows the attrition down to the final number of citations.

Figure 3.1 – PRISMA¹¹³ Study Attrition Flow Chart



The 96 citations described initiatives from 36 cities, as shown on figure 3.2 with 13 citations either not stating a city or covering multiple cities. The date of publication ranged from 1997 to 2019. Similar to the wider scoping review, the majority of the publications were from North America (59/96) with New York City accounting for almost a quarter (23/96). Only one quarter of the identified studies (24/96) included one or more of the predefined outcome measures. If one of the predefined outcomes was not stated, any measure of impact of the initiative was recorded. There was heterogeneity of study design and outcome reporting across the 96 citations, with descriptive texts and qualitative assessment being the most frequently used. The full list of the 96 citations is available with the associated peer reviewed publication.

Figure 3.2 – Location of City Initiatives to Address Obesity



3.5.1. Results 1- School and Childcare Settings

Schools and childcare settings were the most frequently reported setting for initiatives to address childhood obesity with 27 citations representing 28% of the total. Initiatives included a range of education and support programmes for parents and carers, teachers and children on physical activity and healthy eating,^{192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,} restrictions on advertising and provision of unhealthy foods in or around schools^{209,210,201} and providing free healthy school meals.²¹¹ Two cities, New York^{212,145,213,214,145,215,216,217,218,219} and Singapore^{220,221} reported a suite of initiatives within schools and child care settings.

New York City implemented a suite of initiatives including; regulations to increase physical activity, limiting screen time, restricting sugar sweetened beverages, whole milk and fruit juice and providing water as a healthy drinking option which impacted over a million school children.^{212,145} Training programmes were used to support implementation of these regulations.²¹³ There are numerous evaluations of these initiatives^{214,145,215,216,217,218} reporting positive impacts across a range of indicators including obesity, health disparities, calorie intake and physical activity. However, not everything was successful in New York. For example, a wellness initiative targeted at fifth grade students, evaluated through cluster-randomised control study²⁰⁸ resulted in no change to obesity and negative impact on physical activity. Similarly, Singapore has an impressively comprehensive programme of activities within the pre-school and school setting, including; CHERISH (Championing Efforts Resulting in Improved School Health) a comprehensive health promotion programme; multiple programmes to promote healthy canteens and healthy set meals; Trim and Fit physical fitness programmes and support from doctors and nutritionists for already overweight and obese students.^{220 221}

3.5.2. Results 2 - Marketing and Nutritional Information Labelling

Calorie intake increase is thought to be the most significant influence accounting for the global rise in obesity, caused by a range of environmental factors including the role of the marketing and promotion of foods that are high in fat, salt and sugar (HFSS), often referred to as ‘junk foods’.¹⁸³

In terms of initiatives, Amsterdam²⁰⁵ and London²²² banned advertising of unhealthy food on the public transport system. Amsterdam city council also included the ban on licensed sports events where over 25% of the audience were likely to be children.²⁰⁵ New York City²²³ and Philadelphia²²⁴ mandated calorie labelling at fast food restaurants. To demonstrate the variation in cities and approaches, Stevenson, a very small city (population 1,200) in the USA, selected a grocery store as the location for a nutrition and food label education booth on the weekends.¹³⁴ The project reached around 100 people. However, it appears that mainly healthy

people were drawn to the booth and its information whilst people who did not already make healthy diet a priority were much less interested.¹³⁴

3.5.3. Results 3 – Healthy Food Availability

Some of the initiatives used were as follows: ‘B'More Healthy Communities for Kids’ (BHCK) in Baltimore was a suite of initiatives to increase the availability and demand for healthier food, focused on low-income African Americans.^{225,226,227,228,229} Similarly, New York City implemented a suite of initiatives to improve healthy food availability and affordability. This included: mandatory nutritional standards for all food sold by city agencies (hospitals, prisons, aged care and health facilities),²³⁰ launching 1,000 mobile ‘Green Cart’ vendors selling only fruits and vegetables in the more deprived neighbourhoods.^{231,232} and using zoning and financial incentives to promote grocery stores’ provision of healthy food in underserved communities.²³³ Philadelphia’s ‘Healthy Corner Store Initiative’, a public–private initiative, also supported local stores operating in ‘food deserts’ in providing healthy food.⁴⁵ Michigan,⁴⁵ Charleston,²³⁴ and New York City²⁰¹ introduced initiatives to promote farmers markets, whilst Carson (USA), implemented a healthy vending policy.²³⁵

3.5.4. Results 4 – Restaurants and Food Outlets

Los Angeles banned all new fast-food establishments in the city for one year.¹³¹ London took a more targeted but permanent action with ‘super zones’ which restricted unhealthy food shops within 400m of schools.²³⁶ San Marco took a voluntary partnership approach by changing children’s menus through removing sugar-sweetened beverages and increasing fruit and vegetable offerings.²³⁷ Baltimore implemented an initiative which promoted healthier options which led to significantly increased healthy food items sales.^{238,239} Not all initiatives were successful however. New York City tried to limit restaurant portion sizes of sugar sweetened beverages and restrict consumption of sugar drinks purchased through the federal Supplemental Nutrition Assistance Program (SNAP). However, the State court overturned the regulation the day before it was due to take effect.^{240,241}

3.5.5. Results 5 – Education and Support Programmes

Some education and support programmes were very targeted^{242,243,244,245,246,247,248} with Rockingham and Geraldton,²⁴⁹ Moose Jaw,^{242,243} Sydney,²⁴⁶ and a US city (name not stated)²⁴⁷ reporting a direct impact on weight of participants. Other initiatives were on a much wider scale. Singapore's permissive campaign consisted of a series of posters with the question 'Which way is your child growing' imprinted on horizontal rulers, designed to mimic a child's growth chart - however instead of rulers being placed vertically to measure height, the rulers are on their side to draw parents' attention to their child's waistline. The charts were placed in schools, day care centres and paediatric clinics across Singapore.²⁵⁰ New York City, as part of its broader programme, held mass media campaign to reduce sugary drink consumption and raise awareness of the added sugars in drinks and their association with weight gain, obesity and diabetes.²⁵¹ This was preceded by Philadelphia who in 2010 launched a media campaign to reduce the consumption of sugar-sweetened beverages (SSBs).²⁵² Liverpool ran a social marketing campaign to provide people with ongoing support and feedback within the framework of a city-wide challenge to residents to pledge to lose weight.²⁵³ Omaha (Nebraska) created Activate Omaha in 2003 which focused on a strategic social-marketing campaign to increase cycling.²⁵⁴ Fransen et al²⁵⁵ examined the Dutch cities of Nijmegen, Wijchen and Maasdriel and found there were numerous, predominantly educational, initiatives in each city. The pioneer, in 1992, was the Dutch city of Alkmaar which led on a community-based 'Fat Watch' campaign, which aimed at a 10% reduction in fat intake among the general population.²⁵⁶ Memphis used their professional sport team, the Memphis Grizzlies (NBA) to launch a programme called "Get Fit with the Grizzlies". The focus was on nutrition and physical activity for the 4th and 5th grades in Memphis City Schools. Survey research showed health knowledge acquisition and health behaviour improvement post-initiative. In addition, the programme evolved into a broader programme, sponsored by Kelloggs with an additional breakfast element.^{257,258} This is similar to a number of football clubs in the UK that target overweight and obese fans.²⁵⁹

3.5.6. Results 6 – Change in Physical Infrastructure

Eight cities across Douglas County (Nebraska, USA) implemented one or more initiatives to promote healthy eating or physical activity. In total, 952 individual policy changes, such as installing bike racks, were implemented.¹¹⁹ Similarly, La Mesa (USA) made changes to

infrastructure to promote walking.²⁰¹ Somerville implemented community based physical infrastructure changes²⁶⁰ with reported decreases in Body Mass Index (BMI) in males that were overweight or had obesity.^{260,261} ²⁶² New York City²⁶³ used legislation to change the way new buildings and renovations are designed, making stairways more visible and creating streetscapes. Building recreation areas in Indianapolis was reported as reducing the average weight of children.²⁵⁹ Oklahoma City used a development fund to improve parks, sidewalks, trails, bike lanes, and sports facilities targeting neighbourhoods with high rates of health burden.⁴⁵ ²⁶⁴ In Atlanta Beltline (Georgia), they combined economic development with transportation planning and health to create new small businesses, housing, parks, and transit along 22 miles of repurposed trails.⁴⁵ Similarly, in Columbus (Ohio) they established ‘Columbus Healthy Places (CHP)’ to promote active travel through linking public health to urban planning.²⁶⁵ Others looked to use the existing transport infrastructure. In Mexico City, motion sensors were installed in subway stations throughout the city and if commuters completed 10 squats they gained a free transport ticket.²⁶⁶ In the Netherlands, a company called 'Wewatt' installed free bike riding stations that generated enough power to charge a phone.²⁶⁷ These are available at stations and airports across the country and have since been replicated in France and Australia.²⁶⁷ The Red Deer (Alberta) Primary Care Network invested in improving health not just treating ill health through working with the community and supporting ten outdoor gyms in city parks.²⁶⁸ Other cities have temporarily changed the physical environment, such as, ‘Play Streets’ which is a popular initiative in many cities. It involves closing streets to traffic temporarily and opens up reclaimed space for children’s play and physical activity.⁴⁵

3.5.7. Results 7 – Multicomponent or Comprehensive approach

Ten cities were identified that had taken a multicomponent approach. Multicomponent is defined as one or more initiatives from two or more themes simultaneously. An overview of each of these multicomponent cities is provided here.

Coordinated initiatives in Alexandria (Virginia, USA) included; initiatives to increase active play in school and pre-school settings; the use of SNAP food stamps at farmers’ markets; gardening and nutrition clubs; and healthy vending machines and promotion of

breastfeeding.²⁶⁹ In Geelong (Victoria, Australia), their Healthy Together Geelong programme implemented a number of systemic changes to address determinants of health to improve people's lives where they live, learn, work and play. Healthy Together Geelong is one of 12 prevention areas under the Victorian State Government's Healthy Together Victoria initiative which is a \$100m cluster randomised trial of a novel, 'whole system' initiative'.¹⁵⁷ A collaboration in Auckland, 'The Healthy Auckland Together Programme' provided resources to support people living to eat well, live physically active lives and maintain a healthy body weight.²⁷⁰ A community based approach in Nizwa City (Oman) included training for teachers in physical activities, building of gymnasiums and pathways for communities and awareness campaigns.¹⁶⁰ These first four city case studies did not report an outcome measure.

The Healthy Weight Programme in Amsterdam took a comprehensive whole systems approach, from which it is reported to have achieved a reduction in children that are overweight or have obesity from 21% to 18.5% and the number of overweight children fell by 12% between 2012 – 2015.^{205,271 272} Anchorage (Alaska, Canada) achieved similarly impressive results with a 5.4% decline in the overweight and obesity rates among children from 2004 to 2014 (2.2% relative decrease) through a range of initiatives across the childcare and school settings and community action plans.²⁷³ In Cambridge (USA) a multidisciplinary team developed and implemented Healthy Living Cambridge Kids (HLCK), which comprised multicomponent initiatives targeting community, school, family, and individuals to mobilize environmental and policy initiatives, resulting in reduced BMI and obesity.²⁷⁴ 'Get Healthy Philly', an initiative to improve the Philadelphia (USA) city's nutrition, physical activity, and tobacco environments by making healthy choices easier for all Philadelphians.²⁷⁵ They achieved a 6.5% reduction in childhood obesity rates for students and achieved a larger reduction amongst children of colour (African Americans and Asians) than whites – the only city in the US to have achieved this.²⁷⁶ In Seinajoki (Finland) they adopted a health in all policies (HiaP) approach with initiatives across a range of settings (maternity clinics, day care centres, primary schools and after school clubs and community clubs). This resulted in 1 in 10 five year olds being overweight or having obesity in 2015 as compared to 1 in 6 in 2009.^{277,278} Finally, after decades of increases in obesity, New York City saw obesity decline 5.5% between 2006-07 to 2010-11, through the Mayor-led comprehensive programme of initiatives.^{279,280}

3.6. Discussion

Inductive thematic analysis of the results of this systematic review identified seven themes. Schools and childcare settings made up the most studies (#27), with the remaining being distributed across; education and support (#20); multi-component (#17); healthy food availability (#11); physical infrastructure (#11); restaurants and food outlets (#6) and; marketing and nutritional information (#4).

School and childcare facilities are a popular setting for initiatives to address obesity in children. However, overall the results were mixed with only three studies^{193,197,199} reporting a positive impact on reducing BMI, obesity prevalence or mean weight reduction. In addition, all of these studies had multiple reinforcing initiatives within this setting.

Children and young people can typically spend a third of their day in school, therefore initiatives in this setting to prevent and treat obesity are important. However, it appears that single short-term initiatives have limited impact unless they are part of a coherent suite of initiatives.

The importance of ‘first 1000 days’ is widely accepted.^{281,282,283} It was surprising and disappointing how little was found in literature relating to this period regarding obesity measures. Only Amsterdam led an initiative in this area, screening pre-birth for the risk of obesity in babies and providing intensive counselling for expectant mothers deemed to be at an elevated risk.²⁰⁵

When it comes to what we eat, we are heavily influenced by our food environment and our context.^{241 284} This is particularly true for children^{259,285} and in cities²³⁹ with richer people tending to have healthier diets than poorer people.¹⁸³ It is therefore understandable that cities have tried numerous initiatives to improve access and availability to healthy food for less affluent communities. Whilst the initiatives showed some positive results, this alone did not show an impact on obesity. One study found that making the same healthy food available to poorer communities that are available to wealthier communities only addresses 10% of the issue.²⁸⁶ The real issue – and therefore solution – is that the poor need more money so they can afford healthy food. So, whilst initiatives to improve availability of healthy food are admirable, and in part beneficial, we should not lose sight of addressing the real issue – reducing poverty.

Results and outcomes from the education and support initiatives were variable, however there could be limitations and biases explaining this lack of effect which are explored further in section 3.10. Leveraging existing assets^{257,258,259} and developing a support network for the individual^{253,242,243} contribute to more positive impacts on reducing obesity. Whilst education and messages about a healthy diet and physical activity are important, the evidence from this review suggests that alone they are not enough. What comes through as an important factor for success is involving parents (in relation to children with obesity) and peer groups generally²⁸⁷ – there must be multiple reinforcing and supportive messages. Healthcare professionals are well placed and respected to deliver effective lifestyle initiatives for weight loss and providing referrals to weight management and physical activity services.^{288,289} Chapter 4 explores perceptions of healthcare and physical activity providers further.

Physical activity is also key to reducing obesity. Changes in the home and work environment and the way we travel in cities have led to declining rates of daily energy expenditure.²⁹⁰ The Children’s Commissioner for England²⁹¹ identifies that children today are the least active ever, in part because the area around a home where children can play unsupervised has shrunk by 90% since the 1970s. Busy lives, busy roads, fewer communal spaces — all of these things are making activity something that needs to be “planned, scheduled, supervised and often paid for”.²⁹¹

Cities that take a multi-component approach to address obesity show the strongest impact on outcomes. It is however not a quick fix; Amsterdam and Anchorage – both of whom now show impressive results – have had multi-component programmes of work for over 5 years.

A number of multi-component programmes were Mayoral led.^{201,262,263,292,189} Two of the most striking were Oklahoma and New York City. In Oklahoma City, Mayor Mick Cornett stood before the elephant cage at the local zoo and challenged residents to lose one million pounds. It took them five years but they did it; whilst reportedly generating a culture shift towards healthier lifestyles and revitalising the economy.^{45,264} In New York City, the Health Commissioner credited their achievements to the multi-component approach taken^{293 294} and strong leadership of the mayor.²⁹⁵ The approach of having mutually supporting initiatives at numerous levels is supported by other studies.^{290,296} A number of authors^{205 255 292} reference the EPODE approach. Ensemble Prévenons l’Obésité Des Enfants (EPODE) originated in

France but has been implemented in more than 500 communities across different countries. It stresses the importance of action at all levels and the prominent role of Mayors.²⁹⁷

The obesity epidemic is a result of the environment in which we live, which has been created by policies spanning building regulations to food production to transport. The author's view is that the issues that are driving increases in obesity²⁹⁸ will only be addressed by systemic policy action to reduce obesity. Mayors, with their powers and access to the policy levers spanning areas such as planning and public transport, will be key. Therefore, in addition to their role in providing system leadership, they must take direct action on policy initiatives to reduce obesity. In addition, the link between the drivers of and actions to address obesity and climate change have been known for a number of years.²⁹⁹ Building on this, more recently, Swinburn et al¹⁷⁴ describe the interconnected nature of food security (including obesity) and climate change, which they call a 'Global Syndemic'.

We have created a global obesity epidemic which requires a multi-component and multidisciplinary approach. However, for the most part initiatives in cities appear to be single, isolated and short term. Multi-level, multi-component initiatives in concert are needed due to the multi-factorial nature of obesity and its proven links to both the social and built environment.

The initiatives to address obesity do not provide quick fixes and there is a need for sustained and relentless focus. Whilst the issue of obesity is complex the solutions are not complicated – indeed they are relatively simple – and there is evidence from cities across the world that they are possible to achieve. Such initiatives could also have wider benefits for the environment. For example, active travel increases physical exercise and reduces air pollution from cars. Improved diet reduces processed foods and increases natural plant-based diet. Water availability to fill bottles reduces the use of single use plastic bottles.

One of the objectives of this research was to connect academic research with real world policy opportunities to improve urban health. Based on this systematic review, the author and the research team debated the necessary initiatives to reduce obesity and produced the '*composite model of initiatives to address obesity in cities*', below in section 3.7. These initiatives are a combination of educational, fiscal, regulatory and environmental approaches. They are across a range of settings and are set against five aspirational areas.

3.7. Implication of this study for City Health Officials

Whilst obesity is not confined to city populations, cities are home to more than half of the world's population with concentrated groups at high risk of obesity. Therefore, a focus on city level initiatives has the benefit of impact at scale on a significant number of the population that are disproportionately affected by obesity. As well as providing a summary and synthesis of the evidence, the author has developed a novel composite model of initiatives that any city can use when they are planning the necessary initiatives to reduce obesity.

Composite model:

1. Eliminate Child Poverty.
 - a. Interventions to increase employment and, depending on city context, equally importantly reduce in-employment poverty (through policies such as city-wide minimum wage policies for example).
 - b. Improve any existing food voucher schemes, for example SNAP in the United States, so that it incentivises healthy food and disincentivises unhealthy food.
2. Invest in the first 1000 days (from conception) to prevent obesity in children.
 - a. Culturally tailored healthy nutrition and exercise and obesity information to all expectant mothers.
 - b. Screening of babies and infants for risk of obesity; intensive support for expectant mothers deemed to be at high risk.
 - c. Benchmark and increase rates of breastfeeding, local government owned or licensed (for example transport system, libraries, high street cafes) to be required to allow / promote breastfeeding.
3. Make the healthy choice the easy choice.
 - a. Remove or reduce marketing and placement (availability) of HFSS (high fat, sugar and salt foods).

- i. Ban HFSS marketing on public transport, community/government owned or licenses buildings and events (e.g. sporting fixtures and concerts).
 - ii. Restrict media and marketing of HFSS targeted at children.
 - iii. Instigate a social media and behaviour change campaign which does not normalise obesity but equally does not stigmatise individuals with obesity. Making the links between obesity and the environment (personal and planetary) health.
- b. Make (free) water the drink of choice. Increase access to water by:
 - i. Installing water fountains across the city and/or requiring high street cafes (and others) to top up water bottles free of charge.
- c. Work with local business, shops, supermarkets and schools to transform the food environment
 - i. Restrict HFSS fast food shops around schools.
 - ii. Manage portion sizes (restrict where possible – i.e. in schools) by standardised school plate and portion size.
 - iii. Work with food providers to reformulate foods to reduce fat, sugar and salt. Driven by a levy / tax (e.g. sugar tax plus)
 - iv. Work with shops, supermarkets and others to remove products in ‘impulse buy areas’ e.g., checkout queues or in/around transport hubs / intersections and increase the amount and placement of healthy food (incentives through reduced tax). For example, fruit (instead of chocolate and crisps) at tube / metro stations
- d. Create safe and active streets.
 - i. Restrict traffic around schools during morning and afternoon start and finish times
 - ii. In all planning considerations, prioritise firstly; play, pedestrians, cyclists/scooters, public transport, electric vehicles and finally cars and lorries. Physical infrastructure to enable and promote children being active should be part of all planning decisions.

This will also improve air quality and asthma and reduce carbon emissions.
- e. Involve families and peers in the interventions to create multiple supporting and reinforcing networks.

4. Create Healthy Schools and Childcare Settings

- a. All settings to be HFSS free. The link with the environment could be extended here and all settings could also become single use plastic free too.
- b. Provide training for all existing and future education and childcare professions, including but not restricted to teachers and assistants, on healthy lifestyle and obesity and training in offering very brief advice related to obesity.
- c. Increase physical activity of children, through interventions such as the ‘daily mile’. Education regulators, for example OFSTED in England, to include provision of water and healthy school meals and exercise as integral part of their assessment. Only schools meeting this broader assessment criteria can achieve overall ‘outstanding’ status.
- d. Fully utilise the built assets of schools; for example playgrounds as farmers’ markets at weekends and halls for affordable community exercise classes
- e. Instigate child measurement programme (or improve if existing);
 - i. Annual childhood measurement across all schools
 - ii. Children who are overweight or have obesity to be given supported action plan
- f. Target support for schools and communities with high rate of children who are overweight or with obesity.

If the above are the ingredients or the ‘what’ of requirements, then the following can be learnt from other cities in terms of the ‘how’:

5. Maximise the cities’ unique assets.

Cities are, typically, seen as a coherent place based ‘unit of transformation’ that are linked by a Mayor and governance, single public transport infrastructure and public services, leading academic and research units, a diverse and transient population and are home to a range of arts, sports and culture. All of these assets should be utilised in the fight against obesity. The list below identifies what appear to be the critically important approaches to using these assets:

- a. Active support and leadership from the Mayor (or very senior politician) and clinical/public health leaders. Because of the multi-component and multi-disciplinary requirement – political leadership is essential.

- b. Utilise the trust voice of the breadth of healthcare professionals in both offering ‘very brief advice’ (VBA) and referring into physical activity provision in communities.
- c. Co-create, with the public and a broad range of stakeholders, a shared vision for the health of the city. Around which, specific statements and ambitions are made, for example ‘By 20XX we will have reduced child poverty by xx%’
- d. Engage and utilise the full breadth of the cities assets, including transport infrastructure, professional and amateur sports clubs, creative industries such as media and the arts and the commercial sector.
- e. Sustained effort and resources, along with a relentless focus, are required over a number of years to make a significant impact on reducing obesity.

This composite of interventions needs to be considered in the local city and national context.

3.8. Implication of this study for National Policy Makers

Whilst the focus of this study is on what cities can do to address obesity, cities do not operate in isolation from their host nation. This review has identified the need for concerted initiatives which will also require the support and action from national policy makers.

3.9. Implication of this study for academics/research and future work

To the authors knowledge, this is the first systematic review of citywide initiatives to address obesity. It fills an important gap in our knowledge by providing a comprehensive summary of the evidence. Through the peer reviewed associated publication, the author has also provided the excel database of the 96 initiatives so that academics can interrogate and freely use. In addition, the author, with support from his supervisors and using the evidence from this review, has developed a novel ‘composite model of initiatives’ that can be further tested and applied. As with the previous chapter, the role of Mayors in relation to initiatives to reduce obesity would be an interesting area of further study.

3.10. Strengths and Weaknesses/Limitations

This study has several limitations. To begin with, although it is a comprehensive systematic review it is not a ‘live review’ and therefore it is a snapshot in time of what cities have been reported as doing to address obesity. Another limitation, particularly for a global review, is that only publications in English language were included and the bias in the number of citations from New York City specifically and North America more generally. There is also potential publication bias, whereby initiatives that have positive and demonstrable impact are more likely to be published. Also, coding of the citations to obesity was performed solely by the author which, as demonstrated by the recoding, is susceptible to subject interpretation. Finally, but importantly, due to the variation in study designs and reporting types, along with the majority of results deriving from simple descriptive text; no formal quality assessment was carried out.

These weaknesses and limitations clearly have some impact. However, the aim of this research was to identify initiatives that cities were adopting in order to address obesity and to develop a composite model of initiatives, based on a synthesis of the gathered evidence, that cities could use to address obesity. The author is content that even with the study’s limitations this has been achieved. The author would welcome further challenge and testing of the composite model.

3.11. Conclusions

Obesity is a global epidemic which is a complex problem that requires multiple initiatives to be instigated across different disciplines. The initiatives previously carried out do not provide a quick fix and therefore sustained and enduring effort and commitment is needed for improvements to be shown. Whilst the issue and causes of obesity are complex, the initiatives to begin to address it are not.

This systematic review of almost 100 research studies into city-wide approaches to address obesity finds that single measures are largely ineffective and multi-component initiatives spanning education, policy, regulation and the environment are urgently needed to reduce growing rates of obesity. To have the best chance at bringing lasting change, initiatives must work across the individual, community, city and at national level.

Furthermore, and as an additional positive measure, action taken to address obesity will also be good for the environment. For example, active travel increases physical exercise and reduces air pollution from cars. Improved diet reduces processed foods and increases natural plant-based diet. Water availability to fill bottles reduces the use of single use plastic bottles. Personal health and planetary health are intimately and inextricably intertwined.

Recently, there has been the emergence of GLP-1 receptor agonist drugs (trade names including Ozempic and Wegovy) having a significant impact on obesity.³⁰⁰ However, this should not be seen as a ‘silver bullet’ solution. The long term effects are unclear and further research is required. In addition, in the author’s view, it is a perverse world whereby we allow commercial determinants to create an obesogenic environment leading to the obesity epidemic whilst then promoting an equally commercially driven medicalised solution to a problem. This is both unaffordable, in increased healthcare costs, and unethical.

The purpose of this research was to connect academic research with policy initiatives to aid the real world. Based on this academic review, the author debated the necessary initiatives to reduce obesity and produced a ‘*composite model of initiatives to address obesity in cities*’. The initiatives are a combination of educational, fiscal, regulatory and environmental approaches. They are across a range of settings and are set against five aspirational areas. It is important to acknowledge that it is not the case of simply choosing one or two initiatives. The optimal solution to decreasing obesity is multiple reinforcing initiatives.

3.12. Reflections from carrying out this study

Using the systematic scoping review as the basis for this in-depth systematic review was hugely beneficial. There were three key reflections and learning.

Firstly, using the scoping review saved a considerable amount of work in (re)searching databases that had already been searched and coded as part of the wider scoping review. The implication of this for the author, and other researchers, was to use the scoping review (and other scoping review databases) to deep dive into other areas.

Then, taking the in-depth analysis of the systematic review resulted in eight of one hundred and four citations coded to obesity in the scoping review being recoded. This is 8% recoding from the scoping review. This could be a particular issue concerning the scoping review in this thesis. It could be an issue related to the close relationship between obesity and the two other coded categories of the scoping review of diet and physical inactivity. It could be a combination of all these, and other, factors. It does however suggest that some care should be taken in any precise interpretation of scoping reviews.

Finally, as part of the journey of the author in gaining a foundation in becoming a researcher, it was beneficial to gain a practical understanding of the differences and strengths and weaknesses of scoping reviews and systematic reviews.

3.13. Acknowledgements

The author would like to thank John Lotherington and Astrid Koblmuller from the Salzburg Global Seminar, Jamie Bussell from Robert Wood Johnson Foundation and all the participants of the conference ‘Halting the Childhood Obesity Epidemic: Identifying Decisive Initiatives in Complex Systems’ (14th – 19th December 2019) for their expert views that fed into this review, both explicitly and implicitly.

Chapter 4: Maximising physical activity from healthcare in London

"If physical activity were a drug, we would refer to it as a miracle cure, due to the great many illnesses it can prevent and help treat."

UK Chief Medical Officers 2019

4. Plain English abstract

This study, conducted by way of a cross-sectional survey, examined the views of 197 respondents relating to physical activity needs and services. The respondents came from a wide range of relevant roles and professions, representing all 33 local government areas in London.

The aim of the study was to understand any gaps or disconnect between those working within the healthcare sector and those in the physical activity sector. The findings from the data showed overall a good level of confidence both in and outside the healthcare sector in understanding the physical activity needs of potential service users. However, confidence was lower in respect of engagement and follow up in relation to the physical activity sector.

A number of themes emerged from the analysis of priorities to enable physical activity to support better health outcomes. From these, suggestions for action are proposed for policy makers and those working within the healthcare and physical activity sector.

4.1. Introduction

Inactivity is also one of the top causes of all disease and disability.^{301 302} Globally, one in four adults are not active enough.³⁰² Therefore, whilst it is shocking it is perhaps unsurprising that physical inactivity accounts for over 5 millions deaths globally³⁰³ and is responsible for a significant economic burden, necessitating significant additional healthcare costs.³⁰⁴

Conversely, being physically active is proven to reduce obesity,^{305,306} as well as assisting in stopping or ameliorating a range of other conditions, including depression,³⁰⁷ diabetes,³⁰¹ including gestational diabetes,³⁰⁸ various cancers,^{309,310} hypertension³¹¹ and cognitive decline.³¹² A randomised control trial found that physical activity was as effective as prescribed drugs for secondary prevention of cardiovascular disease and diabetes.³¹³

Urban environments promote obesity.¹⁸⁷ As identified in the systematic review (chapter 3), the reasons for obesity in cities are complex and require multicomponent actions and a

comprehensive approach. As identified in the ‘composite model’, and as a priority by the World Health Organisation (WHO), promoting physical activity in healthcare is a priority area.³¹⁴ In London, research shows that physical activity averted over 36,000 case of cardiovascular disease, over 16,000 cases of diabetes and just under 80,000 instances of depression.³¹⁵

Research on the positive impact of physical activity promotion in healthcare is beginning to emerge.^{314,316,317} The benefit of community wide physical activity initiatives in cities and regions is growing too.³¹⁸⁻³²⁰ Therefore, increasing the promotion of physical activity from healthcare into the community, particularly in cities, offers the potential to reduce obesity and promote physical and mental health more widely.

4.2. Aim of this study

The aim of this study was to understand the perceptions and priorities of those that work in healthcare, those that refer people to physical activity services in the community and also the physical activity providers that are recipients of the referral from healthcare.

4.3. Research question and research objectives

The primary research question for this study was: What opportunities are there for urban healthcare to work with physical activity providers ?

This was supported with these secondary research questions:

1. How confident are those who work in healthcare in understanding the physical activity needs and provision of physical activity services outside of healthcare ?
2. How confident are those that work outside of healthcare in working with and alongside healthcare providers ?
3. What health conditions or population characteristics are priorities for physical activity support ?
4. What are the challenges in increasing physical activity from a healthcare perspective ?

The objective of this study was to understand and begin to bridge any gap between healthcare and access into physical activity providers, which are typically voluntary or community groups.

This objective arose because, in the author's role as Trustee of London Sport, it was noted that there was an often cited disconnect between those in the physical activity sector whose view was that the NHS was huge and impenetrable, whilst those in the NHS appeared often to be unaware of local physical activity provision.

4.4. Methods

4.4.1. Study design

Given the research questions, a cross-sectional survey was considered the most appropriate study design. A self-administered electronic questionnaire was chosen because of its relative ease and speed for respondents to complete. The author worked with London Sport on the study and questionnaire design. The questionnaire was administered and delivered by London Sport.

4.4.2. Data and analysis

The author was sent the anonymised data in an excel file by London Sport. The data was analysed using the functionality of Microsoft excel. In accordance with thematic analysis, divergence and consensus themes were explored. One question allowed for free text unstructured data. This was analysed using Natural Language Processing (NLP) which is widely used in health and healthcare.³²¹

4.5. Ethics

This study was approved by Imperial College Research Ethics (ICREC). ICREC Reference number: 6274497

4.6. Results

4.6.1. Results 1 – Survey Respondents

Two hundred and nine individuals started the survey between the period 9th May 2022 and 13th July 2022. However, nine respondents (respondents, 68, 69, 70, 72, 73, 85, 88, 140 and 177) completed less than two fields; therefore they were excluded. Three respondents (respondents 1, 2 and 4) did not work in London and because this survey was specifically looking at data from London, these responses were also excluded. This meant that there were 197 responses completed between the period of 9th May 2022 and 12th July 2022.

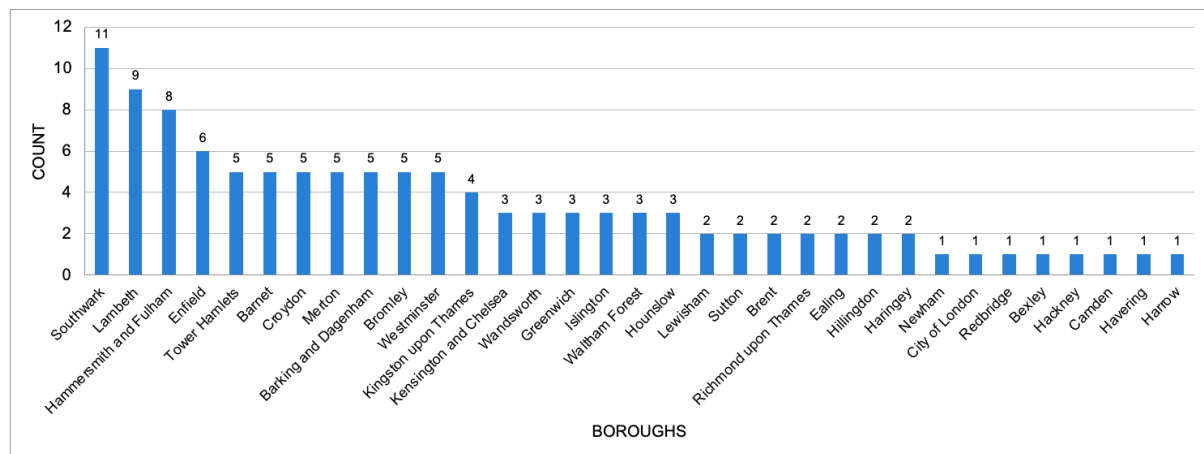
As shown in Table 4.1, of the 197 responses, 114 represented a single borough, 46 represented more than one borough and 37 represented a pan-London organisation.

Table 4.1 - Location of respondents

Location	Number	Percentage
Pan-London	37	18.78%
One Borough	115	58.38%
More than one Borough	45	22.84%
Total	197	

The breakdown of respondents that were representing a single borough (#115) is shown below in Figure 4.1. All of the thirty-two London boroughs plus the city of London (total 33) are represented. Southwark had the most responses (#11) with six boroughs (Bexley, Camden, City of London, Hackney, Havering and Redbridge) having a single response

Figure 4.1 – Number of respondents representing a single borough

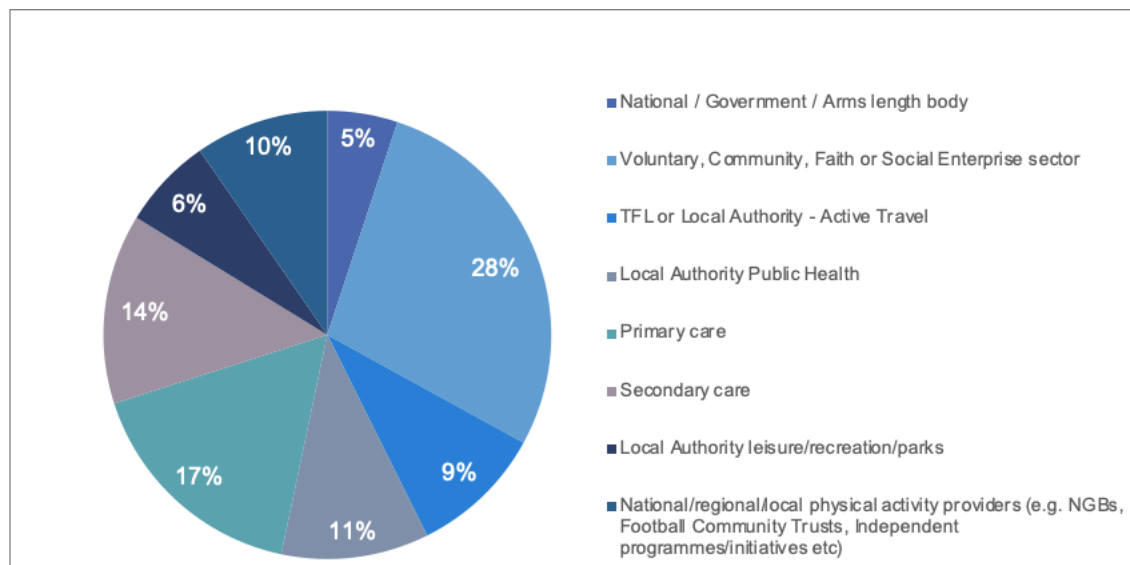


Respondents entered their ‘field of work’ entry as free text. This started as 12 different types of entry but on data cleansing and rationalising this was reduced to eight. For example, ‘TfL’, ‘active travel’ and ‘local authority travel’ were merged into ‘TfL and local authority – active travel’. The number of responses, and percentage of the total this represents, is shown in Table 4.2 and Figure 4.2.

Table 4.2 - Field of work of respondents

Field of work	Number of response	%
National / Government / Arms length body	10	5.08%
Voluntary, Community, Faith or Social Enterprise sector	55	27.92%
TFL or Local Authority - Active Travel	19	9.64%
Local Authority Public Health	21	10.66%
Primary care	33	16.75%
Secondary care	27	13.71%
Local Authority leisure/recreation/parks	13	6.60%
National/regional/local physical activity providers (e.g. NGF)	19	9.64%

Figure 4.2 - Field of work of respondents



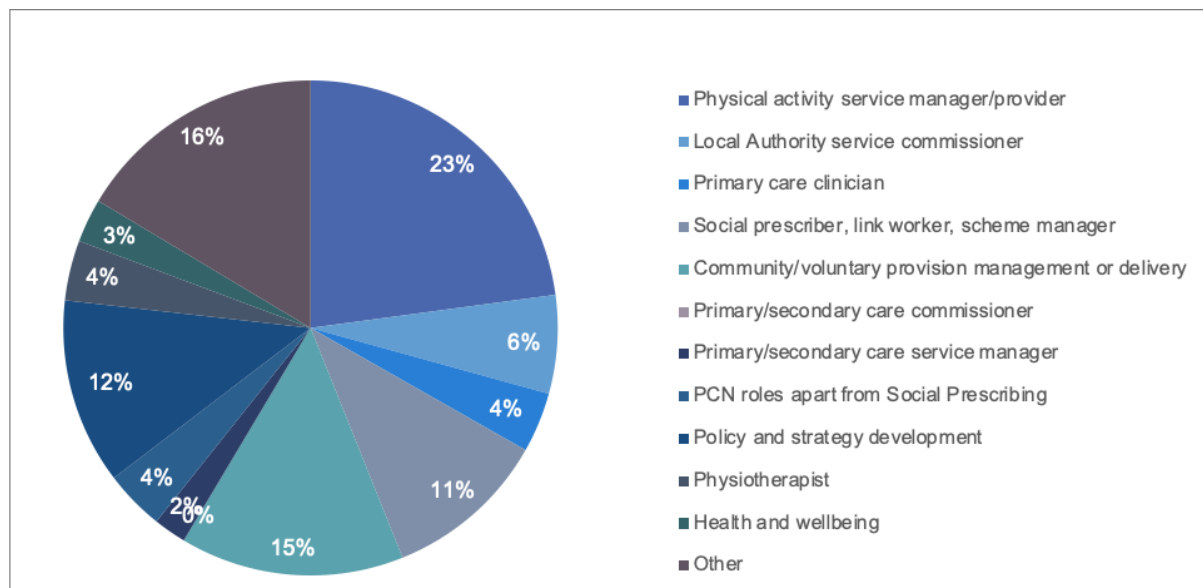
The respondents were asked to state their role or professional interest in relation to physical activity. Respondents were given 10 options to choose from. The category ‘other’ received a high number of responses. During initial data analysis, the free text data from ‘other’ was reviewed which identified two further categories (‘physiotherapist’ and ‘health and wellbeing’) which each accounted for over 5 responses. These two further categories were added to create 12 options, which are presented in Table 4.3 and Figure 4.3 below with the number of responses³ and the percentage of the total they represent.

Table 4.3 - Role / professional interest in relation to physical activity

Role/Professional Interest	Number	%
Physical activity service manager/provider	64	22.86%
Local Authority service commissioner	18	6.43%
Primary care clinician	11	3.93%
Social prescriber, link worker, scheme manager	30	10.71%
Community/voluntary provision management or delivery	41	14.64%
Primary/secondary care commissioner	0	0.00%
Primary/secondary care service manager	6	2.14%
PCN roles apart from Social Prescribing	11	3.93%
Policy and strategy development	34	12.14%
Physiotherapist	11	3.93%
Health and wellbeing	8	2.86%
Other	46	16.43%

³ The respondents were able to select more than one option.

Figure 4.3 - Role / professional interest in relation to physical activity.



The respondents were asked if they provided, commissioned or referred to physical activity opportunities. One hundred and forty one (72%) responded yes and fifty six (28%) responded no. The respondents' answer to this question was linked to their role / professional interest area, which is presented in Table 4.4.

Table 4.4 - Role/professional interest that provide, commission or refers to physical activity.

Role/Professional Interest	Yes	Yes (%)	No	No (%)	Total	Total (%)
Physical activity service manager/provider	55	85.94%	9	14.06%	64	100.00%
Local Authority service commissioner	15	83.33%	3	16.67%	18	100.00%
Primary care clinician	10	90.91%	1	9.09%	11	100.00%
Social prescriber, link worker, scheme manager	25	83.33%	5	16.67%	30	100.00%
Community/voluntary provision management or delivery	32	78.05%	9	21.95%	41	100.00%
Primary/secondary care commissioner	0	0.00%	0	0.00%	0	100.00%
Primary/secondary care service manager	4	66.67%	2	33.33%	6	100.00%
PCN roles apart from Social Prescribing	9	81.82%	2	18.18%	11	100.00%
Policy and strategy development	18	52.94%	16	47.06%	34	100.00%
Physiotherapist	11	57.89%	8	42.11%	19	100.00%
Health and wellbeing	4	50.00%	4	50.00%	8	100.00%
Other (please describe)	32	69.57%	14	30.43%	46	100.00%

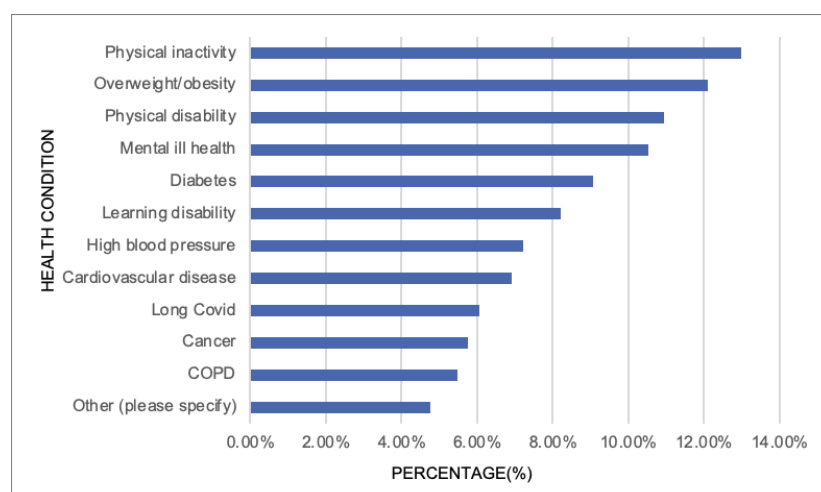
4.6.2. Results 2 – Health conditions

The respondents were asked to select from a list of specific health conditions that they commission, refer into or provide. Twelve options were presented from which the respondent could choose⁴. The responses are presented in Table 4.5 and Figure 4.4 below.

Table 4.5 - Health conditions that the respondent either commissions, refers in to or provide.

Health Conditions	Number of responses	%
Cancer	40	5.76%
Cardiovascular disease	48	6.92%
Diabetes	63	9.08%
Physical disability	76	10.95%
Learning disability	57	8.21%
Mental ill health	73	10.52%
Physical inactivity	90	12.97%
Overweight/obesity	84	12.10%
COPD	38	5.48%
Long Covid	42	6.05%
High blood pressure	50	7.20%
Other (please specify)	33	4.76%

Figure 4.4 - Health conditions that the respondent either commissions, refers into or provides



⁴The respondents were able to select more than one option

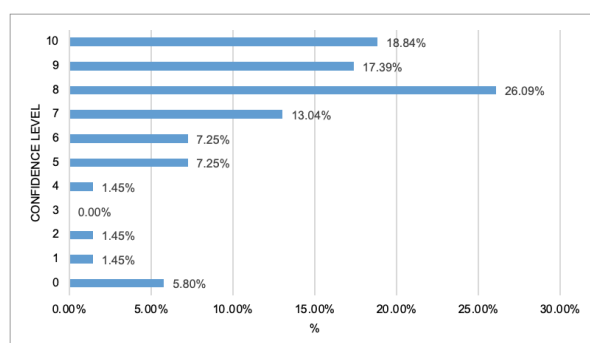
4.6.3. Result 3 - Health sector confidence in understanding the physical activity needs of service users

Two questions related to those that work in the health sector. The first question was how confident they felt in understanding the physical activity needs of their clients, with a score of 0 indicating very low and 10 indicating high confidence. There were sixty nine responses to these questions, which is broadly in line with the expected number from the 'field of work, section 4.5 responses (which had 33 from primary care and 27 from secondary care). The results are presented in Table 4.6 and Figure 4.5. Respondents self-selected if they were from the health sector (this section) or 'outside the health sector (section 4.6.4). Not all respondents completed either this question or the question presented in section 4.6.4.

Table 4.6 - Health sectors confidence in understanding the physical activity needs of users

Confidence level	Number of Respondents	%
0	4	5.80%
1	1	1.45%
2	1	1.45%
3	0	0.00%
4	1	1.45%
5	5	7.25%
6	5	7.25%
7	9	13.04%
8	18	26.09%
9	12	17.39%
10	13	18.84%
Total Response	69	100.00%

Figure 4.5 - Health sectors confidence in understanding need of patients in relation to physical activity

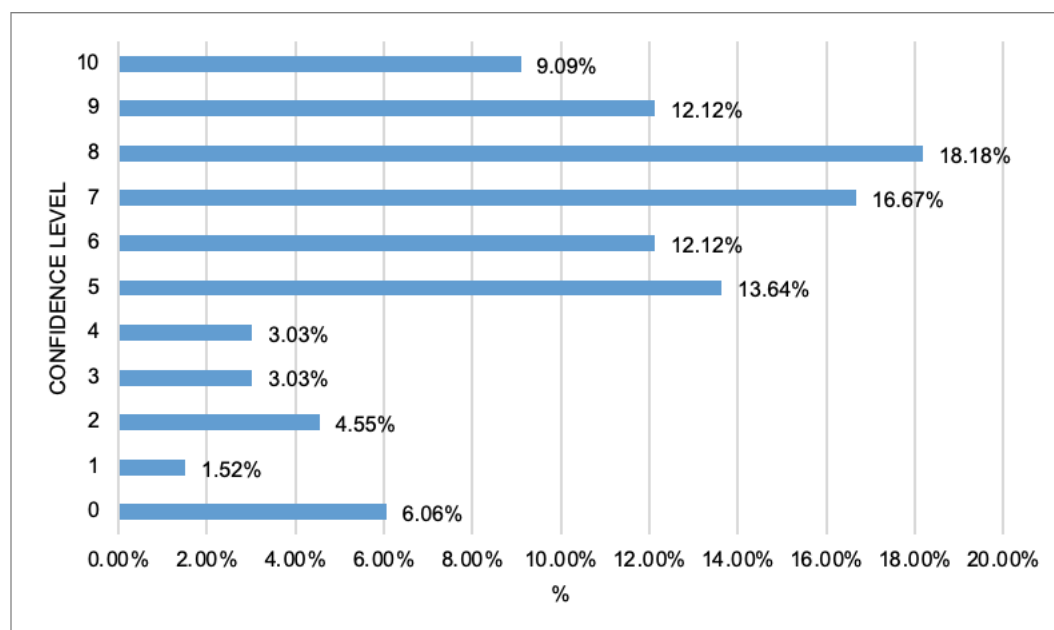


The second question asked how confident respondents felt with following up on these identified needs. Again, a Likert scale was used with 0 being very low and 10 being high confidence. Table 4.7 and Figure 4.6 below presents the results of the sixty six respondents that answered this question.

Table 4.7 - Health sector confidence in following up on identified needs of physical activity

Confidence level	Count of Confidence	%
0	4	6.06%
1	1	1.52%
2	3	4.55%
3	2	3.03%
4	2	3.03%
5	9	13.64%
6	8	12.12%
7	11	16.67%
8	12	18.18%
9	8	12.12%
10	6	9.09%
Total Response	66	100.00%

Figure 4.6 - Health sector confidence in following up on identified needs with managers/commissioners/providers of physical activity



4.6.4. Result 4 - Outside the health sector confidence in role of physical activity in relation to health

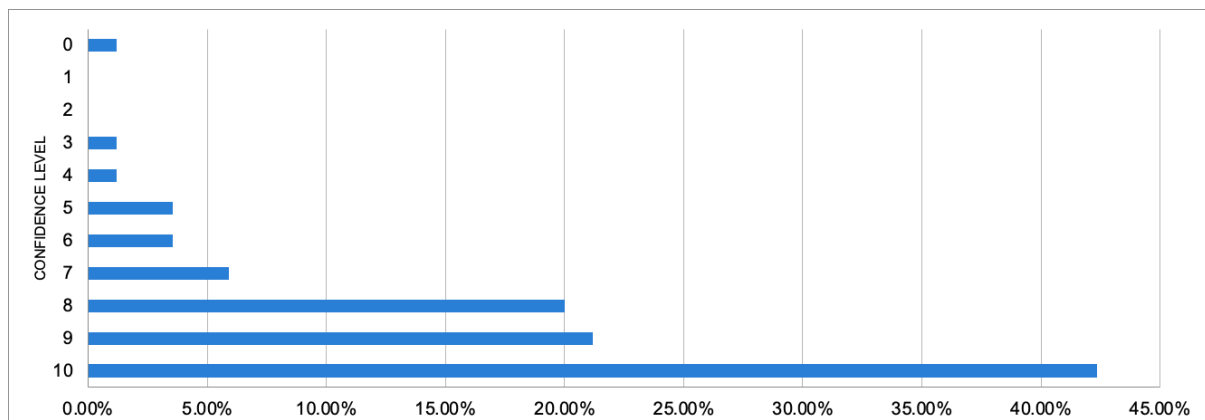
Respondents that were from outside of the health sector were asked very similar questions as those within the health sector in the previous section.

Firstly, how confident were non health sector respondents about the role of physical activity in relation to health. The same Likert scale was used on these two questions, 0 very low confidence and 10 high confidence. Table 4.8 and Figure 4.7 presents the results of the sixty six respondents that answered this question.

Table 4.8 - Non health sector respondents confidence in the role of physical activity to health.

Confidence level	Count of Confidence	%
0	1	1.18%
1	0	0.00%
2	0	0.00%
3	1	1.18%
4	1	1.18%
5	3	3.53%
6	3	3.53%
7	5	5.88%
8	17	20.00%
9	18	21.18%
10	36	42.35%
Total Response	85	100.00%

Figure 4.7 - Non health sector respondents confidence in the role of physical activity to health.

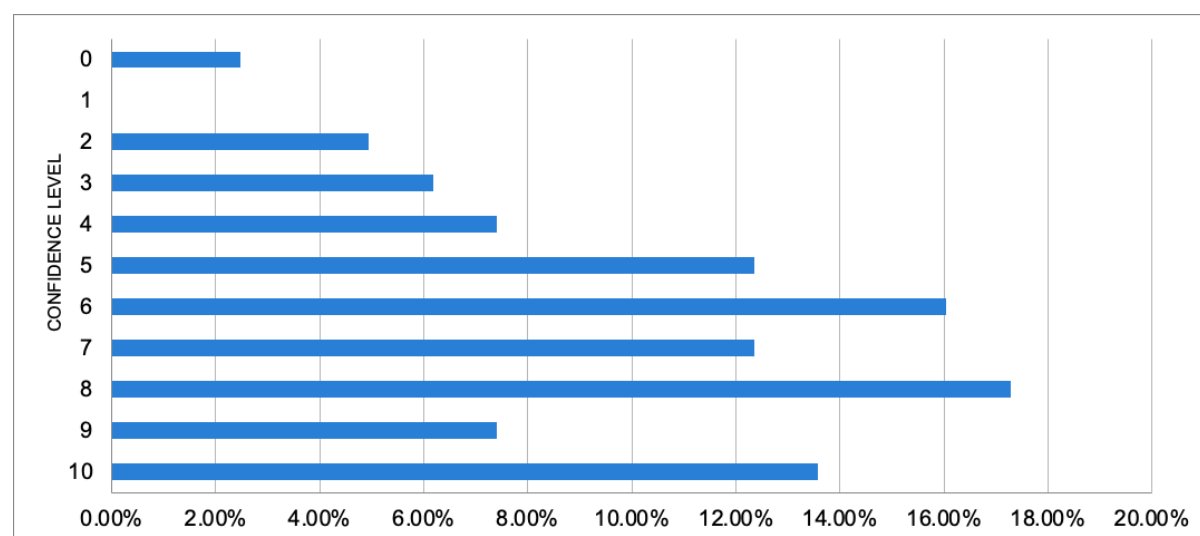


The second question for those that work outside the health sector covered how confident they felt about engaging on physical activity with the health sector. Table 4.9 and Figure 4.8 presents the results of the eighty one respondents that answered this question.

Table 4.9 - How confident those that work outside the health sector feel about engaging with the health sector regarding physical activity?

Confidence level	Count of Confidence	%
0	2	2.47%
1	0	0.00%
2	4	4.94%
3	5	6.17%
4	6	7.41%
5	10	12.35%
6	13	16.05%
7	10	12.35%
8	14	17.28%
9	6	7.41%
10	11	13.58%
Total Response	81	100.00%

Figure 4.8 - How confident those that work outside the health sector feel about engaging with the health sector regarding physical activity?



4.6.5. Results 5 - Priorities to enable physical activity to better support delivery of health outcomes

All respondents were asked; what were their top 3 priorities to enable physical activity to better support the delivery of health outcomes? Answers were provided as free text.

The author utilised the Natural Language Processing (NLP)³²² expertise within the Institute of Global Health Innovation (IGHI) to carry out the NLP.

The results of applying NLP identified the following priorities

Priority 1:

- Inclusivity and accessibility.
- Funding and cost.
- Collaboration and networking.
- Engagement with specific populations.
- Awareness and education.

Priority 2:

- Green Social Prescribing and parks for health.
- Infrastructure and accessibility.
- Collaboration and engagement.
- Behavioural change initiatives.
- Funding and sustainability.
- Mental health support.

Priority 3:

- Adequate commissioning from new systems.
- Support evaluation of initiatives.
- Improving urban environments for active travel.
- Community engagement.
- Behavioural change management training and resources.
- Motorists' education for considerate active travel.

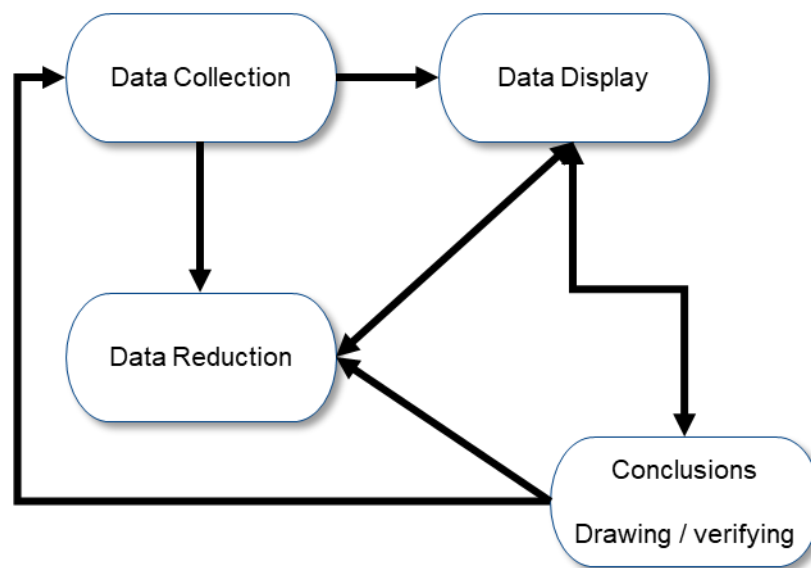
Overall Goals:

- Priority 1 is focused on making physical activity inclusive and accessible to various populations, including vulnerable groups and those with health conditions.
- Priority 2 emphasizes the importance of green spaces, sustainable funding, and behavioural change initiatives for active travel.

- Priority 3 is centred around commissioning, evaluation, and community engagement to enhance physical activity opportunities.

In parallel to using NLP, as a way to compare results, a manual process was applied. Miles and Huberman³²³ three stage process was used for its simplicity. The three stages involve; data reduction; data display and data conclusion, as shown in Figure 4.9, with visualisation a key technique.

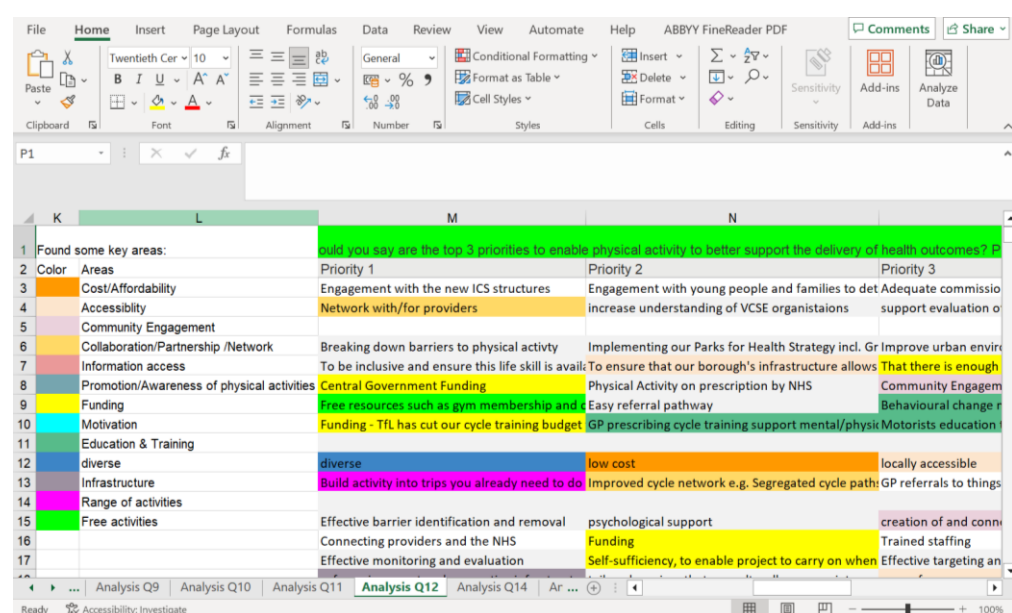
Figure 4.9 - Miles & Huberman Model for Thematic Analysis



Miles & Huberman Model³²³

Several cycles of the models process were completed using colour coding. Figure 4.10 shows a screen shot during these cycles. The same themes were identified; collaboration and engagement; funding and sustainability; accessibility and inclusivity; creating awareness and behaviour change.

Figure 4.10 – Screen shot of manual grounded theory analysis



4.6.6. Results 6 - Specific population groups to be targeted through better integration of healthcare and physical activity providers

The participants were asked if there were any specific population groups that should be targeted through the better integration of healthcare and physical activity providers. Participants were given eleven population groups and asked to select the three most important. One hundred and sixty one respondents (82% of the total 197) answered this question, with the results presented below in Table 4.10 and Figures 4.11 and 4.12.

Table 4.10 - Population groups that should be targeted through the integration of physical activity into health care

Target group	Count	%
Those with long term conditions	84	15.03%
Those living in the most deprived communities	108	19.32%
Those from Black, Asian or minority ethnic communities	62	11.09%
Early years (pre school)	16	2.86%
Children and young people	56	10.02%
Older people	42	7.51%
People of working age	14	2.50%
Those overweight or with obesity	56	10.02%
Those with mental health challenges	71	12.70%
The whole population - no targeted work	36	6.44%
Other (please specify)	14	2.50%

Figure 4.11 - Populations groups that should be targeted through the integration of physical activity into health care (bar chart)

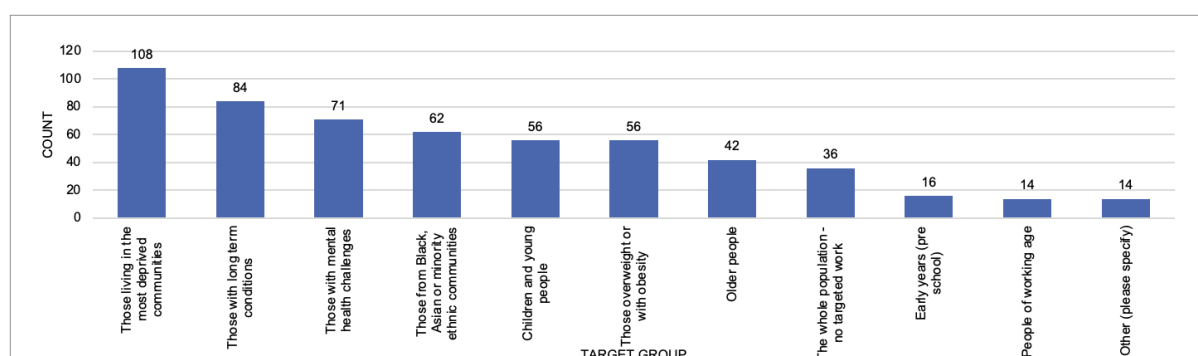
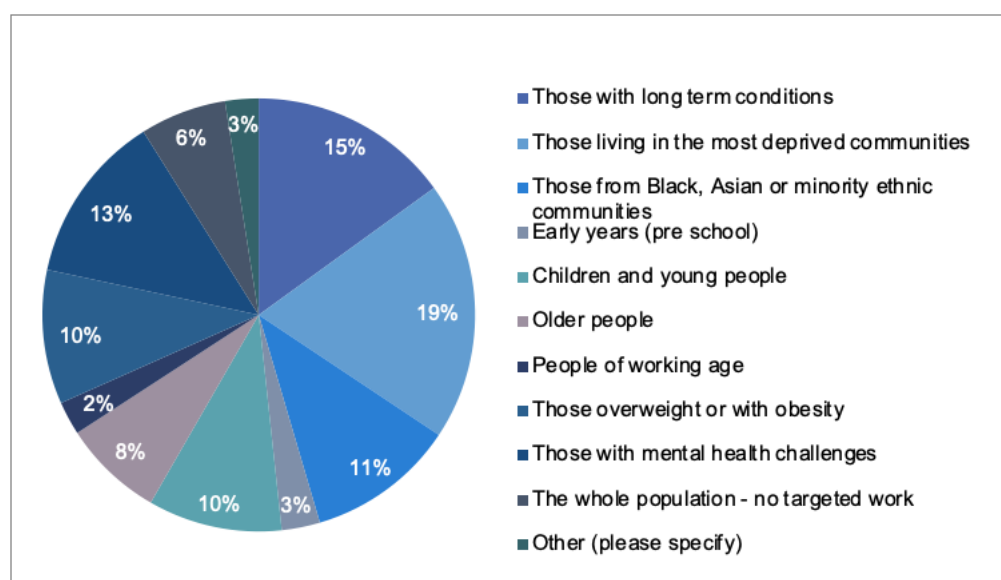


Figure 4.12 - Populations groups that should be targeted through the integration of physical activity into health care



4.6.7. Results 7 - Challenges to using physical activity more widely in London

Respondents were asked to select, from thirteen predefined options, what they considered the three biggest challenges to using physical activity more widely within community health care in London? One hundred and fifty seven respondents (79.7%) answered this question. The results are presented in Table 4.11 and Figures 4.13 and 4.14.

Table 4.11 – Biggest challenges to using physical activity more widely in healthcare

Challenges	Count	%
Lack of investment	75	14.26%
Lack of infrastructure	37	7.03%
Competing NHS priorities	37	7.03%
Competing Local Authority priorities	22	4.18%
Lack of public support/motivation	36	6.84%
Lack of information on appropriate contacts	51	9.70%
Lack of evidence of effectiveness	11	2.09%
Lack of community engagement	35	6.65%
Lack of knowledge of available sport and physical	73	13.88%
Lack of clarity about physical activity appropriate	38	7.22%
Lack of coordination presence / body / organisation	44	8.37%
Lack of free activities/resources	65	12.36%
I don't know	2	0.38%

Figure 4.13 - Biggest challenges to using physical activity more widely in healthcare

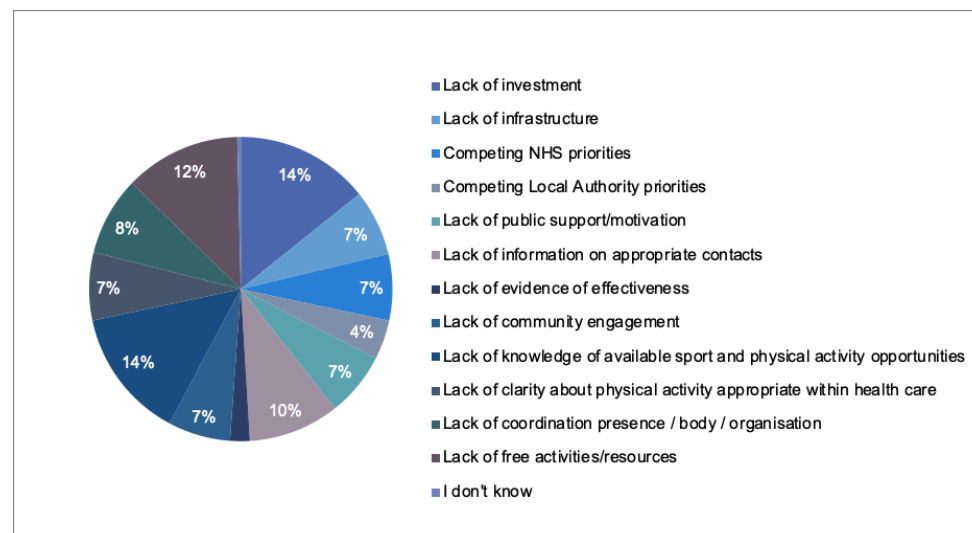
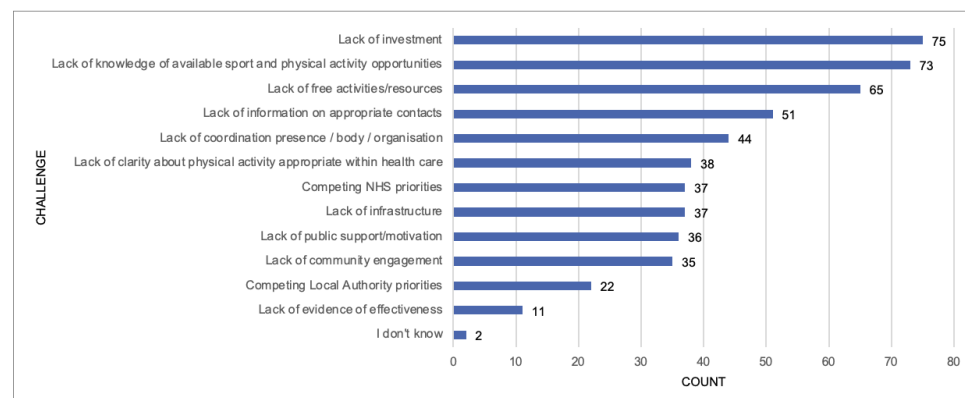


Figure 4.14 – Biggest challenges presented as bar chart and actual numbers not percentages.



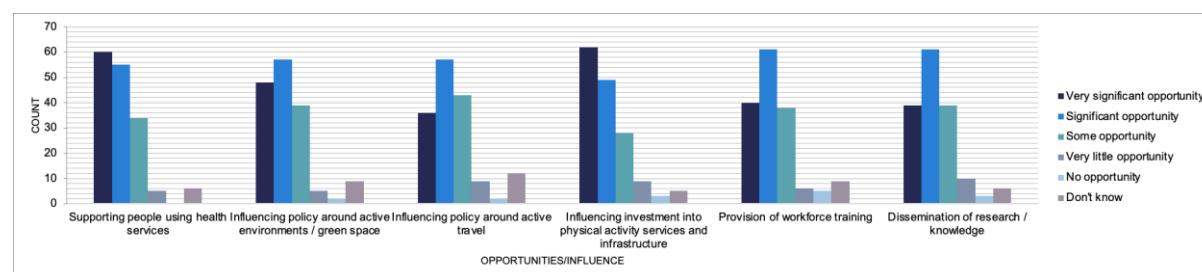
4.7.Results 8 - Opportunities for health and physical activity services to influence the wider system

Respondents were asked whether they thought that opportunities for health care and physical activity services working together to influence the wider system existed. Six predefined themes were presented, and respondents asked to rank these from Very significant opportunity / Significant opportunity / Some opportunity / Very little opportunity / no opportunity / Don't know. The results are presented in Table 4.12 and Figure 4.15 below.

Table 4.12 – Collaborative opportunities to influence the wider system

Opportunities/Influence	Very significant opportunity	%	Significant opportunity	%	Some opportunity	%	Very little opportunity	%	No opportunity	%	Don't know	%
Supporting people using health services	60	21.05%	55	16.18%	34	15.38%	5	11.36%	0	0.00%	6	12.77%
Influencing policy around active environments / green space	48	16.84%	57	16.76%	39	17.65%	5	11.36%	2	13.33%	9	19.15%
Influencing policy around active travel	36	12.63%	57	16.76%	43	19.46%	9	20.45%	2	13.33%	12	25.53%
Influencing investment into physical activity services and infrastructure	62	21.75%	49	14.41%	28	12.67%	9	20.45%	3	20.00%	5	10.64%
Provision of workforce training	40	14.04%	61	17.94%	38	17.19%	6	13.64%	5	33.33%	9	19.15%
Dissemination of research / knowledge	39	13.68%	61	17.94%	39	17.65%	10	22.73%	3	20.00%	6	12.77%
Total	285	100.00%	340	100.00%	221	100.00%	44	100.00%	15	100.00%	47	100.00%

Figure 4.15 – Collaborative opportunities to influence the wider system



4.8. Discussion

This survey was completed by nearly 200 respondents geographically covering all the 32 boroughs of London plus the city of London, giving full geographic coverage. The respondents also represented a good coverage of professions, with nearly a third from the voluntary, community, faith or social enterprise (VCSE) sector and almost a third from healthcare, which was evenly split between primary and secondary care. TfL or local authority active travel, public health and national or regional healthcare providers each accounted for around 10% .

Similarly, the mix of role or professional interest was good; in particular there was strong representation from the physical activity provider sector and community voluntary delivery and social prescriber, link work or scheme manager. These roles will be key in any referral, relationship and therefore uptake of physical activity from healthcare. The low numbers of respondents from primary/secondary care commissioner (zero) and primary/secondary care service manager (six) were not a surprise or an area of concern for the results as these roles would not be patient facing or refer into the physical activity providers.

Health Conditions

The range of health conditions that physical activity services provide for or others commission or refer into was interesting. Across the 10 areas, ‘other’ had a relatively low score (under 5% of the total) which suggests that the predetermined 10 areas provided comprehensive options. It was unsurprising that the two areas of ‘physical inactivity’ (almost 13%) and ‘overweight/obesity’ (12%) were the most common ‘health conditions’. However, these two areas were only slightly higher than other areas of which there was generally a good spread, demonstrating that participants had a good understanding of the breadth of areas to which physical activity was beneficial. It was pleasing to see among those, ‘physical disability’ (almost 11% and the third most common condition) and only slightly lower ‘learning disability’ (over 8%). Individuals with disabilities have higher rates of obesity and physical inactivity³²⁴ and physical inactivity follows, and creates, inequalities.^{325,326}

Health Sector Confidence

Overall, the levels of confidence of the healthcare sector in understanding the physical activity needs of service users was good. Over 60% scored their confidence as 8 or above (zero being very low, ten being very high) with almost 1 in 5 (18.84%) scoring the highest confidence. However, 6 respondents scored in the bottom 3 levels of confidence, with 4 respondents (accounting for just under 6 percent) scoring zero confidence. Looking into this in further detail, Table 4.13 shows the reported confidence split by role/professional interest. The statutory services of primary and secondary care, generally, show high number of responses and strong confidence.

Table 4.13 - Health sectors confidence in understanding needs of patients in relation to physical activity – split by role/professional interest.

Role/Professional Interest	Responses	Confidence levels																				Average Confidence
National / Government / Arms length body	2	4	0																			2
Voluntary, Community, Faith or Social Enterprise sector	14	8	0	8	10	9	6	7	10	0	7	9	9	10	10							7.357142857
TFL or Local Authority - Active Travel	2	7	2																			4.5
Local Authority Public Health	6	9	8	0	7	7	7															6.333333333
Primary care	21	1	6	8	10	8	5	7	8	8	5	10	8	5	8	8	10	6	6	7	6	7
Secondary care	20	9	7	5	8	10	10	10	9	8	8	9	9	8	10	9	8	8	9	9	5	8.4
Local Authority leisure/recreation/parks	1	8																				8
National/regional/local physical activity providers (e.g. NGBs,	3	8	10	10																		9.333333333

However, the levels in confidence of the healthcare sector following up with the physical activity sector was much more mixed. Just under 40% scored their confidence as 8 or above (compared to 60% on the previous question) with less than 10% scoring the highest confidence. The levels of confidence were much more evenly spread out between confidence levels five to ten. Looking into this further, Table 4.14 shows the reported confidence split by role/professional interest. Primary care and secondary care, which make up the majority of responders, show a mixed picture in confidence.

Table 4.14 - Health sector confidence in following up on identified needs – split by role/professional interest

Role/Professional Interest	Responses	Confidence levels																				Average Confidence	
National / Government / Arms length body	1	5																				5	
Voluntary, Community, Faith or Social Enterprise sector	12	8	0	4	7	5	5	10	5	9	6	10	7									6.333333333	
TFL or Local Authority - Active Travel	2	6	0																			3	
Local Authority Public Health	6	9	8	0	7	8	6															6.333333333	
Primary care	21	2	6	9	10	8	5	5	9	7	1	7	8	8	5	8	7	6	6	7	4	5	6.4
Secondary care	20	6	7	8	7	8	10	9	3	2	0	6	9	8	10	7	2	3	9	9	5	6.4	
Local Authority leisure/recreation/parks	1	8																				8	
National/regional/local physical activity providers (e.g. NGBs,	3	7	8	10																		8.333333333	

Outside Health Sector Confidence

The levels of confidence of those outside the healthcare sector regarding the role of physical activity in relation to health was very high. Over 80% scored their confidence as 8 or above. Around thirteen percent scored confidence between five and seven. Only 3 respondents scored under confidence level of five. Looking into this in further detail, Table 4.15 shows the reported confidence split by role/professional interest. This is a mirror of the health sector reported confidence, in that in the voluntary, community, faith or social sector, which accounts for the majority of responses, overall and average confidence is very high. However, this does mask some individual low scores.

Table 4.15 - Non health sector respondents confidence in the role of physical activity to health.

Role/Professional Interest	Responses	Confidence levels																																				Average Confidence
National / Government / Arms length body	8	10	8	10	10	8	10	7	10																				9.125									
Voluntary, Community, Faith or Social Enterprise sector	35	8	8	10	5	10	9	8	10	7	10	8	6	10	5	10	10	10	8	9	10	8	8	8	9	9	3	10	9	10	9	7	9	10	8	10	8.571	
TFL or Local Authority - Active Travel	10	10	9	8	8	5	7	10	0	9	9																								7.500			
Local Authority Public Health	7	10	10	10	10	10	6	9																											9.286			
Primary care	6	9	9	10	8	10	8																												9.000			
Secondary care	1	9																																		9.000		
Local Authority leisure/recreation/parks	5	4	8	9	9	9																													7.800			
National/regional/local physical activity providers (e.g. NGBs)	13	10	9	8	10	6	10	7	10	10	8	10	10	10																					9.677			

However, again, similar to that reported by the health sector, those in the non-health sector were much less confident about engaging the health sector on physical activity. Just under 40% scored their confidence as 8 or above, very similar to their colleagues in the health sector felt about engaging them. The levels of confidence were much more evenly spread out across the confidence levels compared to the previous question. Table 4.16: shows the reported confidence split by role/professional interest. Voluntary, community, faith or social enterprise, which makes up the majority of responses, show a generally lower level of confidence.

Table 4.16 - Non health sector confidence in engaging with healthcare on physical activity.

Role/Professional Interest	Responses	Confidence levels																				Average Confidence	
National / Government / Arms length body	8	9	3	10	3	8	6	4	8													6.38	
Voluntary, Community, Faith or Social Enterprise sector	35	7	6	10	4	10	6	5	7	7	10	5	7	7	4	8	5	9	5	5	4	4	6.69
TfL or Local Authority - Active Travel	10	2	6	8	6	5	2	5	0	8	5											4.70	
Local Authority Public Health	7	10	7	10	3	7	7	8														7.43	
Primary care	3	8	9	5																		7.33	
Secondary care	0																					0.00	
Local Authority leisure/recreation/parks	6	4	3	8	8	8	8															6.50	
National/regional/local physical activity providers (e.g. NGBs)	12	2	5	9	6	6	0	10	7	10	8	3	10									6.33	

Priorities to enable physical activity to better support the delivery of health outcomes

Four themes emerged from the analysis of priorities to enable physical activity to support better health outcomes. First was creating awareness about physical activity initiatives to promote behavioural change and educating healthcare professionals to increase physical activity participation. Secondly, ensuring accessibility and inclusivity to ensure that physical activity is accessible to all, regardless of background, ability, or socioeconomic status. Also, collaboration and engagement featured in all three priorities, with emphasis on the importance of collaboration and engagement between different stakeholders, including the health sector, physical activity providers, community organizations, and individuals, to promote physical activity effectively. Finally, funding and sustainability was a recurring theme with an emphasis on the need for longer term funding support for long-term sustainability of services.

Population groups to be targeted

Those living in the most deprived communities were felt to be the highest priority group to be targeted with better integrated healthcare and physical activity providers by the respondents,

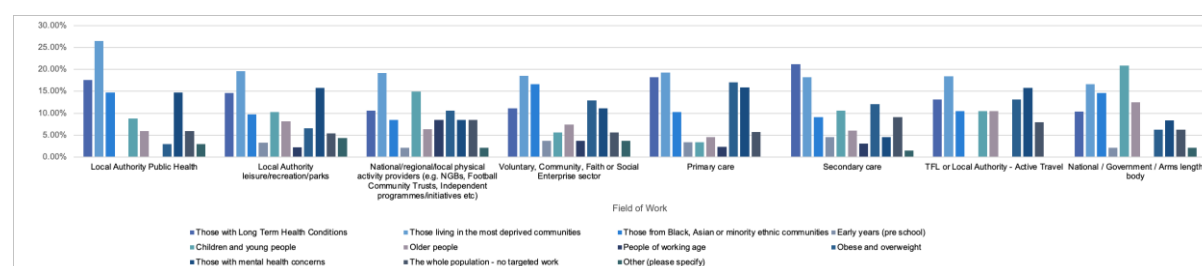
accounting for almost 1 in 5 (19.32%) of the responses to this question. This was followed by those with one or more long term conditions (15.03%) and those with mental health challenges (12.70%).

The three most important groups for targeting were further split by respondent organisations and is presented in Table 4.17 and Figure 4.16 below.

Table 4.17 - Respondent organisations type and three priorities population

Field of Work	Those with Long Term Health Conditions	Those living in the most deprived communities	Those from Black, Asian or minority ethnic communities	Early years (pre school)	Children and young people	Older people	People of working age	Obese and overweight	Those with mental health concerns	The whole population - no targeted work	Other (please specify)	TOTAL
Local Authority Public Health	17.65%	26.47%	14.71%	0.00%	8.82%	5.88%	0.00%	2.94%	14.71%	5.88%	2.94%	100.00%
Local Authority leisure/recreation/parks	14.67%	19.57%	9.78%	3.26%	10.33%	8.15%	2.17%	6.52%	15.78%	5.43%	4.35%	100.00%
National/regional/local physical activity providers (e.g. NGBs, Football)	10.64%	19.15%	8.51%	2.13%	14.89%	6.38%	8.51%	10.64%	8.51%	8.51%	2.13%	100.00%
Voluntary, Community, Faith or Social Enterprise sector	11.11%	18.52%	16.67%	3.70%	5.56%	7.41%	3.70%	12.96%	11.11%	5.56%	3.70%	100.00%
Primary care	18.18%	19.32%	10.23%	3.41%	3.41%	4.55%	2.27%	17.05%	15.91%	5.68%	0.00%	100.00%
Secondary care	21.21%	18.18%	9.09%	4.55%	10.61%	6.06%	3.03%	12.12%	4.55%	9.09%	1.52%	100.00%
TfL or Local Authority - Active Travel	13.16%	18.42%	10.53%	0.00%	10.53%	10.53%	0.00%	13.16%	15.79%	7.89%	0.00%	100.00%
National / Government / Arms length body	10.42%	16.67%	14.58%	2.08%	20.83%	12.50%	0.00%	6.25%	8.33%	6.25%	2.08%	100.00%

Figure 4.16 - Respondent organisations type and three priorities population



Biggest challenges to using physical activity more widely in London

The four most commonly raised challenges were centred around two themes of lack of resources or investment and lack of information or knowledge. In the current financial context, it is difficult to envision a significant uplift in investment. However, improvements to information or knowledge could be relatively cheap to ensure the current assets are fully ‘sweated’. Excluding ‘don’t know’, it was reassuring that ‘lack of evidence of effectiveness’ was the least raised challenge, suggesting knowledge on the strong evidence is good. The challenges to using physical activity more widely was split by ‘target group’ (Table 4.18) and ‘field of work’ (Table 4.19).

Table 4.18 - Biggest challenges to using physical activity more widely in healthcare split by ‘target group’

Target group/challenges in Percentage	Lack of investment	Lack of infrastructure	Competing NHS priorities	Competing Local Authority priorities	Lack of public support/motivation	Lack of information on appropriate contacts	Lack of evidence of effectiveness	Lack of community engagement	Lack of knowledge of available sport and physical activity opportunities	Lack of clarity about physical activity appropriate within health care	Lack of coordination presence / body / organisation	Lack of free activities/resources	I don't know
Those with Long Term Health Conditions	15.30%	14.38%	17.48%	13.64%	13.74%	17.59%	12.50%	14.69%	14.74%	16.44%	16.18%	14.16%	0.00%
Those living in the most deprived communities	18.96%	16.99%	19.56%	17.05%	16.79%	21.11%	18.75%	14.69%	20.72%	16.75%	16.97%	18.91%	20.00%
Those from Black, Asian or minority ethnic communities	11.36%	9.15%	11.19%	11.36%	12.21%	10.55%	10.42%	11.19%	12.35%	12.33%	10.30%	8.85%	0.00%
Early years (pre school)	2.14%	3.92%	3.50%	2.27%	3.62%	3.02%	4.17%	4.20%	3.19%	4.11%	4.24%	3.98%	0.00%
Children and young people	9.61%	12.42%	10.49%	13.64%	9.16%	8.54%	14.58%	13.29%	8.76%	10.27%	9.70%	10.18%	0.00%
Older people	9.25%	7.19%	6.29%	9.09%	7.63%	7.04%	8.33%	8.39%	5.58%	6.85%	9.09%	6.64%	20.00%
People of working age	2.85%	4.58%	3.50%	4.55%	3.82%	2.51%	4.17%	3.50%	3.59%	3.42%	2.42%	2.21%	0.00%
Obese and overweight	11.98%	12.42%	11.89%	11.36%	12.21%	9.55%	10.42%	9.79%	9.96%	10.96%	10.30%	11.50%	20.00%
Those with mental health concerns	13.88%	12.42%	10.49%	10.23%	12.21%	14.07%	10.42%	12.58%	14.74%	14.38%	12.73%	13.27%	0.00%
The whole population - no targeted work	5.34%	6.54%	5.59%	6.82%	8.40%	6.03%	6.25%	7.69%	6.37%	5.48%	6.06%	9.29%	40.00%
Other (please specify)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Table 4.19 - Biggest challenges to using physical activity more widely in healthcare split by ‘field of work’

Field of Work/challenges Percentage	Lack of investment	Lack of infrastructure	Competing NHS priorities	Competing Local Authority priorities	Lack of public support/motivation	Lack of information on appropriate contacts	Lack of evidence of effectiveness	Lack of community engagement	Lack of knowledge of available sport and physical activity opportunities	Lack of clarity about physical activity appropriate within health care	Lack of coordination presence / body / organisation	Lack of free activities/resources	I don't know
National / Government / Arms length body	3.33%	2.27%	9.09%	0.00%	0.00%	8.33%	7.69%	2.44%	6.74%	4.35%	2.04%	5.41%	0.00%
Voluntary, Community, Faith or Social Enterprise sector	27.78%	25.00%	18.18%	28.00%	29.27%	30.00%	23.08%	31.71%	25.84%	30.43%	26.53%	28.73%	0.00%
TPL or Local Authority - Active Travel	11.11%	11.36%	6.82%	12.00%	9.78%	1.67%	7.69%	2.44%	6.74%	0.00%	2.04%	6.76%	50.00%
Local Authority Public Health	6.67%	4.55%	9.09%	16.00%	7.32%	3.33%	7.69%	12.20%	7.87%	10.87%	4.08%	4.05%	0.00%
Primary care	12.22%	13.64%	18.18%	8.00%	21.96%	13.33%	7.69%	7.32%	15.73%	10.87%	18.37%	24.32%	0.00%
Secondary care	11.11%	11.36%	11.36%	4.00%	4.88%	13.33%	0.00%	17.07%	11.24%	6.52%	18.37%	12.16%	0.00%
Local Authority leisure/recreation/parks	5.56%	2.27%	6.82%	8.00%	0.00%	6.67%	15.38%	2.44%	2.25%	10.20%	2.70%	50.00%	0.00%
National/regional/local physical activity providers (e.g. NGA)	5.56%	13.64%	4.55%	12.00%	14.63%	8.33%	15.38%	9.79%	5.62%	13.04%	8.16%	2.70%	0.00%
Other	16.67%	15.91%	15.91%	12.00%	12.20%	15.00%	15.38%	14.63%	17.88%	17.39%	10.20%	12.16%	0.00%

Opportunities to influence the wider system

Healthcare and physical activity services thought that by working together they had the best opportunity to influence further investment. They were most sceptical on influencing the provision of workforce training. It was quite surprising they were also unsure or felt little or no opportunity to influence policy around active travel, as it would be thought this is something that they might have more chance to control.

4.9. Implication of this study for healthcare and physical activity providers

This survey garnered good engagement of providers, commissioners, and those who refer to physical activity services. In general, results reported strong levels of confidence from these groups in accessing physical activity services. However, there were some areas of weakness identified. For example, 6 respondents from healthcare scored the bottom 3 levels of confidence. This outcome would benefit from targeted follow up to offer education, training and support to ensure no users are being disadvantaged. What was more concerning was the widespread lower confidence of healthcare in following up on identified needs of physical activity. This outcome would benefit from a systemic programme of education, training and support. In addition, further activities to connect and breakdown the barriers between the

healthcare sector and the physical activity sector would be beneficial, this could be a role for London Sport.

4.10. Implication of this study for national policy makers

Regular physical activity is beneficial to physical and mental wellbeing. Good physical and mental health is essential for economic prosperity. Therefore, national government and policy makers should prioritise support and resources towards increasing physical activity to meet their mission of securing the highest sustained growth in the G7.

4.11. Implication of this study for academia and future research

There is strong evidence on the benefit of physical activity to health. There is small but growing evidence on the impact of physical activity promotion in healthcare. However, there is a scarcity of evidence on the interaction between healthcare and physical activity. Firstly, this study adds to fill this gap. In addition, in completing the survey almost two thirds (64%) of respondents said ‘dissemination of research’ was either a ‘very significant’ or ‘significant’ opportunity for them to work on collaboratively. This suggests a significant cohort working in the field could be part of further ongoing research.

4.12. Strengths and weaknesses/limitations

The number and breadth of responses to this survey is a strength. As is the fact that all 33 local government areas (the 32 London boroughs and the city of London) were represented. However, there will be bias created by some boroughs having more respondents and therefore an over represented view. For example, there were 11 responses from Southwark whereas 8 boroughs only had 1 response. Similarly, there could be biases in the type of person that responded to the questionnaire and the response they gave (response bias), this was in part managed through clear explanation of the purpose of the survey and that responses would not be able to be identified to individuals. Other weaknesses include the structuring of some of the questions, when considered with the benefit of hindsight. For example, Question 4 asked ‘What is your role/professional interest in relation to physical activity?’ and respondents were given options to select multiple choices from a list of 10 options. It may have been better to only

allow the respondent to pick one option with the addition to write free text. Allowing multiple options to be chosen makes it difficult to be certain on their primary role and professional interest. This study would also have benefited from including a follow up interview element.

4.13. Conclusions

The results of the questions on healthcare and non-healthcare sector confidence show many similarities. Both sectors are, generally, confident in the role physical activity can play in health. There are some outliers which would benefit from follow up action. However, when it comes to engaging the other sector, both those in the healthcare sector and those not in the healthcare sector, feel much less confident. Actions that could be taken to address this issue are also provided in the section dealing with implications for city health officials. This underscores the importance of putting time into relationships and cross sector knowledge building. It is only through collaborative working that we will address some of our most challenging health issues.

4.14. Personal reflection from carrying out this study

This study has demonstrated the importance of precision and user testing of questionnaires. It demonstrates the benefit of using existing networks to carry out research in that this, much simpler, survey garnered significantly more respondents than the city survey presented in the following chapter 5. This is despite the significant time spent identifying and contacting potential respondents for chapter 5. However, one negative of using existing networks is that it risks the same voices being heard and therefore less diversity.

4.15. Acknowledgements

The data for this study was provided by London Sport as raw data in excel format. London Sport is a charity whose aim is to support Londoners live longer, healthier lives through being active. The author is a Trustee of London Sport and this fed into the design of the questionnaire and specification for the work. London Sport commissioned a third party: Progress Health Partnerships to administer the survey and produce a report – of which this study is independent. Notwithstanding this, the author would like to acknowledge London Sport and in particular Rob McLean and Mike Parker from Progress Health Partnerships.

The author would also like to thank the Mohammed Elsharkawy from IGHI for support in carrying out the NLP analysis in section 4.6.5

Chapter 5: City health survey

"A healthy city is not one that has reached a particular health status, but one that is committed to improving the health of its population."

World Health Organization

5. Plain English abstract

This study, conducted by way of a cross-sectional survey, examined the health priorities and initiatives followed by a diverse group of eleven cities. The aim of the study was to understand health priorities and initiatives for cities' health, including the impact of the Covid-19 pandemic and the importance of Mayoral support for health initiatives. The findings from the data in relation to Covid-19 were varied in nature, although on the question of new ways of working and resilience to future pandemics, certain themes emerged which could be used by policy makers. More generally, the findings from the data showed a detailed and complex picture of the types of initiatives being used by cities in relation to key health risk factors. The data produced novel information which can be used collaboratively by cities and policy makers in future work on health initiatives. In terms of the impact of initiatives, the picture was also varied. On the question of the role of the Mayor, there was high scoring levels for the strength and importance of Mayoral support. Given that Mayors did not feature much in the initial scoping review, covered in chapter 2, this is an area of further focus in subsequent chapters.

5.1. Introduction

We know that cities have been shown to succeed - where national governments have failed - in making significant improvements in areas affecting population health.^{327,328,127,329,330} We know that over half the world's population live in city and urban areas³³¹ and this will continue to increase. We also know that globally cities have been hardest hit by Covid-19.³³² Therefore what cities are doing to improve population health and respond to Covid-19 is of significant importance and of global interest.

5.2. Aim of this study

The research aim for this study was to understand the health priorities for cities' health and actions and associated impact of initiatives to address the health priorities. This included the impact of the recent Covid-19 pandemic but also went much broader to a range of non-communicable diseases (NCDs) and wider determinants of health.

5.3. Research question and research objectives

The research questions for this study are:

- What initiatives are cities undertaking to improve population health, including their response to Covid-19 and the role of the Mayor ? What impact have these initiatives had ?

There are six objectives related to these research question. There are four primary objectives of this study:

- Understand the impact of Covid-19 on the city
- Understand the relative importance of health risk factors in the city.
- Understand the initiatives the city has implemented and the impact of the initiatives.
- Understand the importance of Mayoral support for health initiatives.

There are two secondary objectives of this study:

- Understand the initiatives that cities are considering to improve population health.
- Test the appetite for cities to be part of an informal network on sharing experiences

5.4. Methods

5.4.1. Study design

Given the information sought, number and location of cities, and resources available, a cross-sectional survey was considered the most appropriate study design. A self-administered electronic questionnaire was chosen as the primary means of data collection. It is a relatively quick and inexpensive means of obtaining data from respondents across different continents and it is relatively flexible and easy for respondents to complete. Moreover, as topics and initiatives had already been identified through the systematic review, methods associated with constructionist methodology would not have been appropriate.

5.4.2. Questionnaire Development and Piloting

Taking the learning and the gaps identified from the systematic scoping review (chapter 2), a questionnaire was developed to understand the priority issues and initiatives that cities are undertaking to improve population health. The survey was designed to allow for heterogeneity in city size and resources. The survey was developed and deployed online with predominantly multiple choice questions to ensure it was as quick and easy to complete as possible.

The first page of the questionnaire asked the participants to confirm that they had read the participant information sheet and that they gave their consent to be part of the study. The participant information sheet included information regarding the purpose and aims of the study; the data that would be collected; how this data would be stored and used; details regarding who to contact in the event of questions and the potential advantages and disadvantages of participating. The participant information sheet is presented in appendix five.

Version three (v0.3) of the survey was pilot tested by the author and an individual from the London city health team. The main changes made following this pilot testing were a reduction in the number of questions (as the survey was taking over an hour to complete) a simplification of questions and allowing the respondent to proceed with questions un-answered. It was decided that requiring the respondent to answer every question before they could proceed might lead to a high dropout rate. Further minor amendments were made until the final survey questionnaire, version seven (v0.7).

5.4.3. Final questionnaire

The final survey questionnaire (v0.7) consisted of 10 sections. The first two sections enabled the participant to view the 'participant information sheet' and confirm their consent to participate. It also provided instructions for the participant on completing the questionnaire. The third section was the start of the substantive questionnaire, with questions about the participant and the city they were representing (3 questions). Two short sections followed; asking questions on the impact of the Covid-19 pandemic (4 questions) and whether the city had a vision or strategy for health (3 questions). The next section contained the bulk of the survey questions as it covered health risk factor priorities (15 questions) based on the global burden of disease¹⁰⁹ and initiatives to combat the different factors (149 questions across 14

thematic areas ranging from tobacco, HIV, inactivity, wider determinants and climate change). The final four sections contained questions on priorities and prioritisation (2 questions), initiatives or areas of work they are most proud of in the last 5 years (2 questions), the role of the Mayor and relationship with other cities (4 questions) and, finally, if they would like to be connected with other participants of the survey to collaborate (1 question). The survey questionnaire was in English, retrospective and prospective and contained a mixture of formats including single choice, multiple choice, Likert scales and open ended free-text. The questionnaire was created on Qualtrics (online survey software provided through Imperial College London). A word version of the questionnaire is provided in appendix three.

5.4.4. Identifying potential participants & participant eligibility

The target audience was representatives of, or health officials in, city health departments. These individuals were identified through current connections, those identified as part of the systematic scoping review and a significant amount of desk research.

The desk research involved collating a list of cities from across the continents of Europe, North America, South America, Oceania and Asia from the source: <https://worldpopulationreview.com/>. With this list, starting with largest cities, by population size, the author spent three months ‘google searching’ the name of the city with ‘head of health’ and ‘commissioner of health’. So, for example, typing into google ‘London head of health’ and ‘London commissioner of health’. If a name was identified through this search method, a further search was carried out to identify their linkedin profile and contact details. This identified 530 names and email addresses.

The inclusion criterion was: an individual that has, or had, a role working with or for a city administration in respect of health of the city population. The request was for their views and insight in relation to priority issues and initiative(s) cities are taking to improve health for their population. The aim was to receive broad participation from individuals and cities across the world.

Exclusion criteria consisted of the following: cities with a population of under 50,000 residents were not included. In addition, any persons who had never had a role working for or with city administration in respect of health of the city population.

5.4.5. Participants invited

The 530 potential participants were sent an invitation to participate by email between 10 May 2022 and 22 September 2022. This was an extended duration as it included the desk work to identify names and contact details described in section 5.4.4 above. The invitation to participate email, presented in appendix four, contained a link to the online survey and the participant information sheet, which is presented in appendix five. Participation was entirely voluntary and no incentives for participation were offered. Participants were informed that they were free to withdraw from the study at any point.

The aim was to survey a diverse - rather than representative - group of city health officials from different continents and countries. However, this was not the sole reason for contacting over 500 cities. Beyond data collection, the outreach also served to raise awareness of the study and the author's work, with the intention of building future collaborations and expanding the author's professional network. Once an introductory email was drafted, it required minimal effort to personalise and resend to different recipients. Each time the email was sent, the author also used the opportunity to connect with the recipient on LinkedIn, further strengthening professional engagement.

5.4.6. Participants responses and data analysis

5.4.6.1. Participants responses

Participants were required to confirm they had read the information leaflet and provided their consent before commencing the survey. The participants were given the opportunity to discuss the survey prior to signing the consent form. No participants took this option.

The survey data from Qualtrics was downloaded to Microsoft excel on 26th March 2024. Thirty three questionnaire responses had been started. However, a number of these responses were marked as “test” or significantly incomplete. Therefore, when the data was reviewed the following exclusions were made:

- All entries where the name column was completed as ‘test’ or ‘testing’ or the name and city were blank with no or very small (less than 5%) of answers completed. These were coded as ‘test’ and excluded. This accounted for 10 entries.
- Entries where the name and city had been completed but the respondent had not got past the first page of questions. These were coded as ‘not started’ and excluded. This accounted for 10 entries.
- There were two entries by the same participant for the same city, twice. It is thought they each started but not finished the questionnaire and came back to it a later date but had restarted rather than continued. Therefore, the duplicate entry was removed and answers merged (where there was a difference the latest entry was taken). This excluded 2 entries.

This meant that there were 11 participant cities. These consisted of: London (UK), Birmingham (UK), Philadelphia (USA), Washington (USA), Singapore, Bridgetown (Barbados), Vienna (Austria), Yerevan (Armenia), Montreal (Canada), Hamburg (Germany), Madrid (Spain).

Survey completion rate is a key indicator of overall data quality and potential bias.³³³ In this study, the survey completion rate was very low, which, to some extent, was anticipated. As outlined in the previous section, the survey invitation was intentionally broad and somewhat speculative, aiming to establish an initial stakeholder list and develop a potential network for future research. However, notwithstanding this expectation, several additional factors may have contributed to the low response rate, including;

- The questionnaire was available only in English, which will have limited accessibility for non-English speakers.
- Research indicates that survey length and question difficulty negatively impact completion rates.³³³ This survey was particularly long, consisting of 173 questions.
- Participation was entirely voluntary, no incentives were offered to encourage completion.

- Due to the high volume of emails sent, no follow-up reminders were issued. Given participants' busy schedules, even those who intended to complete the survey may not have prioritised it, resulting in non-completion.

These factors highlight important considerations for future survey design, particularly the need for follow-up engagement, language accessibility, and a more concise questionnaire to improve response rates.

5.4.6.2. Data analysis

Personal and identifiable information, for example name and email address and any reference to the city in free text responses were removed or redacted in the Microsoft excel document. The document was also formatted to make it easier to navigate. The data was analysed using the functionality of Microsoft excel. In accordance with thematic analysis, divergence and consensus themes were explored.

5.5. Ethics

An application was made to the Imperial College Research Ethics Committee (ICREC) for this study. The study was approved on the 11th January 2022, ICREC reference number: 21IC7365. One area of deviation from the Imperial College Research Ethics Committee approved application was made during the course of this study. The application stated that “participants will have two weeks to complete the questionnaire. If after two weeks we have not had a response from the participant, we will send 2 follow up emails and make attempts to speak to them directly via telephone.” However, because of the volume of participants invited and the time taken this did not happen.

Researcher safety and participant safety and confidentiality were considered and actions put in place as described in the ICREC application.

Participants were able to choose whether they consented to sharing their questionnaire responses and their email address with other consenting participants. This was entirely optional. Sharing email address and questionnaire responses would allow participants to

contact another participant city to discuss and share experiences on a specific initiative they may be considering. Evidence suggests that policy making is a combination of evidence, public and political opinion and (opportunistic) timing.^{294,97,95 105,106} This therefore offered a direct tangible benefit to the participant cities.

5.6. Results

5.6.1. Results One – Survey Respondents

The surveys were completed between 24 April 2022 (pilot) and 2 November 2022. The time participants took to complete the survey ranged from 31 minutes to 31 hours. The eleven cities range in size and continent, as shown in Table 5.1 and Figure 5.1

Table 5.1 – Cities that responded to the survey.

City	Country	Continent	Population Size (in thousands)
Birmingham	UK	Europe	2610
Bridgetown	Barbados	North America	110
Hamburg	Germany	Europe	1867
London	UK	Europe	10849
Madrid	Spain	Europe	6476
Montréal	Canada	North America	4158
Philadelphia	USA	North America	5709
Singapore	Singapore	Asia	6057
Vienna	Austria	Europe	1808
Washington DC	USA	North America	5230
Yerevan	Armenia	Asia	1024

Table notes: Population data from: <https://data.london.gov.uk/dataset/global-city-population-estimates> based on year 2020 (Accessed 13 March 2024) This did not include Bridgetown which was therefore sourced from <https://barbados.org/btown.htm#>

All of the cities, with the exception of Yerevan, were from countries that are classified as high-income countries by the World Bank.⁵ Yerevan (Armenia) is classified as an upper middle income economy country.

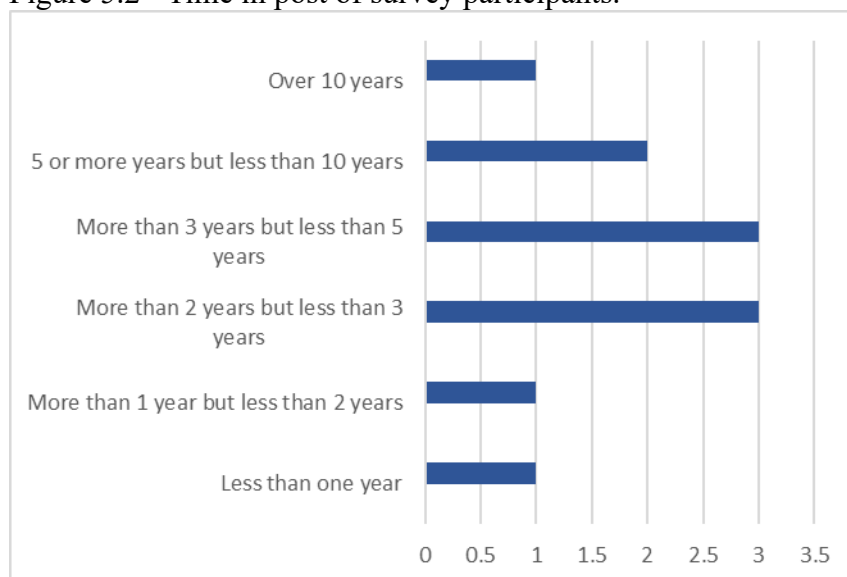
⁵ For the current 2024 fiscal year, low-income economies are defined as those with a GNI per capita, calculated using the [World Bank Atlas method](#), of \$1,135 or less in 2022; lower middle-income economies are those with a GNI per capita between \$1,136 and \$4,465; upper middle-income economies are those with a GNI per capita between \$4,466 and \$13,845; high-income economies are those with a GNI per capita of \$13,846 or more. Available here: [World Bank Country and Lending Groups – World Bank Data Help Desk](#). Accessed 15 April 2024

Figure 5.1 – Cities that responded to the survey



The roles of the respondents that completed the survey were all very senior including Directors of Public Health, Health Commissioner, Directors Epidemiologists, Parliamentary Representatives, Head of Health. The time in post ranged from 6 months to 13 years with an average of just over 4 years (4.14) and is presented in Figure 5.2.

Figure 5.2 - Time in post of survey participants.



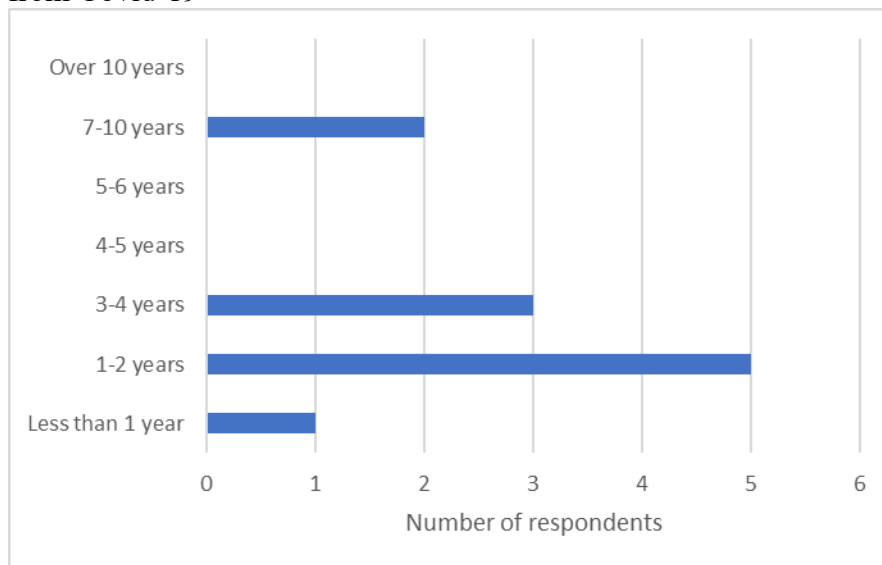
5.6.2. Results Two - Impact of Covid-19

Participants were asked five questions in relation to the recent Covid-19 pandemic, which are explored in this section.

5.6.2.1. How long will it take for city healthcare services to recover from Covid-19

Participants were asked how long they thought it would take for healthcare services in their city to recover from Covid-19. Recovery was defined as all healthcare services returning to pre-pandemic levels of activity and waiting times. Participants could choose from 6 options; the results are presented in Figure 5.3 below.

Figure 5.3: How long do you think it will take for healthcare services in your city to recover from Covid-19



Only 1 city, city 11, thought health services would recover in less than one year. Five cities, city 6, city 3, city 5, city 4, city 8) reported 1 – 2 years. Three cities, city 2, city 10, city 9, reported 3 – 4 years. Two cities, city 1 and city 7, thought it would take 7 – 10 years for health services to recover from the pandemic.

5.6.2.2. Ways of working to respond to Covid-19 that cities would like to continue.

The Covid-19 pandemic had a significant negative immediate impact on mortality³³⁴ and inequalities^{335,336} as well as stress on healthcare systems³³⁷ and other health diseases,^{338 339} and risk factors.³⁴⁰ However, there were also positive repercussions.³⁴¹

Participants were asked: what, if any, health system ways of working put in place to respond to Covid-19 would they like to see continue post-pandemic. They were also asked to list their top 3. Below sets out the response to the question.

First priority answers:

1. Collaboration with Housing Directors to tackle homelessness.
2. Virtual consultation.
3. Collaboration both within city government and with community partners.
4. Surveillance.
5. Expanded access to healthcare data and analytics to benefit patient care across different settings.
6. Separation of infectious disease.
7. Video consultation.
8. Good working IPC in all medical facilities.
9. Remote working with tools and information systems making it possible, we can easily access expertise from other regions and countries.
10. Being prepared for health crisis - organisation, knowledge management, decision-making authority.
11. Mayor co-ordination between city health and communities.

Second priority answers:

12. Integrated outreach BBV testing for vulnerable communities.
13. Proactive citizens engagement.
14. Stress on getting resources to highest risk populations.
15. Long term covid.
16. Greater integration of public and private healthcare services for population health
17. Appointment outpatient clinic.

18. Telemedicine and teleconsultation for the efficiency but also it reduces barriers to access for some patients.
 19. Identification and classification of critical infrastructure.
 20. Greater co-ordination between different areas of the city council
- (two respondents did not answer this second question)

Third priority answers:

21. In depth work with community leaders to promote equitable service delivery.
 22. Health literacy initiatives.
 23. All hands-on deck quick responses to crises.
 24. Use of telehealth and community care services to relieve reliance on hospital-based care provision.
 25. More efficient, connected and interoperable information systems for our surveillance and monitoring function.
 26. Permanent management of protective equipment.
 27. Digitalization and work methods: Possibility of establishing new ways of providing certain services (especially all those related to prevention and promotion of health and addictions); Importance of having adequate technology and support services that provide agile responses to the difficulties encountered.
- (four respondents did not answer this third part of this question).

The above responses were thematically assessed and grouped. Six groups emerged: collaboration, virtual and digital, surveillance and future pandemic, healthcare capacity and models, communities, and long covid. Table 5.2 presents the themes and responses.

Table 5.2 - health system ways of working put in place in response to Covid-19 which cities would like to maintain

Theme	Response number	Total # of responses per theme
Collaboration	1, 3, 8, 11, 16, 20,	6
Virtual and digital	2, 7, 9, 18, 24, 27	6
Surveillance and future pandemic	4, 10, 23, 25	4
Healthcare capacity and models	5, 6, 12, 14, 17, 19, 26	7
Community engagement	13, 21, 22	3
Long covid	15	1

5.6.2.3. Resilience to future pandemics

Participants were asked: What are the health or health service initiatives that need to be put in place to ensure their city is more resilient to any future pandemic. They were also asked to list their top 3.

First priority answers:

1. Resources to support local authority health protection roles and responsibilities.
2. Primary prevention to reduce disease risk burden.
3. Adequately funding public health on a consistent and predictable basis.
4. Data systems.
5. Better sense making and surveillance for emerging communicable diseases of concern in the community.
6. Greater scanning at ports.
7. Pool PCR Testing Infrastructure.
8. High level of vaccination.
9. Increase public policies to reduce and address health inequalities.
10. One standard digital real time reporting system for infections - in cities, counties, federal states and the whole country.
11. Creation of a procedure for the management of crisis situations, which includes, at least, the administrative organization, the minimum necessary services, rotation and the ability to reorganize necessary reinforcement personnel, where appropriate from other Departments.

Second priority answers:

12. Regular and systematic testing of multi-agency preparedness and response.
13. Secondary and tertiary prevention in care pathways.
14. Improved access to primary care.
15. Robust reporting.
16. Expansion of healthcare institutional bed capacity, including recruitment of more healthcare staff in nursing and allied health domains.
17. Digital Contact Tracing.

18. Increased preparedness to emergency situations.
19. Adaptation plan and emergency response plan at community level (not only at the regional level with resources for communities).
20. Overall identification and agreement of all critical infrastructures and important services, that must get priority protection.
21. Possibility of appointing temporary staff on an extraordinary basis to deal with necessary reinforcement situations.

(one respondents did not answer this second part of this question).

Third priority answers:

22. Consolidation of monitoring and surveillance systems under the new English health protection arrangements.
23. Reducing inequalities in clinical care management of long term conditions.
24. Support for the public health workforce to address burnout, low wages, retention, etc.
25. Preparedness.
26. Greater diversification of healthcare supply sources and expedited access to diagnostics, therapeutics and vaccines for procurement.
27. Better investment in community organisation addressing the increasing needs of vulnerable population during and after crises.
28. Organisation of survey all relevant facilities, equipment, service provider, available stocks.
29. Facilitate intra-municipal coordination and with other public administrations: establishment of coordination protocols, in a crisis situation, between the different areas of the City Council, in order to ensure the unity of actions.

(three respondents did not answer this question).

These responses were thematically assessed and grouped with five groups emerging; funding for health protection and promotion, health protection and promotion, surveillance and data, workforce and system preparedness and healthcare, which are presented in Table 5.3.

Table 5.3 - What are the health or health service initiatives that need to be put in place to ensure their city was more resilient to any future pandemics?

Theme	Response number coded to this theme	Total number of responses coded to this theme
Funding for health protection and promotion	1, 3, 27	3
Health protection and promotion	2, 7, 8, 9,	4
Surveillance and data	4, 5, 6, 10, 15, 17, 22, 28	8
Workforce and system preparedness	11, 12, 18, 19, 20, 21, 24, 25, 29	9
Healthcare	13, 14, 16, 23, 26,	5

5.6.2.4. Lasting impact of Covid-19 pandemic

Participants were asked: What do you think the lasting impact of Covid-19 will be on your city? And asked to list the three most significant - positive or negative - impacts in order (1 being the most significant).

Most significant impact of Covid-19 pandemic

1. Renewed need to focus on mental wellbeing and recovery.
2. Poverty & unemployment.
3. Connections between people across a wide range of organizations.
4. Behaviour change.
5. Change in work and social behaviour with more 'work from home' activities.
6. Positive - greater efficiency.
7. Economic.
8. Transformation of neighbourhoods (green spaces, pedestrian streets, active transportation).
9. Higher awareness of potential threats.

10. Facilitate intra-municipal coordination and with other public administrations: establishment of coordination protocols, in a crisis situation, between the different areas of the [name of the city redacted] City Council, in order to ensure the unity of actions.
(one respondent did not answer this second part of this question).

Second most significant impact of Covid-19 pandemic

11. Changes in population profile - for example, vulnerable people leaving the City if they can.
12. Burnout of healthcare & social care staff.
13. Impact of trauma on our Black and Latino populations.
14. Trust in government.
15. Greater risk of social isolation for at risk groups due to a reluctance to engage in community activities to minimise social close contacts.
16. Use of Technology.
17. Health.
18. Major improvement in health information systems.
19. Organisation of necessary precaution for crisis management.
20. Establishment of teleworking.
(one respondent did not answer this second part of this question).

Third most significant impact of Covid-19 pandemic

21. Opportunity cost of continuing to control and treat high levels of COVID infection.
22. Strong relationships between public sector and communities.
23. Knowledge of public health principles and activities.
24. Enhanced resiliency of businesses and industry to accommodate 'shocks' from community lock-downs or manpower shortfalls from illness.
25. Social.
26. Increase in inequalities (homelessness), in urban violence, disinformation.
27. Experience and knowledge of well-working measures and helpful players.
28. Monitoring and telemonitoring at home.
(three respondents did not answer the third part of this question).

City participants' responses to the lasting impact of Covid-19 were varied and ranged from positive for example "Strong relationships between public sector and communities" and "use

of technology” through to many negative, such as: “poverty and unemployment” and “burnout of healthcare and social care staff”, and also neutral responses, that could be positive or negative, for example “behaviour change”.

5.6.2.5. City health vision or strategy

Finally in this section, participants were asked whether prior to December 2019 (i.e. prior to Covid-19), their city had a current health vision or health strategy? Eight answered that they did and three did not.

5.6.3. Results Three – Strategic Priorities & Health Initiatives

In this section, participants were firstly asked to rank health behaviours and health risks in their relative priority for their city population (with 1 being low importance and 10 being high importance) when compared to other health behaviours and risks. The health risk factors were identified from the Global Burden of Disease.¹⁰⁹ The results are presented in Table 5.4 below.

Table 5.4 - Health Risk Factors – Relative Priority to the City

City #	Tobacco	HBP	Diet	Alcohol	Drugs	Inactivity	Obesity	Mental Health	HIV	Other Infectious	Wider Determinants	Climate
1	8	7	7	6	7	8	9	10	10	7	8	8
2	10	3	9	4	3	8	2	7	3	1	9	4
3	5	1	4		3	2		6		7	10	8
4	10	10	10	10	10	10	10	10	10	10		6
5	8	8	9	8	4	9	9	10	5	5	7	6
6	4	9	9	4	10	9	9	8	3	10	5	9
7	10	10	10	10	10	10	10	10	10	10	10	10
8	10	10	9	9	9	9	10	9	9	10	9	9
9	8	7	8	6	9	8	8	10	8	9	10	10
10	8	10	10	8	7	9	10	10	6	8		10
11	10	10	10	10	10	10	10	10	10	10	10	9
Average	8.27	7.73	8.64	7.50	7.45	8.36	8.70	9.09	7.40	7.91	8.67	8.09

Table 5.4 note: Where a city has not scored a risk factor (e.g. City 3 has not scored alcohol) the average has been adjusted to reflect less cities scoring. HBP – High Blood Pressure

Three of the cities did not score all of the 12 health risk factors. City 3 missed scoring 2 factors (HIV and obesity), city 4 and city 10 both missed scoring 1 factor (wider determinants). City 7 scored all of the 12 health risk factors as the highest priority. Similarly, city 11 scored 11 of the 12 risk factors the highest priority, city 4 scored 10 of the health risk factors as the highest priority and city 8 scored all the risk factors the highest or second highest priority. The variation

in scores from each city across the risk factors ranged from 0 (city 7) to 9 (city 2 and city 3) with an average difference of 4. The risk factor with the highest priority across all the cities was mental health. The risk factor with the lowest priority across all cities was HIV.

In addition to these multiple choice questions, the respondents were given the option of selecting up to three additional risk factors which were priorities for their city. Three cities utilised this option, city 1, city 3 and city 9. City 1 added two risk factors: Air Quality (ranking priority 9) and Hepatitis C (ranking priority 8). City 3 add one risk factor: Gun Violence (ranking priority 9). City 9 added three risk factors: Housing (ranking priority 10), Child development (ranking priority 7) and social participation of elders (ranking priority 7).

5.6.4. Results Four – Initiatives to reduce risk factors

The systematic scoping review (chapter 2) identified a range of initiatives that cities could take to reduce or eliminate a negative health risk factor. For each health risk factor, survey participants were asked a range of questions regarding these initiatives in their city and also given the opportunity to add any additional initiatives not listed.

For each initiative identified, including initiatives not listed that they added, survey participants were asked:

- Whether the initiative had been carried out but at national or state level (i.e. not the city).
- Whether the initiative had been previously or currently implemented by their city. As an adjunct to this question, city respondents were asked if two or more city led initiatives were purposely done together - as part of a comprehensive or multi-initiative programme of work - to address the health risk factor. Respondents were also given the option to add an initiative if they were doing it and it was not listed.
- If their city had or was currently implementing the initiative, respondents were asked to rank the impact of the initiative (1 minimal impact, 5 high impact).

- Finally, if the city had not implemented the initiative they were asked how likely were they to consider implementing it in the future? Respondents were given three options ‘unlikely to do’, ‘may consider doing’ and ‘actively considering doing’.

The results for each risk factor are presented below.

5.6.4.1. Tobacco

Cities were asked to report on 10 initiatives related to reduce tobacco use. The initiatives ranged from individual or group education, restricting advertising and places that allow smoking, to additional taxation and initiatives focused on illicit tobacco. All the cities reported. Nations or states have taken a leading role in initiatives to reduce tobacco use with 74 initiatives across the 11 cities (the highest number of all the health risk factors). These ranged from 2 initiatives in city 3 to all 10 initiatives in city 4. Restricting smoking in indoor public places was universally reported.

Cities led on 51 initiatives related to tobacco. These initiatives were more focused around education (7) and education with support (9) and initiatives by healthcare services (9). Of the city led initiatives, restrictions (in advertising and indoor and outdoor restrictions in public places) and additional city taxation generally scored the highest impact. Survey respondents were given the opportunity to add up to three additional initiatives (free text) and rank the impact of these initiatives. Three cities used this opportunity.

- City 1 - public debate on smoking harms (ranked as 5 impact)
- City 2 - App based behaviour change (ranked as 4 impact)
- City 3 - Policy to limit the density of tobacco outlets (ranked as 3 impact)

City 4 reported that all the initiatives to address tobacco use were being done at national or state level and at city level. If this were the case, it would be expected that City 4 to have made a significant impact on reducing tobacco use. However, this was not reported. In terms of where cities were considering further action, city 5 reported to be actively considering 3 initiatives, whilst cities 6, 8 and 10 were actively considering an additional single initiative.

The full results are presented in Tables 5.5 - 5.8.

Table 5.5 – Nation or State initiatives to reduce tobacco use prevalence.

Tobacco	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Individual or group education (including at schools or particular locations)		Y		Y	Y	Y	Y	Y	Y	Y	
Individual or group education and support*				Y			Y	Y			
Mass health advertising - traditional** and/or social media	Y	Y	Y	Y		Y	Y	Y	Y	Y	
Plain packaging of tobacco product	Y	Y		Y		Y	Y	Y	Y	Y	Y
Restricting advertising of tobacco products	Y	Y		Y	Y		Y	Y	Y	Y	Y
Restricting smoking in indoor public places (e.g. bars, railway stations)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Restricting smoking in outdoor public places (e.g. squares or parks)		Y		Y	Y		Y	Y	Y		Y
Additional city taxation on tobacco products				Y	Y	Y			Y		Y
Initiative(s) on illicit / illegal tobacco	Y	Y		Y	Y			Y		Y	Y
Initiatives or services by healthcare services to reduce smoking***				Y	Y	Y	Y	Y	Y		
Counts or totals	5	7	2	10	7	6	8	9	8	6	6

* Support includes, for example, smoking cessation services, nicotine replacement products)

** Traditional includes newspapers / radio / television

*** Including smoking cessation services or clinicians giving advice

Table 5.6 – City led initiatives to reduce tobacco use prevalence

Tobacco	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Individual or group education (including at schools or particular locations)			Y	Y	Y		Y	Y	Y		Y
Individual or group education and support*		Y	Y	Y	Y		Y	Y	Y	Y	Y
Mass health advertising - traditional** and/or social media			Y	Y			Y	Y			Y
Plain packaging of tobacco product				Y				Y			
Restricting advertising of tobacco products				Y	Y			Y			
Restricting smoking in indoor public places (e.g. bars, railway stations)				Y	Y			Y			
Restricting smoking in outdoor public places (e.g. squares or parks)			Y	Y	Y			Y		Y	
Additional city taxation on tobacco products			Y	Y	Y						
Initiative(s) on illicit / illegal tobacco		Y	Y	Y	Y			Y			
Initiatives or services by healthcare services to reduce smoking***	Y	Y	Y	Y	Y		Y	Y	Y		Y
Counts or totals	1	3	7	10	8	0	4	9	3	2	4
Average Impact	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together**** ?	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes

* Support includes, for example, smoking cessation services, nicotine replacement products)

** Traditional includes newspapers / radio / television

*** Including smoking cessation services or clinicians giving advice

**** as part of a comprehensive or multi-initiative programme of work

Table 5.7 – Self reported impact of city led initiatives to reduce tobacco use prevalence

Tobacco	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Individual or group education (including at schools or particular locations)			2		3	4	4	5	3		4	4
Individual or group education and support*		4	2		2		4	4	4		4	3
Mass health advertising - traditional** and/or social media			5			5		5	2		3	4
Plain packaging of tobacco product			5			5		5	2		3	4
Restricting advertising of tobacco products					5			5	4			5
Restricting smoking in indoor public places (e.g. bars, railway stations)			5		5	5		5	5			5
Restricting smoking in outdoor public places (e.g. squares or parks)			2		4	4		4	5			4
Additional city taxation on tobacco products			5		5	5		5	5			5
Initiative(s) on illicit / illegal tobacco		3	3		4			5				4
Initiatives or services by healthcare services to reduce smoking***	4	5	3		4	5		4	3		4	4
Counts or totals	4	12	32	0	32	29	8	42	33	0	18	

* Support includes, for example, smoking cessation services, nicotine replacement products)

** Traditional includes newspapers / radio / television

*** Including smoking cessation services or clinicians giving advice

**** as part of a comprehensive or multi-initiative programme of work

Table 5.8 – Likelihood of city to implement the initiative to address tobacco use

Tobacco	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Initiatives											
Individual or group education (including at schools or particular locations)	unlikely		may do			unlikely					
Individual or group education and support*	unlikely										
Mass health advertising - traditional** and/or social media					may do	unlikely					may do
Plain packaging of tobacco product			unlikely		active	unlikely					unlikely
Restricting advertising of tobacco products			unlikely								unlikely
Restricting smoking in indoor public places (e.g. bars, railway stations)						unlikely					unlikely
Restricting smoking in outdoor public places (e.g. squares or parks)						active					unlikely
Additional city taxation on tobacco products		unlikely				unlikely	unlikely	active		unlikely	unlikely
Initiative(s) on illicit / illegal tobacco					active		unlikely		unlikely		unlikely
Initiatives or services by healthcare services to reduce smoking***					active	unlikely				active	

* Support includes, for example, smoking cessation services, nicotine replacement products)

** Traditional includes newspapers / radio / television

*** Including smoking cessation services or clinicians giving advice

**** as part of a comprehensive or multi-initiative programme of work

5.6.4.2. High Blood Pressure

In relation to high blood pressure, cities were asked to report on initiatives based around three domains of prevent, detect and manage. City 7 did not report any results to these questions. Reported initiatives across both city-led and nation or state action on high blood pressure were mixed.

City 3, city 5 and city 8 reported city led initiatives across the domains of prevent, detect and manage as part of a comprehensive programme to address high blood pressure. Survey respondents were given the opportunity to add up to three additional initiatives (free text) and rank the impact of these initiatives. Only city 3 used this option and stated ‘City 3 - Mass media campaign and CME (continuing medical education) re hypertension among Black men (Impact 2)’ Of the city led initiatives, city 8 reported the highest impact across each of the domains of prevent, detect and manage. Across the cities that reported impact, initiatives that focused on medical management were ranked the highest. In terms of where cities were considering further action, city 6 and city 10 were actively considering initiatives across the three domains of prevent, detect and manage.

At a national or state level, four cities (city 1, city 4, city 5 and city 8) reported action across each of the domains of prevent, detect and manage. Four cities (city 3, city 7, city 10 and city 11) did not report any initiatives to address high blood pressure. Cities 2 and 6 reported only prevent initiatives. City 6, city 9, city 10, city 11 did not report any initiatives at national or state or city level.

The full results are presented in Tables 5.9 - 5.12

Table 5.9 – Nation or State initiatives to reduce high blood pressure.

High Blood Pressure	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Prevent: initiatives focused around education and behaviour change t blood pressure	y	y		y	y	y		y			
Detect: initiatives focused around detection (individuals & their clinicians knowing their blood pressure)	y			y	y			y			
Manage: initiatives focused around medical management	y			y	y			y			
Counts or totals	3	1	0	3	3	1	0	3	0	0	0

Table 5.10 – City led initiatives to reduce high blood pressure.

High Blood Pressure	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Prevent: initiatives focused around education and behaviour change t blood pressure			y	y	y			y			
Detect: initiatives focused around detection (individuals & their clinicians knowing their blood pressure)		y	y	y	y			y			
Manage: initiatives focused around medical management		y	y	y	y			y			
Counts or totals	0	2	3	3	3	0	0	3	0	0	0

Table 5.11 – Self reported impact of city led initiatives to reduce high blood pressure.

High Blood Pressure	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Prevent: initiatives focused around education and behaviour change t blood pressure			2		3	1		5				3
Detect: initiatives focused around detection (individuals & their clinicians knowing their blood pressure)		3	2		3			5				3
Manage: initiatives focused around medical management		5	2		4			5				4
Counts or totals		8	6	0	10	1		15	0			

Table 5.12 – Likelihood of city to implement the initiative to address high blood pressure.

High Blood Pressure	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Initiatives											
Prevent: initiatives focused around education and behaviour change t blood pressure						active			may do	active	may do
Detect: initiatives focused around detection (individuals & their clinicians knowing their blood pressure)						active			may do	active	unlikely
Manage: initiatives focused around medical management						active			unlikely	active	unlikely

5.6.4.3. Unhealthy Diet

Cities were asked to report on 13 initiatives to reduce unhealthy diets. These ranged from education and advertising, initiatives to promote breast feeding and promote water and healthy food, to restrictions around advertising and provision of unhealthy food. Cities 4 and 7 did not answer any of the unhealthy diet questions.

City 5 was taking the most concerted effort to address unhealthy diets followed by city 3. All of the listed initiatives, with the exception of taxation, were used by at least one city. Survey respondents were given the opportunity to add up to three additional initiatives (free text) and rank the impact of these initiatives too. Three cities, city 1, city 2 and city 11, recorded the following;

- City 1 – national reformation of salt and sugar
- City 2 - work to improve food affordability (impact 4) and work to improve culturally competent approaches (Impact 5)
- City 11 - city led nutrition, physical activity and health program (Impact 4)

The impact of pre-stated city led interventions to address an unhealthy diet showed a mixed picture. Restricting advertising of high fat sugar salt (HFSS) and policies around reformation of food or reduced promotion (two for one) of unhealthy food were considered the most impactful.

Reported national or state action initiatives to reduce an unhealthy diet were also mixed. City 6 had the most active national or state initiatives with 10 different initiatives reported. Four cities, city 3, city 4, city 7 and city 11, did not report any national or state initiatives.

The full results are presented in Tables 5.13 - 5.16

Table 5.13 – Nation or State initiatives to reduce an unhealthy diet.

Unhealthy Diet	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Individual or group education (including at particular locations or settings)					y	y		y			
Initiatives to promote breast feeding	y					y		y			
Mass health advertising - traditional (newspapers / radio / television) and/or social media	y	y			y	y		y			
Restricting advertising of High Fat, Sugar, Salt (HFSS) products		y			y	y					
Restricting unhealthy food availability in certain locations (e.g. in or around schools or public buildings)						y			y		
Restricting unhealthy food portion sizes						y					
Taxation on sugar sweetened beverages (ssb) - i.e. sugar tax	y	y				y					
Taxation on any other high fat sugar or salt (not ssb)		y				y					
Implement or improve food voucher scheme (for those on low income) to increase healthy food consumption	y									y	
Policies or partnerships to increasing healthy food availability (farmers markets, vending machines/carts, etc)								y		y	
Policy to increase the availability of (free) drinking water (e.g. water fountains or free top up of water bottles)						y		y	y		
Policies or partnerships to work with the industry to promote reformation towards a healthier diet and/or shops to reduce unhealthy impulse buys	y	y			y						
Initiatives or services by healthcare services to promote healthy diet					y	y		y			
Counts or totals	5	5	0	0	5	10	0	6	2	2	0

Table 5.14 – City led initiatives to reduce an unhealthy diet.

Unhealthy Diet	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Individual or group education (including at particular locations or settings)		y	y		y			y			y
Initiatives to promote breast feeding		y	y		y			y	y		y
Mass health advertising - traditional (newspapers / radio / television) and/or social media			y		y			y			
Restricting advertising of High Fat, Sugar, Salt (HFSS) products	y				y						
Restricting unhealthy food availability in certain locations (e.g. in or around schools or public buildings)	y	y	y		y				y		
Restricting unhealthy food portion sizes					y						
Taxation on sugar sweetened beverages (ssb) - i.e. sugar tax			y								
Taxation on any other high fat sugar or salt (not ssb)											
Implement or Improve food voucher scheme (for those on low income) to increase healthy food consumption		y	y		y				y		
Policies or partnerships to Increasing healthy food availability (farmers markets, vending machines/carts, etc)	y	y	y		y			y	y		
Policy to increase the availability of (free) drinking water (e.g. water fountains or free top up of water bottles)	y				y			y	y	y	
Policies or partnerships to work with the industry to promote reformation towards a healthier diet and/or shops to reduce unhealthy impulse buys	y				y						
Initiatives or services by healthcare services to promote healthy diet		y	y		y			y			y
Counts or totals	5	6	8	0	11	0	0	6	5	1	3
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive plan)	Yes	Yes	Yes	No	Yes	No		Yes	No	No	Yes

Table 5.15 – Self reported impact of city led initiatives to reduce an unhealthy diet.

Unhealthy Diet	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Individual or group education (including at particular locations or settings)		3	2		3	3		5	1		4	3
Initiatives to promote breast feeding		5	3		3	3		5	4		4	4
Mass health advertising - traditional (newspapers / radio / television) and/or social media			2		3	3		4	2			3
Restricting advertising of High Fat, Sugar, Salt (HFSS) products	5				4	4		5				5
Restricting unhealthy food availability in certain locations (e.g. in or around schools or public buildings)	4	2	3		2	4		4				3
Restricting unhealthy food portion sizes					3	4						4
Taxation on sugar sweetened beverages (ssb) - i.e. sugar tax			5		3	3						4
Taxation on any other high fat sugar or salt (not ssb)					3	3						3
Implement or Improve food voucher scheme (for those on low income) to increase healthy food consumption		5	1		4				4			4
Policies or partnerships to Increasing healthy food availability (farmers markets, vending machines/carts, etc)	4	2	1		4			5	4			3
Policy to increase the availability of (free) drinking water (e.g. water fountains or free top up of water bottles)	4	2			4	1		5	4			3
Policies or partnerships to work with the industry to promote reformation towards a healthier diet and/or shops to reduce unhealthy impulse buys	4				5							5
Initiatives or services by healthcare services to promote healthy diet		5	4		5	2		4			4	4
Counts or totals	21	24	21	0	46	30	0	33	23	0	12	

Table 5.16 – Likelihood of city to implement the initiative to address an unhealthy diet.

Unhealthy Diet	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Initiatives											
Individual or group education (including at particular locations or settings)						active			unlikely	active	
Initiatives to promote breast feeding					may do	active				may do	
Mass health advertising - traditional (newspapers / radio / television) and/or social media					active	active			unlikely	active	unlikely
Restricting advertising of High Fat, Sugar, Salt (HFSS) products			unlikely		active	active		active	may do	active	unlikely
Restricting unhealthy food availability in certain locations (e.g. in or around schools or public buildings)					may do	active		active		active	unlikely
Restricting unhealthy food portion sizes		unlikely	unlikely		may do	active		may do	may do	active	unlikely
Taxation on sugar sweetened beverages (ssb) - i.e. sugar tax					active	active		may do	may do	may do	unlikely
Taxation on any other high fat sugar or salt (not ssb)			unlikely		may do	active		may do	may do	may do	unlikely
Implement or Improve food voucher scheme (for those on low income) to increase healthy food consumption					may do	active		may do			unlikely
Policies or partnerships to Increasing healthy food availability (farmers markets, vending machines/carts, etc)					active	active					unlikely
Policy to increase the availability of (free) drinking water (e.g. water fountains or free top up of water bottles)		may do	active		active	active					unlikely
Policies or partnerships to work with the industry to promote reformation towards a healthier diet and/or shops to reduce unhealthy impulse buys			unlikely		active	active		may do	unlikely	active	unlikely
Initiatives or services by healthcare services to promote healthy diet						active			unlikely	active	

5.6.4.4. Harmful Alcohol Consumption

Cities were asked to report on 11 initiatives which address harmful alcohol consumption. These initiatives spanned education and advertising, restrictions on advertising and provision, taxation and financial instruments such as ‘minimum unit pricing’ (MUP) to partnerships with industry and provision of healthcare interventions.

City 5 reported undertaking the most city-led initiatives (8) to address harmful alcohol consumption followed by city 8 (6) and city 2 and city 11 each with 4 initiatives. Three other cities, city 1, city 3, city 9 reported two or less with the remaining cities not reporting any initiatives. City 10 was the most actively considering initiatives to reduce harmful alcohol consumption.

Nations or states are generally leading the initiatives around harmful alcohol consumption, with initiatives focused on education and advertising and restrictions on advertising and availability and areas of consumption. Generally, education and restrictions on availability scored highly as to impact.

The full results are presented in Tables 5.17 - 5.20.

Table 5.17 – Nation or State initiatives to reduce harmful alcohol consumption.

Harmful Alcohol Consumption	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
Initiatives	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Individual or group education						y		y	y		
Individual or group education and support (support including community recovery support, medication or intensive personalised support)					y	y		y	y		
Mass health advertising - traditional and/or social media	y	y				y		y	y		y
Restricting advertising of alcoholic drinks	y	y			y			y			y
Restricting alcoholic drink availability in certain locations					y				y		y
Restricting consumption of alcohol in certain locations*			y		y				y	y	y
Minimum unit pricing (or other financial mechanism aimed at reducing								y			y
Additional city taxation on alcoholic beverages					y						
Policies or partnerships to increasing non alcoholic alternatives availability											
Policies or partnerships to work with industry promote reduced alcoholic											
Healthcare services to reduce alcohol consumption or treat alcoholism								y			
Counts or totals	2	2	1	0	5	3	0	6	5	1	5

* eg on public transport or in public spaces such as squares or parks

Table 5.18 – City led initiatives to reduce harmful alcohol consumption.

Harmful Alcohol Consumption	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
Initiatives	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Individual or group education		Y			Y			Y			Y
Individual or group education and support (support including community recovery support, medication or intensive personalised support)		Y			Y			Y	Y		Y
Mass health advertising - traditional and/or social media					Y			Y			Y
Restricting advertising of alcoholic drinks					Y			Y			
Restricting alcoholic drink availability in certain locations		Y			Y						
Restricting consumption of alcohol in certain locations*	Y				Y						
Minimum unit pricing (or other financial mechanism aimed at reducing drinking)								Y			
Additional city taxation on alcoholic beverages			Y		Y						
Policies or partnerships to Increasing non alcoholic alternatives availability											
Policies or partnerships to work with industry promote reduced alcoholic content											
Healthcare services to reduce alcohol consumption or treat alcoholism		Y			Y			Y	Y		Y
Counts or totals	1	4	1	0	8	0	0	6	2	0	4
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive plan)	No	No	No	No	Yes	No		Yes	No	No	Yes

* e.g. on public transport or in public spaces such as squares or parks

Table 5.19 – Self reported impact of city led initiatives to reduce harmful alcohol consumption.

Harmful Alcohol Consumption	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
Initiatives	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Individual or group education		2			3	4		5	3		5	4
Individual or group education and support (support including community recovery support, medication or intensive personalised support)		5			3	5			3		5	4
Mass health advertising - traditional and/or social media					3	5		4	3		5	4
Restricting advertising of alcoholic drinks					3			2				3
Restricting alcoholic drink availability in certain locations		2			4				5			4
Restricting consumption of alcohol in certain locations*					4				5			5
Minimum unit pricing (or other financial mechanism aimed at reducing drinking)								5				5
Additional city taxation on alcoholic beverages			1		4							3
Policies or partnerships to Increasing non alcoholic alternatives availability												
Policies or partnerships to work with industry promote reduced alcoholic content												
Healthcare services to reduce alcohol consumption or treat alcoholism					4			3	3		5	4
Counts or totals	0	9	1	0	28	14	0	19	22	0	20	

* eg on public transport or in public spaces such as squares or parks

Survey respondents were given the opportunity to add up to three additional initiatives (free text) and rank the impact of these initiatives too. No cities recorded any additional initiatives.

Table 5.20 – Likelihood of city to implement the initiative to address harmful alcohol consumption.

Harmful Alcohol Consumption	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
Initiatives	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Individual or group education			unlikely		may do	active				active	
Individual or group education and support (support including community recovery support, medication or intensive personalised support)			unlikely			unlikely				active	
Mass health advertising - traditional and/or social media						unlikely				active	
Restricting advertising of alcoholic drinks			unlikely		may do	may do			unlikely	active	unlikely
Restricting alcoholic drink availability in certain locations			unlikely		active	unlikely		may do		unlikely	unlikely
Restricting consumption of alcohol in certain locations*		may do			active	may do		may do			unlikely
Minimum unit pricing (or other financial mechanism aimed at reducing drinking)		unlikely	unlikely		may do	unlikely			unlikely	unlikely	unlikely
Additional city taxation on alcoholic beverages		unlikely			may do	active				unlikely	unlikely
Policies or partnerships to Increasing non alcoholic alternatives availability		may do			may do	active			unlikely	active	unlikely
Policies or partnerships to work with industry promote reduced alcoholic content		unlikely	unlikely		may do	active		may do	unlikely	active	unlikely
Healthcare services to reduce alcohol consumption or treat alcoholism			may do			active				active	

* eg on public transport or in public spaces such as squares or parks

5.6.4.5. Harmful Drug Use

Cities were asked to report on 7 initiatives identified to reduce harmful drug use. City 7 did not report on any of the harmful drug use questions. At a city level, some cities had taken additional steps to decriminalise personal use cannabis (city 3, city 9 and city 11) and legalise personal use cannabis (city 9). Three cities (city 9, city 10, city 11) also provided facilities for safe drug injection and additional health services for drug addiction. Two cities, city 9 and city 11 stood out in terms of the initiatives and self-reported impact of initiatives to address harmful drug use.

At a nation or state level, most of the quite limited number of initiatives to address harmful drug use were based around mass health advertising and education and support. Two cities were part of a country or state that had legalised personal use cannabis. Five cities did not report any initiatives at a nation or state level.

The full results are presented in Tables 5.21 - 5.24.

Table 5.21 – Nation or State initiatives to reduce harmful drug use.

Harmful Drug Use	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Individual or group education					Y	Y		Y		Y	
Individual / group education with support (e.g. needle exchange, drug substitute)								Y		Y	
Mass health advertising - traditional and/or social media		Y			Y	Y		Y		Y	Y
Decriminalise personal use cannabis						Y					Y
Legalise personal use cannabis											
Facilities that allow and support safe drug injection											
Healthcare services to reduce drug usage and treat drug addiction											
Counts or totals	0	1	0	0	2	3	0	3	0	3	2

Table 5.22 – City led initiatives to reduce harmful drug use.

Harmful Drug Use	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Individual or group education		Y	Y		Y			Y	Y		Y
Individual / group education with support (e.g. needle exchange, drug substitute)		Y						Y	Y		Y
Mass health advertising - traditional and/or social media			Y		Y			Y			Y
Decriminalise personal use cannabis			Y						Y		Y
Legalise personal use cannabis									Y		
Facilities that allow and support safe drug injection									Y	Y	Y
Healthcare services to reduce drug usage and treat drug addiction			Y						Y	Y	Y
Counts or totals	0	2	4	0	2	0	0	3	6	2	6
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive plan)	No	Yes	Yes	No	Yes	No		Yes	No	Yes	Yes

Table 5.23 – Self reported impact of city led initiatives to reduce harmful drug use.

Harmful Drug Use	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
Initiatives	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Individual or group education		2	3		3	3		5	4		5	4
Individual / group education with support (e.g. needle exchange, drug substitute)		5	4					5	5		5	5
Mass health advertising - traditional and/or social media			3		3	3		5			5	4
Decriminalise personal use cannabis			3			2			4		5	4
Legalise personal use cannabis									5			5
Facilities that allow and support safe drug injection									5		5	5
Healthcare services to reduce drug usage and treat drug addiction			4		3				5		5	4
Counts or totals	0	7	17	0	9	8	0	15	28	0	30	

Survey respondents were given the opportunity to add up to three additional initiatives (free text) and rank the impact of these initiatives too. Only one city, City 1 recorded a national initiative – ‘substitute prescribing’.

Table 5.24 – Likelihood of city to implement the initiative to address harmful drug use.

Harmful Drug Use	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
Initiatives	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Individual or group education	unlikely					active					
Individual / group education with support (e.g. needle exchange, drug substitute)	unlikely		may do		may do	active					
Mass health advertising - traditional and/or social media	unlikely				may do	active			unlikely		
Decriminalise personal use cannabis	may do	unlikely			unlikely	active		unlikely		may do	active
Legalise personal use cannabis	may do	unlikely			unlikely	active		unlikely		may do	
Facilities that allow and support safe drug injection	may do	active	may do		unlikely	unlikely					
Healthcare services to reduce drug usage and treat drug addiction	unlikely	active			may do	active		active			

5.6.4.6. Physical Inactivity

Cities were presented with 6 initiatives that had been identified to improve physical activity. Cities 4 and 7 did not respond to any questions in the physical inactivity section.

At the city level, city 10 was undertaking all six initiatives, closely followed by city 5 and city 8 carrying out five initiatives, then city 2 with four initiatives. Cities 1, 3 and 11 were each undertaking 2 initiatives. City 9 reported one initiative and City 6 did not report any city-led initiatives. However, there was a discrepancy with city 6 reporting generally very high impact of city led initiatives but not having reported any city led initiatives in the previous section. This could have been an omission or error. Two cities, city 1 and city 2, reported additional city led initiatives of active travel promotion (impact 4) and active travel infrastructure (impact 5) respectively. City 5 and city 6 were the most interested in the potential of initiatives to increase physical activity.

The host nation or state of city 6 was undertaking all of the six listed initiatives to address physical inactivity, closely followed by city 8 nation or state with five of the six initiatives. Two cities nations or states (city 5 and city 9) were carrying out 3 initiatives, city 2 was undertaking one initiative and the nation or state of city 1, city 3, city 4, city 7, city 10 and city 11 were not undertaking any initiatives.

The full results are presented in Tables 5.25 - 5.28

Table 5.25 – Nation or State initiatives to address physical inactivity

Physical Inactivity	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Individual or group education (including targeted at specific groups or locations)					Y	Y		Y			
Mass health advertising - traditional and/or social media		Y				Y		Y	Y		
Introducing physical activity expectations/requirements in schools					Y	Y		Y	Y		
Free to use outdoor gyms in parks and other locations					Y	Y		Y			
Financial incentives / tax relief to incentivise physical activity						Y			Y		
Initiatives or services by healthcare services to increase physical activity						Y		Y			
Counts or totals	0	1	0	0	3	6	0	5	3	0	0

Table 5.26 – City led initiatives to increase physical activity

Physical Inactivity	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Individual or group education (including targeted at specific groups or locations)		Y			Y			Y		Y	Y
Mass health advertising - traditional and/or social media	Y		Y		Y			Y		Y	
Introducing physical activity expectations/requirements in schools	Y	Y			Y			Y		Y	
Free to use outdoor gyms in parks and other locations		Y	Y		Y			Y	Y	Y	
Financial incentives / tax relief to incentivise physical activity										Y	
Initiatives or services by healthcare services to increase physical activity		Y			Y			Y		Y	Y
Counts or totals	2	4	2	0	5	0	0	5	1	6	2
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive plan)	No	Yes	Yes	No	Yes	No		Yes	No	Yes	Yes

Table 5.27 – Self reported impact of city led initiatives to reduce physical inactivity.

Physical Inactivity	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Individual or group education (including targeted at specific groups or locations)		5			5	5		5			5	5
Mass health advertising - traditional and/or social media	3		2		4	5		4	2			3
Introducing physical activity expectations/requirements in schools	4	2			4	5		4	4			4
Free to use outdoor gyms in parks and other locations		3	3		4	5		4	4			4
Financial incentives / tax relief to incentivise physical activity					4				3			4
Initiatives or services by healthcare services to increase physical activity		5			4	3		4			5	4
Counts or totals	7	15	5	0	21	27	0	21	13	0	10	

Survey respondents were given the opportunity to add up to three additional initiatives (free text) and rank the impact of these initiatives. Two cities, city 1 and city 2 recorded the following:

- City 1 - city led active travel promotion of walking and cycling (impact 4)
- City 2 - Active transport infrastructure development (impact 5)

Table 5.28 – Likelihood of city to implement the initiative to address physical inactivity.

Physical Inactivity	City 1 Are you likely to consider doing ?	City 2 Are you likely to consider doing ?	City 3 Are you likely to consider doing ?	City 4 Are you likely to consider doing ?	City 5 Are you likely to consider doing ?	City 6 Are you likely to consider doing ?	City 7 Are you likely to consider doing ?	City 8 Are you likely to consider doing ?	City 9 Are you likely to consider doing ?	City 10 Are you likely to consider doing ?	City 11 Are you likely to consider doing ?
Initiatives											
Individual or group education (including targeted at specific groups or locations)	unlikely		unlikely		active	active			unlikely		
Mass health advertising - traditional and/or social media					active	active					
Introducing physical activity expectations/requirements in schools					active	active					
Free to use outdoor gyms in parks and other locations	may do		unlikely		active	active					
Financial incentives / tax relief to incentivise physical activity	unlikely	unlikely			may do	active		may do		unlikely	
Initiatives or services by healthcare services to increase physical activity	unlikely				may do	active			unlikely		

5.6.4.7. Obesity

Many of the initiatives to reduce the prevalence of obesity were covered in the ‘unhealthy diet’ and ‘physical (in)activity’ section. Therefore, cities were only given 4 initiatives to report on. Cities 4 and 7 did not respond to any questions in the obesity section.

The host nation or state of city 6 and city 8 were reported to be doing all initiatives to address obesity. Similarly, across the reporting of city led initiatives and impact of city led initiatives cities 5, 6 and 8 reported the most initiatives and impact.

Survey respondents were given the opportunity to add up to three additional initiatives (free text) and rank the impact of these initiatives too. No cities recorded any additional initiatives.

City 5 and city 6 were considering further initiatives whilst already carrying out initiatives whilst city 10 was looking to expand the current single healthcare focused initiative.

The full results are presented in Tables 5.29 - 5.32.

Table 5.29 – Nation or State initiatives to reduce obesity

Obesity	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Individual or group education (including at schools or particular settings)					Y	Y		Y			
Individual or group education with support (e.g. education with personal coaching)						Y		Y			
Mass health advertising - traditional and/or social media	Y	Y				Y		Y			
Healthcare services or initiatives to reduce obesity (including bariatric surgery)						Y		Y			
Counts or totals	1	1	0	0	1	4	0	4	0	0	0

Table 5.30 – City led initiatives to reduce obesity prevalence

Obesity	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
Initiatives	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Individual or group education (including at schools or particular settings)					Y			Y			Y
Individual or group education with support (e.g. education with personal coaching)		Y			Y			Y			
Mass health advertising - traditional and/or social media			Y					Y			
Healthcare services or initiatives to reduce obesity (including bariatric surgery)		Y			Y			Y	Y	Y	Y
Counts or totals	0	2	1	0	3	0	0	4	1	1	2
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive approach)	No	Yes	Yes	No	Yes	No		Yes	No	Yes	Yes

Table 5.31 – Self reported impact of city led initiatives to reduce obesity prevalence

Obesity	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
Initiatives	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Individual or group education (including at schools or particular settings)					3	3		5			5	4
Individual or group education with support (e.g. education with personal coaching)		5			3	3		4				4
Mass health advertising - traditional and/or social media			1			3		4				3
Healthcare services or initiatives to reduce obesity (including bariatric surgery)		5			3	3		5	3		5	4
Counts or totals	0	10	1	0	9	12	0	18	3	0	10	

Table 5.32 – Likelihood of city to implement the initiative to address obesity prevalence.

Obesity	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
Initiatives	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Individual or group education (including at schools or particular settings)	unlikely	May	unlikely		Active	Active			unlikely	Active	
Individual or group education with support (e.g. education with personal coaching)	unlikely		unlikely		Active	Active			unlikely	Active	
Mass health advertising - traditional and/or social media	unlikely		unlikely		May do	Active			unlikely	Active	
Healthcare services or initiatives to reduce obesity (including bariatric surgery)	unlikely		unlikely			Active					

5.6.4.8. Travel and Planning

Cities were asked to report on 14 initiatives that were identified to promote health through travel and planning. These initiatives ranged from active travel initiatives focused on walking or cycling, restricting vehicles either with regard to speed or from certain areas, for example low traffic neighbourhoods, low emission zones or 'Ciclovia' (car free days), and initiatives to reduce road traffic accidents (RTAs). Cities 4 and 7 did not respond to any questions in this section.

In respect of city led initiatives in travel and planning to support health, city 4, city 6 and city 7 did not report any initiatives. City 10, city 9 city 5, city 2 and city 1, reported the most with initiatives with 14, 13, 11, 9 and 10 respectively (out of a possible total of 14) areas. The highest average impact was scored by 'promote public transport - creating or expanding bus, tube/metro, tram or train' and 'In all planning considerations prioritise firstly; play, pedestrians, cyclists/scooters, public transport, electric vehicles and finally cars and lorries. No cities reported any additional free text initiatives.

At a nation or state level, only city 5, city 6 and city 8 reported any initiatives in the 14 categories. City 6 was currently undertaking very limited initiatives in travel and planning but reported as actively considering initiatives in all 14 areas.

The full results are presented in Tables 5.33 - 5.36.

Table 5.33 – Nation or State initiatives to promote health through travel and planning.

Travel	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Walking - Policies, initiatives or partnerships to promote walking					Y			Y			
*Promote cycling through increasing bike lanes											
*Creating or expanding bike share / bike hire scheme(s)											
* Creating or expanding electric bike share / bike hire scheme(s)											
* creating or expanding electric scooters / electric scooter hire scheme(s)											
Promote public transport - creating or expanding bus, tube/metro, tram or train etc					Y						
* reduce private vehicle usage - eg Car Free Day(s)					Y						
Restrict traffic (cars, vans etc) around schools during morning and afternoon											
Restricting vehicles to promote pedestrian safety and walking and play streets											
Restricting vehicles in certain areas through 'low emission zones'											
Incentivising other forms for travel and transport through charging vehicles					Y						
Speed restrictions - over an above national requirements - in certain areas*						Y		Y			
* reduce road traffic accidents (Including speed restrictions, changes to layout)						Y		Y			
In all planning considerations prioritise firstly; play, pedestrians, cyclists/scooters, public transport, electric vehicles and finally cars and lorries.					Y						
Counts or totals	0	0	0	0	1	2	0	2	0	0	0

*Policies, initiatives or partnerships to...

**e.g., lower speeds around schools or high accident areas

Table 5.34 – City led initiatives to promote health through travel and planning policy.

Travel	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Walking - Policies, initiatives or partnerships to promote walking	Y	Y	Y		Y					Y	Y
*Promote cycling through increasing bike lanes	Y	Y	Y		Y			Y	Y	Y	Y
*Creating or expanding bike share / bike hire scheme(s)	Y	Y	Y		Y				Y	Y	Y
* Creating or expanding electric bike share / bike hire scheme(s)		Y	Y						Y	Y	Y
* creating or expanding electric scooters / electric scooter hire scheme(s)	Y	Y			Y				Y	Y	
Promote public transport - creating or expanding bus, tube/metro, tram or train etc	Y	Y			Y				Y	Y	
* reduce private vehicle usage - eg Car Free Day(s)	Y	Y			Y				Y	Y	
Restrict traffic (cars, vans etc) around schools during morning and afternoon		Y			Y				Y	Y	
Restricting vehicles to promote pedestrian safety and walking and play streets		Y							Y	Y	
Restricting vehicles in certain areas through 'low emission zones'	Y								Y	Y	Y
Incentivising other forms for travel and transport through charging vehicles	Y				Y				Y	Y	
Speed restrictions - over an above national requirements - in certain areas*	Y				Y			Y	Y	Y	
* reduce road traffic accidents (Including speed restrictions, changes to layout)	Y		Y		Y			Y	Y	Y	
In all planning considerations prioritise firstly; play, pedestrians, cyclists/scooters, public transport, electric vehicles and finally cars and lorries.					Y				Y	Y	
Counts or totals	10	9	5	0	11	0	0	3	13	14	5
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive plan)	Yes	Yes	Yes	No	Yes	No		Yes	No	Yes	Yes

*Policies, initiatives or partnerships to...

**e.g., lower speeds around schools or high accident areas

Table 5.35 – Self reported impact of city led initiatives to promote health through travel and planning policy

Travel	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
Initiatives	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Walking - Policies, initiatives or partnerships to promote walking	4	5	3		5					4	5	4
*Promote cycling through increasing bike lanes	5	5	2		3			4	5		5	4
*Creating or expanding bike share / bike hire scheme(s)	4	5	2		3				5		5	4
* Creating or expanding electric bike share / bike hire scheme(s)		3	2		2				5		5	3
* creating or expanding electric scooters / electric scooter hire scheme(s)	4	3			2				5			4
Promote public transport - creating or expanding bus, tube/metro, tram or train etc	5	5			4				5			5
* reduce private vehicle usage - eg Car Free Day(s)	5	3			4				5			4
Restrict traffic (cars, vans etc) around schools during morning and afternoon	4	3			3				4			4
Restricting vehicles to promote pedestrian safety and walking and play streets	4	3							4			4
Restricting vehicles in certain areas through 'low emission zones'	4	3							4		4	4
Incentivising other forms for travel and transport through charging vehicles	4				3				4			4
Speed restrictions - over an above national requirements - in certain areas*	4				3	5		5	5			4
* reduce road traffic accidents (Including speed restrictions, changes to layout)	4		2		4	4		5	5			4
In all planning considerations prioritise firstly; play, pedestrians, cyclists/scooters, public transport, electric vehicles and finally cars and lorries.					4				5			5
Counts or totals	51	38	11	0	40	9	0	14	61	4	24	

*Policies, initiatives or partnerships to...

**e.g., lower speeds around schools or high accident areas

Table 5.36 – Likelihood of city to implement the initiative to promote health through travel and planning policy.

Travel	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
Initiatives	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Walking - Policies, initiatives or partnerships to promote walking					Active	Active		Active			
*Promote cycling through increasing bike lanes					May do	Active					
*Creating or expanding bike share / bike hire scheme(s)					May do	Active		may do			
* Creating or expanding electric bike share / bike hire scheme(s)	May do					Active		may do			
* creating or expanding electric scooters / electric scooter hire scheme(s)			unlikely		May do	Active		may do			May do
Promote public transport - creating or expanding bus, tube/metro, tram or train etc					active	Active					May do
* reduce private vehicle usage - eg Car Free Day(s)					active	Active		unlikely			May do
Restrict traffic (cars, vans etc) around schools during morning and afternoon	unlikely					Active					May do
Restricting vehicles to promote pedestrian safety and walking and play streets	unlikely				May do	Active		Active			May do
Restricting vehicles in certain areas through 'low emission zones'					May do	Active					May do
Incentivising other forms for travel and transport through charging vehicles		May do				Active					May do
Speed restrictions - over an above national requirements - in certain areas*		Active				Active					May do
* reduce road traffic accidents (Including speed restrictions, changes to layout)		Active				Active					May do
In all planning considerations prioritise firstly; play, pedestrians, cyclists/scooters, public transport, electric vehicles and finally cars and lorries.	May do	Active				Active					May do

*Policies, initiatives or partnerships to...

**e.g., lower speeds around schools or high accident areas

5.6.4.9. Mental Health

Cities were given the opportunity to report on 10 mental health related initiatives. Cities 4 and 7 did not respond to any questions in this section. City 5, city 2, city 11, city 1 and city 9 reported the highest number of initiatives, with 10, 8, 8, 7 and 6 respectively. Similar to the previous section on 'travel and planning' city 6 did not report any city led initiatives. However, city 6 did report that it is actively considering all of the initiatives. No cities reported any additional free text initiatives. In terms of impact, city 5, city 11, city 2 and city 1, all reported aggregate impact scores of over 30. All of the 10 listed initiatives, with the exception of initiatives to support social cohesion or loneliness, scored an average impact of 4 or 5.

The full results are presented in Tables 5.37 - 5.40.

Table 5.37 – Nation or State initiatives to promote good mental health

Mental Health	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Individual or group education											
Mass health advertising - traditional and/or social media		Y									Y
Policies, initiatives or partnerships to destigmatise mental health		Y			Y			Y			Y
Policies, initiatives or partnerships to support perinatal mental health					Y						Y
Policies, initiatives or partnerships to support CYP mental health					Y			Y			Y
Policies, initiatives or partnerships to support adult anxiety and depression					Y						Y
Policies, initiatives or partnerships to support reduction in self harm and suicide								Y			Y
Policies, initiatives or partnerships to support social cohesion and/or loneliness											
Policies, initiatives or partnerships around Dementia					Y						
Initiatives or services by healthcare services to promote good mental health					Y			Y			
Counts or totals	0	2	0	0	6	0	0	4	0	0	6

Table 5.38 – City led initiatives to promote good mental health.

Mental Health	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Individual or group education	Y	Y			Y				Y		Y
Mass health advertising - traditional and/or social media	Y		Y		Y				Y		
Policies, initiatives or partnerships to destigmatise mental health	Y				Y			Y	Y		Y
Policies, initiatives or partnerships to support perinatal mental health		Y			Y						
Policies, initiatives or partnerships to support CYP mental health	Y	Y			Y			Y	Y		Y
Policies, initiatives or partnerships to support adult anxiety and depression	Y	Y			Y				Y		Y
Policies, initiatives or partnerships to support reduction in self harm and suicide	Y	Y			Y			Y			Y
Policies, initiatives or partnerships to support social cohesion and/or loneliness		Y			Y				Y	Y	Y
Policies, initiatives or partnerships around Dementia	Y	Y			Y						Y
Initiatives or services by healthcare services to promote good mental health		Y			Y			Y		Y	Y
Counts or totals	7	8	1	0	10	0	0	4	6	2	8
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive approach)	Yes	Yes	Yes	No	Yes	No		Yes	No	Yes	Yes

Table 5.39 – Self reported impact of city led initiatives to promote good mental health.

Mental Health	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Individual or group education	4	5			5				4		5	5
Mass health advertising - traditional and/or social media	4				4				3			4
Policies, initiatives or partnerships to destigmatise mental health	5				5			5	4		4	5
Policies, initiatives or partnerships to support perinatal mental health		5			3							4
Policies, initiatives or partnerships to support CYP mental health	4	4			5			4	4		4	4
Policies, initiatives or partnerships to support adult anxiety and depression	4	3			4				3		4	4
Policies, initiatives or partnerships to support reduction in self harm and suicide	5	5			4			4			4	4
Policies, initiatives or partnerships to support social cohesion and/or loneliness		3			3				3		5	3
Policies, initiatives or partnerships around Dementia	4	4			3						5	4
Initiatives or services by healthcare services to promote good mental health		5			4			4			5	5
Counts or totals	30	34	0	0	40	0	0	17	21	0	36	

Table 5.40 – Likelihood of city to implement the initiative to promote good mental health

Mental Health	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Initiatives											
Individual or group education					active	active		active		active	
Mass health advertising - traditional and/or social media					active	active		active		active	
Policies, initiatives or partnerships to destigmatise mental health					active	active				active	
Policies, initiatives or partnerships to support perinatal mental health	may do				active	active		active	active	active	may do
Policies, initiatives or partnerships to support CYP mental health					active	active		active		active	
Policies, initiatives or partnerships to support adult anxiety and depression					may do	active		active		active	
Policies, initiatives or partnerships to support reduction in self harm and suicide					may do	active			unlikely	may do	
Policies, initiatives or partnerships to support social cohesion and/or loneliness	active				may do	active					
Policies, initiatives or partnerships around Dementia					active	active		active	unlikely	may do	
Initiatives or services by healthcare services to promote good mental health	may do				active	active			unlikely		

5.6.4.10. HIV/AIDS

Cities were presented with 5 initiatives identified to reduce the prevalence of HIV and AIDs. These initiatives ranged from education and mass advertising, initiatives to de-stigmatise and treatment offers such as PrEP (Pre-Exposure Prophylaxis). All cities responded to at least one question in this section.

City 4, city 5 and city 9, reported they were leading on all (city 4) or all but one (City 5 and City 9) initiatives to reduce the prevalence of HIV/AIDs. City 6, city 7 and city 10 did not report any city led initiatives. However, city 6 did later report the impact of city-led initiatives, indeed it reported the highest possible impact score of 5 across all initiatives. No cities reported any additional free text initiatives. ‘Mass health advertising - traditional and/or social media’ was reported as having the biggest average impact.

The full results are presented in Tables 5.41 - 5.44.

Table 5.41 – Nation or State initiatives to reduce HIV / AIDs prevalence

HIV / AIDS	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Individual or group education (including at schools or particular settings)		Y		Y		Y		Y		Y	
Mass health advertising - traditional and/or social media		Y		Y		Y		Y		Y	Y
Policies, initiatives or partnerships to destigmatise HIV/AIDS		Y		Y		Y		Y			
Treatments, such as PrEP* are available - but at a cost to the individual				Y		Y					
Treatments, such as PrEP*, are available - and are free at the point of need/care				Y		Y					
Counts or totals	0	3	0	5	0	5	0	3	0	2	1

*PrEP - pre-exposure prophylaxis

Table 5.42 – City led initiatives to reduce HIV / AIDs prevalence

HIV / AIDS	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Individual or group education (including at schools or particular settings)				Y	Y			Y	Y		Y
Mass health advertising - traditional and/or social media	Y			Y	Y			Y			
Policies, initiatives or partnerships to destigmatise HIV/AIDS	Y		Y	Y	Y			Y	Y		Y
Treatments, such as PrEP* are available - but at a cost to the individual			Y	Y	Y			Y			
Treatments, such as PrEP*, are available - and are free at the point of need/care		Y	Y	Y	Y			Y			Y
Counts or totals	2	1	3	5	4	0	0	3	4	0	3
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive approach)	Yes	Yes	Yes	Yes	Yes	No		Yes	No	No	Yes

*PrEP - pre-exposure prophylaxis

Table 5.43 – Self reported impact of city led initiatives to reduce HIV / AIDs prevalence

HIV / AIDS	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Individual or group education (including at schools or particular settings)				5	3	5		5	3		5	4
Mass health advertising - traditional and/or social media	5			5		5		5				5
Policies, initiatives or partnerships to destigmatise HIV/AIDS	5		3	5		5		5	4		4	4
Treatments, such as PrEP* are available - but at a cost to the individual	4		3	5	3	5			5			4
Treatments, such as PrEP*, are available - and are free at the point of need/care	4	5	3	5	3	5			5		5	4
Counts or totals	18	5	9	25	9	25	0	15	17	0	14	

Table 5.44 – Likelihood of city to implement the initiative to address HIV / AIDs prevalence

HIV / AIDS	City 1 Are you likely to consider doing ?	City 2 Are you likely to consider doing ?	City 3 Are you likely to consider doing ?	City 4 Are you likely to consider doing ?	City 5 Are you likely to consider doing ?	City 6 Are you likely to consider doing ?	City 7 Are you likely to consider doing ?	City 8 Are you likely to consider doing ?	City 9 Are you likely to consider doing ?	City 10 Are you likely to consider doing ?	City 11 Are you likely to consider doing ?
Initiatives											
Individual or group education (including at schools or particular settings)	unlikely					may do					
Mass health advertising - traditional and/or social media					may do	may do			unlikely		unlikely
Policies, initiatives or partnerships to destigmatise HIV/AIDS						may do				Active	
Treatments, such as PrEP* are available - but at a cost to the individual	Active				Active	may do					
Treatments, such as PrEP*, are available - and are free at the point of need/care	Active				may do	may do					

*PrEP - pre-exposure prophylaxis

5.6.4.11. Infectious Diseases (excluding HIV/AIDs)

Cities were presented with 5 initiatives identified to reduce the prevalence of other infectious diseases (excluding HIV and AIDs). Cities 3 and 7 did not report any answers in this section. City 4, city 5 city 8 and city 11 reported city-led initiatives in all the categories to reduce infectious diseases. In addition to city 3 and 7, city 6 did not report any city-led initiatives, however it did report it was actively considering all the initiatives. City 1, city 2 and city 9 all reported city-led initiatives in 3 categories in the areas of sexual health, TB and hepatitis B and hepatitis C and childhood vaccinations. Initiatives to increase uptake of childhood vaccinations scored the highest impact. Survey respondents were given the opportunity to add up to three additional initiatives (free text) and rank the impact of these initiatives too. Only city 1 used this option to identify: BBV (blood born virus) testing (Impact 4)

The full results are presented in Tables 5.45 - 5.48

Table 5.45 – Nation or State initiatives to reduce infectious diseases (excluding HIV / AIDs).

Infectious Diseases (excluding HIV)	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Individual or group education (including at schools or particular setting)				Y	Y			Y		Y	
Mass health advertising - traditional and/or social media		Y		Y	Y			Y			
Policies, initiatives or partnerships to reduce sexually transmitted diseases				Y				Y			Y
*improve the detection and treatment of Tuberculosis (TB) or Hepatitis B and C				Y				Y			Y
increase the uptake of childhood vaccinations					Y			Y		Y	Y
Counts or totals	0	1	0	4	3	0	0	5	0	2	3

*Policies, initiatives or partnerships to reduce the transmission and...

Table 5.46 – City led initiatives to reduce infectious diseases (excluding HIV / AIDs)

Infectious Diseases (excluding HIV)	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Individual or group education (including at schools or particular setting)				Y	Y			Y			Y
Mass health advertising - traditional and/or social media				Y	Y			Y			Y
Policies, initiatives or partnerships to reduce sexually transmitted diseases	Y	Y		Y	Y			Y	Y		Y
*improve the detection and treatment of Tuberculosis (TB) or Hepatitis B and C	Y	Y		Y	Y			Y	Y		Y
increase the uptake of childhood vaccinations	Y	Y		Y	Y			Y	Y		Y
Counts or totals	3	3	0	5	5	0	0	5	3	0	5
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive)	Yes	Yes		Yes	Yes	No		Yes	No	Yes	Yes

*Policies, initiatives or partnerships to reduce the transmission and...

Table 5.47 – Self reported impact of city led initiatives to reduce infectious diseases (excluding HIV / AIDs)

Infectious Diseases (excluding HIV)	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Individual or group education (including at schools or particular setting)				5	4			5			5	5
Mass health advertising - traditional and/or social media				5	3			5			4	4
Policies, initiatives or partnerships to reduce sexually transmitted diseases	5	5		5	3			5	3		4	4
*improve the detection and treatment of Tuberculosis (TB) or Hepatitis B and C	4	5		5	3			5	4		4	4
increase the uptake of childhood vaccinations	3	5		5	5			5	5		4	5
Counts or totals	12	15	0	25	18	0	0	25	12	0	21	

*Policies, initiatives or partnerships to reduce the transmission and...

Table 5.48 – Likelihood of city to implement the initiative to address reduce infectious diseases (excluding HIV / AIDs).

Infectious Diseases (excluding HIV)	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Initiatives											
Individual or group education (including at schools or particular setting)	unlikely	may do			active	active			unlikely	active	
Mass health advertising - traditional and/or social media	may do	unlikely			active	active			unlikely	active	
Policies, initiatives or partnerships to reduce sexually transmitted diseases					active	active				active	
*improve the detection and treatment of Tuberculosis (TB) or Hepatitis B and C					May do	active				May do	
increase the uptake of childhood vaccinations					active	active					

*Policies, initiatives or partnerships to reduce the transmission and...

5.6.4.12. Wider Determinants

Eleven initiatives related to the wider determinants of health were included in the survey. These covered broad areas related to income (including minimum wage and universal basic income) as well as other inequalities such as gender, race and health, through to homelessness and violence. Cities 3, 4 and 7 did not respond to any questions in this section.

City 2 led the way, reporting city-led initiatives in all 11 areas, closely followed by city 1 and city 5 who each reported initiatives in 10 areas. City 3, city 4, city 7 and city 6 did not report any city-led initiatives. No cities reported any free text additional initiatives.

City 3 and city 6 did report on some initiatives at nation or state level, whereas city 4 and city 7 did not. Cities 1, 2 and 5 reported generally strong impact of the initiatives across a diverse range of areas.

The full results are presented in Tables 5.49 - 5.52

Table 5.49 – Nation or State initiatives to address wider determinants of health

Wider Determinants	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Policies, initiatives or partnerships to reduce health inequalities								y	y		y
Policies, initiatives or partnerships to reduce income inequalities								y	y		y
Policies, initiatives or partnerships around a Minimum Wage						y		y	y		y
Policies, initiatives or partnerships around Universal Basic Income								y	y		y
Policies, initiatives or partnerships to reduce race inequalities					y						y
Policies, initiatives or partnerships to reduce gender inequalities					y	y		y			y
Policies, initiatives or partnerships to increase social integration					y			y			
Policies, initiatives or partnerships to increase green or open public spaces						y					
Policies, initiatives or partnerships to reduce homelessness						y			y		
Policies, initiatives or partnerships to reduce violent or gang crime						y		y	y		
Policies, initiatives or partnerships to reduce hate crime					y			y			y
Counts or totals	0	0	0	0	4	5	0	8	6	0	7

Table 5.50 – City led initiatives to address wider determinants of health

Wider Determinants	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Policies, initiatives or partnerships to reduce health inequalities	y	y			y			y	y		y
Policies, initiatives or partnerships to reduce income inequalities	y	y			y			y	y		y
Policies, initiatives or partnerships around a Minimum Wage	y	y						y			
Policies, initiatives or partnerships around Universal Basic Income		y			y			y			
Policies, initiatives or partnerships to reduce race inequalities	y	y			y				y		
Policies, initiatives or partnerships to reduce gender inequalities	y	y			y			y			y
Policies, initiatives or partnerships to increase social integration	y	y			y			y	y		y
Policies, initiatives or partnerships to increase green or open public spaces	y	y			y				y	y	y
Policies, initiatives or partnerships to reduce homelessness	y	y			y				y	y	y
Policies, initiatives or partnerships to reduce violent or gang crime	y	y			y			y	y	y	y
Policies, initiatives or partnerships to reduce hate crime	y	y			y			y		y	
Counts or totals	10	11	0	0	10	0	0	8	7	4	7

Table 5.51 – Self reported impact of city led initiatives to address wider determinants of health

Wider Determinants	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Policies, initiatives or partnerships to reduce health inequalities	4	3			4			4	5		4	4
Policies, initiatives or partnerships to reduce income inequalities	4	3			3			4	4		4	4
Policies, initiatives or partnerships around a Minimum Wage	4	4				5		4				4
Policies, initiatives or partnerships around Universal Basic Income		4			4			4				4
Policies, initiatives or partnerships to reduce race inequalities	4	5			4				4			4
Policies, initiatives or partnerships to reduce gender inequalities	4	3			4	5					4	4
Policies, initiatives or partnerships to increase social integration	4	3			5			4	4		4	4
Policies, initiatives or partnerships to increase green or open public spaces	5	5			4	5			4		4	5
Policies, initiatives or partnerships to reduce homelessness	4	5			3	1			3		4	3
Policies, initiatives or partnerships to reduce violent or gang crime	4	3			3	1		5	3		4	3
Policies, initiatives or partnerships to reduce hate crime	4	4			4			5				4
Counts or totals	41	42	0	0	38	17	0	30	27	0	28	

Table 5.52 – Likelihood of city to implement the initiative to address wider determinants of health

Wider Determinants	City 1 Are you likely to consider doing ?	City 2 Are you likely to consider doing ?	City 3 Are you likely to consider doing ?	City 4 Are you likely to consider doing ?	City 5 Are you likely to consider doing ?	City 6 Are you likely to consider doing ?	City 7 Are you likely to consider doing ?	City 8 Are you likely to consider doing ?	City 9 Are you likely to consider doing ?	City 10 Are you likely to consider doing ?	City 11 Are you likely to consider doing ?
Initiatives											
Policies, initiatives or partnerships to reduce health inequalities					active	active				may do	
Policies, initiatives or partnerships to reduce income inequalities					active	active				may do	
Policies, initiatives or partnerships around a Minimum Wage					unlikely	unlikely			unlikely	may do	unlikely
Policies, initiatives or partnerships around Universal Basic Income	active				active	may do			unlikely	may do	unlikely
Policies, initiatives or partnerships to reduce race inequalities					active	may do				active	may do
Policies, initiatives or partnerships to reduce gender inequalities					active	may do			unlikely	may do	
Policies, initiatives or partnerships to increase social integration					active	active				active	
Policies, initiatives or partnerships to increase green or open public spaces					active	active		active			
Policies, initiatives or partnerships to reduce homelessness					active	active					
Policies, initiatives or partnerships to reduce violent or gang crime						active					
Policies, initiatives or partnerships to reduce hate crime					active	unlikely			may do		may do

5.6.4.13. Planetary Health & Climate Change

Cities were asked to report on 12 initiatives related to planetary health. These initiatives ranged from initiatives around food sources and food waste, fossil fuels and renewable energy use to electric car infrastructure. City 3, city 4 and city 7 did not respond to any questions in this section.

City 5 and city 10 were the most active, reporting 10 city-led initiatives, followed by city 1, city 2 and city 9 who reported 7 and city 8 and city 11 who reported 5. No cities reported any additional initiatives. The cities were utilising all the 12 initiatives with ‘Policies, initiatives or partnerships to increase the number of trees in the city’ and ‘Policies, initiatives or partnerships to improve indoor air quality’ the most popular with 6 cities using these initiatives. The least used initiative was ‘policies, initiatives or partnerships to increase the use of wind power’ and ‘fully divesting from fossil fuels’, with only city 10 using these levers. No cities reported any additional free text initiatives.

In respect of the impact of city-led initiatives, on average all the initiatives were scored between 3 (fully divesting from fossil fuels) and 5 (Promote local food sources, for example farmers markets, and reduce food waste and policies, initiatives or partnerships to increase the use of solar power). The 12 initiatives to support planetary health had the highest number of ‘actively considering doing’ (25) and ‘may consider doing’ (11).

The cities reported that all of the 12 initiatives, with the exception of ‘activities to promote a plant-based diet’, were being done at a nation or state level. ‘Activities to promote a plant based

diet’ and ‘Increase the number of electric car charge points’ were the most popular both reported by 6 cities.

The full results are presented in Tables 5.53 - 5.56.

Table 5.53 – Nation or State initiatives to address planetary health and climate change

Planetary Health	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Promote local food sources and or reduce food waste.	y				y	y					
Activities to promote a plant based diet											
Promote local food sources (including farmers markets) and reduce food waste					y	y					
Policies, initiatives or partnerships to reduce/eliminate the use of fossil fuels					y	y			y	y	y
Energy - policies, initiatives or partnerships to increase the use of solar power		y				y		y		y	y
Energy - policies, initiatives or partnerships to increase the use of wind power		y				y				y	y
Investments - fully divest from all fossil fuel		y				y				y	
Plastic - reduce/eliminate single use plastic (plastic bags, cutlery)						y		y			y
Policies, initiatives or partnerships to increase the number of trees in the city					y	y					
Financial incentives to promote uptake of electric cars		y				y		y	y	y	y
Increase the number of electric car charge points		y				y		y	y	y	y
Policies, initiatives or partnerships to improve indoor air quality		y						y			
Counts or totals	1	6	0	0	4	10	0	5	3	6	6

Table 5.54 – City led initiatives to address planetary health and climate change

Planetary Health	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Promote local food sources and or reduce food waste.		y			y				y	y	y
Activities to promote a plant based diet		y			y				y		y
Promote local food sources (including farmers markets) and reduce food waste		y			y				y	y	y
Policies, initiatives or partnerships to reduce/eliminate the use of fossil fuels	y	y			y				y		
Energy - policies, initiatives or partnerships to increase the use of solar power	y				y			y		y	
Energy - policies, initiatives or partnerships to increase the use of wind power										y	
Investments - fully divest from all fossil fuel										y	
Plastic - reduce/eliminate single use plastic (plastic bags, cutlery)	y	y			y			y	y		
Policies, initiatives or partnerships to increase the number of trees in the city	y	y			y				y	y	y
Financial incentives to promote uptake of electric cars	y				y			y		y	
Increase the number of electric car charge points	y	y			y			y		y	
Policies, initiatives or partnerships to improve indoor air quality	y				y			y	y	y	y
Counts or totals	7	7	0	0	10	0	0	5	7	9	5
Averages	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Were 2 or more of the initiatives that were 'City Led' done together (as part of a comprehensive plan)	Yes	Yes		No	Yes	No		Yes	No	Yes	Yes

Table 5.55 – Self reported impact of city led initiatives to address planetary health and climate change

Planetary Health	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative
Initiatives											
Promote local food sources and or reduce food waste.		5			4	4			4		4
Activities to promote a plant based diet		3			3				4		4
Promote local food sources (including farmers markets) and reduce food waste		5			5	5			4		4
Policies, initiatives or partnerships to reduce/eliminate the use of fossil fuels		3			4	5			5		
Energy - policies, initiatives or partnerships to increase the use of solar power					4	5		5			
Energy - policies, initiatives or partnerships to increase the use of wind power						4					
Investments - fully divest from all fossil fuel						3					
Plastic - reduce/eliminate single use plastic (plastic bags, cutlery)		2			3	5		4	5		
Policies, initiatives or partnerships to increase the number of trees in the city		5			4	4			4		3
Financial incentives to promote uptake of electric cars					3	5		5	4		
Increase the number of electric car charge points	4	4			3	5		5	4		
Policies, initiatives or partnerships to improve indoor air quality	3				4			5	3		3
Counts or totals	7	27	0	0	37	45	0	24	37	0	18

Table 5.56 – Likelihood of city to implement the initiative to address planetary health and climate change

Planetary Health	City 1 Are you likely to consider doing?	City 2 Are you likely to consider doing?	City 3 Are you likely to consider doing?	City 4 Are you likely to consider doing?	City 5 Are you likely to consider doing?	City 6 Are you likely to consider doing?	City 7 Are you likely to consider doing?	City 8 Are you likely to consider doing?	City 9 Are you likely to consider doing?	City 10 Are you likely to consider doing?	City 11 Are you likely to consider doing?
Initiatives											
Promote local food sources and or reduce food waste.					active	active		active			
Activities to promote a plant based diet	may do					active		active		active	
Promote local food sources (including farmers markets) and reduce food waste	may do				active	active		active			
Policies, initiatives or partnerships to reduce/eliminate the use of fossil fuels					active	active		active			may do
Energy - policies, initiatives or partnerships to increase the use of solar power					active	active			unlikely		
Energy - policies, initiatives or partnerships to increase the use of wind power	may do				unlikely	active		active	unlikely		may do
Investments - fully divest from all fossil fuel	may do				may do	active			unlikely		
Plastic - reduce/eliminate single use plastic (plastic bags, cutlery)						unlikely				active	may do
Policies, initiatives or partnerships to increase the number of trees in the city					active	active		active			
Financial incentives to promote uptake of electric cars		may do			active	unlikely					unlikely
Increase the number of electric car charge points					active	unlikely					unlikely
Policies, initiatives or partnerships to improve indoor air quality		may do			active	active					

5.6.4.14. Miscellaneous

Finally in this section, cities were asked to report on 10 initiatives, which were identified through the systematic scoping review, which were in a miscellaneous category. The initiatives included areas such as restrictions on sun / tanning beds, making the most of the city's wider assets for health and initiatives to address problem gambling. City 3, City 4 and city 7 did not respond to any questions in this section.

Only city 1, city 2, city 5, city 9, city 10 and city 11 reported on city-led initiatives. City 1, city 5 and city 2 were the most active reporting 6, 5 and 4 initiatives respectively. City 10 reported 3 initiatives, city 9 reported 2 initiatives and city 11 reported a single initiative. No cities reported any additional initiatives. The use of Anchor institutions and initiatives to address problem gambling were the most popular being used in 4 cities. None of the cities reported using the '1 minute city' or 'restrictions on sun / tanning beds'. Three cities scored fluoridating the water supply as the biggest impact and it was on average the most impactful initiative. Across the 7 cities that reported on this section, at least one city reported they 'may do' or were 'actively considering' all of the initiatives.

The cities reported only 4 of the initiatives as being done at a nation or state level. The four initiatives were; fluoridate the water supply; Health in all Policies (HiaP); reduce city sprawl and increase use of mixed zoning; and initiatives to reduce problem gambling.

The full results are presented in Tables 5.57 - 5.60.

Table 5.57 – Nation or State initiatives to address a range of miscellaneous issues

Misc	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State	Done Nation or State
Initiatives											
Fluoridate the water supply (to improve dental health)	y				y				y		
Restrictions on sunbed / tanning shops (to prevent skin and other cancers)											
15 minute city											
1 minute city											
Health in all Policies (HiAP)									y		
Social Prescribing											
Making the most of the cities wider assets* for the benefit of health											
Anchor institutions											
Reduce city sprawl (outward expansion) and increase use of mixed zoning					y						
Policies, initiatives or partnerships to reduce problem gambling									y		
Counts or totals	1	0	0	0	1	0	0	0	2	0	0

* wider assets could include anything from arts and culture to professional sports teams to private sector organisations.

Table 5.58 – City led initiatives to address a range of miscellaneous issues

Misc	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative	City Led Initiative
Initiatives											
Fluoridate the water supply (to improve dental health)		y			y						
Restrictions on sunbed / tanning shops (to prevent skin and other cancers)											
15 minute city	y										
1 minute city											
Health in all Policies (HiAP)	y								y		
Social Prescribing	y	y			y						
Making the most of the cities wider assets* for the benefit of health	y	y								y	
Anchor institutions	y	y			y					y	
Reduce city sprawl (outward expansion) and increase use of mixed zoning					y					y	
Policies, initiatives or partnerships to reduce problem gambling	y				y				y		y
Counts or totals	6	4	0	0	5	0	0	0	2	3	1

* wider assets could include anything from arts and culture to professional sports teams to private sector organisations.

Table 5.59 – Self reported impact of city led initiatives to address a range of misc issues

Misc	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11	Average impact of initiative
	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	Impact of City Led Initiative	
Initiatives												
Fluoridate the water supply (to improve dental health)		5			5			5				5
Restrictions on sunbed / tanning shops (to prevent skin and other cancers)												
15 minute city												
1 minute city												
Health in all Policies (HiAP)								4				4
Social Prescribing		3			4							4
Making the most of the cities wider assets* for the benefit of health		5										5
Anchor institutions		5										5
Reduce city sprawl (outward expansion) and increase use of mixed zoning					5							5
Policies, initiatives or partnerships to reduce problem gambling					3			3		5		4
Counts or totals	0	18	0	0	17	0	0	0	12	0	5	

* wider assets could include anything from arts and culture to professional sports teams to private sector organisations.

Table 5.60 – Likelihood of city to implement the initiative to address a range of misc issues

Misc	City 1	City 2	City 3	City 4	City 5	City 6	City 7	City 8	City 9	City 10	City 11
	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?	Are you likely to consider doing ?
Initiatives											
Fluoridate the water supply (to improve dental health)					active	unlikely				may do	
Restrictions on sunbed / tanning shops (to prevent skin and other cancers)	may do	may do			unlikely	unlikely			unlikely	may do	
15 minute city		active			may do	may do			may do	active	
1 minute city		unlikely			may do	may do			may do	unlikely	
Health in all Policies (HiAP)		active			may do	may do				active	
Social Prescribing					active	may do			unlikely	unlikely	
Making the most of the cities wider assets* for the benefit of health					May do	active		active	unlikely		
Anchor institutions					may do	may do			unlikely		
Reduce city sprawl (outward expansion) and increase use of mixed zoning		unlikely			active	may do			may do	active	
Policies, initiatives or partnerships to reduce problem gambling		active			active	unlikely				may do	

* wider assets could include anything from arts and culture to professional sports teams to private sector organisations.

5.6.5. Results 5 – Combining priority and number of city-led initiatives

As Table 5.61 demonstrates, there is not a consistent link between the priority a city gives a health issue or risk (e.g. tobacco) and the number of city-led initiatives to address the risk or issue. Indeed, in a number of cases, various cities reported giving a health issue the highest score priority with no or few initiatives relating to that issue. City 7 in particular gave all health issues a score of 10 whilst implementing only a few initiatives.

Table 5.61 – Health risk and number of city-led initiatives

City #	Tobacco		HBP		Diet		Alcohol		Drugs		Inactivity	
	Priority	#initiatives	Priority	#initiatives	Priority	#initiatives	Priority	#initiatives	Priority	#initiatives	Priority	#initiatives
1	8	1	7	0	7	5	6	1	7	0	8	2
2	10	3	3	2	9	6	4	4	3	2	8	4
3	5	7	1	3	4	8	1	1	3	4	2	2
4	10	10	10	3	10	0	10	0	10	0	10	0
5	8	8	8	3	9	11	8	8	4	2	9	5
6	4	0	9	0	9	0	4	0	10	0	9	0
7	10	4	10	0	10	0	10	0	10	0	10	0
8	10	9	10	3	9	6	9	6	9	3	9	5
9	8	3	7	0	8	5	6	2	9	6	8	1
10	8	2	10	0	10	1	8	0	7	2	9	6
11	10	4	10	0	10	3	10	4	10	6	10	2
City #	Obesity		Mental Health		HIV		Other Infectious		Wider Determinants		Climate	
	Priority	#initiatives	Priority	#initiatives	Priority	#initiatives	Priority	#initiatives	Priority	#initiatives	Priority	#initiatives
1	9	0	10	7	10	2	7	3	8	10	8	7
2	2	2	7	8	3	1	1	3	9	11	4	7
3		1	6	1		3	7	0	10	0	8	0
4	10	0	10	0	10	5	10	5		0	6	0
5	9	3	10	10	5	4	5	5	7	10	6	10
6	9	0	8	0	3	0	10	0	5	0	9	0
7	10	0	10	0	10	0	10	0	10	0	10	0
8	10	4	9	4	9	3	10	5	9	8	9	5
9	8	1	10	6	8	4	9	3	10	7	10	7
10	10	1	10	2	6	0	8	0		4	10	10
11	10	2	10	8	10	3	10	5	10	7	9	5

5.6.6. Results 6 – Priorities for the next 12 – 24 months and process for prioritisation

5.6.6.1. Process for Prioritisation

The survey respondents were asked how they prioritised health policy initiatives. The question asked for a free-text answer. Eight of the cities responded to this question. City 3, city 6 and city 7 did not respond. The responses are presented in Table 5.62.

Table 5.62 – How do cities prioritise health policy initiatives

City #	How do you prioritise health policy initiatives?
1	Evidence of health needs and health inequalities. Political mandate for action. Evidence base for intervention effectiveness, impact and outcomes. Resource availability. Avoiding duplication with other agencies
2	Cost benefit. Practicality of implementation. Political support. National policy balance/tension
3	No response
4	By conducting a comprehensive community health assessment
5	We prioritise on the basis of what has greatest impact on population health and is sustainable based on present and future resource consumption, Cost-effectiveness is an important consideration for us.
6	No response
7	No response
8	High priority
9	Impact on reduction of health and social inequalities. Impact on population as a whole. Other collateral impact (cost-benefit). Social acceptability. Feasibility.
10	Health policy has to become an essential part of city policy, health awareness must become natural element in all planning, measures and decisions. Health problems and related services will decrease.
11	Based on the results of the Health Survey of the City of (name redacted) and the Health Study of the City of (name redacted)

5.6.6.2. Priorities for the next 12 – 24 months

The survey respondents were asked what their top 3 priorities for the next 12 – 24 months were. The question asked for a free-text answer. Nine cities responded to this question. Two cities, city 3 and city 7 did not respond. The responses are presented in Table 5.63.

Table 5.63 – Top 3 priorities for each city over the next 12 – 24 months

City #	Priority One	Priority Two	Priority Three
1	Cost of living, poverty and living wage	developing a refreshed narrative on health inequalities for the City	ethnic inequalities and structural racism
2	Post-covid staff stabilisation	Support ICS and its masterplan	Finalise and ratify majority delivery plans e.g. food system work
3	-	-	-
4	Maternal Health	IT infrastructure	Epidemiology
5	Successful management of COVID-19 through vaccinations and management of epidemic waves	Implementation of population health national policy	Introduction of value based care initiatives for appropriate care delivery and service utilisation
6	Anti NCD programs	Antimicrobial prevention	-
7	-	-	-
8	Prophylaxes of communicable diseases	Prophylaxes of non-communicable diseases	-
9	Climate change (mitigation but mainly adaptation of communities)	Urban violence and opioid crisis	Housing crises (affordability, quality, stability, environment, adaptation to climate change)
10	Lessons learnt from the pandemic	Preparing organisation for the next crisis	Developing workplaces and working processes
11	Health in the city of (name redacted)	Disease prevention and health promotion	Prevention and comprehensive care for addictions

5.6.7. Results 7 - Role of the Mayor

The survey respondents were asked two questions relating to the Mayor of the city:

- 1) On a scale of 1 to 10 (1: no support, to 10: fully supported) how strong has the Mayoral support been for the existing initiatives to improve health and health equalities?
- 2) On a scale of 1 to 10 (1: not at all important, to 10: extremely important) how important do you think Mayoral support is for city initiatives to improve health and health equalities?

City 3 and City 7 did not respond to this question. All responses are presented in Table 5.64.

Table 5.64 – Strength of Mayoral Support and Importance of Mayoral Support

City #	Strength of Mayor Support	Importance of Mayoral Support
1	10	10
2	10	10
3	-	-
4	10	10
5	8	8
6	10	10
7	-	-
8	8	9
9	8	10
10	8	7
11	10	10

5.7. Discussion

The aim of this survey study was to gain a broad and comprehensive understanding of the health priorities for a number of cities and the initiatives and associated impact of initiatives, to address these health priorities. A diverse - rather than representative - group of city health officials from different countries and continents were sought. Significant time and effort was spent identifying and contacting over 500 potential participants from cities from across five continents (Europe, North America, South America, Oceania and Asia). In the event, only 11 cities responded in depth to the survey.

5.7.1. Covid-19 Pandemic

On December 31, 2019, the World Health Organization (WHO) reported a virus of concern in the city of Wuhan (China).³⁴² Over the following weeks and months it became clear the virus was spreading globally and on 11 March, 2020 the WHO confirmed the outbreak as a pandemic.³⁴³

Early on during the Covid-19 pandemic, the author carried out analysis of the economic interventions countries were taking to ameliorate the impact of Covid-19.³⁴⁴ Just as the outbreak began in a city, cities soon became the focal point globally.³⁴⁵ Both the immediate and direct and longer term and indirect impact and the impact of the actions to ameliorate the impact of the Covid-19 pandemic were most strongly felt in cities, as is typically the case with other

communicable disease outbreaks. Therefore, the purpose of the first part of the survey was to understand the impact and learning from actions from cities.

This research explored city perceptions of healthcare recovery, lasting impact, ways of working and initiatives put in place as part of the Covid-19 pandemic response. What is most striking in the Cities' responses is the heterogeneity in responses.

In respect of how long cities thought it would take for healthcare services to recover from the impact of Covid-19 responses ranged from under one year (City 11) through to seven to ten years (city 1 and city 7) with the other 8 cities reporting either one to two years (5 cities) or three to four years (3 cities). There was no pattern between the length of time cities thought it would take for healthcare services in their city to recover from Covid-19 and size of the city. For example, the two largest cities were at each end of the spectrum of how long they thought it would take for health services to recover. The Asian cities both had the second quickest timeframe (1-2 years). This could be coincidence or because they were better prepared having been through recent pandemics.

Cities quickly responded to the pandemic, establishing new ways of working or new models of care that had been slow to progress for decades.³⁴⁶ In response to the question of which of the ways of working they would like to maintain, six key themes emerged. Some of these themes could be seen to overlap and so a judgment was made regarding categorisation. Notwithstanding this, the themes crystalize important learnings that should be taken forward by cities to ensure they are both more resilient to any future pandemics but also to integrate the positives into the present day. The themes of developing healthcare capacity and models of care, including virtual and digital offerings, working in collaboration, particularly with communities, are all themes that have been aspirations which have been slow to progress within the general health and healthcare space for decades.

In respect of what health or health service initiatives cities would put in place to ensure their city is more resilient to any future pandemic, again the themes resonate with existing concerns. Workforce and system preparedness was the most popular, with nine priorities such as "support for workforce to address burnout" and "regular and systematic testing of multi-agency preparedness and response" mapped to this theme. 'Improved surveillance and data' also

grouped highly with 8 priorities. “Health protection and promotion”, including funding, grouped seven priorities, which left healthcare capacity with five priorities.

The final two questions related to the Covid-19 pandemic asked the city respondents what they thought the lasting impact of Covid-19 would be on their city and whether they had a current health vision or strategy for the city. City responses to the lasting impact of Covid-19 were varied, including negatives, for example “impact of trauma on our Black and Latino populations”, positive “improvements in health information systems”, and others that were hard to distinguish so coded as neutral for example “more working from home”. In relation to whether the city had a health vision or strategy, eight cities reported they did have a vision or strategy and three reported they did not. This question came out of the systematic scoping review (chapter 2) where initiatives appeared ad-hoc, piecemeal and without reference to a wider co-ordinating vision or strategy. Whilst it was reassuring that eight cities did consider themselves as having a health vision or strategy, this survey demonstrates that one quarter did not. In the author’s view, every city, irrespective of size or location, should have a galvanising health vision or strategy.

The COVID-19 pandemic shone a light on the importance of cities in rising to complex challenges.³⁴⁷ The results of this part of the survey show that there is a wide and varying range of ways of working which were used in the pandemic and could be used moving forward. The key themes in particular are useful for cities and policy makers.

5.7.2. Strategic Priorities and Health Initiatives

Cities’ ranking of the priority of health behaviours and health risks showed higher levels of heterogeneity and a complex picture. Cities of roughly the same size in the same continent, for example city 3 and city 4, had significant differences in priorities. There are a range of reasons for cities’ differences in priority scoring. This could be due to differences in population characteristics or differences in areas of responsibility or political priorities within city health departments. Three cities did not score all of the risk factors. We do not know the reason for not scoring but it does mean there needs to be some caution in interpretation of results. Three of the cities (city 7, city 8 and city 11) scored factors consistently as the highest or second highest priority, whereas in others the difference in scoring of factors ranged from the highest

(10) to the lowest (1) (city 2 and city 3). Two risk areas that stand out as generally being consistently scored with relative high priority are diet and mental health, in particular mental health.

5.7.2.1. Tobacco

The risks of smoking have been long known ³⁴⁸ since the seminal research published in the BMJ ³⁴⁹ and yet it remains one of the leading causes of premature death and disability around the world.³⁵⁰ Countries and cities have the opportunity to save thousands of lives and billions of dollars.³⁵¹ It is perhaps therefore unsurprising that this risk factor had one of the highest number of nation or state and city led initiatives, along with ‘travel’. Whilst cities reported a high number of initiatives around education, it was the restrictive or punitive initiatives that were reported to have the biggest impact. For example, additional taxation was used by 4 cities and restrictions in smoking in indoor public places was used by 5 cities – all scoring the initiative the highest impact.

5.7.2.2. High Blood Pressure

Raised blood pressure, also known as hypertension, has been known to adversely affect cardiovascular disease, which has been the leading cause of death worldwide,^{352,353} for over 50 years³⁵⁴ and yet effective and low-cost therapies are widely available.³⁵⁵ The systematic scoping review identified innovative approaches, such as the Los Angeles barbershop blood pressure study.³⁵⁶ Seventy six million deaths could be averted by 2050 if treatment coverage improves.³⁵⁷ In this context, it is perhaps unsurprising that initiatives which focused around medical management of high blood pressure reported the biggest impact. Many of the initiatives to address the other health risk factors of diet, physical activity and obesity will also have a positive impact on the prevention of high blood pressure. Therefore, the prior evidence and evidence from this research strongly suggest that cities should focus on improving medical management for high blood pressure. However, three cities, city 7, city 10 and city 11 ranked high blood pressure as the highest priority and yet reported no initiatives across prevent, detect or manage and a nation or state or city level.

5.7.2.3. Unhealthy Diet

Unhealthy diets are a global concern.³⁵⁸ The Global Burden of Disease Study shows poor diet was responsible for around 11 million deaths in 2017.³⁵⁹ Eating too much salt alone kills nearly two million people every year³⁶⁰ More recently, the adverse effects of ‘ultra processed foods’ and a variety of chronic diseases have come to the fore.^{361,362,363} ³⁶⁴ This is particularly concerning for UK cities, as children in the UK have the highest ultra-processed food (UPF) intake in Europe.³⁶⁵ The results from the unhealthy diet section showed a mixed picture on initiatives taken by nations and states and by cities. This could be due in part be because unhealthy diet is a complex multi-faceted issue that has links to numerous other health risk factors, such as environment and socio-economic factors and is also strongly associated with the powerful forces of the commercial determinants of health.

5.7.2.4. Harmful Alcohol Consumption

Alcohol is a leading risk factor in the global burden of disease.³⁶⁶⁻³⁶⁸ In 2019, more than 2.4 million people died because of alcohol, accounting for 12.6% of deaths globally in men under 50 years old.³⁶⁹ Europe is the region with highest alcohol consumption³⁷⁰ and the association between an urban environment and higher alcohol consumption has been documented.³⁷¹ It is therefore surprising that harmful alcohol consumption did not score a higher priority for cities and that there were not more initiatives at national, state or city level. Some alcohol policies, such as minimum unit pricing (MUP) have been controversial but ultimately proven successful.³⁷² Only one city (city 8) had adopted MUP and it ranked it the highest impact. Policies around reducing alcohol content or non-alcoholic alternatives also appear to be underused but are gaining interest.

5.7.2.5. Harmful Drug Use

According to the GBD 2019 study,³⁸ cannabis ranks third worldwide among consumed substances of misuse, and globally more than 23.8 million people have cannabis use disorder.^{373,374,375} Also, a recent systematic review concluded that supervised injection facilities could reduce the risk of overdose, improve access to care whilst not increasing crime or public. ³⁷⁶ Drug use is increasing in cities in Europe³⁷⁷ and the USA.³⁷⁸ Many of the initiatives,

at a nation and state level and city level, to address harmful drug use were based around individual education and support and mass health advertising. Education with support (support being, for example, a needle exchange or drug substitute) scored highly on impact consistently across five cities. In other health risk areas, education and support has not featured with such consistently high impact scores. This could be because the targeted and intensive support typically associated with reducing harmful drug use is most appropriate when used for a relatively small number of individuals, or other reasons.

5.7.2.6. Physical Inactivity

Physical inactivity is one of the top ten causes of all disease and disability³⁰¹ and up to 5 million deaths a year could be averted if the global population was more active.³⁷⁹ Physical activity improves both physical and mental wellbeing.^{380,307} Two cities, city 5 and city 6 both reported currently undertaking a significant number of initiatives to improve physical activity and had the most interest in developing further initiatives. Cities 5, 6 and 8 would be interesting cities to find out more on what they had done at a nation and state and city level to improve physical activity.

5.7.2.7. Obesity

Over the last 30 years, obesity rates in adults have more than doubled; for children and adolescents they have more than quadrupled. More than 1 billion people worldwide are living with obesity.³⁸¹ There are links between urbanisation and obesity¹⁸⁷ and prevention is crucial, as obesity in childhood persists into adulthood.³⁸² Obesity closely relates to diet and physical activity with many of the initiatives in these areas. It is perhaps unsurprising that cities 5, 6 and 8, as reported in the physical activity section, reported the highest number of initiatives across nation or state and city level. Again, there was an example where city 10 was actively considering further initiatives to address obesity and would benefit from speaking to other cities to understand their experiences. Chapter 3 identified a need for a comprehensive approach to addressing obesity. These survey results show, on the whole, a spread of activities across diet, physical activity and obesity, which is encouraging.

5.7.2.8. Travel and Planning

Premature deaths attributable to risk factors associated with poor urban environments, remain substantial.³⁸³ Vehicles can have a negative impact on health as the leading cause of death in children in the USA³⁸⁴ and Europe³⁸⁵ and the second largest source of climate pollution in Europe.³⁸⁶ The best forms of exercise are those that fit into everyday life, therefore active travel initiatives play a significant role³⁸⁷ and yet health is often not adequately factored into the urban planning process.³⁸⁸ The travel and planning section had the most number of initiatives options of all the categories for cities to report on. At a nation or state level, it was surprisingly few cities (City 5, City 6 and City 8) that reported any initiatives in the 14 categories as it could be expected that nation or state would do more around promoting active travel because of the benefits to physical and mental health and the environment.

5.7.2.9. Mental Health

Almost 1 billion people worldwide suffer from a mental disorder.³⁸⁹ Mental health scored the average highest priority across all cities (section 5.6.3). and cities reported a strong range of city led initiatives; city 5, city 11 and city 2 in particular. Similar to Travel and Planning, it was surprising that there were so few reported initiatives at a national or state level to support good mental health.

5.7.2.10. HIV / AIDS

Since the beginning of the AIDs epidemic, over 40 million people have died of HIV.³⁹⁰ Cases of HIV are typically more common in cities.¹⁹² However, initiatives such as the UNAIDS ‘90-90-90’ initiative⁶ along with the introduction of pre-exposure prophylaxis (PrEP), with political will and financial support have the potential to end AIDS by 2030.³⁹¹ Cities reported a strong response in terms of the initiatives and impact of initiatives in response to the risk of HIV and AIDs. City 4 in particular stood out in respect of nation or state and city led initiatives and the impact of those city led initiatives.

⁶ The 90-90-90’ initiative aims to ensure that 90% of people living with HIV know their status, 90% of those diagnosed consistently take treatment, and 90% of those on treatment receive viral suppression.

5.7.2.11. Infectious Diseases

Other infectious diseases continue to impact health, particularly in cities. Tuberculosis caused 1.6 million deaths in 2016, making it the world's leading infectious killer³²⁸ with London accounting for 40 per cent of cases in England.¹⁹² Vaccination has had an unprecedented positive impact on health, drastically reducing the global burden of infectious disease, across the life course - not just in childhood³⁹² - but there remains more to be done to improve vaccination uptake rates.³⁹³ There were a number of risk factors where cities did not report any initiatives at nation or state or city-led to address a health risk factor. For example, three cities, City 3 City 6 and City 7, did not report on any national or state or city-led initiatives to reduce infectious diseases.

5.7.2.12. Wider Determinants

Socio-economic factors have long been known to have a significant impact on health.³⁹⁴ Good health boosts employment and employment supports good health³⁹⁵ and thus a virtuous circle is created. However, issues such as homelessness are particular issues of cities and a worsening global public health issue.^{396,397 398}

It was surprising how few initiatives at nation or state level were reported, particularly as many of these initiatives most suited these national levels rather than city level, for example, minimum wage. However, cities who responded to this section reported using many of the initiatives, such as minimum wage and universal basic income, albeit with mixed results of impact.

5.7.2.13. Planetary Health & Climate Change

Planetary health and climate change is the biggest threat to human health.³⁹⁹⁻⁴⁰¹ There are mutual benefits to taking action on planetary health and personal health⁴⁰² as can also be seen by the ULEZ. It is therefore unsurprising that initiatives to promote planetary health is clearly an area of interest to cities, with 7 cities either 'actively considering doing' (25) or 'may

consider doing’ (11) 36 initiatives. It was more surprising that cities were not doing more to ‘fully divest from fossil fuels’, particularly as this has been a focus of the C40 initiative.⁴⁰³ However, the one city that reported on this initiative only scored the impact as 3. The most popular initiatives of planting trees was unsurprising, given its relative ease and evidence.⁴⁰⁴ However, the joint most popular initiative of indoor air quality was a surprise. Whilst this is an important area of increasing focus, it has typically been outdoor air quality in cities that has received attention.

5.7.2.14. Miscellaneous

The final section of the large multiple-choice section was a miscellaneous category. There was less reporting in this section which was probably a combination of the initiatives being less ‘main stream’ and it being the last section of a large multiple-choice section. Respondent fatigue is discussed further in section 5.11 below. Notwithstanding the lack of reporting, there were some interesting observations from the results. Firstly, given this was primarily a survey on what cities were doing to improve the health for their population, it was surprising that ‘Making the most of the cities wider assets for the benefit of health’ was only reported by 3 cities. The very uniqueness of a city or cities should be used by all cities for its benefit. This was in some part mitigated by the adoption of ‘Anchor Institutions’ in four cities. Anchor Institutions are organisations that are part of the fabric of the community they operate in and that use their assets, their procurement, buildings, employment, for the benefit of the socioeconomic development of the businesses and communities within which they sit. Secondly, fluoridation of water was scored the highest impact. These types of policy initiatives, which address an issue and make the change at source, and therefore do not require individual motivation have the biggest impact at a population level and should be pursued as the preferred approach. There are other similar examples, such as adding folic acid to flour, with good evidence and yet almost a quarter of century between when Canada (1998) and the UK (2021) adopted the policy.⁴⁰⁵ Finally, gambling^{406,407,408,409} and ‘commercial determinants of health’ more broadly^{410 411,412,413,414} are, rightly, increasingly receiving attention as significant public health issues.

5.7.3. Process for Prioritisation

Eight out of eleven city responses to how they prioritise health policy initiatives were all generally based on the health needs of the population. There was then some variation in this core theme, with three groups emerging:

1. Those based on health assessment or survey - “conducting a comprehensive community health assessment’ (city 4) and “based on the results of the health survey of the city” (city 11)
2. Those based on health needs with other considerations, such as political support or cost benefit. For example, “evidence of health needs...political mandate... resource availability” (city 1) “Cost benefit, practicality of implementation, political support. National policy balance/tension” (city 2), “prioritise on the basis of what has the greatest impact on the population and is sustainable...cost effectiveness is an important consideration for us “ (city 5) and “Impact on reduction of health...inequalities. Impact on population as a whole... cost benefit...feasibility” (city 9)
3. Finally, city 10 appeared to have the most integrated ‘Health in all Policies’ type approach stating that “health policy has to become an essential part of the city policy, health awareness must become natural element in all plannings, measures and decisions. Health problems and repara (sic) services will decrease.” (City 10)

5.7.3.1. Priorities for the next 12 – 24 months

There was a broad range of priorities reported by the 9 Cities that responded to the question: What are your top 3 priorities for the next 12 – 24 months? Of the 9 cities that responded, 7 responded with 3 priorities and two responded with only 2 priorities. This therefore gave a total of 25 priorities (7 x 3 + 2 x 2). Of the 25 priorities the only duplications were:

- Three references to Covid – “post covid staff stabilisation” city 2 priority 1) and “successful management of Covid-19 through vaccinations and management of epidemic waves” City 5 priority one and “Lessons learnt from the pandemic” city 10 priority one.
- Two references to Non-communicable diseases (NCDs) – “Anti NCD programs” city 6 priority one and “prophylaxes of non-communicable diseases” city 8 priority two

The other priorities reported from cities covered “cost of living” (city 1), “food system work” (city 2), “maternal health” (city 4), “introduction of value based care...” (city 5), “antimicrobial prevention” (city 6), “...communicable diseases” (city 8), “climate change” (city 9), “developing workplaces...” (city 10) and “addictions” (city 11).

Whilst cities contend with many similar issues and have broadly similar processes for prioritisation, as demonstrated by section 5.7.3, the level of heterogeneity in respect of the priorities, is an interesting and slightly puzzling feature. However, it does demonstrate the variety and richness of priorities. This supports the view on the benefit of cities connecting with other cities on specific issues or initiatives that are of importance at that time.

5.7.4. Role of the Mayor

The ‘strength of Mayoral support’ and the ‘importance of Mayoral support’ were both rated highly by the nine cities that responded, with average scores of 9.11 and 9.33 (out of 10), respectively. A score of 1 indicated ‘no support / not important,’ while a score of 10 signified ‘fully supported / extremely important.’ These responses suggest that cities believe that Mayors play a significant role and have actively supported health improvement initiatives.

This finding is particularly interesting given that, as identified in Chapter 2, Mayors did not prominently featured in the systematic scoping review results. Several factors may explain this, including publication bias, the absence of Mayoral roles as a predefined variable in the population, intervention, comparator, or outcome (PICO) criteria, or a general lack of focus on this area in existing studies. However, given the central role of Mayors in city governance, this topic will be explored further in two subsequent studies within this Thesis.

5.8. Implication of this study for City Health Officials

Evidence suggests that policy making is a combination of evidence, public and political opinion and (opportunistic) timing.^{294,97,95 105,106} This research was aimed to be of practical use to cities. Cities that participated were able to receive results from other cities. Therefore, participant

cities were able to see which initiatives other cities have implemented, the impact of the initiative and which initiatives other cities are considering implementing.

The breadth of initiatives being undertaken by cities, both in response to the Covid-19 pandemic and ongoing chronic health issues and risks, strongly supports the idea of cities collaborating and sharing experiences and learning on health priorities and initiatives to improve urban population health. As discussed in the conclusion section, there was not one city that stood out for initiatives across all health risk factors. There was, however, something that could be learnt from every city, with the possible exception of city 7, whom only provided limited responses.

5.9. Implications of this study for National Policy Makers

Health systems evidence enhances policymaking and strengthens national health systems.⁴¹⁵
⁴¹⁶ The results from this study will be developed into a policy briefing of how Cities and City Health Departments could have a greater impact on urban health.

Cities from the same country, which will share many common features and national context, have much to benefit from collaborating and acting collectively. National governments and policy makers could also support and enable this network development.

5.10. Implication of this study for academia and Future Research

This global survey was unique in its combination of focus of the comparative importance of issues and specificity of the initiatives. For example, we know that smoking, alcohol, diet and physical inactivity account for at least 80% of all heart disease, stroke and type 2 diabetes and 40% of cancers.¹⁶⁸ Taking smoking as one example, we know based on the evidence, that there are a limited number of initiatives to address tobacco dependence. This survey covers the detail of each initiative a city has adopted and the perceived impact. This can then be compared across cities.

As discussed in section 5.9 this survey connects cities with regard to addressing urban population health issues which will be of practical benefit. In doing so, it begins the potential of a global research collaboration in urban population health.

5.11. Strengths and weaknesses/limitations

This was a comprehensive survey, containing 173 questions utilising a range of formats to gain both a broad and deep understanding of health priorities and initiatives in cities. However, the strength and depth of the study meant that it was time consuming to complete. Whilst every effort was made to reduce its onerousness, by creating multiple choice questions format, it is likely that the fact that completing the survey was entirely voluntary and without immediate reward, could mean omissions were made by participants. For example, in ‘Travel and Planning’ and ‘Mental Health’ it was surprising that there were so few reported initiatives at a national or state level. This could be due to participant fatigue with completing the questionnaire. The range of cities, both geographically and in population size, is also a strength. As is the ability for participant cities to confer and collaborate with other cities.

All research has limitations. Some of the limitations of this research are linked to its strength. The breadth and depth of the survey meant it was only completed by 11 cities, despite considerable effort in identifying and contacting potential participants, which will have brought in bias. The heterogeneity of cities and their responses mean that it is difficult to draw universally applicable conclusions. Whilst the respondent cities had a broad range of population sizes and geographic range, they were all from high income or upper middle income economy countries. The biggest growth in the number and size of cities is expected in Africa. This study will therefore be of interest to city health officials in Africa. However, it would have added to the study if a city from Africa had been included. This is a potential area of further study.

The survey design, with the requirement to identify a named city health lead, may have led to bias and errors, as participants were required to report both city initiatives and their impact, creating the risk of misunderstanding or fatigue, which should have been mitigated through improved questionnaire design. The self-reported survey design of the research has inherent weaknesses in that it is self-reported and not independently assessed and is limited by the use

of set and predefined questions. This was partially offset using open-ended questions and the ability for respondents to add fields and comments.

Finally, the survey was only provided in English language. This is a particular weakness for a global survey. These limitations will have brought in biases to the results of the study.

5.12. Conclusions

The results of the survey provide a rich, and in some places complex, picture of priorities, initiatives and impact at nation or state or city level. The focus of this study was on what cities are doing or considering. Whilst there is not one city that is doing everything well, there are clearly cities that have focused on specific issues and reported a significant impact.

To illustrate this point, if you are a city and interested in measures to address tobacco prevalence speak to city 3 or city 8. Whereas city 6 and city 10, who were actively considering initiatives across the three domains of prevent, detect and manage of high blood pressure would do well to speak to city 8. If addressing unhealthy diets is a priority, city 5 would be the place to visit. This survey is not just of interest to cities. For example, if you are a nation or state and want to address unhealthy diet it would be worth speaking to the host nation or state of city 6. City 6 itself is actively considering all initiatives to address unhealthy diet so could be a fruitful match to learn and share with city 5. City 5 would also be a city to learn from in respect of addressing alcohol harm initiatives. City 9 and city 11 are the go to cities to learn about initiatives to reduce harmful drug use. Cities 5, 6 and 8 would be interesting to find out more on what they had done at a nation and state and city level to improve physical activity. This was similarly true for obesity. City 6, who has much to share in other areas would have a lot to benefit from city 9 or city 1 in respect of travel and planning. City 8 or city 11 would be cities to visit to find out about nation or state and city led initiatives to improve mental health. City 2 would join city 8 and city 11 in city led initiatives to improve mental health. City 4, for both the city led initiatives and nation and state initiatives, appears to be leading the way on initiative to improve AIDs/HIV. City 4 is joined by city 8 and city 11 in respect of other infectious diseases. city 1, city 2, city 5 for a broad range of initiatives of policies around the wider

determinants of health. city 6, then city 5 and city 9 would be interesting cities to discuss planetary health initiatives.

Overall the self-reported impact was high, typically scored as 4 or 5. This is unsurprising as self-reporting tends to emphasise the positive of initiatives.⁴¹⁷ What is interesting is the variation between the reported impact of the same initiatives in different cities. For example, ‘policies, initiatives or partnerships to reduce homelessness’ was scored as impact of 5 by city 2 but only 1 by city 6. There is some expected variation between the reported impact due to the different participants and their different perspectives. Also, the initiative area is quite broad and could include a wide range of specific initiatives. This variation between different cities reporting the biggest and smallest impact occurs in total seven times⁷. This would be an interesting area to explore in more detail and for further study and follow up.

There was heterogeneity in city size, national context, and geography, along with some inconsistencies and variation in responses. As a result, it is difficult to draw firm comprehensive conclusions about the commonalities in the features of cities' health and the impact of those initiatives. However, several core themes emerged:

- Mental health was a prominent focus across all cities.
- There was a growing emphasis on planetary health and climate change initiatives.
- Despite differences, cities generally followed a similar approach in developing their health priorities.
- Larger global cities were more likely to have a formal health vision or strategy.
- These global cities also tended to prioritize communicable diseases as key risk areas.
- Only the Asian cities showed strong interest in addressing alcohol-related harm.

While these commonalities exist, the most striking finding remains the heterogeneity in responses. This variation could be attributed to several factors, including, genuine differences in health priorities and impact of initiatives and the different perspectives of the single individual representing each city. This raises a broader issue about the limitations of this survey, and surveys generally, in capturing nuance. Given the relatively low response rate, an

⁷ The other initiative areas are: Policies, initiatives or partnerships to reduce violent or gang crime; Policies or partnerships to Increase healthy food availability (farmers markets, vending machines/carts, etc); Policy to increase the availability of (free) drinking water (e.g. water fountains or free top up of water bottles); Implement or Improve food voucher scheme (for those on low income) to increase healthy food consumption; Individual or group education (including at particular locations or settings) (related to unhealthy diet); and Prevent: initiatives focused around education and behaviour change to blood pressure

interview-based approach may have been a more effective single approach or as an additional follow to the survey.

Finally, it was of particular interest that the role and importance of the Mayor scored very highly in all cities that responded. This is striking, particularly as chapter two identified a deficit of reporting of the role of the Mayor and was the reason that the question was included in this questionnaire. The role of Mayors is important but remains somewhat of a mystery in the existing body of evidence (chapter 2). Therefore, chapter 7 and chapter 8 are focused on developing an understanding of the role of Mayors, as this is clearly an important area of further knowledge.

5.13. Personal reflection from completing this study.

This study has enabled the author to develop skills in carrying out questionnaire based research. Key learning has been gained from linking the questions in the questionnaire to the research question. Initially, the questionnaire contained a long ‘wish list’ of questions which would provide data in areas that were considered interesting. However, after testing, this resulted in an unwieldy and onerous task for participants. The study was therefore cut down to only questions linked to the research question. The importance of carefully framing questions also became apparent. For example, the following question was included in the questionnaire “what were you {the city} most proud of?” However, it became impossible to report this without identifying the city, so this was excluded. The rationale for providing anonymity was to enable the respondents to answer as freely as possible, the good and the bad.

This study has also provided the author with a rich understanding of the priorities and initiatives in cities. There are common issues that cities are seeking to address but the priorities, initiatives and impact of initiatives are diverse. This suggests city, and national, contextual factors are important.

In respect of the content and the study design, in hindsight the author would have included in the design a follow up interview stage to add further richness and follow up on some of the questions raised as part of the reported results.

5.14. Acknowledgements

I would like to acknowledge and thank; Professor Klaus D. Plumer, Professor Klaus-Peter Stender, Professor Geoff Meen, Professor Ben Clifford, Professor Jonathan Purtle, Professor Lynne Kennedy, Justine Alford (Imperial College), Linda Gibbs and Tamiru Mammo (Bloomberg) and Lori Tremmel (NACCHO) in the design and dissemination of this survey.

Chapter 6: Reviews of London health and healthcare

“It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us...”

Charles Dickens

6. Plain English abstract

This chapter describes a study, conducted by way of a narrative review, to identify previous comprehensive reviews, strategies or visions of pan-London health or healthcare over the last 200 years. A short summary of these reviews, strategies or visions, hereafter shortened to ‘reviews’, is presented in the context of other documents, reports and important events to give the reader necessary wider contextual setting. The reviews are analysed to identify common themes and relevant learnings for today and the future. A total of 30 reviews were identified. The earliest was a House of Lords commissioned review in 1890, which identified an over-reliance on hospital services, high inequalities and poor primary and community care, issues which remain pertinent today. There is much we can learn from the past that will benefit today and tomorrow.

6.1. Introduction

The systematic scoping review (chapter 2) identified a paucity of city health or healthcare strategies or visions. In light of this, the present chapter seeks to understand what city reviews, strategies or visions, hereafter shortened to ‘reviews’, of health or healthcare have been undertaken for London over the last 200 years.

Health and healthcare in London have been the subject of many large-scale and in-depth reviews over this period. Whilst the social and political context has changed alongside the delivery of healthcare, most notably with the birth of the NHS itself in 1948, and quality and access to healthcare in London has improved significantly, many of the issues and problems first highlighted over a century ago persist today.

The quotation at the beginning of the chapter is from a *Tale of Two Cities* by Charles Dickens. First published in 1859, the same century the first review of health and healthcare was identified, and set in London (and Paris), it perfectly speaks to the contradictions and contrasting realities found in this review of London’s health and healthcare over the last 200 years. Development of vaccines and treatments as well as wider improvements in living and working conditions have dramatically increased life and healthy life expectancy in the city. Yet,

not equally for all and recently improvements have stalled, inequalities are worsening, and health services are “broken”. It is the best of times and worst of times depending on your perspective.

6.2. Aim and objectives of this research

The aim of this study was to identify common themes from the issues and recommendations from previous reviews of London’s health or healthcare. As with all the studies in this thesis, there is an overarching aim to not only add to the existing body of academic knowledge but to produce something which is of practical use in improving health or healthcare in London.

The objectives to achieve this aim were:

- Identify and thematically analyse previous reviews of health or healthcare for London
- Set out a brief summary of the reviews, in chronological order, with necessary contextual information so that the reader is given an appreciation of how these reviews have evolved and developed over time.
- Understand, rather than judge, the past so that we can better understand the present and plan for the future.

6.3. Research question and scope

The systematic scoping review (chapter 2) identified 1,614 original citations covering initiatives from 227 cities. However, it was notable that these initiatives rarely referenced being part of a wider strategy or programme of work. Any initiative that is carried out in isolation is unlikely to have as profound and sustained an impact on health or healthcare as a suite of multiple reinforcing system initiatives (which, in the author’s view, is evidence of a vision or strategy). This study, along with a part of the questionnaire study (chapter 5) was aimed at examining city-wide reviews, strategies or visions to improve health or healthcare, with this chapter specifically focusing on London.

The primary research question was:

- What comprehensive reviews, strategies or visions for health and healthcare have been developed for London over the last 200 years?

There were two secondary research questions:

- What have these reviews concluded and recommended?
- Are there any common themes and if so, has there been any evolution of those themes.

6.4. Methods

6.4.1. Study design

Certain types of research questions can be best answered using existing sources of information and data.⁴¹⁸ The use of publicly available data, particularly to answer policy questions, is increasingly common.⁴¹⁹ A number of study designs were considered before it was decided to use integrative narrative review. Integrative narrative reviews allow for inclusion of a diverse range of studies to provide a comprehensive understanding and synthesis of the topic under investigation, particularly relevant for health policy.^{420 421} The framework developed by Whittemore and Khafil⁴²⁰ was used to guide the study.

6.4.2. Inclusion and exclusion criteria

Comprehensive reviews, strategies or visions of London's health or healthcare were included. Only studies and reports in English were included. Any study or report that was found that did not meet the inclusion criteria was, as appropriate, used for context setting.

6.4.3. Search strategy, data sources and curation

In addition to material identified through the systematic scoping review, further electronic searches were carried out, in September 2022, through Ovid Embase (through Imperial library website/portal), using the search term, London AND Health in the title.

In addition to these electronic searches, a number of libraries and archives were hand searched during the last 4 months of 2022 and the first 2 months of 2023. These included:

- The Kings Fund library and off-site storage. Off sight storage material was found through the author using indexing at the main library. The off-site material had to be retrieved and passed to the author by Kings Fund staff due to insurance cover restrictions.
- The Wellcome Trust
- The London Metropolitan Archives.

Retrieved articles, reports and other documents were indexed on Endnote and entered onto a simple excel database. All were reviewed with associated notes made and organised in chronological order.

No articles in non-English were found. However, if articles in non-English language had been found they would have been excluded.

The aim and objectives of this narrative study meant using archival research methods to construct an historic account of the reviews of London's health and healthcare. It was not the objective of this study to present a comprehensive examination of each of the reviews, albeit significant time and analysis was undertaken in this regard. Given the time span of 200 years and the word limit on this thesis, it was also not intended to give a full and comprehensive explanation of all elements of historical, social and economic context. Had this been the intention, it would have likely been an interesting thesis in its own right. However, context was added where it would assist the reader's understanding of the reviews.

During the course of the last two centuries, particularly in the last 40 years, there have been multiple comprehensive studies of individual reviews or reviews covering a shorter period of time. These have been used and referenced, where appropriate, in the text and the most significant noted in the bibliography and acknowledgement sections. The separate interview study examining the impact of the London Mayor over the last 20 years (chapters 7 and 8) also provided context data and information for this study.

Finally, and in addition to the comments above, given the historical length and nature of this research study, the author fully acknowledges the limitations and risks of researcher bias in the

interpretation throughout this study. The objective of the study, as described in section 6.3, was therefore to ‘understand’ rather than ‘judge’.

6.5. Results

This integrative narrative review identified 30 comprehensive reviews with recommendations of health or healthcare of London over the last 200 years. In addition to these 30 reviews, 99 other documents and reports were identified and have been used as appropriate contextual information. Of the total 129 documents, only 29 came through electronic database searches whilst the other 100 came through hand search at the Kings Fund library, Nuffield Trust, Wellcome Trust Library, Health Foundation, London Metropolitan Archives and the National Archives. A full indexed list of the 129 documents is provided in excel in Appendix six. A brief summary of each of the 30 reviews is provided here in chronological order and set within any important contextual factors. The reviews are identifiable in this narrative results section by **bold** text. Table 6.1 and Figure 6.1 present the thirty reviews with recommendations. The reviews cover the period 1890 to 2021.

Table 6.1 – Reviews of London’s health or healthcare

Number	Author	Year	Title
1	Sandhurst	1890	Report from the Select Committee of the House of Lords on Metropolitan Hospitals, &c. : together with the Proceedings of the Committee, minutes of evidence, and appendix.
1	House of Lords	1891	House of Lords Select Committee 1892 report on metropolitan hospitals, provident and other public dispensaries and charitable institutions for the sick poor (SECOND REPORT)
1	House of Lords	1892	House of Lords Select Committee 1892 report on metropolitan hospitals, provident and other public dispensaries and charitable institutions for the sick poor (THIRD REPORT)
2	BMJ	1913	British Medical Association. Hospitals Committee. Report Of The Committee Appointed To Inquire Into The System Prevailing In The London Hospitals With Regard To The Admission Of Out-Patients
3	Goodenough	1944	Report of the Interdepartmental Committee on Medical Schools (Goodenough) (1944)
4	London Health Planning Consortium	1979	Towards a Balance: A Framework for acute hospital services in London reconciling service with teaching needs
5	Habakkuk	1981	The Development of health services in London (London Advisory Group)
6	London Planning Consortium	1981	Primary Healthcare Study Group: Primary Health Care in Inner London (The Acheson Report) (1981)
7	The Kings Fund	1987	Planned Health Services in Inner London: Back to back planning
8	Geoff Martin	1991	Capital carve up : the future pattern of health authorities in Greater London.
9	Benzeval et al	1991	Health and health care in London
10	Hussey	1992	London health care 2010 : changing the future of services in the capital
11	Hogg	1992	Centering excellence? : national and regional health services in London
12	Tomlinson	1992	Inquiry into London's Health Service
13	Department of Health	1993	Making London Better
14	Towell	1997	London health care: rethinking development
15	The Kings Fund	1997	London Commission: Transforming Health in London
16	Turnberg	1998	Health Services in London: A Strategic Review
17	London Health Strategy Steering Group	2000	The London health strategy : outline strategic framework
18	London Health Commission	2000	Making London a healthier city : London Health Commission
19	Levenson	2003	London's state of mind: King's Fund mental health inquiry 2003
20	NHS London	2007	Healthcare for London: A Framework for Action
21	Greater London Authority	2010	Health inequalities strategy
22	The Kings Fund	2013	Leading Health Care in London: Time for a radical response
23	NHS England London Region,	2013	London - A Call to Action
24	Gilbert et al	2014	Transforming mental health : a plan of action for London.
25	People's Inquiry into London's NHS	2014	Peoples Inquiry into London's NHS: London's NHS at a Crossroads
26	Darzi	2015	Better Health for London: The Report of the London Health Commission
27	GLA	2017	London health devolution agreement.
28	GLA	2018	The London Health Inequalities Strategy
29	Healthy London Partnership	2019	The London Health and Care Vision
30	GLA	2021	Health Inequalities Strategy Implementation Plan 2021-24

The timeline is presented as a horizontal sequence of 20 white boxes with rounded corners, each containing a year and a brief description of a key report or event. The boxes are arranged in two rows of ten. Below the timeline is a black silhouette of the London skyline, featuring the Gherkin, the London Eye, Tower Bridge, and the Shard. The timeline starts with the 1882 report on Metropolitan Hospitals and ends with the 2024 NHS Long Term Plan.

Year	Report/Event
1882	Report on Metropolitan Hospitals, Provident and Other Public Dispensaries and Charitable Institutions for the Sick Poor (House of Lords Select Committee)
1890	Report from the Select Committee of the House of Lords on Metropolitan Hospitals, &c. together with the Proceedings of the Committee, minutes of evidence, and appendix
1891	House of Lords Select Committee 1892 report on metropolitan hospitals, provident and other public dispensaries and charitable institutions for the sick poor (SECOND REPORT)
1913	British Medical Association Hospitals Committee. King Edward's Hospital Fund For London.
1914	Report on Interdepartmental Committees on Medical Schools (Goodenough)
1918	The London Health Inequalities Strategy.
1921	Health Inequalities Strategy Implementation Plan 2021-24.
1924	Planned Health Services for Inner London: Back to back planning
1926	Report on the Select Committee of the House of Lords on Metropolitan Hospitals, &c. together with the Proceedings of the Committee, minutes of evidence, and appendix
1927	London health care: rethinking development: a discussion paper prepared for the King's Fund London Commission.
1928	House of Lords Select Committee 1892 report on metropolitan hospitals, provident and other public dispensaries and charitable institutions for the sick poor (SECOND REPORT)
1929	Towards a Balance: A framework for acute hospital services in London reconciling service with teaching needs (London Health Planning Consortium)
1930	Peoples Inquiry into London's NHS: Londons NHS at a Crossroads.
1931	Capital carve up the future pattern of health authorities in Greater London.
1932	London Health Care 2010: Changing the future of services in the capital (King's Fund)
1933	Making London Better (Department of Health)
1934	House of Lords Select Committee 1892 report on metropolitan hospitals, provident and other public dispensaries and charitable institutions for the sick poor (SECOND REPORT)
1935	Healthcare for London: A Framework for Action (NHS London)
1936	Healthcare for London: A Framework for Action (NHS London)
1937	Healthcare for London: A Framework for Action (NHS London)
1938	Healthcare for London: A Framework for Action (NHS London)
1939	Healthcare for London: A Framework for Action (NHS London)
1940	Healthcare for London: A Framework for Action (NHS London)
1941	Healthcare for London: A Framework for Action (NHS London)
1942	Healthcare for London: A Framework for Action (NHS London)
1943	Healthcare for London: A Framework for Action (NHS London)
1944	Healthcare for London: A Framework for Action (NHS London)
1945	Healthcare for London: A Framework for Action (NHS London)
1946	Healthcare for London: A Framework for Action (NHS London)
1947	Healthcare for London: A Framework for Action (NHS London)
1948	Healthcare for London: A Framework for Action (NHS London)
1949	Healthcare for London: A Framework for Action (NHS London)
1950	Healthcare for London: A Framework for Action (NHS London)
1951	Healthcare for London: A Framework for Action (NHS London)
1952	Healthcare for London: A Framework for Action (NHS London)
1953	Healthcare for London: A Framework for Action (NHS London)
1954	Healthcare for London: A Framework for Action (NHS London)
1955	Healthcare for London: A Framework for Action (NHS London)
1956	Healthcare for London: A Framework for Action (NHS London)
1957	Healthcare for London: A Framework for Action (NHS London)
1958	Healthcare for London: A Framework for Action (NHS London)
1959	Healthcare for London: A Framework for Action (NHS London)
1960	Healthcare for London: A Framework for Action (NHS London)
1961	Healthcare for London: A Framework for Action (NHS London)
1962	Healthcare for London: A Framework for Action (NHS London)
1963	Healthcare for London: A Framework for Action (NHS London)
1964	Healthcare for London: A Framework for Action (NHS London)
1965	Healthcare for London: A Framework for Action (NHS London)
1966	Healthcare for London: A Framework for Action (NHS London)
1967	Healthcare for London: A Framework for Action (NHS London)
1968	Healthcare for London: A Framework for Action (NHS London)
1969	Healthcare for London: A Framework for Action (NHS London)
1970	Healthcare for London: A Framework for Action (NHS London)
1971	Healthcare for London: A Framework for Action (NHS London)
1972	Healthcare for London: A Framework for Action (NHS London)
1973	Healthcare for London: A Framework for Action (NHS London)
1974	Healthcare for London: A Framework for Action (NHS London)
1975	Healthcare for London: A Framework for Action (NHS London)
1976	Healthcare for London: A Framework for Action (NHS London)
1977	Healthcare for London: A Framework for Action (NHS London)
1978	Healthcare for London: A Framework for Action (NHS London)
1979	Healthcare for London: A Framework for Action (NHS London)
1980	Healthcare for London: A Framework for Action (NHS London)
1981	Healthcare for London: A Framework for Action (NHS London)
1982	Healthcare for London: A Framework for Action (NHS London)
1983	Healthcare for London: A Framework for Action (NHS London)
1984	Healthcare for London: A Framework for Action (NHS London)
1985	Healthcare for London: A Framework for Action (NHS London)
1986	Healthcare for London: A Framework for Action (NHS London)
1987	Healthcare for London: A Framework for Action (NHS London)
1988	Healthcare for London: A Framework for Action (NHS London)
1989	Healthcare for London: A Framework for Action (NHS London)
1990	Healthcare for London: A Framework for Action (NHS London)
1991	Healthcare for London: A Framework for Action (NHS London)
1992	Healthcare for London: A Framework for Action (NHS London)
1993	Healthcare for London: A Framework for Action (NHS London)
1994	Healthcare for London: A Framework for Action (NHS London)
1995	Healthcare for London: A Framework for Action (NHS London)
1996	Healthcare for London: A Framework for Action (NHS London)
1997	Healthcare for London: A Framework for Action (NHS London)
1998	Healthcare for London: A Framework for Action (NHS London)
1999	Healthcare for London: A Framework for Action (NHS London)
2000	Healthcare for London: A Framework for Action (NHS London)
2001	Healthcare for London: A Framework for Action (NHS London)
2002	Healthcare for London: A Framework for Action (NHS London)
2003	Healthcare for London: A Framework for Action (NHS London)
2004	Healthcare for London: A Framework for Action (NHS London)
2005	Healthcare for London: A Framework for Action (NHS London)
2006	Healthcare for London: A Framework for Action (NHS London)
2007	Healthcare for London: A Framework for Action (NHS London)
2008	Healthcare for London: A Framework for Action (NHS London)
2009	Healthcare for London: A Framework for Action (NHS London)
2010	Healthcare for London: A Framework for Action (NHS London)
2011	Healthcare for London: A Framework for Action (NHS London)
2012	Healthcare for London: A Framework for Action (NHS London)
2013	Healthcare for London: A Framework for Action (NHS London)
2014	Healthcare for London: A Framework for Action (NHS London)
2015	Healthcare for London: A Framework for Action (NHS London)
2016	Healthcare for London: A Framework for Action (NHS London)
2017	Healthcare for London: A Framework for Action (NHS London)
2018	Healthcare for London: A Framework for Action (NHS London)
2019	Healthcare for London: A Framework for Action (NHS London)
2020	Healthcare for London: A Framework for Action (NHS London)
2021	Healthcare for London: A Framework for Action (NHS London)
2022	Healthcare for London: A Framework for Action (NHS London)
2023	

The 19th and first part of the 20th century were dominated by the impact and risk of infectious diseases, which by their nature were concentrated in cities, including London. In 1805, in response to the threat of a Spanish pandemic, the first Board of Health was established. It was dissolved in 1806 after the threat had receded.⁴²² A quarter of a century later, in response to an outbreak of cholera, which killed 6,536 in London,⁴²² a Board of Health was again set-up in response.⁴²³

Two later reports, the Fifth Annual Report of the Poor Law Commissioners⁴²⁴ and the Sanitary Conditions of the Labouring Population⁴²⁵ both established the link between poor housing and living conditions and poor health. The former found that whilst there had been improvements

in sanitation in wealthier areas of London this was not the case in poorer areas. The latter, produced by the leading social reformer Edwin Chadwick, advocated government intervention to ensure clean water, drainage and refuse collection. There was general resistance to these measures on the basis that it was interference into individuals' lives.⁴²⁶

The Poor Law and the two reports referenced above were important then and still resonate today. Almost 200 years ago, an underlying principle was established that it was the individual's fault if they could not work and that where we lived and living conditions had a major impact on our lives and health. These were exacerbated by privilege and the promotion of inequalities. Yet there was reluctance from government and those who had the power and privilege to intervene due to concerns about the 'nanny state'.

Interventions did happen when there was a health emergency. Some legislation responded to the cholera epidemic in an attempt to stem the spread nationally and in particular in cities. The 1846 Nuisances Removal and Diseases Prevention Act gave temporary powers for councils to remove nuisances and waste. In 1846, Liverpool was the first city to appoint a medical officer again in response to cholera and infectious diseases.⁴²⁷ Nine years later, in 1855, London appointed its first Chief Medical Officer, John Simon.⁴²²

The temporary powers of the 1846 Act were extended and made permanent by The Public Health Act 1848⁴²⁸ as cholera continued to spread. The 1848 Act enacted many of the recommendations from Edwin Chadwick's 1842 report, including, for the first time, establishing a 'General Board of Health'⁴²⁷ which was the first incarnation of the Department for Health and the beginning of a long list of governing and administrative bodies (all with three letter acronym names) in health and healthcare. The 1848 act was replaced by The Public Health Act 1858, which abolished the General Board of Health. This would be the first of what would be a long series of creation and abolishment of such bodies over the next two centuries.

Following these reports and certain pieces of legislation, there were some significant improvements in sanitation in London. The Metropolitan Sewers Commission⁴²⁹ established, for the first time, homes which were connected to cesspools and sewer systems. As part of this commission, in 1849, Joseph Bazalgette began his work on the London sewer system. Later, Bazalgette, under the auspices of the Metropolitan Board of Works, was appointed Chief

Engineer. The sewage system, much of which is still relied upon today, was eventually completed in 1875.⁴²³

In 1851, the General Board of Health, established local health boards and required them to oversee refuse from streets and drainage and water supply and annual improvement plans.⁴²⁷

The first compulsory vaccination requirement, for babies against smallpox, was created by the Vaccination Act 1853. This resulted in a significant drop in deaths but also created opposition to its mandatory nature and there were the first instances of vaccine hesitancy.⁴³⁰ This was not to be the last time there was medical scepticism and leads to the next great revolutionary Dr John Snow. Snow identified the cause of a cholera outbreak to the water pump in Broad Street in Soho (London). However, at first, he was met with scepticism by the community and the water provider refused to take action. It was not until he enlisted a trusted community figure – Rev Henry Whitehand – that the community listened, action was taken (the pump handle removed) and the link to contaminated water was proven.⁴³¹ The reluctance of corporate organisations to get involved and ‘the commercial determinants of health’ are issues that are increasingly pertinent today. Similarly, the need to have trusted community leaders (as has been shown again through the covid vaccinations).

To obtain an appreciation of the population density of London around this time, London was the most populated city in the world with the district of Soho having 432 people per acre, compared with Manhattan of the 2000s only having circa 100 people per acre.⁴³² The Sanitary Act 1866⁴³³ made, for the first time, residential overcrowding illegal.

Unease with the conditions of workhouses, led by campaigns by Florence Nightingale and the Lancet, a leading medical journal, led to The Metropolitan Poor Act 1867.⁴³⁴ The 1867 Act established the Metropolitan Asylums Board (MAB) which was the first time oversight of London’s healthcare had been established. The MAB also established its own municipal hospitals, essentially the first NHS hospitals.^{435,436} Later in this century, Charles Booth, a social reformer, began mapping areas of poverty and deprivation in London, making the link with general health.

The first review of London’s health and healthcare was from the *House of Lords ‘Select Committee Report on Metropolitan Hospitals, Provident and Other Public Dispensaries and*

Charitable Institutions for the Sick Poor.⁴³⁷ This was the first of a trilogy of joint reports, ***the second report***⁴³⁸ and ***third report***¹³⁵, spanning 1890-92. Because of their interconnected nature, they are counted as three parts of one report. In addition, they are accompanied by a colossal 616 page Hansard report, capturing proceedings and minutes from the Committee which included amongst others the Archbishop of Canterbury and was chaired by Lord Sandhurst. The committee called a range of experts including GPs, nurses, pharmacists, surgeons, chairs of hospital boards, ministers, the previous Lord Mayor of London (Sir Sydney Waterlow) and patients. At the time, hospitals in London were voluntarily funded through charitable giving. When he was Mayor of London in 1873, Sir Sydney Waterlow, at the suggestion of the Lancet, set up the 'metropolitan hospital fund' whereby on a Sunday in June each year churches would hold a collection for funds to support hospital access for the poor. The Select Committee Report concluded that the hospitals were, in general, individually well run. However, there were high levels of inequalities, and the provision of healthcare did not exist in the areas of most need, which was exacerbating these inequalities. They also found that there was a need for co-ordination between healthcare providers. It called for better planned development of healthcare services.

The report recommended the creation of a central board to oversee the planning of health services in London. Initially there was no response to this recommendation, until the Prince of Wales's Hospital Fund for London was established, which amalgamated some small hospitals and attempted to move others to address the gap in provision particularly in the south of the Thames.⁴³⁹ The Prince of Wales's Hospital Fund would go on to become the present day Kings Fund.

Moving into the 20th century

In 1888, The Local Government Act (1888) established the London County Council and in 1899, London boroughs were formed.⁴⁴⁰ These would be re-organised to their current form in 1965. This was the first time London had a single representative elected body. In 1907 the first community health visitors were recruited⁴²² to address the levels of infant mortality which had not changed from the 1840s.⁴⁴¹

The theme of better integration was continued in the ***British Medical Association, Hospitals Committee, King Edward's Hospital Fund For London: Report Of The Committee Appointed To Inquire Into The System Prevailing In The London Hospitals With Regard To***

*The Admission Of Out-Patients.*⁴⁴² The committee held 27 meetings and took oral evidence from 48 witnesses, all focused on hospital admissions. The committee reiterated that there was an over concentration of hospitals in central London. Their recommendations centred around the development of the ‘Almoner system’. The Almoner system was essentially a gatekeeper or care co-ordinator to the hospital services that could also signpost to local services, to avoid unnecessary admissions.

There is then a gap of just over 30 years before the next review. However, during this time, there were some notable events that impacted on health and health care in London. The two world wars, similar to other catastrophic threats to human health, were a catalyst for a transformative change in health and healthcare nationally and in particular in London. At the end and following the first world war, the ‘Spanish Flu’ pandemic occurred, which killed between 50-100 million people (3-5% of the global population)⁴⁴³ In 1919, the Ministry of Health was first established.

During the interwar period, a significant proportion of voluntary hospitals in London (60 out of 145) were unable to cover their costs⁴⁴⁰ requiring intervention and bailouts. The Local Government Act 1929⁴⁴⁴ gave county councils, including London County Council (LCC), greater control over hospitals. As a result, the LCC took control of over half of all municipal hospital beds in England⁴⁴⁵ and became the biggest health authority in the world.⁴⁴⁶

Legislation in response to the outbreak of the second World War enabled the ‘Emergency Medical Service’ (‘EMS’) to be introduced in 1939. These legislative powers enabled central government to direct voluntary and municipal hospitals. The EMS is said to be the biggest single factor for the configuration of London’s hospitals services today.⁴⁴⁰ In 1946, the national blood transfusion service was established.⁴⁴⁷ Over the course of World War Two, increasing groups of the population became eligible for free treatment under the EMS, proving the concept of a national health service possible.⁴⁴⁶

The threat and impact of infectious diseases continued to dominate the early part of the 20th century. Infectious diseases would remain a threat particularly to cities and areas where there was a close proximity of residents. However, post-World War two, from the mid-20th century onwards, there was also an increasing focus on health services and housing. This was because a quarter of Britain’s 12.5 million houses had been damaged during the second World War,

many of these in cities and in particular London.⁴⁴⁸ So much so, that 45,000 builders were drafted into London, with many sleeping in Wembley Stadium, as part of a huge rebuilding programme.⁴⁴⁶ Post war London continued to spread its reach, particularly with the advent of ‘new towns’ and ‘London overspill’ and general ‘urban sprawl’ creating increased waves of commuters.

In 1944, Sir William Goodenough chaired a review and produced the *Report of the Interdepartmental Committee on Medical Schools*.⁴⁴⁹ This was a national review but focused on London, because of the extensive provision of medical training places in London. It proposed fundamental changes to doctors training to meet the requirements of a comprehensive preventative national health service. This included a focus on social medicine and prevention and also children’s health and mental health. It also linked all training hospitals with a teaching centre, most of which remain the same in London today. Similar to previous reports, it cited the over provision of hospital services in central London and proposed moving St George’s hospital to a site in south London, which did later happen. As with other reviews suggesting service change, it was not met with universal support and provoked a stinging response in the British Medical Journal.⁴⁵⁰ The following year, starting in London, the Ministry of Health embarked on a series of audits of hospital services, concluding that the sick were left languishing in hospitals.⁴⁵¹ The continued theme of an over focus on hospital services and lack of focus on prevention and primary and community services continued to be identified.⁴⁵²

On the 5th of July 1948, the NHS was established. This was the start of the modern welfare state and has been called “ the biggest single experiment in social service that the world has ever seen” by its creator Aneurin Bevan.^{453,446} The objectives of the NHS were broad; not just treatment but a preventative service and to promote physical and mental wellbeing.⁴⁵⁴ To ensure London was prepared for the advent of the new NHS, Alderman Reginal Stamp, Chair of the London County Council Health Committee, provided a report on healthcare governance to the London County Council. The report concluded that London’s 165 health services units, each covering a population of around 20,000, were generally well prepared.⁴⁵⁵ London County Council would ultimately be replaced by the Greater London Council (GLC), a ‘sui generis’ council, in 1965. The act which set up the GLC, the London Government Act 1963, also set the boundaries for what remains in the present day: 32 Boroughs and the City of London that make up Greater London. However, the GLC was abolished by the national Conservative government in 1994. It was not until 2000 that another governing body was set up, when the

national Labour government, established the Greater London Authority (GLA) and appointed the first Mayor. This is covered in further detail in the following chapters.

In the 1970s, the Department of Health divided London into 16 local health authorities.⁴⁵⁶ In 1974, the medical officers of health (now known as Directors of Public Health) moved from local government to the NHS. As part of the Conservative Langsley reforms of 2012, the Directors of Public Health, and their teams, moved back to local government.

During the summer of 1980, the 'Report of the Working Group on Inequalities in Health'⁴⁵⁷ (also known as the 'Black Report' – after its author Sir Douglas Black) was published. Initially commissioned in 1977 by the Labour government, it was a significant report and analysis demonstrating the uneven and increasing inequalities in health since the advent of the NHS. The reasons for this worsening picture were deemed to be not due to the NHS but 'wider determinants' such as education, work, income and housing. The report recommended a significant shift of focus and resources to community care and breaking the link between social class and health.⁴⁵⁸ By the time this expansive work was published, the Conservative government had taken power and the report was disowned and ignored.⁴⁵⁹

Rather than a focus on social determinants and community services, it is fair to say that efficiencies and hospital services were the focus of the 1980s. There was pressure on rebalancing resources from London to the rest of the UK, which necessitated a 12% reduction in London's hospital capacity. The London health plan consortium was charged with coming up with a plan and produced a report in 1979: *Towards a Balance: A framework for Acute Hospital Services in London Reconciling Service with Teaching needs (1979)*. The feasibility of the scale of the reduction was a challenge from the beginning.⁴⁶⁰ Whilst hospital capacity was reduced, with a lack of pan-London co-ordination, this was patchy and the expected savings and improvements were not achieved. In fact, waiting times actually increased.⁴⁵⁸

The comprehensive commentary in the Lancet, entitled "Chronic and Critical - A Commentary on Health Care in London"⁴⁶¹ identified issues of lack of London wide health and healthcare planning. This can be seen in the void of reports, analysis, or visions between the 1950s to late 1970s. The commentary also identified that in some cases, there would be benefit for a patient if he or she was not taken to a small A&E but travels further by ambulance to a hospital with

more comprehensive services.⁴⁶¹ It was not until almost 30 years later when Healthcare for London⁴ made this happen for stroke and major trauma cases.

In 1980, Sir John Habakkuk, was asked by the then secretary of state for Health, to set up a 'London Advisory Group' to produce a report on London's health services. The very short (3 page) report '*The development of health services in London*'⁴⁶² was published in 1981. The report was similar to others e.g. Jones⁴⁶¹, in that it identified issues of a lack of co-ordination across London and primary care and community care and silos working between health and care as the biggest issues.

The 1979 Royal Commission on the NHS⁴⁶³ found inadequate health services in inner cities. It concluded that London's over reliance on hospital care and issues of quality and availability in primary care had been an issue for decades.⁴⁵⁸ In response to the report, The London Health Planning Consortium, chaired by Prof Donal Acheson, who would go on to be Chief Medical Officer, produced a report, '*Primary Healthcare Study Group: Primary Health Care in Inner London*' (1981) (London Health Planning Consortium 1981). This was the second London Healthcare Planning Consortium review. The report had a sizeable 115 recommendations, in areas such as improved incentives, discouragement of small list sizes for GP practices, improvements in registration, accessibility and availability of services.

The London Health Planning consortium (LHPC) was set up in 1977 and stood down in 1981, having produced a number of reports 'but not a lot of change'.^{464,458,465}

Issues of a lack of oversight and planning are again raised in a report titled, 'London health planning. Who speaks for the capital?'⁴⁶⁴ The report referenced issues of scale of transformation, particularly in rationalisation of acute services. It also stated that there had been a failure in the development of primary and community care due to broken coterminousity between health and local authorities and despite strong evidence and support for city-wide health and healthcare oversight.

In 1987, the Kings Fund produced '*Planned Health Services in Inner London: Back to back planning*'⁴⁶⁶ in which it analysed London's four Thames Regional Health Authority plans. From the analysis they concluded that, whilst individually and considered in isolation, each of the plans made sense, when considered together they were incoherent and there were

inconsistencies in some of the assumptions made. They recommended a consistent approach and single oversight and leadership.

These themes come up again in '*Capital Carve Up: The Future Pattern of Health Authorities in Greater London*'.⁴⁶⁷ This short report critiqued the proposed changes to create 11 'mega districts' health authorities in London. The main contention was that the plans had been drawn up behind closed doors and there was a concern that the large bureaucracies would lose connection to local areas and patients. It recommended that London needed a strategic health care plan for the whole city.

Also in 1991, the report '*Health and health care in London*'⁴⁶⁸ was produced. This concluded that despite some world leading hospital organisations the needs of Londoners were not well met. Again, issues of over provision of hospital services and at best patchy primary care were raised. The report also mentioned a lack of integration and strategic leadership across London. The report further noted that because London had a historical legacy built up over the last 200 years, it was well endowed with hospitals and therefore was well-funded by NHS finances.

In 1992, the Kings Fund Report '*London health care 2010 : changing the future of services in the capital*'⁴⁶⁹ proposed recommendations to improve the inter-related areas of health services, medical education and research in London. It stated that the decline in bed numbers, as a result of financial efficiencies and medical innovations, had put pressure on traditional patterns of training. It recommended a task force be established, reporting to the Secretary of State for Health and the Secretary of State for Education in order to reimagine services and research and to include a £250 million primary and community care development programme. The report also proposed the establishment of major trauma units, local hospitals, day case centres (including high volume elective centres), multi service primary care clinics (poly clinics). These are all ideas that later came up, and in some instances were implemented, following the 2007 Healthcare for London report.⁴

Another report in 1992, '*Centering excellence? : national and regional health services in London*'⁴⁷⁰ focused on London's healthcare as a provider of specialist (national and international) services. The report summarised the history of specialist services in London, concluding that their development had been largely unplanned and uncoordinated. It proposed a framework for the future based on; equity of access, developing services in outer London,

monitored standards, better planning and; research and teaching. Similar to the earlier Kings Fund report,⁴⁶⁹ it suggested that in some areas clinical outcomes would be better in higher volume specialist centres.

In the same year, the Report of the *'Inquiry into London's Health Service, Medical Education and Research'*⁴⁷¹ (also referred to as the Tomlinson Report) was commissioned by the secretaries of state for education and health. The conclusions of the report followed the earlier themes of identifying that there was poor quality primary care and too many hospitals in inner London. The report went further than previous reports in that it proposed the merger or closure of specific hospitals, some of which did happen. It also recommended a reduction in the number of medical schools, nine merging into four. Finally, it had a specific focus on implementation, where it referenced that "many of the proposals have arisen from a lack of a mechanism for ensuring that the decisions which are sensible at a multi borough level also make sense at a London level" and therefore suggested city-wide health and healthcare oversight and establishing an implementation group. The report warned that "if this change is not managed firmly-and in certain cases, urgently- the result will be serious and haphazard deterioration in health services in London."

The Tomlinson Report provoked a number of responses. These included, a strong response from a vocal group of clinicians in London, who mostly critiqued the planning assumptions rather than the principles.^{472,473,474,475}

Also, in 1992, in response to the Tomlinson Report, Dr Jacobson⁴⁷⁶ published Public health in inner London. In this, they highlighted some of the major determinants of health and health inequalities, identifying that the biggest impact on health and health inequalities are outside the remit of health services and lie within the control of central and local government.

The Kings Fund ran a series of six workshops, each with between 60-80 stakeholders, to discuss the Tomlinson Report, from which they produced their own report Conflict and Change : specialist care in London : a report of six meetings arranged to discuss the London Specialty Review reports.⁴⁷⁷ There was agreement on the need to reorganise specialist services and support for the "hub and spoke" model. However, concerns were raised around an underestimation of future needs for these services and the lack of evidence on quality and outcomes. These concerns around underestimation of need and overestimation of efficient

gains were also raised in another report from the same year, Health Rights - The Right Treatment for London'.⁴⁷⁸

The book *London after Tomlinson: reorganising big city medicine*, is a collection of thematic commentaries from a broad range of subject matter experts, such as Tessa Jowell (MP) and Liam Donaldson. It dealt with consistent issues of poor and variable primary and community care and old and undermaintained buildings, particularly with regard to hospitals.

*'Making London Better'*⁴⁷⁹ was the government's response to Tomlinson, produced in 1993. In this, six speciality reviews, under the coordination of the London Implementation Group were set up and funding was allocated to set up a challenge fund and the creation of a London Initiative Zone (LIZ) focused on developing primary care capacity. Similar to what had happened with the Tomlinson Report, not everyone supported the government's response. Nagpaul^{480,481} completed a study examining the impact of the LIZ, and found that bigger and better organised practices benefited more from the scheme, risking reinforcing inequalities and the inverse care law.⁴⁸¹

The impact of the Tomlinson Report cannot be overstated. Over twenty hospitals in London were proposed for merger and service change.⁴⁴⁶ In the event, Guy's Hospital was eventually merged with St Thomas to create the Guy's and St Thomas' we know today. However, the closure of Barts and other contentious recommendations failed to materialise.

There have been numerous attempts to compare health indicators and outcomes in London with other areas and cities.^{327 482 483} The health status of Londoners : a comparative perspective⁴⁸⁴ compared indices of mortality and morbidity between comparable areas in London and outside London. They found that mortality in London was generally better than comparable areas, except with regard to the areas of breast cancer and suicide. They put this positive comparison down to the relative prosperity of London, rather than access to healthcare. However, this average prosperity may mask very different outcomes for different socioeconomic groups. As with previous reports, the authors of the report found a clear relationship between deprivation and poor health.

Towards a European Public Health Approach,⁴⁸⁵ published in 1993, tried to counterbalance the over focus on healthcare, particularly hospital services, by focusing on the general health of Londoners being determined by the socioeconomic conditions they live in.

The Labour party manifesto included a commitment to consult on creating a Mayor for London. After their successful election, this was duly completed and a Mayor, with the associated infrastructure, came into being in 2000.

In 1997, **London health care: rethinking development**⁴⁸⁶ was the second Kings Fund commissioned report, examining and setting out recommendations. The report concluded that neither top-down reorganisation nor the commissioner and provider split would likely succeed. Based on stakeholder interviews, their recommendation was to use political leadership and locally developed and owned solutions.

In the same year, another comprehensive report with recommendations was produced; ***Transforming Health in London***.⁴⁸⁷ This suggested a need for integration of health and care services but also action to address wider determinants, in particular poverty. Similar to other report recommendations, there were suggestions to rationalise hospital services, develop primary care, and strengthen links between and within communities and urban planning.

Another health secretary commissioned report, published in 1998, ***Health Services in London: A Strategic Review***⁴⁸⁸ (the Turnberg Report) recommended improvements in primary care, through recruitment and retention. It differed from certain previous reviews in that it recommended that hospital services be maintained. Tomlinson had been the Conservatives' choice to review of London's healthcare; Turnberg was Labour's.⁴⁴⁰ However, it resulted in only piecemeal progress.⁴⁸⁹

Despite the significance of the Tomlinson and Turnberg reports, there was limited change to health or healthcare during the 1990s.⁴⁹⁰

21st Century

In 2000, ***The London health strategy: outline strategic framework***⁴⁹¹ was one of the first reports that set out recommendations to improve health, rather than just healthcare. A number of key priorities were identified; work for health and regeneration; addressing inequalities and

poverty; promoting the health of black and minority ethnic people; improving transport, and related aspects of the environment.

In 2000, the first London Health Commission, an independent body but supported by the newly elected Mayor of London, produced its inaugural report and recommendations in ***'Making London a healthier city'***.⁴⁹² The commission was a broad church of around 50 stakeholders across a range of organisations and sectors, first created during the London Health Strategy development. Seven priority areas were identified 1) regeneration 2) inequalities 3) black and minority health 4) transport 5) health impact assessments 6) community development, and 7) London health observatory.⁴⁹³ The Commission also developed a broad range of indicators to track progress, including areas such as unemployment, school attainment, crime, air quality, and life expectancy.⁴⁹⁴ The Commission would commission and oversee Health Impact Assessments (HIAs) on the Mayoral strategies. The HIAs would typically involve a literature review, workshop and subsequent report with recommendations.⁴⁹⁵ This was the first adoption of a "health in all policies" approach and had a positive impact.⁴⁹⁶

In 2003, the Kings Fund published another report ***'London's State of Mind'***⁴⁹⁷ with recommendations focused on mental health. This was a comprehensive two-year review, concluding that there was a variation in outcomes and experiences, slow progress in improvements, issues of stigma, lack of resources particularly around prevention and lack of oversight at the London level. A series of specific recommendations were set out which also included developing a London mental health strategy.

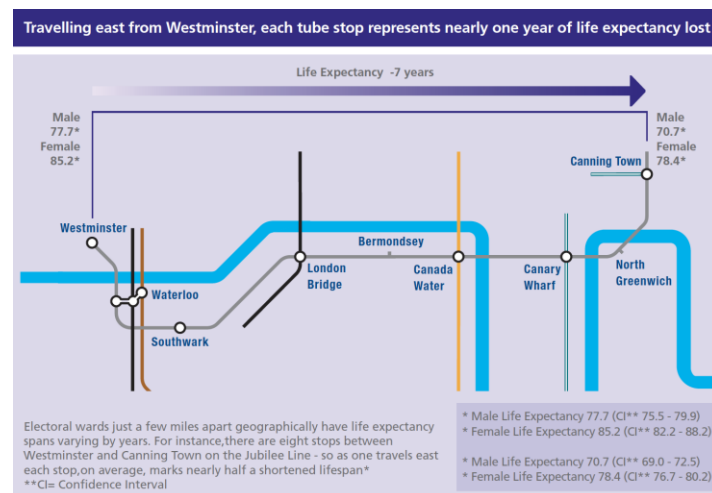
In 2006, following the publication of Commissioning a Patient Led NHS,⁴⁹⁸ the five strategic health authorities covering London, themselves only created in 2002, were replaced by a semi-independent single health authority, 'NHS London'. NHS London was responsible for the strategic oversight and performance of all London's Primary Care Trusts (PCTs) and NHS (hospital) Trusts – essentially all healthcare. This was the first time that a single body had responsibility for health services in the capital ⁴⁹⁰ since the 1867 Metropolitan Asylums Board (MAB).

One of the first actions of this new body was to commission Prof Lord Ara Darzi to undertake a review of health and health care. The report ***'Healthcare for London ('HfL'): A framework for action'***⁴ was published in the summer of 2007, making a series of recommendations. The

report quite famously plotted the changes in life expectancy depending on where you lived along the Jubilee tube line, shown in Figure 6.2 and which has often been replicated. Dame Ruth Carnall, chief executive of NHS London, is quoted as saying “This is the most ambitious and radical plan for the NHS in London since 1948”.⁴⁹⁹

Unlike previous reports, perhaps because the newly created ‘NHS London’ had some degree of autonomy and control, significant focus and resources were put into implementing the recommendations. Indeed, NHS London’s role in leading the change was widely acknowledged.⁴⁹⁰ This included the creation of Academic Health Science Centres (AHSCs), centralising heart attack, stroke and trauma care. These proved to be effective in improving outcomes and costs.^{155,500,6,501} The initiatives were replicated in other areas of the country.⁵⁰² However, other recommendations were less successful, most notably moving care from hospitals into GP led ‘polyclinics’ which was resisted by GPs.⁵⁰³ Progress was made in improving health services as a result of HfL⁴⁸⁹ Indeed, such was the success of the work which followed the HfL report that Lord Darzi was asked to join the government as a junior health minister and carry out a similar review to HfL but nationally.⁴⁹⁰ However, HfL was halted as by the Conservative government when they came into power in 2010.

Figure 6.2 – Changes to life expectancy along the Jubilee tube line



Source: Healthcare of London p19

Changes to the GLA Act in 2007 required the Mayor to produce a ‘*Health Inequalities Strategy*’, which was developed and consulted on during 2007⁴⁹⁴ and was published in 2010. The London Health Inequalities Strategy⁵⁰⁴ set out strategic objectives around themes of

empowering individuals and communities; providing high quality health and social care services; improving income inequality and health; and employment.

Shortly after the election of the conservative government in 2010, despite no indication of NHS service reform in their manifesto,⁵⁰⁵ the government made structural changes that were so significant that the then Chief Executive of the NHS said “you can see them from space”.⁵⁰⁶ This included abolishing NHS London and replacing it with a regional office of a national organisation.

In 2013, in response and in an attempt to join up the fragmented NHS commissioning system in London, the London regional office published *‘London – A Call to Action’*⁵⁰⁷ presenting the case and broad recommendations for primary care improvement and integrated seven day services. In the same year, the Kings Fund published *‘Leading Healthcare in London: time for a radical response’*.⁵⁰⁸ The catalyst for this analysis was fragmentation of leadership oversight and commissioning function and the increasing performance and financial pressures in London. To respond to these challenges, the authors suggested the creation of a single pan-London commissioning and strategic body to oversee a newly amalgamation of three provider networks, based around existing academic health science networks.

A year later, in 2014, two reports were published. The first was *‘Transforming mental health: a plan of action for London’*.⁵⁰⁹ This report described a vision for the future of mental health provision in London developed through engagement with stakeholders. The second report was *‘Peoples Inquiry into London’s NHS: London’s NHS at a Crossroads’*⁵¹⁰ which made 18 recommendations, one of which was to re-establish a strategic health authority for London.⁵¹¹

Also in 2014, Following on from *‘A Call to Action’* in 2013, Lord Darzi was asked by the then Mayor of London, Boris Johnson to carry out a second review of health and healthcare in London. Whereas the focus of the first review was primarily healthcare, the focus of Better Health for London was almost exclusively health focused. There were 64 recommendations, framed around 10 ambitions with the objective for London to become ‘the world’s healthiest major city’.

What made this review unique was that it was arguably the broadest and most inclusive of all any of the previous, or subsequent, reviews with a high level of open engagement with the

public. Over the course of a year, roadshows were held in in each borough, with the involvement of 9000 Londoners and national and international expert witness sessions. These resulted in '**Better Health for London: The Report of the London Health Commission**'.⁴⁸³ However, similar to most previous reviews, there were very few actions taken forward. Of the 64 recommendations, the author believes only six of the recommendations were delivered. This was despite a formal response in Better health for London: next steps.^{512,512} The notable exceptions that were achieved included the subsequent Mayor using his powers to restrict unhealthy takeaways within 400 metres of schools and a new model of care for child and adult mental health patients in crisis. It also directly led to the subsequent devolution agreements.

In 2015, the first '**London Health and Care Collaboration Agreement**'⁵¹³ was signed to great fanfare by London and national partners, including the UK Chancellor of the Exchequer and the Secretary of State for Health.⁵¹⁴ The agreement set out 4 devolution pilots to explore and test specific areas where it was thought that devolved powers could accelerate better health and healthcare. There was a second devolution agreement signed in 2017⁵¹⁵ which gave further detail on the areas of devolution to be explored.

Also in 2015, the second London Health Inequalities Strategy⁵¹⁶ was published. The strategy set out a range of commitments, actions and 12 indicators to address health inequalities and responded to the Mayor's action in Better Health for London. The inequalities strategy was further consulted on in 2017. However the strategy⁵¹⁷ was 134 pages long which may have been too lengthy and unwieldy for there to be comprehensive public engagement. Following consultation, an updated '**Health inequalities strategy**' was produced¹⁹² based around four broad aims; healthy children; healthy minds; healthy places; healthy communities. This was published in 2018. An update implementation plan, '**Health Inequalities Strategy Implementation Plan**' 2021-24,⁵¹⁸ was published in 2021, setting out the priority actions for the Mayor. In the same year, a subsequent Progress Report: London Health Inequalities Strategy⁵¹⁹ followed.

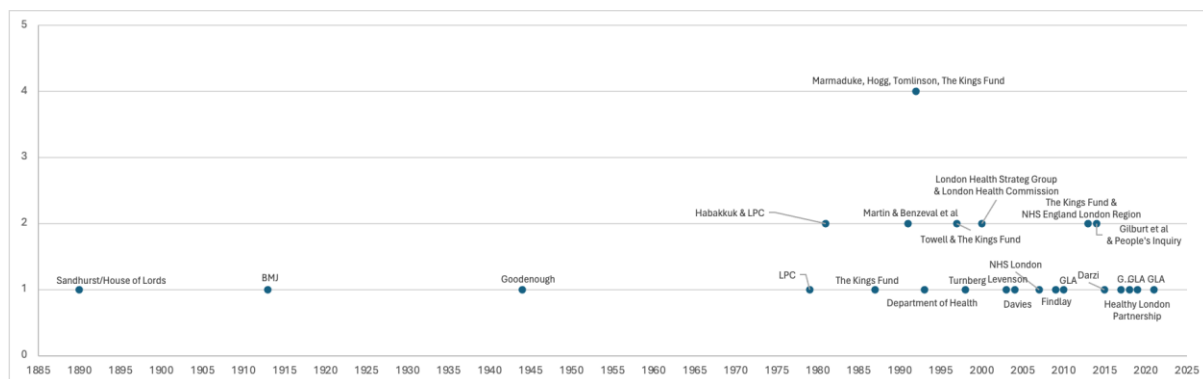
In 2019, London's health and care partners came together to produce The '**London Health and Care Vision**'⁵²⁰. This vision built on Better Health for London from 2014, reviewing progress against the 10 objectives and setting some ambitious targets, for example achieving 10% reduction in weight in respect of children who are overweight by 2023/24. This target has not been met.

6.6. Discussion

6.6.1. London's population

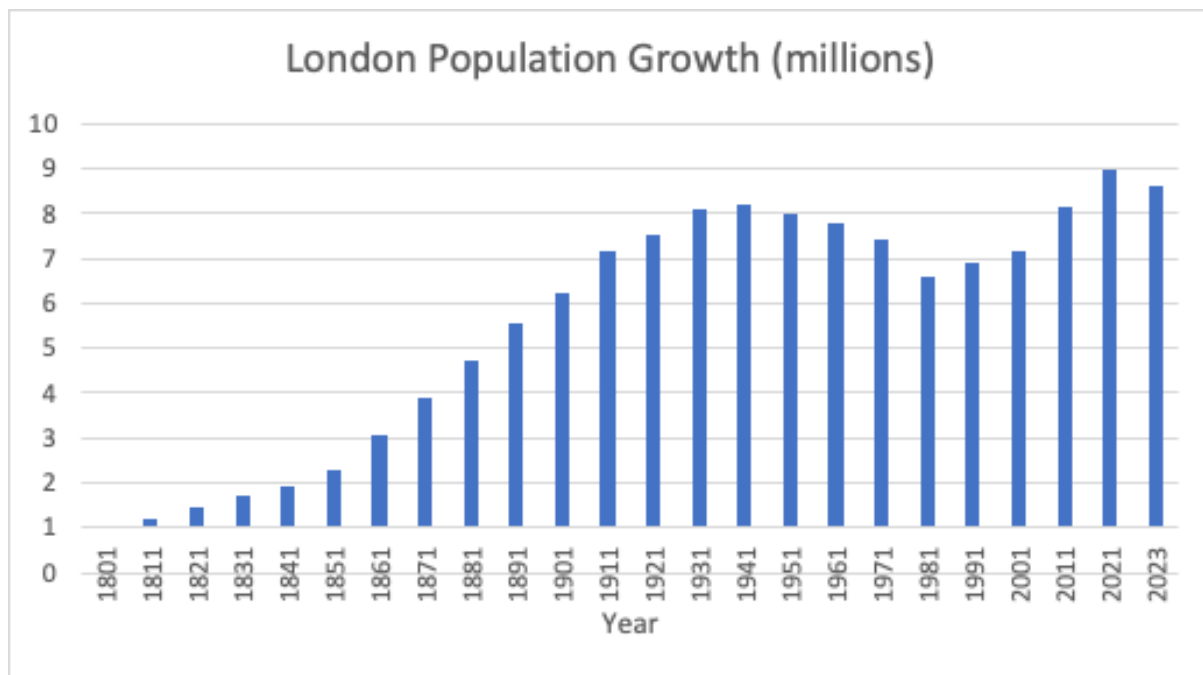
The reviews summarised in the results section span 130 years during which London has changed in almost every dimension, size and demographic. There have also been wider societal and technological advances that would have been unimaginable in the 19th century. Figure 6.3 shows that there has been a recent cluster of reviews over the last forty years. The reviews themselves are heterogeneous in almost every dimension, for example, length (from 4 pages to 614), the party that commissioned them and the party who carried them out (from policy makers to Doctors to Lords). However, there are recurring common themes which are explored further in this discussion section.

Figure 6.3 – Timeline of publications of reviews with recommendations



Over the course of these reviews, for almost a century, London was the largest city in the world and the predominant economic powerhouse. Between the beginning and end of the 19th century London's population growth was at unprecedented levels, increasing from 1 million to 6 million,⁴⁴⁵ rising almost a further 50 percent over the next 50 years, as show in Figure 6.4. The population growth has ebbed and flowed over the years. Whilst London has been overtaken internationally on some comparators it still significantly 'over contributes' to the national economy and prosperity.

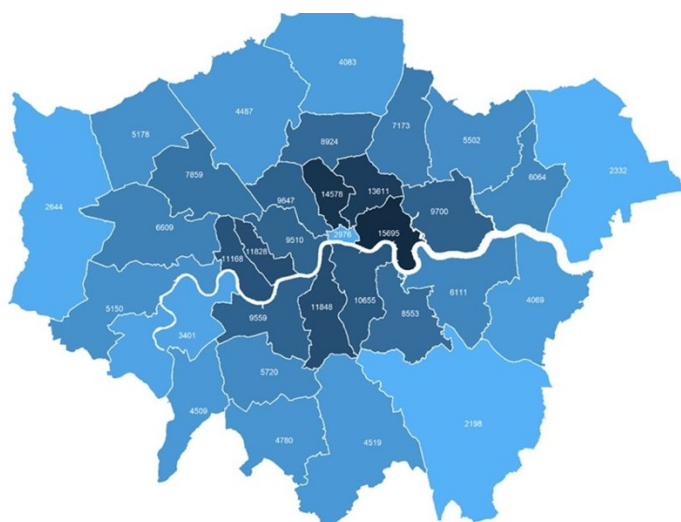
Figure 6.4 – London’s population over the last 200 years.



Source of data⁵²¹

Currently London has a population of around 9 million, as shown in Figure 6.4. This population consists of; just under half (46%) are Black, Asian and minoritised ethnic groups and 41% of were born outside UK (compared to 13% in rest of England).⁵²² The population density of London’s boroughs is shown in figure 6.5.

Figure 6.5 - Population Density (persons per km²) by London Borough, 2021 Census



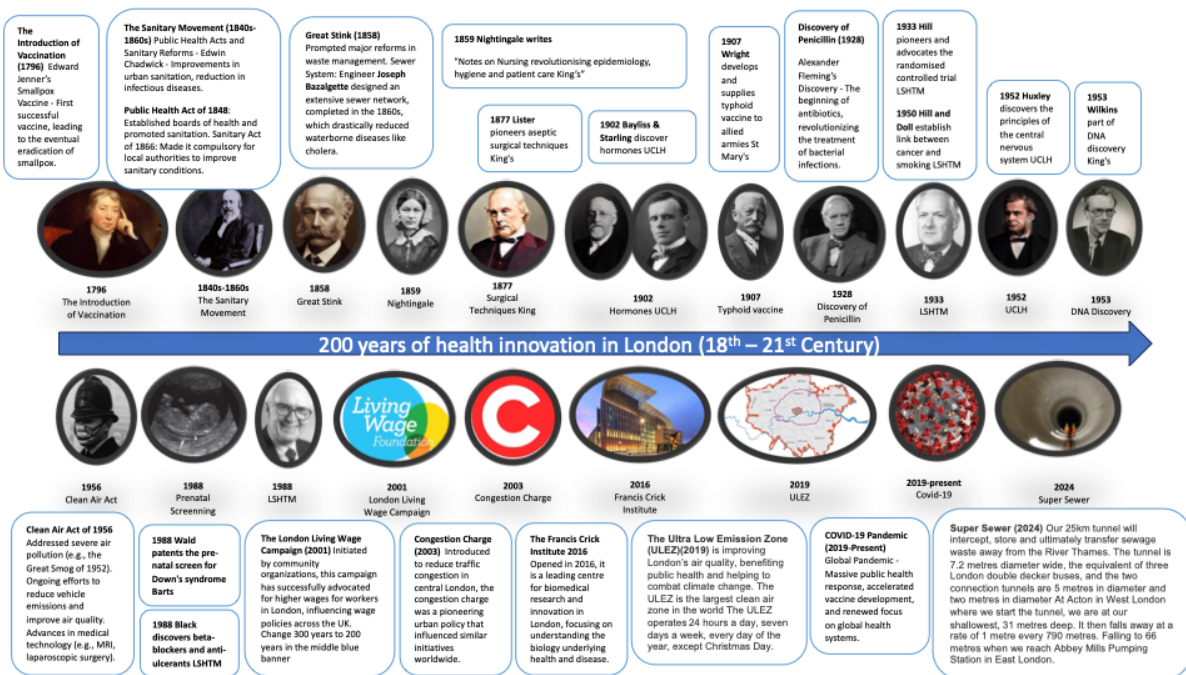
Source: A snapshot of health inequalities in London⁵²²

6.6.2. Cities and London's role in health innovation

Over the last 200 years, cities have been hotbeds for innovation and progress in health and healthcare improvements. Whether that be the first use of anaesthesia during surgery in Boston in 1846 or the discovery of polio vaccine by Jonas Salk in Philadelphia in 1954, through to more recent innovations such as 'Vision Zero' in Stockholm which aims to eliminate all deaths and injuries from road traffic accidents.

London has played a major part in all of this and arguably London has been the greatest city in respect of health and healthcare improvements. Over the last 200 years such improvements have been substantial and have had international impact. They have been driven by innovations in public health and infrastructure, clinical science and practice, as well as social policy and legislation. Figure 6.6 below shows these innovations over the last 200 years.

Figure 6.6 – Health and healthcare innovations in London over the last 200 years



During the 19th century, five London residents made a monumental impact on Londoners' health, the effect of which is still felt today: Dr John Snow, Florence Nightingale, Joseph Bazalgette, Rev Henry Whitehead and Edwin Chadwick. They were variously a doctor, a nurse, an engineer, a community leader and a civil servant. They came from a diverse range of

professions, but each made a valuable contribution to improving London's health and healthcare.

6.6.3. Oversight of health and healthcare in London

In the context of a very centralised national government and very centralised healthcare system, the political oversight and governance of health and healthcare in London has swung between a number of different governments and organisations over the last 200 years. The Metropolitan Board of Works (MBW), replacing the Metropolitan Commissioners of Sewers, was established in the mid-19th century, partially in response to the emerging threat of infectious diseases. This set a recurring trend for the establishment of new bodies (usually named with a three-letter acronym), with the London County Council (LCC) replacing the MBW in 1889. The LCC was the longest standing governance body, surviving 76 years until 1965, when it was replaced by the Greater London Council (GLC). The labour run GLC made it to just over twenty years before being abolished by the Conservative national government in 1986. There was then a hiatus in London level government with the powers of the GLC devolved to local borough administrations until the Greater London Authority (GLA) was established in 2000. With the GLA came, for the first time, a Mayor for London.

All of these political and oversight structures have had a role in health and healthcare. The NHS has been reorganised numerous times. Indeed, it has been said that “If health[care] reorganisation were an Olympic sport the NHS would take gold every time”.⁴⁵³ Even over the last 20 years, there have been Strategic Health Authorities (SHAs) supporting Primary Care Trusts (PCTs), the later replaced with Clinical Commissioning Groups (CCGs), which were then aggregated to operate in Strategic Transformation Partnerships (STPs), which were then rebranded as Integrated Care Boards/Partnerships (ICBs and ICPs) to encourage local government participation.

6.6.4. Recurring themes from London reviews of the last 200 year

The most prominent themes emerging from pan-London health reviews over the last two centuries include:

- Variability in quality and accessibility of health services.
- Inefficient use of resources available;
- Leadership, co-ordination and coherence of planning across London;
- Inequality in health outcomes; and
- Over focus on healthcare to the detriment of health.

6.6.4.1. Variability in quality and accessibility of health services

The subject of variability in quality and accessibility of health services, which impacts on inequality in health outcomes, has been raised numerous times throughout the history of the NHS and in the years before it was established. It has been noted that throughout the previous century, those in greatest need of healthcare were often those who received the least, with the greatest concentration of high quality health services in the areas of least deprivation.⁵²³ This is known as the inverse care law.

The King's Fund review in 1987⁴⁶⁶ highlighted the considerable variation in quality and provision of health services across London, a finding that was reiterated in Tomlinson's review⁴⁷¹ and the King's Fund review of 1992,⁴⁶⁹ which particularly stressed the unacceptable variations in quality and access to mental health care and primary care services. Many of the reviews called for more support to be available in areas of deprivation, particularly preventative initiatives and local support for people to take control of their own conditions.⁴⁸⁷ Turnberg,⁴⁸⁸ in 1998, emphasised the prevalence of poor quality services, specifically in the community, that were evident in deprived areas. *Healthcare for London, 2007*⁴ and the King's Fund reviews in 2011⁴⁸⁹ and 2013⁵⁰⁸ demonstrated that there were still dramatic variations in the quality of services provided across the capital even though this phenomenon has been publicly recognised for decades.

6.6.4.2. Inefficient use of resources available

6.6.4.2.1. Rationalisation and centralisation of acute services

Healthcare services in London have transformed beyond recognition in the last 200 years, albeit that some infrastructure remains the same. However, there has been a constant theme, almost from the day the NHS was established, of the need to increase the pace of change to meet financial and efficiency challenges. Many of the pan-London health reviews have brought to light deep-seated problems in the financial stability of London's health service, leading to recommendations of centralisation and rationalisation of acute hospitals. Some highlighted a prevalence of acute service duplication and other resource inefficiencies leading to financial waste, with the overall quality of services suffering as a result. The London Health Planning Consortium in 1979⁵²⁴ recommended the rationalisation of acute hospitals in London, as there was evidence to suggest that services were being underused and therefore could be best placed elsewhere. However, the decision was an unpopular one, which, coupled with the lack of authority of the Consortium, resulted in the recommendations being discarded.

The market reforms introduced in 1990 prompted the King's Fund review⁴⁶⁹ which subsequently established that the introduction of the internal market and the provider and commissioner split would result in treatment in inner-London becoming financially unsustainable.⁴⁸⁹ As a result, the King's Fund review⁴⁶⁹ put forward a plan for large-scale hospital closures with reinforcement in primary care, which was expected to directly improve efficiency, accessibility and boost patient satisfaction. Tomlinson's report⁴⁷¹ shortly after this, reiterated many of the recommendations with specific sites identified for closure, however little was carried forward.⁵²⁵ The Department of Health's *Making London Better* in 1993⁴⁷⁹ again highlighted acute services to rationalise in order to improve the overall quality of care provided. However, the recommendations were largely rejected not only by the public and politicians but also by clinicians and the media. Turnberg in 1998⁴⁸⁸ was commissioned to investigate the health service of London, specifically the acute services, and suggested a number of closures of inpatient services in order to improve overall quality of care, but again, little change occurred in its wake.

Although there is a clear common theme in these recommendations, they were generally unpopular and did not lead to a great deal of change. The King's Fund in 2011,⁴⁸⁹ pointed out that the end goal of improving services to meet the needs of the population must be visible and acceptable to stakeholders as well as those in charge, suggesting that the recommendations for closures would always come up against resistance.

*Healthcare for London*⁴ which emphasised the value that specific centralisation reforms would have on quality of service and patient empowerment, resulted in some major achievements in the reorganisation of stroke and trauma services, the development of heart attack centres and integration of cancer services. The reorganisation programmes have been proven to be a success; the NHS London Trauma Office report in 2011, found that the four major trauma centres in London have saved the lives of 58 people in their first year^{5 6} and London's previously fragmented stroke services have been moved to 8 aligned stroke units,⁵²⁶ accounting for seven out of the eight top stroke centres in the country.⁵⁰⁸

6.6.4.2.2. Developing primary, community and preventative services

According to the National Audit Office report,⁵²⁷ one fifth of hospital admissions are caused by known conditions and could therefore be prevented if there was adequate provision of services in the community. There has been a consensus within London reviews that in order to overcome inefficient use of acute services, those services should be directed towards the primary care setting, delivered at a local level to ensure specific local needs can be targeted, going right back to Dawson in 1920.⁵²⁸

The Tomlinson Report⁴⁷¹ found that A&E usage was higher in London than elsewhere in the UK while primary care standards were lower. Poor primary care standards were also highlighted by the London Health Planning Consortium in 1979⁵²⁴ and reiterated in the four King's Fund reviews, and *Healthcare for London*.⁴ Consequently, there were suggestions that as well as acute services being rationalised, there was a need for a greater input into upgrading primary care provision, the rationale being to meet specific local needs and promote patient autonomy and choice. The London Health Planning Consortium in 1981 was the first to recommend specific primary service changes⁵²⁹, followed by Turnberg,⁴⁸⁸ Darzi⁴ and several King's Fund reviews^{469,489} which identified primary care in London as an area requiring

improvements in relation to quality, availability and access. The King's Fund in 2011, found via a GP survey that London's primary services still did not perform as well as other regions.⁴⁸⁹

6.6.4.2.3. Integrated care

It has been recognised that a fundamental factor in the smooth and efficient running of healthcare provision is the integration of services, which was first recommended by in 1920 by Dawson.⁵²⁸ Dawson believed that healthcare services would run considerably more efficiently, and duplication of services would be minimised, if there was cohesion between providers and services. The underpinning principles of this should be communication and co-operation between individual services and the multi-disciplinary team as a whole (Dawson suggested standardised clinical records as an enabler of this). Tomlinson⁴⁷¹ reiterated the need for close communication between local authorities and commissioners to ensure clear planning and provision of community services in London, recognised by a number of further pan-London reviews.^{488,4,508}

6.6.4.2.3.1. Integrated community hubs

People with long term conditions (LTCs) are the greatest users of healthcare, accounting for at least 50 per cent of overall GP consultations in the UK, 64 per cent of outpatient appointments and 74 per cent of inpatient bed days. There is an expectation that the incidences of LTCs will increase in the coming years.

Specific community health centres were suggested first by Dawson in 1920,⁵²⁸ many years before the NHS was established. Dawson called for the consideration of the development of a network of small centres for local health provision linked to fewer, larger teaching hospitals in order for care to be delivered closer to the patient's community. With multiple services available in close proximity, designed to meet local needs, Dawson believed pressure on hospital services would be eased. However the lack of GP support for this proposal and the estimated cost of the reorganisation meant that Dawson's recommendations were not put into

practice.⁴⁹⁹ The specialist services review groups under the London Implementation Group in 1993 also supported the concept of a community hub.⁵³⁰

*Healthcare for London*⁴ highlighted that care was currently predominantly provided at the GP practice or in a hospital setting with 97 per cent of outpatient appointments being held in a hospital environment. It brought to attention the need to develop a new model of care that would not only reduce inefficiencies but would enable care to be provided as close to a patient's home setting as possible. *Healthcare for London* emphasised that in order to reduce the pressure that people with LTCs put on healthcare services, there was also a need to focus on preventative services, including health promotion, education, improvements in early diagnosis and supporting individuals to take control of their own care, a message previously delivered by the King's Fund review in 1992.⁴⁶⁹

As a solution, *Healthcare for London*⁴ suggested the development of polyclinics (similar to Dawson's community health centre idea) to bring a wide-range of services that were currently only available in the hospital setting into the community and which, with a knowledge and an understanding of the local community, could also focus on preventative initiatives. The first polyclinics were established in 2008 in some of London's most deprived areas. However there was divided opinion on their value with resistance from many GPs.^{489 531}

6.6.4.3. Leadership, co-ordination and coherent planning across London

A recurring issue in a number of reviews was the lack of a clear leadership structure, absence of accountability and no structure for the co-ordination and planning of services and reforms. The need for improved planning and co-ordination was first highlighted by House of Lords Select Committee Report on Metropolitan Hospitals in 1892^{437,135 438} which recommended a central board to oversee the planning of hospitals in London. Initially there was no response to the recommendation, but then the Prince of Wales' Hospital Fund for London was established, which amalgamated some small hospitals and attempted to move others to address the gap in provision south of the Thames.⁴³⁹ Furthermore, a lack of strategic direction was identified in numerous pan-London reviews including Tomlinson⁴⁷¹ and Turnberg⁴⁸⁸ and The King's Fund.

⁵⁰⁸ Tomlinson recommended the establishment of the London Implementation Group as a body that coordinated pan-London health planning.⁴⁷¹

It has been considered that the presence of a single body with strategic oversight for the whole of healthcare in London (NHS London, the first such body, was established in 2006) may have been one of the enabling factors contributing to the success of *Healthcare for London*.⁴⁸⁹ The National Audit Office considered strong local and national leadership to be significant levers to the successes of the stroke and trauma reforms. NHS London was abolished in 2013 and whilst there is a London regional office it does not have the same powers or autonomy.

As highlighted by many reviews, change is necessary for health service to be improved and therefore so is an established and credible leadership system to bring this about. Without a coherent and credible leadership system there is a real danger that the healthcare system in London will be unable to cope with the financial pressures put upon it and inequalities and inefficiencies will continue or worsen.⁴⁸⁹

6.6.4.4. Inequality in health outcomes

Inequalities in health outcomes were specifically examined in multiple health reviews during the 1980s, including the Black Report⁴⁵⁷ which highlighted the link between poverty and reduced life expectancy.^{459,532,533} Furthermore, inequalities have been linked to the prevalence of health and social issues, in particular long-term conditions.⁵⁰⁴ Since 2004, overall life expectancy in the UK has improved, however, the gap between the wealthy and those in poverty is still increasing.⁵³⁴ Since 2012, improvements in life expectancy have stalled and inequalities continue to increase.⁵³⁵ Despite on-going recognition of this concern, there are still areas of London that have considerably lower life expectancy than others and similar variations of over 12 years within and across London boroughs in healthy life expectancy.⁵²² Furthermore, the life expectancy for people who sleep on the streets is similar to that of people in the Middle Ages, at 40.2 years.⁵⁰⁴

The Acheson Report, *Inequalities in Health: Report of an Independent Inquiry*, launched by the Department of Health in 2003⁵³⁶ found that although health inequalities were primarily

influenced by a number of environmental, social and behavioural factors, health services (including preventative, primary, secondary and community care) could have a significant impact on health outcomes. In 2010, the National Audit Office estimated that 15 to 20 per cent of inequalities in mortality rates across the UK are directly linked to preventative health interventions.⁵³⁴ The same National Audit Office⁵³⁴ report also suggested that improving preventative measures and primary care services could have a marked impact on reducing health inequalities.

Over 20 years ago, in 2003, the Department of Health called for health providers to recognise health inequalities as a key priority.⁵³⁴ It remains a priority today through the Core20Plus5 approach and is a pressing issue for London.⁵²² Nearly 40% of London's children are likely to be living below the poverty line (using the relative poverty after housing costs).⁵²²

6.6.4.5. Over focus on healthcare to the detriment of health

Throughout the reviews, there has been an over attention on healthcare services as a proxy for general health. In the author's view, there is a conflation between health and healthcare which means that there is a lack of focus on some of the important determinants on health which may, in fact, be key to achieving more successful outcomes with regard to both health and healthcare.

6.7. Implications of this study for City Health Officials, National Policy Makers and Academic research

Health and healthcare in London are in many respects distinct from that in the rest of the England. The population of London is more diverse and transient than the rest of England and is more than four times the size of the next biggest city, Birmingham. Healthcare in London provides both for the residents of London but also nationally and accounts for around a fifth of the total NHS Budget.

Disease and ill health have never been the responsibility of one part of society and even healthcare plays only a partial role in overall population health. This review of history tells us

that all parts of society, from planning to education, through the work and the economy need to be engaged in health creation. This will only ever be achieved if it is led and enabled by national and city government.

London has been subject to many reviews; 30 in total over the last 200 years. Despite this long history, this is the first study of the London reviews. This therefore fills a significant knowledge gap.

6.8. Strengths and Weaknesses/Limitations

Whilst the author has endeavoured to be as comprehensive as possible, he does not have first-hand knowledge of the majority of the time-span. It is therefore difficult to achieve insight of why decisions were made or a full understanding of context, values or assumptions of the time.

6.9. Conflicts

The author was Programme Director for Healthcare for London in 2008, Programme Director for Better Health for London in 2014 and was the founding Director of Healthy London Partnership in 2015.

6.10. Conclusions

This chapter started with the Dickens quote from a tale of two cities. The author returns to Dickens as the chapter closes. Currently, those living in the unhealthiest country in the world have an almost 40 year shorter life span than those in the healthiest. This is the same gap as between Dickensian London and London of the present day.⁵³⁷

Throughout the last 200 years, London has faced significant challenges in health and healthcare, many of them consistent with other cities. There is a high burden of disease in the capital, both physical and mental and health inequalities remain stubbornly wide, between and within boroughs. Despite examples of world-leading services and research, quality of care in the capital is variable, poorly co-ordinated and often does not meet people's needs and

expectations. Furthermore, the current economic climate means that public sector finances are constrained even though healthcare costs are rising. Therefore, it is essential that experiences and lessons from the past are understood.

As well as consistency with other cities, and therefore global applicability, there has been remarkable consistency in the issues identified and even more remarkably the solutions proposed. The fact that there is such a similarity of identified issues in London's health service over the previous century illustrates the longstanding and seemingly intractable nature of the problems; inequalities in health are still commonplace, predominately driven by issues outside of healthcare, there is still an overuse and over focus on acute services, with a lack of focus and investment in primary and prevention services. Perhaps most significantly the discourse around health is dominated by healthcare. This needs to change.

There has been a preoccupation with reconfiguring hospital services. Considerable change was achieved in the first 150 years. However, with the notable exception of trauma, stroke, and heart attack services, most reconfigurations have been unsuccessful and those that have achieved change it is benefits are unclear. Even the demonstrable impact of trauma, stroke and heart attack are small numbers of the total population and what might be achieved if a health focus – rather than healthcare focus - were taken.

Why such a lack of progress when there have been consistent messages throughout the last 200 years? Perhaps partly it is the reluctance of governments to interfere too heavily as well as the changes to governing political ruling parties and governing bodies which has been a regular occurrence through the period of review. The one area where this is not the case has been in the case of the London Mayor, as demonstrated in chapter 8, where the three London Mayors have, in the main, adopted and built on the previous incumbents work on health and healthcare. This supports others' view that city mayors tend to put the city before party politics. However, as demonstrated by the Mayoral study in chapter 7, interview participants identified a common theme of 'reinventing the wheel' (section 7.8.2.1) which reinforces the need to learn from the past and the value of this study.

Any future review of health and healthcare in the capital could take a different approach. Under the leadership of the Mayor, the city could hold a conversation with Londoners and London's

organisations (public sector, private sector and voluntary and community) to build a unique coalition around health as the city's greatest asset. London is a world-leading city in health research and healthcare, with wider strengths in creative industries, technology and commerce, which may be harnessed to address these challenges.

6.11. Reflections from carrying out this study

The sheer volume of reviews and the amount of effort and cost that would have gone into producing them will have been vast. It is unclear whether the level of effort and resource to produce the reviews was matched with level of effort and resource to implement the changes. However, whilst very few have been evaluated, the resultant changes and impact appears to have been at best limited.

There is much to learn from the past both with regard to the what and the how. There has been consistency in the 'what' of the issues and proposed solutions. However, there has been a paucity of evaluation of impact and a lack of continuity of approach with the result that many of the same health and healthcare challenges remain.

This has been an interesting study to complete. Searching through historic archive records has taken considerable time and effort. The rewards of this endeavour have been both depressing (recurring issues and known solutions) and instructive in terms of future approaches to achieving change.

6.12. Acknowledgements

The author would like to express my extreme gratitude to the Kings Fund library who have given advice and sourced books and reports from off-site storage that have significantly contributed to this study.

The author would also like to acknowledge the work of Geoffrey Rivet which in part was inspiration for this study.

6.13. Bibliography

The author has read the following books which have been cited in the usual way throughout the text. However, they will also have contributed to wider thinking in this chapter and therefore are also acknowledged here.

A Brief History of London ⁴⁴⁵

The Five Giants: A biography of the welfare state ⁴⁴⁶

Chapter 7: Grounded theory interview study: how Mayors have used their position to improve city health

"A great mayor is one who understands that the health of a city is measured not just in its economy, but in the health and happiness of its people."

Unknown

7. Plain English abstract

This study was conducted by way of interviews with 35 participants, all of whom had worked with the London Mayor. The aim of the study was to develop a model or framework for how Mayors of cities could positively impact health, healthcare and health inequalities. The application of qualitative grounded theory was used to construct the framework. Findings from the data gave rise to five key themes related to ways of behaving which comprised the ‘5C Mayoral Framework for Action on Health’. These five behavioural themes are: convene, champion, collaborate, challenge and command. Developing and embedding trusting relationships are also an important part of the framework.

7.1. Introduction

The systematic scoping review in chapter 2 identified a knowledge gap with regard to the role of Mayors in city-wide health and healthcare transformation. This gap was explored further in the city survey (chapter 5) in which it was identified that Mayors played an important and significant role. This chapter, along with chapter 8, aims to explore the role of the Mayor further. This chapter focuses more deeply on how the London Mayoralty has made an impact on health and healthcare, through an interview study and the application of qualitative grounded theory to develop a framework to enable Mayors to enact city-wide health and healthcare transformation. The following chapter, chapter 8, tests this framework on each of the three London Mayors.

7.2. Aim of this study

The aim of this study was to develop a model or framework for how Mayors could positively impact health, healthcare and health inequalities.

7.3. Research Question

Qualitative studies require the researcher to state the research question or questions rather than objectives or a hypothesis to test.¹¹ During the early stages of data collection (interviews) the interview question was refined to:

- How have Mayors used their positions to improve city residents' health and healthcare?

This was supported by the following sub-questions:

- What approaches have been used ?
- What relationships have been important ?

7.4. Methodology – inductive approach

Research methodology refers to philosophies for how knowledge is gained and analysed in a systematic way (whereas the methods relate to the specific data gathering and analysis technique). The research methodology depends on the research question.¹¹ The research supervisors and Dr Stephanie Archer (Associate Professor, Cambridge University) gave guidance and assisted in discussion regarding existing theories and frameworks with a view to identifying and adapting an existing theory or framework for this research study. A range of studies containing theories or frameworks were identified, for example Shawar et al⁵³⁸ who used Shiffman and Smith,⁵³⁹ Liu et al⁵⁴⁰ who used Colaizzi⁵⁴¹. However, these and others were not deemed appropriate and therefore an inductive approach was collectively agreed upon.

An inductive approach begins with data and develops a theory or model based on the data, whereas, a deductive approach starts with a theory and tests the theory by applying the data.²⁶ Because it begins with an existing theory, deductive moves from a broad and general theory or model and applies it to a specific example (the phenomena being researched). In contrast, inductive theory begins with data from the phenomena being researched to generate a broad/general theory or model. This is the approach used in this study.

7.5. Qualitative analysis

There are a range of theoretical perspectives and analytical approaches and tools for qualitative analysis. These are summarised in Appendix 1. This section presents the chosen approach and rationale for using constructivist grounded theory.

7.5.1. Constructivist Grounded Theory (CGT)

Grounded theory was developed collaboratively by two sociologists, Barney Glaser and Anselm Strauss in 1967⁵⁴² in response to a deficit in qualitative theories at the time. Glaser and Strauss would ultimately disagree about the meaning and approach of grounded theory, ⁵⁴³ Glaser criticising Strauss's approach as too regimented.⁵⁴⁴ Grounded theory is appropriate to use when there is no available theory to use to explain a phenomenon^{8,9,545} as it generates a theory from the data.⁵⁴⁶

Grounded theory entails some core component tools; constant comparative analysis, negative case analysis, theoretical sensitivity, theoretical sampling, theoretical coding and theoretical saturation.⁵⁴³ These tools are further described in Table 7.1 which is adapted from Willig⁵⁴⁶ and Braun.¹⁷ The application of the tools is further discussed in the Methods section (section 7.7)

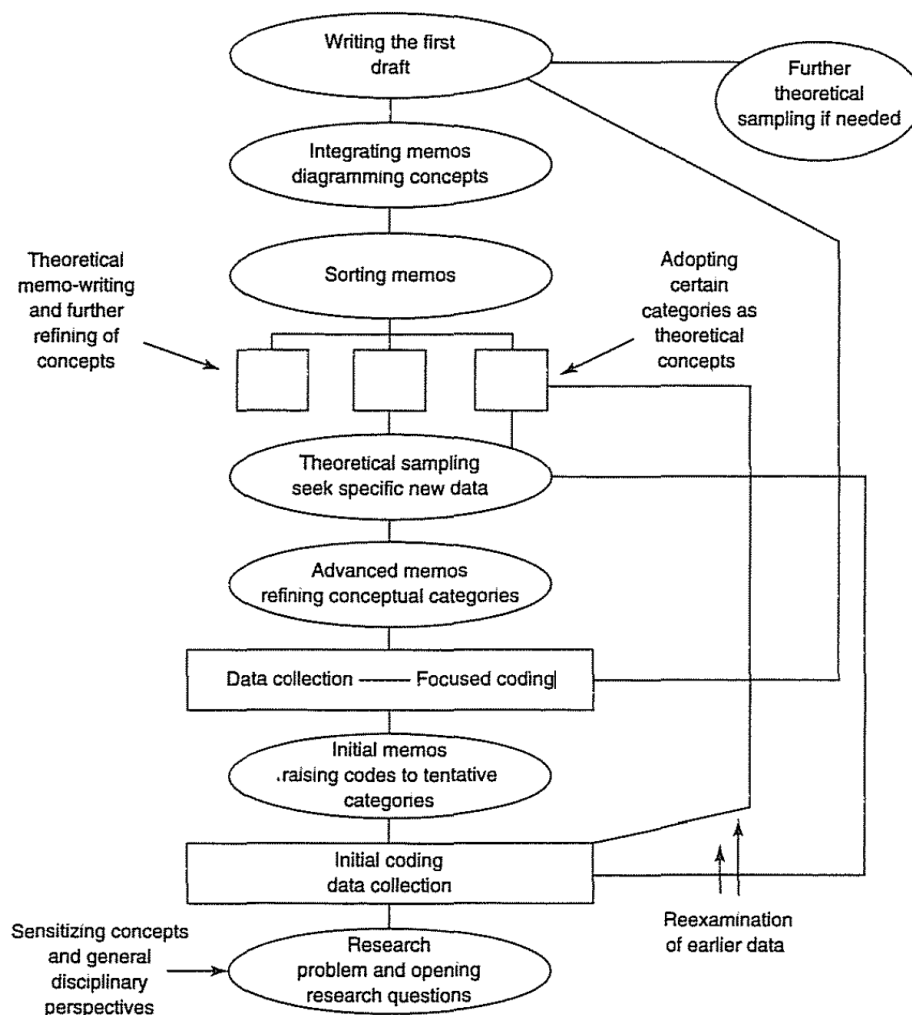
Table 7.1 - Description of grounded theory tools

Tool	Description
constant comparative analysis	A constant (iterative) process of comparing data and with other data, codes with other codes and categories with other categories - in order to make sense of and connections and patterns.
negative case analysis	Searching for negative cases/examples from the data to challenge – and further develop and refine – the theory
theoretical sensitivity	Comparing, questioning, challenging the data to reach a theory
theoretical sampling	Collection of additional or further data in light of emerging category or theory
theoretical coding	Applying a coding paradigm or framework to the data
theoretical saturation	When no new categories emerge

Sources for Table 7.1^{546,547}

Since its inception in 1967, grounded theory has developed into three main perspectives: classical, interpretative and constructivists.^{19,543} Most recently, Charmaz, a student of Glaser and Strauss, put forward ‘constructivist grounded theory’.⁵⁴⁸ Whilst the Glaser and Strauss approach (classical) is more systematic (with prescribed categories of information), Strauss and Corbin (Interpretative) offers some flexibility, Charmaz advocates for a social constructivist approach, emphasizing the collection of diverse views and flexible guidelines to stress the importance of views, values and beliefs of the individuals over the method of research.^{8,9,11,543} Importantly, Charmaz promotes the role of the researcher in inputting to the research¹¹ and that knowledge is cocreated⁵⁴³ whilst remaining true to the core tenets of grounded theory, particularly interpretive understanding and iterative logic.^{549,19} An overview of the Charmaz grounded theory process is shown in Figure 7.1

Figure 7.1 – Grounded Theory process (taken from p11⁵⁴⁹)



7.5.2. Rationale for Constructivist Grounded Theory

At the beginning of examining each of the theoretical perspectives, the author assumed ‘the best’ would be identified and used. The reality, as cited by others far more knowledgeable,⁵⁴⁷ is that there is not a best or perfect approach. There are different approaches, all with strengths and weaknesses. What is key, is that the method used fits with the research aim and enables the research question to be answered and theoretical assumptions are aligned and are made explicit as part of a coherent overall research design.^{546 547}

Charmaz states that constructivist grounded theory has a pragmatist ontological approach with a relativist epistemology, in which the researcher ‘constructs’ rather than discovers.¹⁹ Constructivist grounded theory aligns with the author’s preferred epistemology and ontology (discussed in section 1.2.7). Constructivism accepts the existence of multiple realities and seeks multiple individual accounts.⁵⁴⁹ The active role of the researcher suits the author’s background of working in the specific research field for over fifteen years. However, with this active input comes a risk of preconceived ideas and bias. Reflexivity and memo writing are used to avoid preconceived ideas.⁵⁴³ The author also engaged the support of a specialist and expert in qualitative research (Dr Stephanie Archer).

This study seeks to understand how city mayors can transform health and healthcare and develop a practical framework. The other key attraction of constructivist grounded theory is the development of a theory or model which can be further tested.^{8 9} Finally, the flexibility of the constructivist approach advocated by Charmaz suits the exploratory nature of the research question.

Whilst constructivist grounded theory was the chosen methodology, elements of other methodologies were used where there was benefit. For example, manifest content analysis identifies data and patterns which occur on the surface and easily observable.⁵⁵⁰ For example, the number of times a role or function (e.g. the Mayor’s Health Advisor) comes up across all the interviews to detect patterns and meaning.

7.6.Ethical Considerations

Dicicco-Bloom⁵⁵¹ identify four ethical issues related to interview research. The four issues are 1 reducing the risk of unanticipated harm; 2 protecting the interviewee's information; 3 effectively informing interviewees about the nature of the study, and 4 reducing the risk of exploitation. Similarly, Richards and Schwartz⁵⁵² identify four potential risks; anxiety and distress; exploitation; misrepresentation; identification of the participants, to which they then added a fifth; inconvenience. These have been combined to ensure systematic consideration and mitigation of ethical risks and are presented in table 7.2 below.

Table 7.2 - Ethical consideration; risks and mitigations

Risks to participants	Actions taken to reduce risk of harm
Effectively informing interviewees about the nature of the study	Information was sent in advance (see section 7.8.4) in written format. This was discussed ahead of the interview. The purpose of study was explained.
Unanticipated and Psychological harm –anxiety and distress caused by taking part	The right to withdraw at any point stressed at multiple points. Confidentiality was explained. Expectations in terms of timescale and impact; one off interview and publication in high quality journal, were discussed. Interviewees were advised they could take a break from the interview or stop and withdraw from the interview at any point.
Exploitation —power imbalances between researcher and participant	The researcher shared information on the researcher and his background. Research information was shared in advance (written) and discussed ahead of the interview. In many cases the participant was more senior than the interviewer, for example included Professors, Sir, Dame, Lady. Participants consenting to take part in the study were required to provide written informed

	consent prior to being interviewed. Participants were assessed to ensure they had the capacity and were freely taking part, demonstrating that they understood the purpose and nature of the study, the risks and benefits of participating.
Misinterpretation –views shared with researcher are taken out of context	Reflexivity was used before and throughout the research, through a reflective diary. Careful consideration of the authors own biases and the use of semi structured questions to ask open questions. Misinterpretation of data is most likely to occur when a researcher is working in isolation.⁵⁵² Therefore, as a novice researcher, the author sought senior expertise in the field and benefited from intensive support. Interviews were professionally transcribed and checked by the researcher.
Protecting identification of participants information	All information collected during the course of this study was maintained on a confidential basis and access restricted to the research team. Participants were given a ‘P number’ and names are not disclosed or included in this thesis or related publication. All names (over 100 individuals) identified and recorded in the interview transcript were redacted. When reporting findings, care has been taken to ensure, any comments or quotations from participants included in this thesis are completely anonymised and do not contain information to enable the participant to be identified. Participant data management was

	designed to ensure compliance with the General Data Protection Regulation (GDPR),
Inconvenience –time/cost to participate in participating	A document analysis was carried out to gain the basic information – to reduce the burden on participants. A fundamental ethical requirement of all research is that its scientifically sound and results likely to lead to tangible benefit.⁵⁵² As described, additional external qualitative supervision was employed and a manuscript for publication in a high quality journal has been drafted. Interviews were carried out online (MS Teams) for the interviewee’s convenience. Interviewing can be demanding for the researcher; the authors supervision team provided a safe and supportive space to debrief and guidance.

Table adapted from Richards and Schwartz⁵⁵² and Dickey-Bloom and Crabtree⁵⁵¹

An application for ethical approval was submitted to the research ethics committee at Imperial College (London) which outlined the methodology of the empirical research to be conducted. Imperial College Research Ethics Committee (ICREC) subsequently approved the study (ICREC reference: 21IC6957).

7.7. Methods

The methods described in this section apply to this study, which develops the grounded theory framework, and the following chapter (chapter 8), which tests the framework against the actions of the three London Mayors.

7.7.1. Study design – interview

This research followed a semi-structured interview approach. Interviews are the most common approach in qualitative research.⁵⁵³ In depth, semi-structured, individual interviews^{20 551 554} are the most frequently used interview technique.⁵⁵⁵

Semi structured interviews involve a set of predetermined questions, in a topic guide, which are used as the basis for the interview. The benefits of semi structured interviews are that they offer flexibility to go deeper (and for the interviewer to probe) and go wider (for the interviewee to interpret a question or digress from a question) as they wish. This approach was chosen because of the breadth of the research question and the breadth of the perspectives that the interviewees would give as well as the varying professions and disciplines in which they worked. Interviews were chosen as the method for this study as they are a well supported method for uncovering different stakeholders' experiences, feelings and perspectives.^{8 9 13}

All research methods have strengths and weakness. A weakness of semi structured interviews is that discussions can go off track and there may be time used to collect data irrelevant to the research question, which dilutes the strength of the study. In the case of this study, this was counterbalanced by the research topic guide and the document analysis. The depth and richness of interviews also compliments the document analysis.¹⁰

Semi structured interviews allow flexibility and give interviewees some control, the interaction between the interviewer and interviewee is more conversational and has natural flow which enables insights into complex and nuanced activities.⁵⁵⁶ It also suited this situation as the author already knew many of the interviewees.

A group interview and focus group were considered as alternative approaches. Whilst both of these approaches have strengths, individual in depth interviews were chosen to allow the individual to talk about potentially controversial and conflicting perspectives.⁵⁵¹ In addition, as a flexible method suited to the development of a rich narrative of the phenomena^{557,554 555} and to be able to reach below the surface of the topic⁵⁵⁴ concerned in this study, it was a suitable approach for the exploratory and multiple versions of reality as well as the aim and nature of this study. Disadvantages include resource and time intensive nature of 1-1 interviews, lack of anonymity (compared to questionnaires) and risk of interviewer bias.⁵⁵⁸ Making the best use

of time was in part addressed by undertaking document analysis and developing a topic guide (see section 8.4.1 and section 7.7.4.1 respectively). In summary, semi structured in depth interviews were considered the best fit approach.

7.7.2. Researchers

The author conceived this study and solely led on participant recruitment, data collections (interviews) and data analysis. As presented in section 1.2.1 the author is a systems engineer by training moving into health and care with a good knowledge of the London health and care system and some experience in qualitative research having completed a MSc by research. Therefore, in discussion with the main research supervisors (HA and AD), an experienced qualitative researcher (Associate Professor Stephanie Archer, Cambridge University “SA”) was identified and subsequently kindly agreed to support. SA supported the author with the coding of data and with ongoing constructive challenge and support throughout this study and the study presented in chapter 8.

7.7.3. Pilot

The interview process up to and including data collection, which included invitation letters, the topic guide and carrying out the interview was piloted during November 2022. Feedback was sought from an individual participant on all elements of the process. Pilots are essential to test the process, materials and outputs and add credibility to the study.⁵⁵⁹ The questions and sequence of questions were tested to ensure they were easily and well understood and generated appropriate responses. The pilot interviewee also gave overall reflections on the process and validity of the study. Completing the pilot process allowed amendments to be made to the topic guide, prompted reflection on how better to conduct interviews to achieve the research objectives and provided useful practical experience that informed the subsequent interviews.

The questions in the user guide included primary questions asked of all interviewees, and then optional follow up questions.²⁰ As only minor changes were made to the interview questions from this pilot, the data from the pilot interview was included as part of the main study.

7.7.4. Interview Process

Interviews took place between 20 January 2022 and 18 July 2022. Due to Covid restrictions or participant preference, the interviews took place over video conference call (MS Teams). All interviews were recorded and professionally transcribed. Each interviewee was assigned a participant (P) number code to help ensure that personal identifiers were not revealed during the analysis and subsequent write up. The recording was deleted after transcription and the documents stored securely.

Participants were provided with a participant information sheet and consent form via email. Participants were given one week to read through the information sheet and consent form and respond accordingly. If after one week no response had been received, two further attempts via email were sent. If after 3 weeks no response had been received it was assumed the recipient did not want to participate in the study.

Participants that agreed to be part of the study were asked to sign a consent form ahead of the interview. The interview did not take place without a signed consent form. At the beginning of each interview the participant was given the opportunity to ask any questions that they had prior to commencing the interview and recording. Participants were also informed that they were free to withdraw from the study at any time. No participants withdrew prior to commencing or after the interview.

7.7.4.1. Interview Topic Guide

A topic guide, with twelve predominantly open ended core questions was developed. In addition to the core questions, optional supplementary questions were developed, should further probing be required to elicit a comprehensive response, known as funnelling.⁵⁶⁰ All questions were carefully drafted to avoid any underlying influencing. The topic guide and questions were developed from the research questions and document review to ensure a comprehensive and systematic coverage of the subject whilst allowing flexibility to the interviewee.⁵⁵¹ This topic guide is presented in Appendix nine.

In most instances, the interviewer knew the interviewee. In this context and with the aim of making the interviewee feel comfortable and able to share potentially controversial

perspectives to generate the most useful data, the interviews were intended to be as naturalistic⁵⁶¹ as possible.

7.7.4.2. Interview Participants' Recruitment & Eligibility

The participants for the semi-structured interviews were purposively, as opposed to theoretically⁵⁶² identified through document analysis, information in the public domain and knowledge of the author. Interviewees were relatively homogenous and shared a critical feature related to the research question.⁵⁵¹ Interviewees were selected from current and past Mayoral health advisors, senior leaders from across health and healthcare in London and others identified as having a role or view on the impact the London Mayoralty or the London Mayor(s) over the last 20 years.

The exact number of participants was not known ahead of the interview process but it was estimated there would be between 10-20 participants in the ethics application. Ultimately, 35 interviews were completed.

The term 'saturation' is used when no new data or information is gained from subsequent interviews and the interviewing can cease.^{12 551 561} The term was first coined in grounded theory.⁵⁴² However, some scholars and proponents of specific approaches avoid the term saturation and instead promote active consideration as to whether the data collected enables the research aims and research question to be answered.¹⁷ Thirty of the participants were identified in advance. An additional five participants were identified by one or more of the previously identified participants. This is known as 'snowballing'.^{12 561}

The inclusion criteria for participants were an individual who held a role during the course of 2000 – 2021 that would enable them to have a view on the role, initiatives and interventions and ultimately impact the London Mayoralty or one or more of the London Mayor had on Londoner's health. Exclusion criteria was: any persons who did not hold a role during the course of 2000 – 2021 that would enable them to have a view on the role, initiatives and interventions and impact the London Mayor had on Londoners health.

No incentives or any kind of financial reimbursement was offered to any participants.

7.7.4.3. Conducting the Semi-Structured Interviews

Establishing rapport in conducting interview research is vital.⁵⁵¹ The questions being asked that related to the second study (chapter 8) were in part to elucidate a critique of the Mayors of London (a senior politician). Therefore, it was essential that the interviewee felt comfortable, and that there was a good level of trust. It would have been preferable to conduct face to face interviews for this reason but it was not possible. This made other techniques, such as maintaining eye contact and verbal and non-verbal (facial expressions) to demonstrate active listening even more important. Morse⁵⁶³ cited in Britten⁵⁵⁴ identifies one of the most common pitfalls in interviews, particularly pertinent to carrying out online (MS Teams) interviews, is outside interruptions from other Teams calls. After encountering the issue once, this was addressed through using silencing incoming calls.

A short informal conversation was used at the beginning of the interview, prior to starting the formal proceedings and recording, to set the participant at ease. Final checks on necessary consent and ethical requirements were carried out after a summary of the research project was given by the interviewer and the interviewee given the opportunity to ask any questions. At this stage, the participant was asked if they wished to continue, reminded they could withdraw at any point and asked if they were comfortable with the interview being recorded.

There are a number of potential biases associated with this study. Social desirability bias⁵⁶⁴ whereby participants provide responses they consider to be more acceptable can be encountered in interviews.⁵⁶⁵ To mitigate this risk, confidentiality and anonymity was stressed along with neutrality of the interviewer and questions.⁵⁶⁴ It was also stressed that the current or former Mayors had no influence or access to the data for this or any study related to this thesis. The final question of the research topic guide gave the participant the opportunity to say anything that the interview questions had not enabled them to raise.

7.7.4.4. Sample Size

Appropriate sample sizes in qualitative research are the subject of continued debate.^{566 567} Whilst a precise number or agreed methodology do not exist, it is accepted the sample size is

one important indicator of quality.⁵⁶⁷ In their systematic analysis of qualitative health research over a 15 year period, Vasileiou⁵⁶⁷ found limited justification of sample size (less than a third (28%) of the 214 included articles gave justification for their sample size) and simply frequently listed sample size as a limitation. Similar to other reviews of qualitative research⁵⁶⁸ ⁵⁶⁹ Vasileiou recommends more transparency regarding evaluation of sample size and critical consideration of saturation parameters used in previous studies and implications for their current research. Malterud⁵⁶⁶ proposes an alternative to saturation, coining the concept “information power”, which they define as the information a sample holds. If interview participants hold a lot of knowledge and information on the subject of the research question then a smaller number of participants is required than if participants were only able to provide a section of the data required to answer a research question. So put simply, studies with highly knowledgeable and or experienced individual participants would need a smaller sample size.⁵⁶⁶ The interviewees of these studies were very senior, hugely experienced and from a broad range of organisations.

As part of the ethics application prior to this research commencing, the number of interview participants was estimated to be between 10-20 participants. Ultimately, thirty five participant interviews were completed before saturation was considered achieved. Vasileiou et al⁵⁶⁷ recommends consideration of saturation parameters used in previous studies. A search was carried out at Imperial College Library 28 January 2024, on three key words (‘interview’ AND ‘mayor’ AND ‘health’) in the title, which identified one paper⁵⁷⁰ which was not relevant. Taking a different approach, a highly cited paper with over 25k citations by Vasileiou et al⁵⁷¹ systematically examines saturation, concluding that saturation occurred within the first 12 interviews.

In addition to saturation, other factors were also considered when interview data collection was completed. In line with Vasileiou et al⁵⁶⁷ these factors are made explicit here. Whilst many of the participants were highly knowledgeable and experienced in the topic/research question and this was a single case analysis (London Mayoralty), because of the time period of over 20 years, none had the in-depth knowledge over the full 20 years of the London Mayoralty. Grounded theory was used for the analysis, the use of this established theory with the associated concept of saturation. The level of trust between interviewer and interviewee, for many, had been built over many years, therefore the quality of dialogue was considered to be high.

Whereas quantitative research aims to achieve statistical generalisability, qualitative research aims to reflect the diversity of relevant participants related to the research questions.⁵⁷² The number and diversity of professions, type of role and organisations and timespan of participants is a unique strength of this study and the study within chapter 8.

7.7.5. Data collection

Using solely hand written notes of the interview can prove unreliable²⁰ and distracting.⁵⁵⁴ Therefore, interviews were recorded (MS Teams). Hand written notes were also made of the key points. The recordings were securely downloaded and transferred for professional transcription service (PageSix) where they were transcribed verbatim. Transcriptions were returned and checked by the author against the interview recording for accuracy. Minor errors were identified and corrected. Where interviewees referenced a named individual these were redacted (with the exception of the 3 London Mayors). In total 122 names were redacted, and a coding table created so that the number of times an individual was referenced could be recorded. This led to individuals not previously identified being contacted and interviewed (a form of snowballing). Only the research team had access to this table.

7.7.6. Interview Data Coding & Analysis

Data analysis refers to how information is gained from the collected data. This began during the process of rewatching the interview recordings to check for accuracy of the transcripts. As well as transcripts, the author made hand written notes during the interviews to capture key points or other, non-verbal, elements. These hand written notes were also reviewed against the interview video recording, to check whether, on rewatching and having completed all interviews, the same points stood out. This was an advantage of having video recordings, in that non-verbal signals from participants could be reviewed along with verbal transcription. This was the first stage of deep immersion into the data.

In traditional Grounded Theory, data collection and data analysis occur concurrently, with theoretical sensitivity, case analysis and theoretical saturation used to develop the theory or framework. In this study, abbreviated Grounded Theory⁵⁴⁶ was used. Abbreviated Grounded Theory uses the same data analysis as Grounded Theory (coding and constant comparison) but

is carried out after and not during data collection. Abbreviated Grounded Theory was used for two reasons, one philosophical and one practical. Philosophically and theoretically, in grounded theory, saturation is seen “..as a goal rather than a reality’ Page 37 of Willig.⁵⁴⁶ With thirty five interviews carried out and other factors associated with saturation considered (section 7.8.4.4) the author felt confident that saturation had been achieved. The, second, practical reason was that the author was a part time PhD candidate and felt that ‘dipping in and out’ of the analysis would be detrimental to the quality of analysis and final results. Therefore, once all the data was collected, a block of time was carved out to fully focus on data immersion and analysis.

After this initial data immersion, the transcripts were re-read again, prior to commencing analysis. Initial analysis then commenced and thematic coding was carried out using Nvivo (version 14) (a software for qualitative data analysis) Coding is an iterative process to inductively identify and refine themes.⁵⁷³ The data is broken down through naming each with a label.^{546 573} Each label was succinct and thematically categorised and summarised the data.⁵⁴⁹ There are three levels of coding in constructivist grounded theory, initial coding, focused coding and theoretical coding.⁵⁷³ The tools of constant comparison and memo writing are fundamental to this coding process, which take the researcher from data to developed theory.⁵⁵⁸

573

There were a range of options considered for analysing the data before grounded theory was chosen (see appendix one) Whilst grounded theory was considered the most appropriate and ‘best fit’ it is not without limitations or weaknesses. To mitigate against these the following two further actions were taken.

The process of analysis was bookended by taking time to ‘step back’ and consider the data as a whole. This was to reflect on the meaning of the complete and collective transcripts of text data (as opposed solely to the discrete codes). This was achieved by rewatching and reading the complete interviews, back to back over the course of four days. This is to mitigate against the possibility that the process of coding and ‘slicing and dicing/cutting and pasting’ the data into ‘siloed’ themes loses the importance and meaning of the flow or sequence as reflected by the interviewee.

The flexibility offered by grounded theory was a strength, but it could lead to a real or perceived lack of rigour. Therefore, the analysis process was thoroughly documented, carried out with an experienced qualitative researcher, and findings carefully justified.⁵⁷⁴

‘Coder Fatigue’ is a common risk to the trustworthiness of all forms of qualitative analysis.⁵⁵⁰ To mitigate this risk, when coding the author took breaks and used a reflective journal. Above all else, Kleinheksel et al⁵⁵⁰ recommends a sufficient amount of time to carry out coding whilst not feeling rushed and to take breaks. The author’s reflective journal captures their naivety in how long it took to immerse himself in the data and complete coding. Journaling included using a range of different tools, including capturing the ‘notes’ on a Mac laptop and iphone, with the iphone notes especially useful as they could be quickly captured when thoughts emerged at odd times of the day (and night !) Journaling and reflective learning were also part of the many early drafts of the thesis chapters.

7.7.6.1. Constant comparison method

Constant comparison is a fundamental part of data analysis in grounded theory.^{29 549} It is an interactive process whereby the researcher constantly compares data with data, data with code, code with code, code with category, category with category and category with concept.^{29 549} This constant comparison process enables similarities and differences to be identified from the data.⁵⁴⁶ Constant comparison was used throughout the three stages of coding in this study.

7.7.6.2. Memo writing

Memo writing can take many forms and employ many formats, to suit the researcher, but the purpose is consistent; to demonstrate and trace out how a theory was developed.⁵⁴⁶ Memo writing is the pivotal step between data and theory development,⁵⁴⁹ particularly important in grounded theory.⁵⁴⁶ Through memo writing, the researcher maintains a written record⁵⁴⁹ but more than that they are an essential part of developing theory and it should not be seen as an ‘administrative chore’.

There were two memo writing techniques from Charmaz⁵⁴⁹ that the author found particularly helpful; clustering and freewriting. Clustering was particularly useful in the theoretical coding

stage and so is covered in the subsequent sections. Freewriting is the technique of writing (typing in the authors case) unbound by structure as a stream of consciousness, with Charmaz⁵⁴⁹ stating that it “liberates your thoughts and feelings” (p88). The author found this technique to be useful throughout the research, from conception to final theory development and thesis conclusions write up. Carrying out PhD research is by definition new and novel. Therefore, it is working in the unknown. This was combined with, to a large extent, the author working alone. Therefore, the process and action of writing memos and freewriting gave the author a ‘companion’ to share and ‘talk out loud’ and ‘bounce ideas off’, It was a useful analytical approach but also a therapeutic process !

7.7.6.3. Initial coding

Initial coding is the first stage of coding in constructivist grounded theory.⁵⁴⁹ During initial coding, ‘units of data’ of the text data are coded. A ‘unit of data’ can range from a single word, a phrase, an incident or any combination of these. The chosen unit matters and will depend on the research question and type of data and level of abstraction.⁵⁴⁹ Whichever approach is chosen, what is key during this stage is to remain close to the data and open-minded (codes are not preconceived) to the data and patterns in the data.⁵⁴⁹ These codes are provisional and enable comparison across the data (to identify patterns and gaps). Charmaz⁵⁴⁹ recommends speed and spontaneity during this stage. In vivo codes⁵⁴⁹ are special terms used by participants that generally demonstrate condensed or concentrated meaning (to the individual or a cohort of the group).

During initial coding, in consideration of the research question and the data, the author predominantly used incident coding and purposely remained close to the data and moved through it quickly, not overthinking or overlaying perceptions on the coding. Short and simple codes were created, and in vivo codes identified. Contradictory coding was identified and highlighted to improve the rigour of the analysis. This initial coding was carried out in Nvivo (software). During coding, the author also re-watched the video recording which was beneficial as it identified nuance and the emphasis of both verbal and non-verbal data. Once five interviews had initial coding completed, they were shared with the specialist qualitative research supervisor (SA) to review the coding. SA has significant qualitative and grounded theory experience but no experience of Mayoral impact of health research. Having a second

review of a portion of the coding is identified as valuable strategy for improving rigour in qualitative research.⁵⁷²

7.7.6.4. Focused coding and advanced memos

During focused coding the most significant and/or frequent codes from initial coding are used to organise and identify themes and patterns in the data. Focused codes are more directed, selective and conceptual.^{544 549} Advanced memos are then applied to develop and refine conceptual categories. Strauss and Corbin⁵⁷⁵ in Charmaz⁵⁴⁹ identify Axial Coding as a third type of coding where categories are related to subcategories.

During this second stage of coding – focused coding and advanced memos – the author identified the most significant or common codes from initial coding and across the whole data set. This was itself an iterative process carried out with support of the qualitative research supervisor (SA) to create codes that made the most analytical sense. These focused codes and memos developed the first stage of conceptual categories. At this stage of the coding the author moved from using Nvivo to using traditional non digital (different coloured post-it notes) as whilst the digital approach was very effective and efficient for the initial coding stage (and data management), it had limitations for deeper analysis and clustering.²⁹ These conceptual categories are presented in Appendix ten.

This process was iterative and carried out in person (on the 24th November 2023) with the research supervisor (SA) using different coloured post it notes using clustering. Theoretically, coding can be considered to never be complete or final, as there is always something that can be changed.¹⁷ Therefore, after four refinements to the clustering, including a last one which reverted back to a previous version the in person focused coding was concluded. See figure 7.2 below for a photo of the final version of focused coding with post it notes. Figure 7.3 below shows a cleaner electronic version of the focused coding with the groups and themes clearly identified.

Figure 7.2 - Photo of final version of focused coding using post-it notes

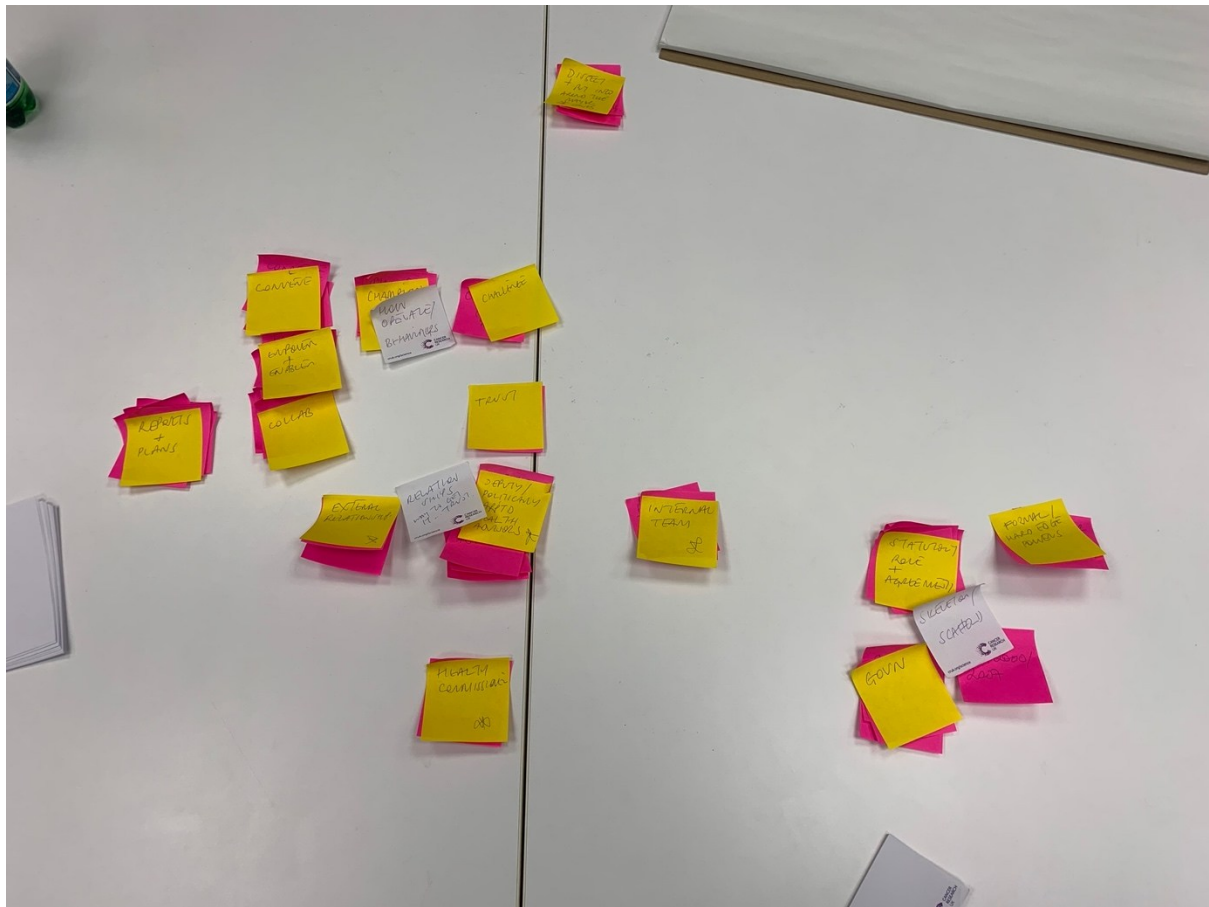
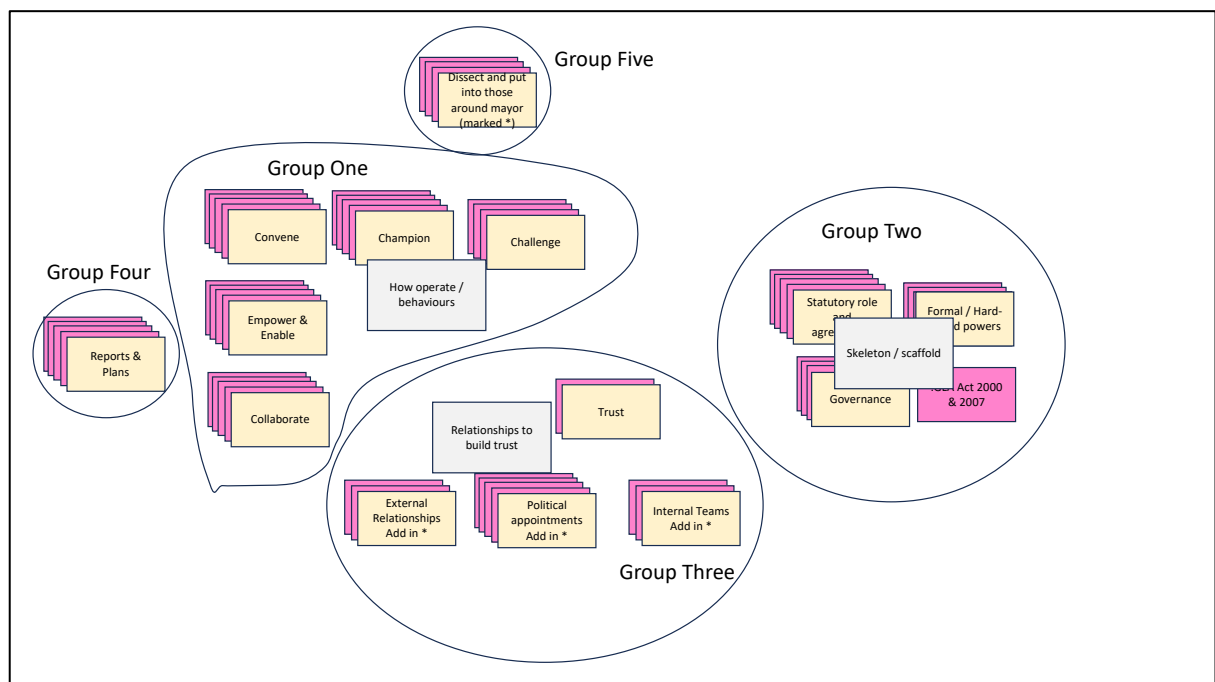


Figure 7.3 - Final version of focused coding with the groups/themes clearly identified



7.7.6.5. Theoretical coding

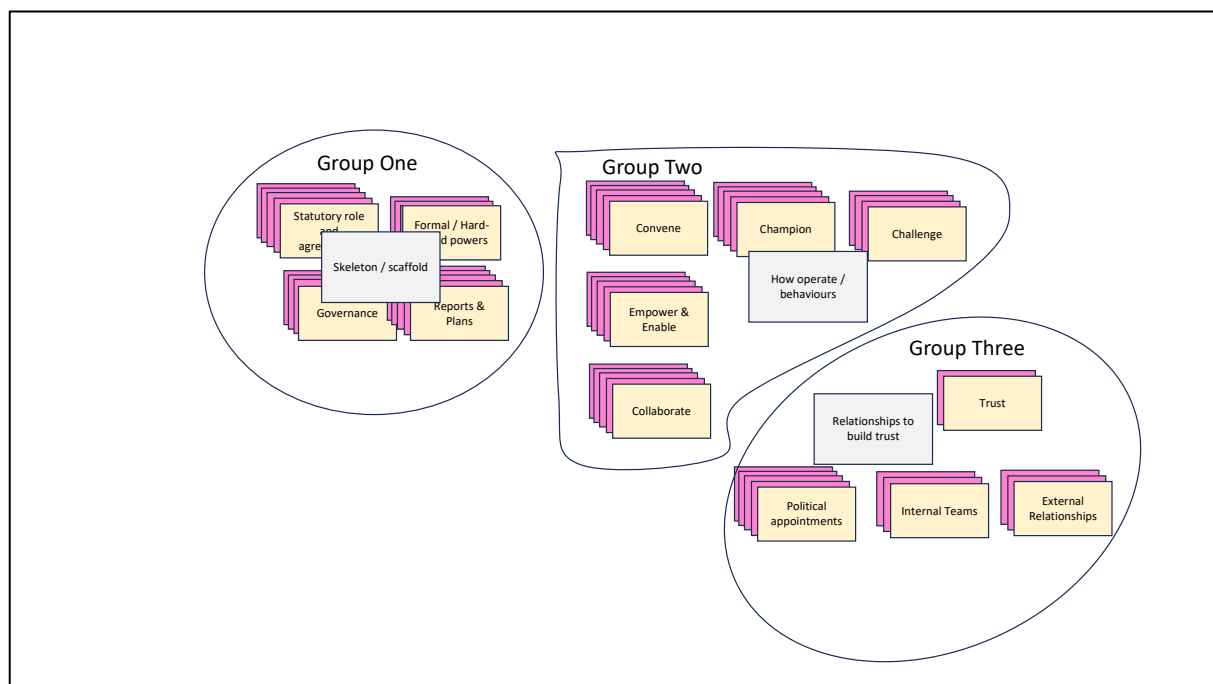
Theoretical coding is the final and most sophisticated stage of coding, developing relationships between categories and themes to put the pieces together to create a theory or framework.⁵⁴⁹ As described by Charmaz,⁵⁴⁹ “theoretical codes specify possible relationships between categories you have developed in your focused coding.”

Memo writing and the clustering exercise were used to develop the relationships between conceptual codes. Conceptual maps with their sub-categories were developed with the aim of developing a theory or framework to answer the research question: How have Mayors used their positions to improve city residents’ health and healthcare ?

7.7.6.6. Theory development and theoretical sorting

After the in person joint session on 24th November 2023, SA recommended the approach of taking a couple of days away from the data, with the aim of acquiring a fresh perspective, and then return back to it. On the 28th November 2023 further refinements and consolidation were made, as presented in Figure 7.4.

Figure 7.4 - The refinements and consolidation of the groupings

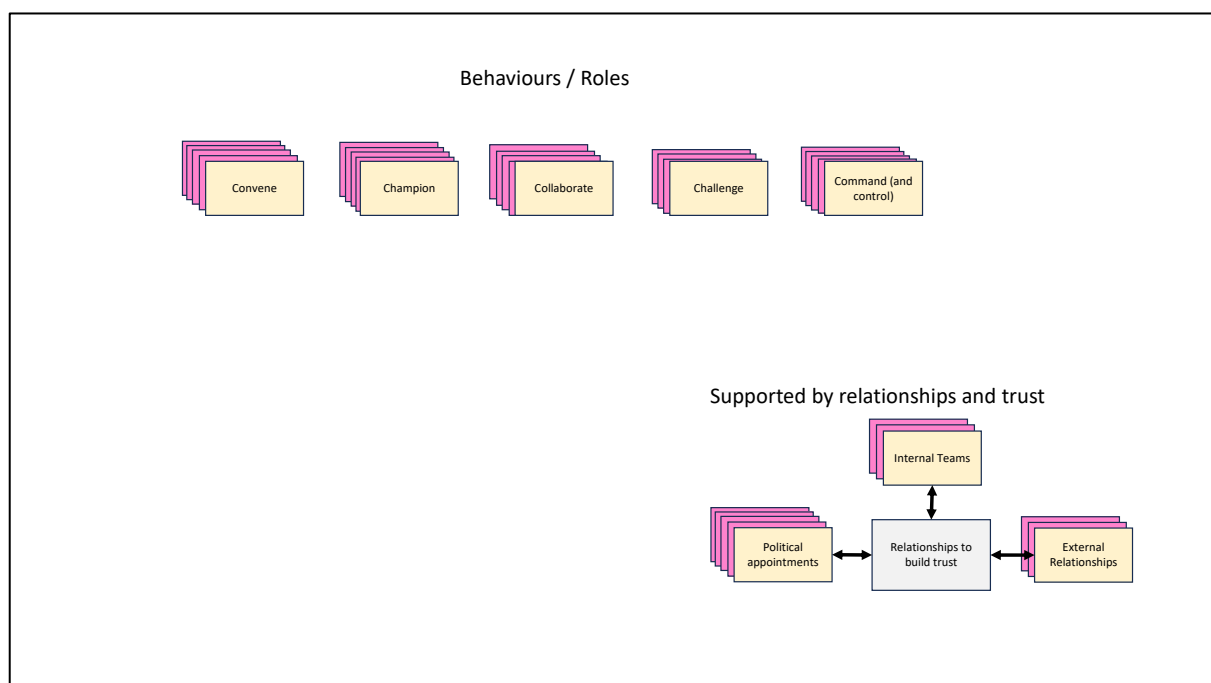


The theoretical model was beginning to emerge, but it still was not quite right. As the author began to bring together the research so far to develop a theory, the author again applied guidance from the main scholars in the field. Charmaz states “Observations alone do not guarantee creating an insightful theoretical analysis”⁵⁴⁹ (P53). Corbin and Strauss⁵⁵⁸ are also clear on the distinction between description and theory. Theory is abstract and explanatory.⁵⁴⁹

558

At this stage, through theoretical sorting, the author sought to uncover the facets underlying the conceptualisation of how mayors have used their positions to improve health to develop a theory or framework. Theoretical sorting, along with the inter-related processes of diagramming and integrating, considers the relationship between categories to ‘reconstruct’ the multiple narratives to develop a coherent theory.⁵⁴⁹ After a further break, and then a period of intense consideration, the author made further sense of the observed categories to create the theoretical framework which results in Figure 7.5

Figure 7.5 - Final draft version of the theoretic framework



7.7.7. Maintaining rigour

Section 1.2.9 of chapter 1 describes rigour in qualitative research, to demonstrate an understanding. This section takes a focused look at rigour in relation to the study presented in this chapter and chapter 8. Whilst there is no simple checklist to provide complete assurance of qualitative research, there are tools, including checklists, but what is fundamental is a well thought through process that is transparent and documented.⁵⁷² Whilst rigour is considered somewhat built in to grounded theory through the inductive deductive cycle of theory generation,⁵⁷⁶ others⁵⁷⁷ criticise the use of grounded theory as “an approving bumper sticker” for academic respectability.

This chapter aims transparently to set out and evidence the methods and results. This included reflexive memoing and self-reflection, to maintain rigour⁵⁷⁸ and the origin of codes tracked and the use of quotes, to demonstrate rigour.

‘Trustworthiness’ is a key concept of rigour in qualitative research.²⁹ Guba and Lincoln, in Denzin and Lincoln¹¹ (P801), set out four criteria to demonstrate rigour; credibility (what is reported is a true reflection of participants reality), transferability (can the findings be transferred to other settings), dependability (process described in sufficient detail), and confirmability (acknowledging researcher bias/predispositions).

- Credibility is achieved with the use of direct quotations
- Transferability can be assessed in section 8.6.1 of the document analysis which gives a detailed context of the London Mayoralty.
- Dependability is demonstrated through section 7.7.
- Finally, confirmability is exhibited in the researcher biography and paradigm presented in section 1.2.1 and 1.27 respectively.

Finally, to ensure the studies were to a high standard, the author chose to report in line with the Consolidated Criteria for Reporting Qualitative Research (COREQ).⁵⁷⁹ This 32 point checklist, developed by Tong et al through a systematic review of literature, provides a comprehensive guide and checklist for qualitative research spanning three domains:

1. Research team and reflexivity: examining the researcher(s) and relationship with interviewees

2. Study design: covering theoretical framework, participant selection, interview setting and data collection.
3. Analysis and findings: covering how the data was analysed and reported.

7.7.8. Transcription notation

In the subsequent sections, the author uses illustrative quotes to support the themes identified. Table 7.3 provides an explanation for the notations used.

Table 7.3 - Transcription quotes notation

Notation	Meaning
...	Natural pause
[sic]	Participant has said something that is grammatically incorrect rather than an error in the transcription
Bold text	Participant emphasis on a word, phrase or point
{ }	Indicates action e.g. gesturing, laughing, frowning
--	Quote shortened / part removed
[explanation]	Explanation by the author to set the context in which a quote was said

7.8. Results

This section presents the results of the analysis of the interviewees and the interview data. Firstly, interviewee demographic details are presented. Then, the five main themes (Convene, Champion, Collaborate, Challenge and Command) which relate to roles or ways of behaving, that the London Mayoralty exhibited in relation to health, are considered. These were developed from sub themes and codes in the interview data. After this, there is a sub-section on participants' views of further powers for the Mayor related to health. The results section is concluded with relational and trust themes regarding the five roles or behaviours.

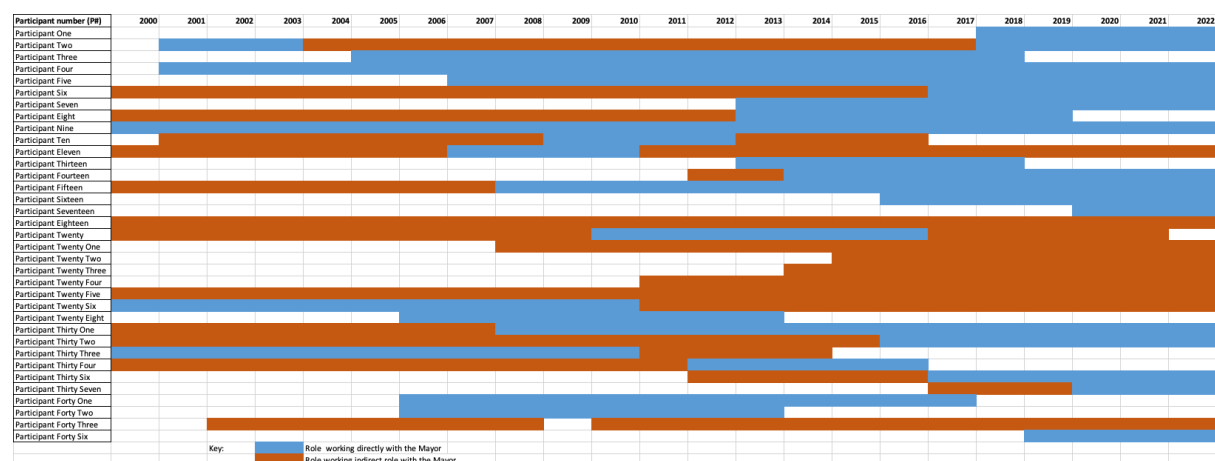
Quotations are used to add richness and convey a sense of weight of feelings and also to illustrate diversity or consensus in the data.

7.8.1. Results 1 - Interviewee demographic details

A total of 35 participants were interviewed between 18th November 2021 and 19th July 2022. The time taken for the interviews ranged from 10 minutes (10.38) to one hour 13 minutes (1:13:18) with an average of 43 minutes. This is within the typical expected range.⁵⁵¹ The number of participants is slightly above recommended estimates for grounded theory from Moser and Korstens,⁵⁸⁰ who suggested between 20–30 participants.

Figure 7.6 below shows the years in which the participant worked either directly or indirectly with the Mayor. In total, the participants had 256 years working directly with the Mayor with an average of just over 7 years (7.31) and 277 years working indirectly with the Mayor, an average of just under 8 years (7.91).

Figure 7.6 – Participants time working directly or indirectly with the Mayor



The 35 participants were from; London Local Authorities, the Greater London Authority (GLA), NHS, Political Appointment, Public Health, Heath Think Tanks and London Media. The numbers and percentage from each organisation type is presented in Table 7.4. The participants were specifically sought from a broad range of stakeholders to obtain a breadth of perspectives. It should be noted, there was not representation from the London Assembly which plays an important in holding the Mayor to account.

Table 7.4 - Participants organisation type

Organisation	Number	Percentage
GLA	7	20.0%
Local Authority	9	25.7%
Public Health	4	11.4%
Political Appointment	5	14.3%
NHS	5	14.3%
London Media	1	2.9%
Health Think Tank	4	11.4%

The participants held a range of roles in these organisations which are presented in Table 7.5. It is naturally weighted to more senior roles (CEO & Directors) as those type of roles were more likely to interact with the mayor. The split of male to female was marginally biased towards male (20 participants, 57%) over female (15 participants, 43%) presented in table 7.6.

Table 7.5 - Roles of participants.

Role	Number	Percentage
Officer	6	17.1%
Director	7	20.0%
CEO	9	25.7%
Chair	2	5.7%
Mayor Advisor	5	14.3%
Reporter	1	2.9%
Health Policy	4	11.4%
Councillor	1	2.9%

Table 7.6 - Sex of participants

Male	20	57.1%
Female	15	42.9%

Equally important, particularly for risk of bias, is those who were invited to participate in the interview but who chose not to participate. In addition to the thirty five that did participate, 11 potential participants were contacted but did not reply (see section 7.8.4 for the process). None came back with a reason for not participating.

Four of the eleven non participants were from Local Authorities. Table 7.7 shows the full breakdown. Table 7.8 shows the full breakdown of roles within the organisations. It is noteworthy that a significant proportion, 4 out of 11, who declined to be interviewed were local

councillors. Of those who were contacted but chose to not participate 6 (55%) were male and 5 were female (45%)

Table 7.7 - Organisation of potential participant that did not respond to invitation

Organisation	Number	Percentage
GLA	1	9.1%
Local Authority	4	36.4%
Public Health	2	18.2%
Academic	2	18.2%
NHS	1	9.1%
Health Think Tank	1	9.1%

Table 7.8 - Roles of potential participants that did not respond to invitation

Role	Number	Percentage
Officer	3	27.3%
councillor	4	36.4%
CEO	1	9.1%
Academic	2	18.2%
Health Policy	1	9.1%

7.8.2. Results 2 – Five main themes of Mayoral Behaviours

The five main themes related to Mayoral behaviour and ways of working are considered below.

7.8.2.1. Convene (& Connect)

The convening powers of the Mayor was one of the most cited behaviours or role of the Mayoralty. Participants felt this was a core or foundational behaviour or role of the Mayoralty and one that should not be underestimated.

“the task of convening and leading and trying to shape behaviour, which is in essence bring people together , which is in essence what the powers that the mayor has, are potentially quite powerful.” Participant 15

“the convening power of the mayor, and people wanted to be part of this, you know, when the mayor or somebody representing the mayor invites people, they come.” Participant 8

“For me, and I've said this to officers and colleagues, it's the soft stuff he can do. It's not about the putting the hard levers around, having that regular conversation and checking back in and keeping everyone honest where we find the value of the mayor's power.” Participant 7

Participants felt that the act of convening drove action in the background or ahead of a meeting, to ensure all the actors were aligned and presented a cohesive position in front of the Mayor.

[in relation to the mayor convening...] “we play nicely and even... we don't drop each other in it in front the mayor, but the fact the mayor has said, “What the hell are you all doing on violent crime?” ... means we all prepare for the meeting, we all figure out what we're doing on violent crime and then we... it usually has a bit of a legacy. So, there is a power in the convening but I wonder whether it could be enhanced”. Participant 32

Convening was seen as a central leadership and influencing function of the Mayorality.

“The convening power of the mayor and the ability to be a champion for the city is critical... when you have the mayor's voice amplifying it, it creates a different level of leadership support first to make it move forward,” Participant 37

“ I do think from a position of influencing some of the conversations that the mayoralty has been most welcome and being able to convene some of those conversations is most welcome. Participant 14

Participants identified a strong role for the Mayor in showing leadership through convening and the lack of many statutory powers related to health was seen as an advantage as it gave opportunities to step into spaces.

“it highlights the point about leadership, that the momentum often follows from what the person in charge is actually saying.” Participant 25

“In fact, they would be more significant and more powerful by trying to do slightly less and see themselves with more of a convening role and be more kind of, to box clever with that convening role and use it not, and their lack of statutory power, a statutory kind of basis, not as a problem, but as an opportunity to bring people together to try and tackle some kind of London wide challenge that no one else is tackling.” Participant 21

However, participants also identified some negative issues around the number of meetings and recurring conversations.

“what we get at the moment is the convening but to review what's already happening and the harsh truth is that people who troop along to the meetings that get called and all the rest of it, you know, they go with raised eyebrows, here we go again, it's a waste, you know, I don't think this will be very productive. They come out and say it wasn't very productive and it just goes round and round in circles. And basically, it's just activity that's not really doing very much...” Participant 21

“We're not really kind of empowered to do that, so you know, there's a lot of discussion and advisory boards, but there isn't really a, “Well, should we not all resource some kind of function that will actually move some of this forward, rather than people just kind of doing it?” Participant 36

There was also frustration amongst some participants that there needed to be more than convening given that convening on its own could lack speed and progress.

“because you don't have levers, you are just left with the convening power, which I don't underrate. It can be very impactful and you can get people to do things and I think that, to some extent, is what's happening, but it can be pretty slow.” Participant 23

“And then you realise, you know, a year down the track that that didn’t happen. ... to make things actually change, you do need someone there, like, pushing it forward systematically, and ...someone to be, yeah, charged with owning it ...it’s really hard to move things forward through the governance structure, and then sometimes you just end up, it’s just easier to go round it”. Participant 36

“you can’t see any sort of progress, and you sort of feel the agendas are quite random. And so, I think he has these sort of offshoots, but it all feels a bit muddled if I’ve got to be honest. It has a feel of one of those things where someone feels there should be one, but they’re not quite sure what they should do.” Participant 17

Participants also identified issues around reinventing what had previously been tried without looking back at lessons learnt or why things may not have worked the first time and with duplication or multiple similar strategies (national, London, Borough) that sometimes made for a confusing and crowded agenda.

“there’s a massive reinvention in London, which as I get older, I just get pissed off, to be honest, and I’m just, like, “Fuck’s sake, you know, we’ve done this so many times,”
Participant 2

“I can certainly cite you examples of certain initiatives that have been done in Tower Hamlets 20 years ago, 10 years ago, last year, and are now happening again; and almost the same but they are different. And if I was those communities...” Participant 33

Participants that had at one point held roles working directly with the Mayoralty and at another point had held roles as part of the London system but indirectly with the Mayoralty cited the lack of visibility or impact of the Mayoralty work. They noted that when you are part of the direct Mayoral system, it feels the most important and impactful. But when you are out working in the wider London eco-system it is less visible and appears to be making limited impact.

“brought it home to me, when you’re in it, you think you’re the centre of the world and everything’s about the mayor or whatever, and then you come out and it’s, like, “What?”

Participant 2

“maybe this is a reflection that unless you’re really focused on the city in roles which I had really, which were either quite national or quite local, my interface with the mayor and the mayoral office was perhaps less so.” Participant 37

“But the end result is in all their organisations none of them in my view have really made any difference. In fact, if you talk to people now and say, “What was it like getting an appointment with your GP ten years ago and what’s it like getting an appointment with your GP now?” I would say that people would not think it was better. Participant 34

“I sat around the table many, many times with the GLA health leads, talking about the mayor wants to do this and the mayor wants to do that. But the reality is they actually don’t have any traction and haven’t had any traction.” Participant 21

“And there’s an odd thing about London that sort of allows it to be quite fragmented. Everyone does a little bit, makes a press release. It doesn’t really change anything. But everyone goes home happy.” Participant 31

7.8.2.2. Champion

There were three dimensions that participants identified regarding “championing” behaviour and the role of the Mayoralty; ‘shine a light’; ‘empowering and enabling’; and ‘rock star’.

Shine a light

Participants identified the ability for the Mayor to champion or ‘shine a light’ on positive examples to promote wider take up or wider application. Note that it is also possible to shine a light on issues or deficiencies; this is covered under the section on challenge.

“The powers of the Mayor of London are pretty limited, particularly in that context, what he can do is shine a light on issues” Participant 26

*“We visited, as you know, every borough and looked at examples of good practice everywhere, and then we then held sessions where some of that learning was shared.”
Participant 34*

“--some great benefits in terms of bringing health into people’s awareness in London and particularly on nutrition and on, you know, healthy food and so on in London.” Participant 8

In championing or shining a light, the Mayoralty has an opportunity to promote voices that may not usually be heard or areas that typically would not receive the attention they deserve.

“elevate those voices that otherwise might not be heard.” Participant 14

A number of participants raised the fact that the Mayor could show the interconnected nature of health on other areas of society, ranging from planetary health to the economy. The breadth of the position of Mayor enabled him to connect these different spheres and therefore take a ‘system approach’.

“so many parallels and synergies with diet, and environment and planetary health, and physical activity and all that type of stuff, it all mushes into one, doesn’t it?” Participant 1

“who is championing Londoners’ health? It’s a fantastic opportunity for the Mayor when it is a broad remit. There’s a fantastic opportunity in our system for the Mayor fighting for London”. Participant 34

“the mayor does have a role of connectivity. So, connect... public health to the business community, public health to the arts community, public health to criminal justice... And that hyperconnectivity is also global as well. So, through the mayor's office, we're now speaking to other global cities.” Participant 37

Empowering and enabling

Participants spoke about how the role of Mayor could champion individuals or teams within London to empower them to take greater action on health and health inequalities.

“the most important thing with all this is that has to be something which is mayor sanctioned too.” Participant 13

“one of the aspects that we highlighted that was important to drive progress was about that leadership from the top and it being a proper priority rather than just something that lip service was provided to.” Participant 25

“most of the leadership has come from people like Individual Two from Bart’s, and Individual Three, to be honest. But the Mayor’s voice, it’s that thing about the influence of the mayor, having the Mayor actually physically signing the pledge with partners from other parts of the system, is quite a, yeah, it is a big deal.” Participant 1

Participants felt that the Mayor does not need to personally lead everything but they do need to be perceived to be in a supporting and enabling role.

“the London Health Commission was able to work because it was an independent commission, but it was commissioned by the mayor,” Participant 13

“ultimately these things do come down to mandate and evidence, all of that stuff you can shape, but at the end of the day, it is the mayor in this organisation that has the final word.”

Participant 2

“his team, when we’ve engaged with them, come across as empowered to be taking action and to be thinking about things and they know that the expectation is high.” Participant 25

“when you have a supportive mayor, how you can accelerate.” Participant 37

“To the point around the mayor being an enabler leader, it isn’t heroic leadership

it is a person prepared to bring people together and allow collective leadership.” Participant

6

“here’s the thing I was saying about does the mayor lead this or do this, or does he create the enabling environment for his advisors to do these things? Or at least not object to his advisors using the platform of the mayoralty?.” Participant 8

Rock star

Participants identified the Mayor role as that of a ‘celebrity’ or ‘rock star’. Typically, the Mayor attending Premiers or the opening of cultural events attracts attention. This attention could be used for the benefit of health and health inequalities.

“my view is if you walk down any street in London and asked them if they knew who Sadiq Khan was, I think 90% of people would say they did, you know, I think they would, I think most people would know that he was the Mayor of London. And if you said, “And who was Mayor before him?” I think most people would know it was Boris, and that was because they’re kind of quite well known characters. I think more people know that Sadiq was the Mayor than they’d know who their local MP was. So, I do think that the influence of the Mayor is not insubstantial” Participant 1

“they’re a single person executive and they’ve got enormous power and they can, you know, they get media coverage when they do things.” Participant 16

And with the ubiquitous social media this can be even more powerful...

“another thing that the mayoral office has done really or started to do really well, which is around communications using social media and infographics and, you know, using a range of ways to actually communicate with the population.” Participant 14

7.8.2.3. Collaborate

Participants identified collaboration as the natural extension from convening and championing.

“think actually under very restricted circumstances that a mayoral sort of position has an opportunity to be really quite influential in harnessing quite disparate parts of a city to kind of orchestrate together when they would naturally otherwise want to be attending to just their issues rather than partnership or collaborative working.” Participant 14

“We used the collaborative powers of the Mayoralty to examine what was going on and to promote good practice.” Participant 34

“the significance is that though the mayors are really powerful, potentially really powerful figures, there’s a lot more going on in the London health and care system that is required to be aligned to capitalise on that power and authority.” Participant 15

“So, it's not just about the mayor, is it? It's about what the mayor does with us and local government as well as with a whole range of partners in the system.” Participant 7

One significant area of collaboration that came up again and again was the aspiration for health devolution to London. There was clear consensus that the devolution agreements of 2015 and 2017 had not achieved any direct health benefits or real devolution of powers. But participants believed the process had wider benefits of enhanced collaboration.

“--things which were done around the London Health Commission and around the time of devolution, I think there was quite a lot of energy to try something new.” Participant 13

{Devolution}... “held that partnership together in the sense that it gave people sort of collective purpose.” Participant 4

“everyone knew the Lansley [Health Secretary Andrew Lansley NHS reforms of 2012] things were a disaster. And there was the kind of the reforming of that, but at the same time there was the London devolution discussions that got going sort of 2014/15 and together those two things really lead to where we are today I think.” Participant 11

Others were sceptical of the actual and potential impact.

“the health devolution stuff in London always felt like a victory a bit over substance. I was never quite sure it amounted to all that much, and certainly nothing that felt tangible to Londoners.” Participant 16

The ‘estates work’⁸ was particularly called out as an area of both making progress and not making progress. It was seen as the flagship aspect of the devolution agreement.

“by the end of 2017, the deal we get is pretty minimal. Probably the best, the most substantial thing, this is estate stuff.” Participant 31

“Devolution might be valuable, but I’m not sure it’s the answer, necessarily., NHS estates, I think we have made progress, but it’s been slow and it’s been grindingly slow”. Participant 1

“It’s achieved a lot of meetings, lots of conversations. But I don’t think you could point to, you know, either a development that either has or hasn’t happened as a result of having an Estates Board in London” Participant 4

“The London estate strategy and all the freedoms that were fought for that. Where I’m sitting, it doesn’t look like they’ve done a lot from that...” Participant 41

Some were even harsher in their assessment.

⁸ The ‘Estates Work’ was the significant part of the devolution programme which had the aim of devolving powers over land and estate, including capital returns, to London

“The one thing that I think had the real potential to change a lot of that was devolution, and we blew it, or it got blown, but that wasn’t...that’s one of my abiding frustrations.”

Participant 15 and “it’s to the wider system’s discredit that we’re not in the same position now that Greater Manchester are”. Participant 15

A number of Participants referenced resistance and lack of collaboration from national government.

“interference from Number 10, who didn’t want...didn’t want boroughs to be able to have wider powers in relation to...smoking-- we got caught up in the debate about the nanny state,” Participant 15

“central government, who of course by now have lost any sense of bandwidth, any ability to do anything that isn’t Brexit. And it takes two years to get to the second bit of the memorandum which has slowed down by the 2017 general election and some straightforward anti-public health coming out of the prime ministers office.” Participant 31

“it really had no impact whatsoever at national level. And yeah, frankly, quite a degree of resistance to handing over anything that involved any powers to the London mayoralty.” Participant 17

“I never got the sense that it was sort of embraced or supported, I mean, possibly not supported by the right people or the right levels nationally.” Participant 4

“I saw at the national level was a real reluctance of national politicians to give up power to mayors.” Participant 17

However, the collaboration and partnerships already developed were cited as being beneficial and developing further during the covid-19 pandemic.

“What the pandemic did do, it did force the city together. The city decision-makers and leaders together. You know, even just taking health out of the equation, the London councils and the mayoralty/GLA relationship has probably never been better because they were forced

together in a pandemic and they made it work actually and it made more progress on joint working than had been made in the previous 20 years.” Participant 16

“we’ve got really good relationships at the moment. Again, the pandemic helped.”

Participant 36

“in relation to Covid, obviously the hospitals were a very clear focus point, but they couldn’t have done it without the rest, which we were just talking about, the mayor and the system supporting.” Participant 6

7.8.2.4. Challenge

Participants identified challenge as a function or behaviour of the Mayoralty, albeit seldomly used in respect of health or healthcare. Participants were much more in favour of the Mayor using his “soft” power of influence and nudging *“as opposed to banging the table and formal stuff” Participant 7*

“the powers of the Mayor of London are pretty limited-- what he can do is -- make a noise, and use it as more of a...partly as a platform to cause trouble, which is a bit like the public smoking thing, spot some issues, and really have a go at them.” Participant 26

“he’s used his political office and his staff I think broadly speaking constructively in terms of the space that he can operate without becoming sort of a destabilising factor because of the politics of it..” Participant 7

Some participants thought the Mayor should take a more (constructively) challenging approach.

“The grant and project based approach to problems within City Hall, which is just the wrong thing. What you ought to say to foundation trust chief execs of London is this, that they need to... this is the target you want them to hit. We can guarantee you that that’s challenging, but

they know in their hearts it's right...the mayor also needs to want to do it. And I think that's also missing.” Participant 31

“ the perpetual thing you get from them is not them [Mayor’s health team] not wanting to upset the NHS. ... they want to sort of support and encourage rather than directly criticise that.” Participant 22

7.8.2.5. Command (and control)

Command and control relate to the areas where the Mayor has a degree of direct control or responsibility. The most obvious of these relates to the GLA Act (1999) and the amendments in 2007 which introduced a responsibility to produce a Health Inequalities Strategy (HIS). However, the Mayoralty has other areas of control, for example, the resources and assets of the Greater London Authority. This includes how the Mayoralty is organised, the meetings (formal and informal) and the reports (statutory and discretionary) it produces and the wider assets such as, for example, Transport for London and the Metropolitan Police where the Mayor has an executive role .

The GLA Act 1999 made very limited reference to health, with no direct powers related to health (see section 8.6.1 from the document analysis for further information on the 1999 Act and 2007 amendments) .

[there has] *“been a progressive improvement in bringing health into the awareness of what wasn’t really set up as an Act to consider health of Londoners. Participant 8”*

Notwithstanding this limited reference to health, those around at the time, felt even a small hook in the statute was important.

“in the original GLA Act--I might not have the wording absolutely correct but the gist of it was “Taking into account the health of Londoners”--and that was the driver for engaging really between Ken and the public health community.” Participant 33

It was perceived by participants that the amendments made to the GLA Act in 2007 were significant in relation to health.

*[in relation to the GLA Act 2007 changes]... “it doesn’t matter which Mayor we have, they have now got to take account of this, it’s a statutory responsibility to write a Health Inequalities Strategy”. In essence... if you like, [it was] our insurance policy against a change of Mayor ...that didn’t want to be interested [in health] you could slam the statute in front of them and say, “**You may not be interested but you have to be interested**”.*

Participant 42

“the GLA Act enables you to do anything for the good of London, it’s very loosely written.”

Participant 34

As required by the GLA Act 2007, the Mayor must produce a Health Inequalities Strategy (HIS). Participants identified producing a London Health Inequalities strategy as the only real power of the London Mayoralty in respect of health or healthcare.

“I think if you were to actually, you know, follow both the letter and the spirit of the GLA Act and you really were to make the Health Inequalities Strategy as important as it appears to be in that statute, then, yes, you would have an advantage over all the other places I’ve ever worked where, apart from being able to write a Director of Public Health Report once year, you certainly didn’t have the benefit of a legal statute that said you had to write something with the Mayor that people took notice of. But, I mean, it’s just the difference between words on the paper and will, basically.” Participant 42

“Two things which I think were crucial. One, it’s a statutory strategy and it’s an inequality one, it’s not a health strategy.” Participant 9

However, participants queried its impact and how much difference the HIS and other reports had made.

“it was a very kind of, a very New Labour thing to give the mayor a statutory responsibility to produce a health inequality strategy, but no statutory powers to do anything about actually

enforcing it or delivering on it. You know, and it was, yeah, so the mayor is actually breaking the law if he doesn't produce a strategy, but he's not breaking the law if he's not implemented.

It's a bit ridiculous.” Participant 16

“the mayor does have a statutory duty to tackle health inequalities and I think that's the only health responsibility of a mayor.-- it was really limited to publishing the study saying there's a lot of health inequality and isn't it terrible... We'll publish another study next year to see if it's got better or worse.” Participant 20

“But any one entity producing some lovely document that other people say, yeah, well, I mean, I think the health inequality strategy we were obliged to say what we what other people should do, like local authorities. But we'd no power to make them. And we didn't have any money to give them. And so, it became along with everything else they were being asked to do why would they do that? And they weren't going to do that unless their local leadership saw this as an imperative against their other priorities locally... I don't think any of these things are really, I mean they may fulfil a statutory purpose. They're not going to bring about change unless the people who are going to have to do the change buy into the need for it and the KPIs for it and have some sense of shared vision.” Participant 10

“what is the London vision for health?” There is a London level of strategy that you would want the five ICS subregions to follow. But we don't really have that. I mean, what we do have is the ICS subregion saying, “No, London region's being a fucking pain in the neck because they're asking me for 55 things by 5.30pm”. But there's no strategic thing I'm aware of about, which would be about the wider determinants and inequality. You know, I have to say I think the inequality stuff's been a substitute for thought recently. I just don't see any products from it. And what is the London strategy for health and wellbeing that the five subregions should be trying to achieve. It's a bit absent, isn't it? It's totally absent, I think.”

Participant 11

“I wonder whether our collective actions have made much difference. Certainly, our collective health actions, I suspect there have been more, as you say, more significant interventions which come due to wider economic or social events and activities, rather than more specifically health ones. We're having yet another quick look at, well, you know,

refreshing the vision and all that stuff at the moment, and I do worry it's all a bit...it's all going to be a bit inconsequential.” Participant 15

Participants did reference the Mayoralty using its control in other areas of the Greater London Authority. However, these were not related primarily to health.

“where I think we were able to have some influences in looking at his mayoral policies, other things he directly controlled like TfL,-- housing strategy,--economic strategy, how does health and wellbeing fit into that framework through the back door try to influence those mayoral advisors to be ensuring that health was recognised.” Participant 10

There was a feeling that the Mayors' powers were very limited in the difference they could make in respect of the wider determinants of health.

“the biggest things the mayor could ever do for health in London, certainly for health inequalities, were in relation to jobs, poverty, equity, housing. And to some extent, green space and stuff like that. But in all of those areas, the mayor's power is really quite limited.” Participant 26

“trying to do something serious about housing would probably make the biggest difference for the health and wellbeing of our population” Participant 15

“I think cities are well placed to do a lot of that around more air quality, promoting active travel, tackle obesity, healthy lifestyles. I do think that the mayor working with the 32 boroughs, having actual statutory responsibilities in that area, some funding to go with it, would be really powerful. Because as I said, I think you can go a lot further in London than you could go in Surrey. So, the nature of the population. But also, the scale of the problem is different. Cities are unhealthier. So are the people that live there. So, I just think if central government doesn't want to do it because it's not interested or one-size-fits-all doesn't work because what works for Surrey won't work for London and vice versa. Well, let I think the mayor and the local authorities having some freedom and some statutory responsibility could do a lot.” Participant 16

7.8.3. Results 3 - More health and healthcare powers for the Mayor ?

As the Mayoralty has so few immediately obvious direct powers in respect of health or healthcare, participants often went on to give a view on whether more powers would be beneficial. Participants generally held quite strong polarised views; the “yes !” group and the “no !” group.

7.8.3.1. The “Yes !” Group

Those who felt London Mayor should have more powers - the “yes !” group - were split between health and healthcare. Firstly, on health there were views around making the improvement of health and reducing health inequalities a bigger and more formal part of the mayor’s wider role, in acknowledgement that 70-80% that affects a person’s health is outside the health system.

“I think health could be formally a bigger part of the Mayor’s brief -- , because, as you and I know, the impact of the work of the health service is small relative to the impact of everything else on people’s health.” Participant 1

“if you're mayor and you want London to thrive, health has to be the central part of your vision,” Participant 41

“the Mayor and local Politicians need to be much more aggressive on public health interventions however unpopular they are, and a number of things are again within their control.” Participant 18

[the mayor] “has a responsibility to produce a health inequality strategy. But it feels a bit passive -- I'd like to see that beefed up a bit really. I'd like to see that more... so, if you think of a mayor, you think of buildings, don't you, transport and regeneration and the London economy. And I'd like to see something that would put health up there, not because that's the area I worked on, because we know how important that is to everything else”. Participant 20

“give the mayor and the local authorities the flexibility and the freedom to do a hell of a lot more on health prevention if they so wanted, they're limited by statute and by finance.”

Participant 16

“there's a space for him to operate which helps to keep the NHS more balanced in how it pushes forward integration.” Participant 7

More fiscal powers were raised by several participants. Comparison was made to New York and other world cities. In comparison, the London Mayor has significantly fewer revenue raising powers or levers.

“London's system is a bottom-heavy two-tier system, whereas clearly New York is much smaller and the mayor has much more power.” Participant 15

“the New York Mayor has a much wider portfolio of powers so made a huge difference to things like food in prisons and schools.” Participant 33

“more skills and employment-related stuff developed, that would be a big help. And if we had our own revenue-raising powers in the city.” Participant 32

“if we could raise more money ourselves, if the government subsidise TfL I'm sure there lots more things that we could do if we were empowered to do them.” Participant 36

“early years is important, education is important, skills and jobs is important; those are the three biggies I would say. The Mayor has limited powers on some of those, those would be the things that I would say give more power to the Mayor on those--housing: I mean housing would be the other big one.” Participant 33

In relation to healthcare, which was considerably more controversial, there were some surprising views from some participants. A number of participants referenced conversations

that had happened in the past about the Mayoralty taking on more responsibilities for healthcare services (i.e. the NHS)

“I do remember when we were doing the devolution stuff and there were a number of discussions, you know, would the mayor really want responsibility for London's hospitals because it's a bit of a poisoned chalice and there's not much glory in that. Opening them is nice. But the running is a bit difficult.” Participant 20

However, the same participant then went on to say...

“city mayors should have a greater responsibility for the health and care system in their cities, and I realise that's treading on terribly difficult territory, and it may be that that's just not possible within the national NHS and the localised – I just don't, it opens all that stuff up, but I just wonder...” Participant 20

This was surprising given the participant was from a local authority, whose perspectives are typically to not cede and aggregate to a London level.

Others also supported a stronger Mayoral role and a holding to account for leading healthcare transformation.

“I can see a very credible role for him [the Mayor] which is like a combination of being mayor and being Chair of the ICS whereby actually he's got some authority over the resource use.” Participant 28

“We still struggle to take resources away from hospitals and that is partly because of the local Politicians-- I think a massive mistake by the Mayor and local government not to support major reform of primary care—and not to support the downsizing of hospitals.” Participant 18

“I mean there's always a question should the mayor have some kind of democratic oversight of the NHS in a way that he doesn't at the moment. I mean, you know, personally I'd be supportive of that and I think it would help... I think maybe some kind of stronger mayoral

oversight of ICSs [Integrated Care System's] might be system working might... could be healthy" Participant 32

"Ken's (Livingston) view, again, interestingly, was that in another two or three, he said three reorganisations down, they'll give health [participant meant healthcare] to the GLA, because it's such a poisoned chalice, Participant 26

7.8.3.2. The "No!" Group

Participants in the "No!" group felt London and the London Mayor should not have more powers. Their views spanned a range of different reasons. Some participants could not see how additional powers would be beneficial.

"I don't see how it's going to help. I'm not clear about how that would help." Participant 14

"I'm not sure I do. I mean I think because London is structured around 32 boroughs and that is where the decision-making for place takes place in the main." Participant 10

Some participants thought Mayor had enough powers already.

"there's argument that they have quite a lot of powers over wider health already.-- They've got quite a lot of powers there". Participant 17

"Actually, are we using the powers we've got optimally?"-- the conclusion that actually there was a long way to go with the powers they'd already got and they weren't really using them. ... I would not reach for new powers before really knowing that you're using the ones you've got as well as you can do." Participant 24

Other reasons Participants cited as to why London and the London Mayor should not have additional powers included areas such as the size and complexity of London.

“large scale citywide solutions are rarely universally applicable, and if they try to be applied universally, then they tend to result in quite large inequalities and inefficiencies. And I think I would say, I suppose that Covid probably more or less bears that out.” Participant 15

“I don’t think I want a Mayor to have kind of the health and care powers that Greater Manchester has necessarily, I think it’s super complex in London, so I don’t think it should be like that necessarily.” Participant 36

“think we should be thinking about what can do more to enable the mayor to be a system leader on health.” Participant 32

7.8.4. Results 4 – Relationships and trust

“it’s the relational things that are important in terms of making things happen.” Participant 20

7.8.4.1. People around the Mayor

Participants identified a small number of key individuals that had driven forward the health agenda with the Mayors over the last over 20 years. In many instances, it was difficult if not impossible to distinguish between who had actually instigated or led, the Mayor or the identified individual.

“the momentum on health that’s been maintained by the discussions about ICS. And from my perspective that’s very much been led by Individual Eighteen and Individual Forty One from the local authority side.” Participant 11

“hard to unpack how much of the leadership came from the GLA, or was sort of sitting in other parts of the system, you know, with HLP [Healthy London Partnership] etc.” Participant 2

“it was principally the health partners because it was Individual Fourteen and the London Health Commission, yeah and they decided that we would do as opposed to the mayor saying, ‘I’ve got a view on public health in London’ ... I could point to any of the other partners and players of say, ‘So, who did we work with and what did you think of them?’ ‘They were great,’ you know? ‘What a privilege it was to work with such great people’.” Participant 20

“I think the kind of core of health though has survived [throughout the course of all the mayors] , and I would like to think that it’s survived because of the quality of the people around the mayor, who advocate for the broadest form of public health to be in the mix. So, it’s not always important to have the same people for, you know, 30 years, but it is important that the baton is handed over when people come and go on the officials’ side.” Participant 8

“Interestingly, Boris did keep my boss, Individual Seventeen, who was one of Ken’s closest advisors, stayed through Boris’ administration. Again, in confidence, that’s because when Individual Seventeen...Ken had had a word, Ken said to Individual Seventeen, ‘You have to stay, otherwise the Olympics will fall over,’ because Individual Seventeen drove the Olympics.” Participant 26

7.8.4.2. The Mayor and local authority and London Councils

Participants were at pains to stress the importance of others around the Mayoralty. London’s 32 boroughs and the city of London⁹ (subsequently referred to as ‘local government’) came up frequently.

There has always been a tension that has ebbed and flowed between the Mayor and local government.

“the history of London government is always this sort of pull and tug and tension between the views of boroughs, either collectively or individually and of citywide government and trying

⁹ ‘city of London’ is the 33rd geographic sub area of London but is not classed a ‘borough’

to get the right balance between those things at different times has been pretty hairy. “

Participant 15

“There's always this, I say unspoken. I think sometimes it's fairly clearly spoken. It says we're very conscious of a power grab by the mayor. So, there was always this tension, and it exists forever and it's there the whole time. Is the mayor doing this because he wants to do something different or is it a power grab to take power away from the boroughs?”

Participant 20

“local authority people are quite protective of their own patch and their own borough so I don't think that should be taken as a negative point if somebody else's tanks ever so slightly come onto your lawn.” Participant 23

This tension may exist anyway simply based on the number of players and therefore relationships, with a total of 33 local government bodies in London, comprised of 32 borough local authorities and the City of London.

“there's a tension between the London boroughs and the mayoralty means that collective action across London, so a lot of the things that you impact are in the boroughs and trying to get 32/33 London boroughs all to act together is politically difficult to do.” Participant 41

“the boroughs, we always had to work incredibly hard to get to a point of coherence. So, without something quite close it all frays. And the chief execs, I mean, everyone falls back on just thinking about their own borough. So, I mean, I'm spending a lot of my time just desperately trying to hold something together that looks even vaguely like it's one story.”

Participant 31

“we don't need 32 London boroughs. I mean it's far too many. Far, far too many. You could save, I think someone was calculated, you could probably save annually probably somewhere in the reach of £50 million by reducing the number of boroughs and probably just have the same effectiveness in service provision. But politically, it's toxic.” Participant 21

“having an expectation that London Councils can somehow speak for all councils and make things happen, make commitments on their behalf, like, obviously they can’t, but that’s the link, because there’s 33 councils, so you know, how else are you going to do it, you can’t do it with them all individually, but then that means you can’t make any commitments, no commitments can be made on their behalf, so any kind of... It wouldn’t be, so people get a bit reluctant to even talk about kind of programme management for the London partnership stuff.” Participant 36

Participants identified that, whilst there is a system tension that prohibits action, in addition there are no real system incentives to promote action.

“I do think there's not enough threat to failure, and so it's rather easy for everyone not to raise their game, for the mayor, for the boroughs. And one of the ways to build that threat is to make it in law more clearly the duty of elected London politicians to fix the problem. -- So, when I look back and I think, “Oh yeah,” and then on our own side with the boroughs we got all this, “Oh I won't do it unless this happens”. They wouldn't have dared if there had been a law saying, “The boroughs and the mayor shall have a duty to deliver a better health system for London,” because it would have been really obvious that's your job, you've failed.”

Participant 31

“It would be better if there was a compact, but what we’re all trying to achieve and how does the NHS play into that?” Participant 10

7.8.4.3. The Mayor and the NHS

Participants generally identified a good relationship across NHS leadership and all of the Mayors (and their teams).

“I think Individual Forty Six was influential in this. I think Boris and Individual Forty Six had a good relationship. And I think was it not also around that time... so, Boris became Mayor in 2008 but then also there was that restructure where NHS London ceased to exist.

And I do remember Boris saying... I think his view was that there should have remained an organisation like NHS London. I'm sure he said that in a Mayor's question once. He felt that kind of strategic oversight was important. And, yeah, I think that he and Individual Forty Six, as I say, had a good relationship with one another." Participant 5

"So, he had some specific policy aims, which I thought were not difficult to support. And we did support them. And as a result, he became pretty supportive to the extent that, you know, his starting position on say Queen Mary's Hospital Sidcup was, "It's got to be DGH [District General Hospital]. It needs to be kept open and why are you bastards trying to shut it?" That was his opening gambit. And eventually he would say, "I wish I'd never opened my mouth on Queen Mary's Hospital because I understand now why you think it shouldn't be a full functioning hospital, so I wish I'd kept my mouth shut, but I didn't. So, now you're going to have to help me with how I managed to get an aligned position". So, I developed a relationship with him which was actually very open." Participant 28

Participants also felt the NHS leadership, particularly NHS regional leadership was key in respect of the joint agenda.

"the biggest connection clearly between the mayor and health tends to be through the region." Participant 17

"any successes of it [the LHB] are based on everybody agreed to play ball, you know? If the NHS decided that they didn't want to cooperate, then it'd be very limited for what it could achieve. I think we've be lucky over that period in that the two people that have run the NHS in London," Participant 16

And reasons for things failing.

"In relation to devolution.. "The other reason it failed was frankly to do with the NHS, so my analysis is that if Individual Forty Seven stayed as the regional director, we would have—make {sic} it happen, and the NHS was completely absorbed in its own internal machinations

in terms of whatever reorganisation was that was going on at that time, therefore there was complete inertia.” Participant 15

7.8.4.4. Trust

The importance of relationships and trust was a theme that was often raised by participants, across all three Mayors.

“I mean they both did play ball, and particularly Individual Eighteen, who I think had quite a good rapport with Sadiq. You know, I think that it proved to be a good working relationship. But that could easily have not been the case depending on who was in those posts. So, a lot of it just depends on people. There’s no duty. Well, in fact, there is a duty to cooperate but that doesn’t mean anything, who enforces that? Nobody.” Participant 16

“the mayoralty success in even doing what they do do on health, which I’ve explained I believe is quite limited, does depend on the goodwill of people like the NHS regional director.

Now Individual Eighteen has just stepped away to be the COO, who knows who his replacement will be. But we have seen London’s regional directors in operation in past guises and they have been far less accommodating to the mayoralty than Individual Eighteen was.

Individual Eighteen tried really, really hard to make it work. The next one might not.”

Participant 21

“I developed a relationship with him which was actually very open he was also willing to have a very open and honest relationship with us.” Participant 28

“We did however have very good liaison and regular; so, we involved Individual Twenty Five and he and I and Ken would meet on a regular basis – those sorts of things were set up so that we kept in touch on what was happening between both Health and health services.”

Participant 33

“But I have to say that if you look back I mean Individual Eighty Nine I’m sure went to the Lord’s because he knew Boris from school or university days. I mean I can remember Boris

was always quite excited about seeing him because they had gone back a long way so he was someone that Boris trusted because Boris would say to me, “Oh, I knew him from” – presumably from Oxford – and I think therefore he was excited that this was somebody who wasn’t just joining him because he was a political groupie if you know what I mean. He thought that Individual Eighty Nine was very clever and that Individual Eighty Nine needed to be listened to and responded to because one of the reasons I think in the end we did get some input from Boris on health.” Participant 34

“I think the pandemic experience has actually...people seem a bit more collaborative and trusting of each other a bit, you know, “We’ll show them what happens when we all pile in and work together with a shared goal,” so I feel like relationships have shifted a bit. – You know, this has taken years, and the pandemic, I think, to kind of move to that bit more kind of mutual trust, but I think it’s essential for something like health inequalities.” Participant 36

“the joint experience of London leaders of going through the pandemic and having had to forge such fundamentally close relationships in order to navigate the pandemic has meant that pre-existing structures which I’m told worked, but were not really, you know, we’re seeing more of another thing to do have perhaps changed because we’ve become good friends, we’ve had that shared traumatic experience of the pandemic and we’re now emerging from that experience committed to doing things better for longer.” Participant 37

“I developed during my time there an extremely productive, professional working relationship with Sadiq.” Participant 46

“personal relationships. These things matter, you know, they matter. personalities matter.” Participant 42

7.9. Discussion

This grounded theory interview study included 35 participants from a range of senior roles related to health or healthcare and working both directly and indirectly for the London Mayoralty over the last 20 years.

From the data and coding, five main themes (Convene, Champion, Collaborate, Challenge and Command) emerged as ways of working or behaving that the London Mayoralty exhibited in relation to health.

Convene

The first ‘C’ and foundational behaviour was ‘Convene’. Using, in many instances, the non-statutory (soft), power of the office of the Mayoralty to bring people together was seen as the essence of the role of Mayoralty by many participants. Facilitating the right people to come together and discuss challenges and opportunities under the auspices of the Mayor was seen as both attractive, even intoxicating, and powerful. Operating at a city level, particularly a city the size of London, allows opportunities for a system approach, which by definition requires multiple stakeholders to firstly come together. The Mayor and Mayoralty are one of the few roles and functions that can authoritatively fulfil this convening role across a broad portfolio of issues (almost any issue affecting Londoners). As put by Participant 8... *“when the mayor or somebody representing the mayor invites people, they come.”*

Whilst convening was seen as a very powerful function of the Mayoralty, which could be used and add value in isolation, as with other functions it needed to be used judiciously. This is to ensure it was not seen to be overused and creating a perception of endless meetings with little or no action or outcome. There would also be opportunities to use the convening as a foundation for further Mayoral activity.

Championing

Championing, using the voice of Mayor, was seen by participants as a function that had the ability to give a voice to those seldom heard and to ‘shine a light’ on areas that could be ‘scaled and spread’, giving a local perspective but global city scalability. The Mayor was seen as a political celebrity that attracted media attention. However, participants were at pains to point out that whilst this role as a political celebrity was positive in the attention it drew to issues and opportunities, it could not work in isolation. The use of “political celebrity” needed to be part of a wider enabling leadership role and therefore, empowering and enabling was also part of the championing role. The Mayor is but one person, limited in capacity with a finite amount of bandwidth and time. Therefore, participants thought it important the Mayor considered where and how they championed issues. The perception from participants was that what was key

regarding impact was the Mayor genuinely supported, gave a mandate and would be willing to step in to support.

The contextual evolution of information technology and social media presents a significant opportunity for the Mayoralty. Participants identified how the Mayoralty has begun to leverage social media for direct health benefit (e.g. vaccination and immunisation promotion) and wider health benefit around social cohesion and democratising health. The speed of development over the next twenty years in areas such as information technology, including artificial intelligence, is unknown but likely to create new ways of exerting Mayoral influence.

Collaborate

Collaboration was identified by participants as the natural extension from convening and championing, bringing the unique function and powers of the Mayor with other parts of the system. This is important because the Mayor and the infrastructure around them is only one part of the system in a city; it does not work in isolation. Each component part of the city system has power over areas it controls and can use its own 'command' function. However, as demonstrated by the systematic scoping review, successful city-wide action on health requires concerted and orchestrated collaborative effort and actions. The Mayor has a unique ability to orchestrate these various actions through collaborative behaviours.

The relationship that the Mayor has with partners (local, London and national) is incredibly important for this collaboration. So much so, that relationships are discussed separately. However, it is naive to say that politics do not impact on the role the Mayor takes with both local and national government. If either is from a different political party, it makes collaboration typically more difficult to achieve, albeit not impossible.

Challenge

Challenge was a function or behaviour within the arsenal of the Mayoralty. In some respects, challenge could be seen as the opposite side of the coin to 'champion'. Through the discussions with participants, the Mayor, in respect of health, was perceived to be very selective and rarely used his challenging function in a direct manner. This could be because the role has very limited powers in respect of health. However, there may be scope for greater use of challenging in the right circumstances. In discussions with participants regarding challenge, perhaps because they

would be the ones that could be challenged, there was a general feeling that this behaviour was best used sparingly.

Command

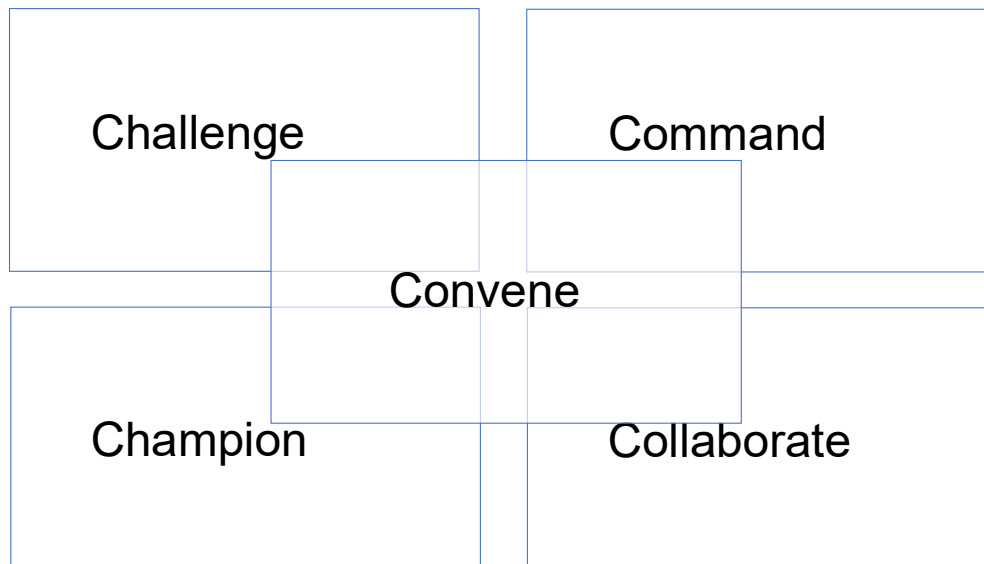
The theme of command and control relates to areas where the Mayor has direct control. The changes to the GLA Act 2007 demonstrate the importance of having a legal requirement in respect of health. The GLA Act 2007 introduced the statutory advisor to the mayor function, which was very helpful. This has meant that the Mayor has had to have some form of relationship with a health advisor and meant that they had to have an accountability for the statutory advice that was provided. It also meant the assembly could hold the Mayor to account if they were minded to – and they have most recently during the Covid-19 pandemic.

The requirement to produce a London Health Inequalities (HIS) strategy, explicitly an inequalities strategy, is quite unusual and certainly unique for a Mayor in the United Kingdom. Its strength is the explicit focus on inequalities, that it is, in part at least, produced with London partners and that it is in the public domain. A weakness of the Health Inequalities strategy is that it is one of many health and healthcare strategy documents which are relevant to London, others including; the London Vision,⁵²⁰ Integrated Care Systems Joint Forward Plan,⁵⁸¹ the NHS Long Term Plan{NHS England, 2019 #31782} and the NHS Core20PLUS5⁵⁸² not to mention each of the 33 local government areas in London having its own health plan or vision. This, in conjunction with a ‘lack of teeth’ of these London Mayoral reports, means that there is a lack of clarity. *“I’ve no idea what status the London vision has and the priorities, you know, I’ve never got the impression that anyone would take me to court about it or put me in prison if I didn’t do it.”* Participant 32. This HIS and other London reports and visions can get lost in a very crowded pitch. In the author’s view, what would help is if there were a formal requirement to take notice of the HIS, in a similar way that there is for boroughs to take account of the ‘London Plan’ and it was written into politicians (Mayor and other elected leaders) job descriptions that they were responsible for health and health inequalities. If any subsequent amendment to the GLA Act could write in a requirement ensuring that all aspects of the Mayor’s duties took account of promoting health, this would essentially ‘bake in’ Health in all Policies (HiaP).

The 5C Mayoral Framework for Action on Health

Together, from the above discussed five roles or behaviours, the author puts forward the 5C Mayoral Framework for Action on Health (5C MFfAH), as shown in figure 7.1.

Figure 7.1 - 5C Mayoral Framework for Action on Health (5C MFfAH)



Each of the five components of the 5 model are essential, none more important than another. They should all be displayed in conjunction and relation to each other. They are all also situation and context specific.

More health and healthcare powers for the Mayor

Participants consistently raised whether the Mayor and London partners having more powers would be beneficial. The majority of the participants thought there were benefits in the Mayoralty having more powers around health and healthcare. These powers being in some instances devolved down to London from national and some that would benefit from being aggregated up from London local government and London NHS level.

These are best illustrated by, for example, infectious diseases or air pollution, that do not respect borough of healthcare boundaries, but are particular issues in London, and other large cities. It is impossible to take meaningful and impactful action on air pollution if neighbouring boroughs do not do the same. Judging by the recent London ULEZ experience, whereby some local governments took the Mayor to court in an attempt to block the implementation of ULEZ,

it would have been impossible to get all Boroughs to agree and therefore you will always sink to the lowest common denominator. The Mayoralty should be able to cut through this.

However, with these powers would need to come greater responsibility and accountability. Currently, the Mayors have chosen to become involved – to varying degrees (see chapter 8) – in health and healthcare but have never had accountability. In London, and other cities in England, it could be seen how a Mayor could have a joint role as chair of the Integrated Care System or NHS Regional Executive, whereby they actually had some authority but also responsibility and accountability over the resource use and outcomes. At the moment, Mayors have the ability to take on pet projects or make pronouncements on issues but without any accountability. In the author's view, this responsibility or duty in law should also apply to other local elected officials.

A significant minority of participants thought that the Mayor should not have more powers. This was predominantly because either the Mayor had enough powers already or because of the size and complexity of London. It is true that London is large and complex. On the NHS side, five NHS Integrated Care Systems which collectively include and oversee 18 Acute Trusts (most with multiple sites) and 16 Community, mental health and specialist trusts⁵⁸³ and 1,500 GP practices. On local government side, 32 Boroughs plus the city of London, with different political and executive leadership, a rich and vast array of voluntary and community sector enterprises (VCSE), overlayed by regional and national regulators. *“what you learn really quickly is there are too many players on the pitch”* Participant 46. It is vast, complicated with a never ending churn of personal and regular restructures. It is incredibly difficult to keep on top of everything let alone make a positive difference, *“it's fiercely complex, just when you think you've understood it, it's changing”* Participant 2.

Therefore, as a starting point, the London Mayor - and other London health and healthcare partners - should look to use all their existing powers, before seeking additional powers. This applies to the whole system not just the Mayor.

A progressive next step would be to put some form of the London Health Board on a statutory footing, with clear purpose and accountability, and resources. This would require political, national and local support and NHS buy in to make it work. It would need to be accepted that there are benefits from having a really strong relationship with the Mayor and London councils

and all the other health stakeholders in London. The model and precedence are somewhat set with the Metropolitan Police and the Home Secretary. It could be that the Mayor and Secretary of State for Health and Care jointly sponsor some kind of next evolution of the London Health Board.

The London Assembly is an important part of the architecture of the GLA. It is made up of 25 London Assembly Members that are elected at the same time as the Mayor. The Assembly holds the Mayor and advisers accountable through public examinations, committee meetings, and investigations. The Mayor must respond to Assembly motions, attend Mayor's Question Time ten times a year, and consult Assembly Members on statutory strategies and the GLA budget. The Assembly can reject strategies and amend the budget with a two-thirds majority. There is a specific Health Committee which reviews health and healthcare issues, particularly public health issues and the Mayors health inequalities strategy. The Assembly and its committees play an important 'check and balance' to the Mayor.

In the author's view, the aspiration should be combining the significance of the role of the city Mayor with the ability to get things done and the resources and delivery mechanism of London local government and London's NHS. However, there are a range of barriers to future devolution of health and care powers to London identified. Principally, politically – both locally and nationally –it is incredibly difficult to get agreement to cede powers to a London Mayor. Particularly, if the Mayor and national government or areas of London local government are from different political parties.

There are recurrent discussions about powers at different spatial levels and the NHS regularly being reorganised. Cynics would argue this is mostly so governments can look busy, but the reality is that action is needed at every level. A good example is childhood obesity, which has been a priority for every Mayor and every national government, with national governments producing no less than 14 strategies which have had little or no impact.³³⁰ And yet, obesity rates continue to rise. Banning HFSS adverts on the transport system and implementing superzones around schools by Mayor Khan has been proven effective⁵⁸⁴but it needs to be part of a wider suite of actions at different levels of the system as chapter 3 demonstrates. Chapter 6 demonstrates the longstanding nature of issues and lack of progress.

Relationships

During the course of the interviews, which focused on the Mayorality and Mayors, participants frequently identified the importance of other individuals and other parts of London's health and healthcare system working in concert with the Mayorality, as being key. A small number of individuals consistently came up as being key to driving forward the health and healthcare agenda. It was, at times, quite difficult to discern between whether it was the Mayor driving progress or the identified individual.

In respect of relationships, politics and the size and complexity of London was often raised. It will always be challenging to get political agreement, or alignment, across national, London regional and London local government. A number of participants raised the point that London has a large number (x33) of local government tiers (boroughs) which cover a relatively small geographic and population size when compared to other global cities. However, it is possible to *"argue until the cows come home about whether the boroughs are too big, too small, the right size"*. Participant 4 And interestingly, the Boroughs have only been around in their current form since 1965.⁵⁸⁵ As the ULEZ example demonstrates, it is difficult if not impossible to get agreement for consistent action across the city. It is beyond the scope of this research to suggest changes to these local government structures. However, it does demonstrate the benefit of more powers and responsibility at a Mayoral city level.

NHS London leadership is critical and in particular a collaborative approach is needed. All of the substantive London Chief Executive and Regional Directors over the last 20 years were interviewed as part of this study. They all clearly saw the significant, and mutual, benefit of collaborating and developing a good relationship with the Mayor and their team.

7.10. Implication of this study for current and future Mayors, National Policy Makers and Academic research.

This study provides the current and future London Mayor with a framework that can be used to systematically assess how they can be most effective in using their position to improve the health of Londoners. The 5C Mayoral Framework for Action on Health (5CMFfAH) could also be applicable to Mayors in other cities and counties. This could be an area of future study.

In respect of the London Mayoralty, there are further opportunities, working with London partners, to exploit existing powers for the benefit of Londoners' health before exploring the potential of further powers. This will also be of interest to national policy makers.

7.11. Strengths and Weaknesses Limitations

This interview study included 35 participants from a range of senior roles working both directly and indirectly for the London Mayoralty over the last 20 years. The breadth and depth of the participants knowledge is an undoubted unique strength of this study. However, in respect of participants, a weakness is that only one local councillor participated. Four other local councillors did not reply to invitations to participate. This will bring inherent sample bias. The extended timescale, 20 years of the phenomena under study, has also meant that more participants with recent experience of working with the Mayoralty were included and those included who were involved in the first Mayoralty will, understandably, have found it more difficult to recollect historic details.

Grounded theory, in its purest sense, develops theories solely from the data rather than the researchers preconceived expectations or experiences, however this is probably too simplistic for real life.⁵⁷² This will be particularly true in respect of this research given the author's close experience or working with the phenomena under study. This risk was somewhat mitigated by having a second review of 5 of the initial interview coding and having an experienced qualitative researcher as supervisor for this study. A different perspective could be that having the researcher with first-hand knowledge of the phenomena being studied and trusting relationships with interview participants is a strength.

As noted, this study did not include representation from the London Assembly, which is an acknowledged weakness. In hindsight, the author should have included Assembly representation, as it plays a crucial role in providing 'checks and balances' on the Mayoralty.

Finally, this study was performed in only one city (London). Therefore, wider applicability is as yet untested.

7.12. Conclusions

For Mayors - whether in London or any other city - creating a vibrant, thriving, prosperous, and fair community must be a central goal. Health is foundational to this goal, supporting both the economy and the sustainability of public services. Achieving this requires a holistic, system-wide approach in which mayors play a crucial role. Even when focusing only on healthcare, many solutions to healthcare pressures lie outside the healthcare system itself and demand a collaborative, cross-sector approach.

This study, based on interviews with 35 senior leaders in health and healthcare across London, has developed a framework—the 5CMFfAH—to understand how mayors can use their roles to improve public health. This is particularly important as over half of the world’s population now lives in cities.

Mayors, particularly in complex cities like London, do not operate in isolation but are part of a city system within a national framework. In such settings, system-based and distributed leadership is more effective than singular, "heroic" leadership. If every decision has to go through the mayor, it can create bottlenecks and slow down progress.

Participants in the study envisioned an ideal where the London Mayor’s leadership combines with the resources of the NHS and local government’s close community connections. This alliance of the Mayor, the London NHS, and local government would form a powerful triumvirate of change-makers. However, strong relationships, trust, and effective collaboration are essential to making this work. As one participant put it, *“You’re trying to build collaborative bricks out of relational straw—it’s all about relationships.”*

In London, there are existing powers that provide opportunities to enhance collaboration, and these should be fully utilized. Establishing strong, statutory relationships among the mayor, London’s local government, health stakeholders, and national authorities could be beneficial. One proposal is to create a city-region health coordination committee, jointly sponsored by the Mayor and the Secretary of State, similar to the arrangements for the Metropolitan Police.

7.13. Reflection from carrying out this study

This study marked the author's first experience of conducting an interview-based study and specifically using constructivist grounded theory. As with other parts of this thesis, this required learning the process while simultaneously applying it, leading to the use of a reflective diary.

Similar to other areas of the research, the time required for data analysis was significantly underestimated. As described in the data coding and analysis section, several iterations of coding and theme development were necessary. It often felt as though changes and refinements could continue indefinitely, and the author is grateful for the guidance provided by research supervisors in managing this process.

The author's understanding of the phenomena under study, along with pre-existing relationships with key interview participants, proved to be strengths. However, these prior experiences necessitated careful measures to avoid leading interviewees or interpreting data through pre-existing biases. This commitment to objectivity likely contributed to the analysis taking longer than initially expected.

In retrospect, the author recognizes that interview sequencing could have been approached more strategically, beginning with an initial cohort to establish a foundation and following up with additional interviews to gather detailed insights on specific events.

After gaining familiarity with NVIVO software, the author found it both enjoyable and useful for coding. Reviewing interview videos while coding in NVIVO was particularly beneficial. In hindsight, the author would approach certain aspects of coding differently if conducting interview coding again. For instance, coding over 100 names mentioned during the interviews proved cumbersome. In future studies, the author would consider whether coding each name is necessary or if names could instead be redacted or anonymized.

One of the author's key insights was the importance of consistently focusing on the research question and keeping it at the forefront. This was especially relevant during the interviews, where numerous interesting topics emerged that were initially coded but ultimately discarded, as they were not pertinent to the research question.

While conducting 35 interviews added richness to the study, the time required to complete both the interviews and, especially, the analysis suggests that limiting the participant count to around 20 may have been more practical.

7.14. Acknowledgement

The author would like to thank Dr Stephanie Archer for providing guidance and expertise to this study.

Chapter 8: Impact of the London Mayoralty and London Mayors on Londoners' health

"Mayors put their cities before their political parties"

Michael Bloomberg

8. Plain English abstract

This chapter contains two integrated studies: a document review involving an analysis of archives in the Greater London Authority and a cross sectional interview study with the same 35 participants as in the previous grounded theory study (chapter 7).

The aim of this study was to explore the impact that the London Mayoralty and each of the three London Mayors have had on the health of Londoners and to test the 5C Mayoral Framework developed in the previous chapter.

Findings from the data enabled the framework to be populated, with specific reference to the key actions and behaviours of Mayors Ken Livingston, Boris Johnson and Sadiq Khan. The application of the framework gave rise to a number of findings with positive implications for Mayors and policy makers, including further testing of the 5C framework as a proactive tool for present and future Mayoral priorities.

8.1. Introduction

This chapter integrates two studies. The first study is a short document analysis of archives in the Greater London Authority (GLA) at City Hall. The purpose of the document analysis was to provide a chronology of the main health related events and governance during the time of the London Mayoralty (2000 – 2021). This timeline was then used to give background structure and context to the second interview study.

8.2. Research Question

As previously stated, qualitative studies require the researcher to state the research questions rather than objectives or a hypothesis to test.¹¹ The research questions for this study are:

- What impact has the London Mayoralty and each of the 3 London Mayors had on the health of Londoners ?

This primary research question has a supplementary research question:

- What have the London Mayors done and how have they made an impact – testing the 5C Mayoral Framework for Action on Health.

The research questions set the foundation and guides the study, influencing the methods.⁵⁵⁸

8.3. Methodology

For this study, the author did not expect to find a single truth or reality. Instead, interpretation of different actors' views and perceptions was required. Therefore, the author felt that a qualitative approach was best suited. Qualitative research is defined by Creswell⁹ as 'an inquiry process of understanding based on distinct and methodological traditions of inquiry that explore a social or human problem'. Qualitative research is best suited when it is necessary to obtain a detailed understanding of a complex issue, which is typically best done by speaking to people.⁹

There are a range of approaches and tools for qualitative analysis. These are presented in appendix 1 and so are not repeated here. This section presents the chosen approach and rationale.

The chosen analytical method was the integration of document analysis into a qualitative thematic interview study. A widely cited definition of a theme from Boyatzis's is "a theme is a pattern [...] that at the minimum describes and organises possible observations or at the maximum interprets aspects of the phenomenon" (1998, p. vii).¹⁷

A key feature of thematic analysis is that whilst some research methods consider researcher subjective input a contamination to be avoided or mitigated, reflexive thematic analysis considers it a primary tool to for the benefit of the research.⁵⁸⁶ The key advantage of reflexive thematic analysis is that it offers theoretical and practical flexibility.⁵⁷⁴ Thematic analysis also has an in-built quality control; as it has a two stage review process whereby initial themes are reviewed against the entire data set.^{125,574} These features along with the value that the researcher's perspective brings makes it an inductive as well as deductive orientation.¹⁷ The author therefore viewed it as an appropriate option.

8.3.1. Ethical Considerations

Ethical considerations in relation to interview studies are considered in section 7.6 of the previous chapter and so are not repeated here.

8.4. Methods

8.4.1. Study design – Document analysis

The author's general summary of document analysis is presented in appendix 1 so is not repeated here. This section relates to this specific study document analysis.

The document analysis enabled background information to be obtained which lessened the burden on interviewees and also set out a chronological structure within which the interview could sit. The interview data adding richness and colour to the document analysis. The two research methods, document analysis and interview, were selected as in parallel they addressed the research objectives, both being appropriate to the research context and producing complimentary data to address weaknesses or risks within the other data. For example, the document analysis enabled the governance structure and key meetings over the last 20 years to be identified as a memory prompt during the interviews process. The match between the research objectives and document analysis and interview methods was not coincidental; the objectives and methods were developed in parallel.

In areas of policy, there are two broad sources of data: documents and people.⁵⁸⁷ The author combined them both for this study. The document analysis developed a chronological outline of events to support memory recall during the interviews.¹⁴ For this study, the author used the READ approach⁵⁸⁸ as it was simple, straightforward and appropriate for the purpose of this part of the study.⁵⁸⁸ First skimming the material to get a sense of the overall content.⁵⁸⁹

The document analysis was completed in July 2019 and updated in July 2023. It included access documents saved electronically at the Greater London Authority (GLA). It provides a

chronological ‘route map’ of the priority areas and key structures and governance related to health. The current London Mayor, Sadiq Khan, and his Mayoral Health Advisor, Dr Tom Coffey, gave their support to this research and have given full access to Greater London Authority documents related to any elements of health. This is the extent of their role in relation to this research. They have not had any input in the design, data collection, analysis, or reporting for this study.

8.4.2. Study design – Interview

The interview methods, participants and data collection for this study was carried out in conjunction with the grounded theory study (chapter 7) and so is not repeated here. See sections 7.7.1 to 7.7.5 of the previous chapter.

The questions related to this study were asked as the second part of the interview, following the grounded theory study questions. The questions cover the impact of the London Mayoralty and each of the three London Mayors on Londoners’ health. Where deemed helpful for context, historical facts and explanations have been included in the interview results section (sections 8.6.3 to 8.6.7)

8.4.3. Maintaining rigour

Maintaining rigour in interview studies is covered in section 7.7.7 so is not repeated here.

8.5. Results

This section presents the results of the document analysis and the interview study.

The document analysis is presented first. This is to provide a “thick description” to the reader. Guba and Lincoln, p801 in Denzin and Lincoln¹¹ suggest that one element of ensuring rigour is to provide background and context information (a “thick description”) to enable transferability to other settings, in this case other cities. Therefore, to support this element of rigour the author has included this as a product of the document analysis.

This background and context from the document analysis is also integrated into the interview study which follows. This study presents the results thematically and then mapped to the 5C Mayoral Framework for Action on Health (MFfAH).

Quotations are used in this study chapter. This is, as is usual in reporting interview studies, to add richness and give a sense of weight of feelings and also to illustrate diversity or consensus in the data. However, as the subjects being analysed and reported include current and recent former senior politicians including the current Mayor of London and recent Prime Minister, they are used much more extensively than perhaps would be usual.

8.5.1. Results 1 – Document Analysis

The results of the document analysis are presented here as key contextual events for the later interview study. The results are presented in chronological order such that the reader can see the evolution of the historical structure.

The GLA Act 1999⁵⁹⁰ was passed by the ‘New Labour’ government which was in power from 1997 – 2010. The Act, which has twelve parts and thirty four schedules, made very limited reference to health, with no direct powers related to health. The only reference was in Section 30 (the general power of the authority) subsections 4 to 6, whereby it states “*when the authority is carrying out its principal purpose*”... it “*shall have regard to the effect on the health of persons in Greater London*” (subsection 4). When exercising powers in relation to its principal purposes it shall “do so in the way which it considers best calculated to promote improvements in the health of persons in Greater London (section 5) and ‘promoting improvement’ includes “mitigating any detriment to health which would otherwise be occasioned by the exercise of the power.” (section 6). These references are repeated in section 41 (General duties of the Mayor in relation to his strategies). In addition, section 31 (Limits to Powers) (subsection 3) says that the Authority cannot incur expenditure related to providing health services. At the time of the development of the Act, the national context, driven by the Labour government, in respect of health was the reduction of waiting times for NHS healthcare. Also in 1999, in response to the national Acheson review of health inequalities, a London Health Strategy Steering Group was set up to oversee the development of the London Strategy. When the

strategy was launched, a new coalition for Health and Regeneration was formed to oversee and drive forward its implementation.

On 4th May 2000, an independent candidate, Ken Livingstone was elected as the first Mayor for London. The main policies pursued during the 2000-04 period and beyond were focussed on Mayor Livingstone's priority of establishing London as a global city. Commitments and actions were focused on transport, infrastructure and economic growth. In addition to the appointment of the Mayor, the GLA Act 1999 created the London Assembly which acted and still acts as an important 'check and balance' to the Mayoralty. The Assembly consists of 25 members elected at the same time as the Mayor. The Assembly, and its subcommittees, which has included a health sub-committee from the beginning, scrutinise and investigate all elements of the Mayoralty but in particular budget and statutory responsibilities of the Mayor. The Assembly has the power to call for amendments, and even reject, statutory strategies or budgets, if two thirds or more members request it. The Mayor and the Assembly form part of the Greater London Authority (GLA) which are located together at City Hall. The Mayor and Assembly serve a parallel four year term.

Following the election of Mayor Livingstone, discussions were held with the London Health Strategy Steering Group to look at ways that the GLA could provide support, given its responsibility to promote the health of Londoners and the alignment of its role with the priorities of the London Health Strategy. It was therefore agreed that the work could best be taken forward by the establishment of an independent London Health Commission, whose role it would be to both drive the development of the London Health Strategy priorities and to ensure that health was integrated across the range of London strategies, and particularly those of the GLA.

The chair was appointed by Mayor Livingstone and hosted throughout by the Mayor of London at City Hall. The membership of the Commission was large and broad, consisting of 49 members from across health, healthcare, private sector, think tanks and national government. Ten forums each took forward a priority area and an annual London Health Report reported back on ten high level indicators. The London Health Observatory led on data reporting. As well as a programme of work, the Commission influenced wider London policy through its Health Impact Assessment of Mayoral strategies and the Big Smoke debate which was

instrumental in putting pressure on national government to take action towards smoking legislation.

Separately from the development of the London Mayoralty, following the Health and Social Care Act 2001, in 2002, for the first time, a single London-wide NHS Executive was created which gave a coherence to NHS provision and planning across London and gave London a certain degree of autonomy.

On the 10th June 2004, Ken Livingstone was successfully re-elected as Mayor of London, this time as a Labour Mayor, having been recently readmitted to the party. This provided political alignment between the London Mayor and national government for the first time. The focus for Mayor Livingstone for the period 2004 to 2008 continued to be on economic development and transport, including traffic congestion and bringing the Olympics to London.

Towards the end of Mayor Livingstone's second term, in 2007, the GLA Act (amendments) 2007 was passed. The amendment, Part 5a, created the addition of a requirement to develop a Health Inequalities Strategy for London and for the appointment of a statutory health advisor. In addition, there were a number of amendments in respect of planning that gave the Mayor a positive power to grant permissions, whereas previously the Mayor only had negative powers to refuse planning permission.

Following Mayoral elections on 1st May 2008, Boris Johnson defeated Ken Livingstone and was elected the first Conservative Mayor of London. When Boris Johnson secured office in 2008, he pledged to support and strengthen the London Health Commission, making it clear that 'public health and health inequalities are important issues for London'. The re-launch took place in April 2009 and the Commission continued until March 2011.

In the same year, the global banking crisis affected all economies of the world, significantly impacting the UK and London.

The incumbent Labour government called and subsequently lost the general election in 2010. The incoming Conservative government meant for the second time there was political alignment between the London Mayor and national government. The conservative party would remain in power until July 2024. During the period 2010 to 2019 the UK was in a period of

austerity. Whilst the NHS was somewhat protected, austerity measures significantly impacted on all other areas of public spending, directly negatively impacting health. In respect of health services, despite giving the assurance of no ‘top down reorganisation of the NHS’ as part of wider controversial proposals, late in 2010, the Secretary of State for Health, Andrew Lansley invited the Mayor of London, London Councils and London's borough leaders to develop proposals for collective work on health improvement in London. The joint proposal included establishing a London Health Improvement Board (LHIB).

The following year, 2011, the London Health Commission was wound up by Mayor Johnson and replaced with the London Health Improvement Board (LHIB). The LHIB operated in shadow form ahead of the 2012 Health and Social Care Act following which, after lobbying and agreement, it was expected to be put on a formal footing and receive a 3% top slice of borough public health budgets with a further 3%, subject to London-wide agreement, to be used for pan-London health promotion activities.

After delay and ongoing controversy, the Health and Social Care Act was eventually passed in 2012. However, it did not include LHIB or the powers to provide top slice funding. With no mandate or resources, NHS London stepped in and grant funded the LHIB £2m to deliver pan-London work on alcohol, cancer, data transparency and child obesity, led by multi-agency project teams.

In May 2012, Boris Johnson was re-elected Mayor of London. His ‘six manifestos’ contained around 180 pledges across transport, crime, London’s economy and Olympics, supporting older Londoners and cutting waste and council tax. Health was not a priority and any areas that were related to health were focussed on greater enforcement measures such as ‘strengthening the force’, solutions for alcohol and drug misuse such as compulsory sobriety tags - rather than support for prevention and wellbeing.

In 2013, having used the grant provided by NHS London, the LHIB was replaced by the ‘London Health Board’ (LHB) which was funded by a modest contribution from various partners (GLA, London Councils, NHS England (London), Public Health England (London) and London’s 32 Clinical Commissioning Groups), with a total funding of £500,000. The secretariat was based at one of the partners; London Councils.

Following the wide ranging changes of the Health Act 2012 and the failure to secure top slice funding, the Mayor announced in 2013 that the London Health Commission (LHC) would perform a high profile London-wide review of health and healthcare in the capital, chaired by Professor Lord Darzi. In the autumn of 2014, the 'London Health Commission' published its final report and made a series of comprehensive recommendations aimed at improving the health and wellbeing of London's diverse population. These recommendations included targeted actions for all partners including London's NHS, local authorities, businesses and the GLA. The final report was published in 2014 and the Mayor's response published in 2015. Progress towards the recommendations that required Mayoral leadership was variable.

In light of the LHC recommendations, the London Health Board was refocused, and membership streamlined in 2015. This refocus pivoted to a more strategic and political leadership for health where political engagement could "uniquely make a difference". Following the LHC recommendations, one key priority was supporting London's shared ambition for health and care transformation through delivering on the London health and care devolution memorandum of understanding. In December 2015, London partners signed the London Health and Care Collaboration Agreement (devolution agreement) with national government.

Also in 2015, the NHS published 'The Five Year Forward View' which marked the transition from competitive market and the 'provider and commissioner split' to a more co-operative and integrated healthcare system. Initially this was through voluntary partnerships. Integration was further strengthened by the creation of the statutory 'Integrated Care Systems' in 2019.

In 2016, Sadiq Khan was elected as Labour Mayor of London, replacing Boris Johnson. Mayor Khan's priorities were similar to other Mayors with a focus on areas of direct control such as transport and policing but his manifesto was more explicit about the role he had to play in improving the health of Londoners, acting as an advocate for London's NHS and addressing health inequalities. 'Improving London's health' was an explicit chapter in his manifesto describing the leadership role in health, improving public health and greater support for Londoner's mental health.

Mayor Khan continued to chair the LHB as set up by his predecessor but he reviewed it and made changes in 2017 to increase membership to include trusts and make proceedings more transparent. Also in 2017, the London Health and Care Devolution Agreement was signed.

Further changes were made to the LHB in 2018, to increase Borough membership to five political leaders and the board is now also open access webcast, having previously been held in private.

In 2019, in light of a new Regional Director for NHS London, London Health and Care Vision was launched at the London Health Board conference. The London health and care vision was a build on from the 2014 London Health Commission report. In 2020, the LHB membership was again updated to reflect Integrated Care Systems (ICSs). Trust, acute and mental health membership was stood down and two independent ICS Chairs appointed as well as the London Medical Director.

In early 2020, the Covid-19 pandemic hit London first and hardest with major immediate and ongoing repercussions for health and healthcare.

Where deemed helpful for context, additional historical facts and explanations have been included in the following results sections.

8.5.2. Results 2 : Interviewee demographic details

The interview participants were the same as for the grounded theory study (chapter 7) and so are not repeated here.

8.5.3. Results 3: What Impact has the London Mayoralty had on Londoners' Health ?

There was universal support for the benefits of the London Mayoralty.

“Benefits are absolutely massive” Participant 2

“if you can change the way Londoners move and connect in the city, if you can change the air we breathe, if you can focus on social cohesion, connectivity and wellbeing in its greatest forms, and if you can continue to give Londoners every opportunity for meaningful and good quality work and health across your life course, then what you're doing is literally ticking off

Michael Marmot's almost six principles of addressing inequalities. And in its broader sense, that's what the mayoralty has been able to do now." Participant 37

"the importance of just the position of mayor representing a world city...combination of us [local authorities and London NHS] doing the legwork and the figure of the London mayor managed to get them round the table. I don't think it would have happened without a mayoralty." Participant 20

"I do remember the period between when we had no mayor...we really struggled. All the time that we look back on whether a mayor has been truly effective or not, at least we have something, whereas that point, that time was pretty dire in terms of trying to get... I was involved in health policy," Participant 15

"We're definitely better off with it [the London Mayoralty] than without it." Participant 14

The cited benefits also included the engagement and involvement of Londoners themselves.

"I think democracy is a domain of health. So... and that sense of involvement in decisions about your lives and all of that kind of stuff, and all the research has shown says Londoners would not go back to a pre-mayoral world, so I think Londoners feel a greater sense of political engagement and democratic engagement as a result of the mayoralty, and I think that's a health outcome." Participant 32

Participants felt that the Mayor was a Mayor for London somewhat over and above being a member of their political party.⁵⁹¹

"London also has a very distinct identity and it's quite a galvanising role.-- the Mayor of London sort of spoke. It felt like he spoke for London. There was a sense that he spoke for London rather than a political party." Participant 22

"certainly, I think it's important because I think the Mayor is a natural leader in London whichever party and somebody who can fight for Londoner's health." Participant 34

"there's been actually admirable continuity between mayors on some of those wider improvements to the city, and of course, we shouldn't...you know, the city, compared to how

London was in the 1980s, London has boomed economically, and you know, seen huge investment in public facilities.” Participant 15

At least one participant identified there was a need to explain to the Mayor their role in relation to health.

“I think health has been a cross cutting theme and a principle in that Act-- But I think there’s always been a case to be made, and quite a lot of explanation with all three of the mayors, as to, “What is this all about?” and, “Why do I do health? Why isn’t it the NHS’s job?”
Participant 4

“there’s a big discussion to be had there [on health being broader than the NHS] where the mayoralty does have that wider lens on it” Participant 7

“The sort of things you can do, not with health powers, but with powers to engage populations at large about how to tackle and prevent particular medical conditions-- They talk about the non-communicable pandemics that have existed for a very long time, like diabetes, like smoking. If we can crack those as hard as we cracked on COVID, which, by the way, was an awful lot of stuff that happened outside the medical system. Then there are thousands of Londoners whose lives would be much better for it.” Participant 7

Participants also referred to the Mayors’ role of speaking for London, representing London both nationally and internationally.

“One of the things the... which is really important that... the intangible is the narrative, the narrative about London, both to national government, the narrative of a single mayor talking to Londoners on issues of health, they don’t actually necessarily have to do anything, but if they’re talking about issues of health. And going back, for example, the pandemic, you had Sadiq every single day advising people about how to keep safe, what we need to keep safe, why it’s important, inequalities, access to vaccination, challenging government on isolation payments, you know, so there’s the advocacy role was absolutely huge and never bigger during the pandemic, in other areas as well.” Participant 9

“one thing he [the Mayoralty] was really good at is he changes the narrative about London. Before Ken Livingstone, London doesn’t get described as a global city competing with others and therefore don’t bother us about the rest of the country; we’re the economic powerhouse. - what it does do is open up doors to talk to other global cities.” Participant 9

This is important as research shows that global cities have more in common and therefore more to learn and share with other global cities than they do their ‘host’ nations.

Participants identified the wider context in which a Mayor operates as an important factor in what they did and how they operated. There was a view that the Mayor helped bring and maintain social cohesion for Londoners not only as regards health but in wider economic terms.

“I mean clearly the economics has been... you know, this is difficult, isn’t it? But the mayor, you know, crudely, you’ve had a nice kind of cosy period up to 2007, isn’t it, where I’m not saying life was perfect and I’m not saying London wasn’t unequal, but it feels like a positive bloody nirvana compared to what’s happened since 2007/2008, isn’t it? So, economically I would have thought outcomes have, you know, depending on how you look at it, have stagnated or deteriorated really in the round, isn’t it? You know, financial crisis, austerity, you know, Brexit, we all know it, COVID, etc., so that’s been an incredibly tough environment economically, I think. And loads of Londoners won’t have had a material pay rise during that period, so that’s significant. I think cohesion-wise, all the evidence I’ve seen from the surveys says that social cohesion has remained strong in London. I know we’ve had setbacks, but largely they’ve been isolated, haven’t they, incidents? And I think the mayoralty can reasonably claim to have played a role in that social cohesion. So, I think that’s a helpful impact of the mayoralty. And, yeah, so I think mixed picture, I guess, good in some domains, less good in others and then you’ve got headwinds and the powers that kind of interact in a tricky way.” Participant 32

“there is much more awareness of the health impact of non-health issues, than there probably was 10 years ago, certainly than there was 20 years ago when the Mayoralty began.”

Participant 1

“We’ve been told we need good air quality; we didn’t even know what air quality we had 10 years ago. So, yeah, I think you need to contextualise it. But I think the same holds true for

Sadiq in that they do what is politically convenient for them and they do stray away from controversial decisions, conversations, that could polarise parts of the electorate”.

Participant 3

However, whilst national and international context is important, Mayors, particularly of global cities such as London, have an important role in influencing nationally and internationally and directly shaping city context.

“it’s a bit chicken and egg in respect of the Mayor needs to respond to those things but then can equally highlight those things as being an issue in the first place” Participant 34

“I doubt ten years later... it would be so contentious and might be a vote winner. So, I think there is something about understanding the nature of society and if you're trying to be leading edge, that may not be comfortable to a politician.” Participant 41

[In response to the question: has there been an evolution of Mayors role in health because the context was different so therefore the importance of it has evolved?] *“Well, it’s a good question and it’s hard to know isn’t it because you can never have the same time twice, can you? I think it’s possibly a bit of both. I think I would say that I think the priority of health took a slightly backwards step if I’m honest when Boris was Mayor in terms of the importance -- towards the end of his term I think he was more knowledgeable and kind of confident about those issues. It’s an evolution of the role; it’s a change in the times in which we are living. I mean that obviously has been most write large by Covid where the current Mayor has met the NHS and Public Health England every week now for the last two years or almost that amount of time. But I think it does also reflect interests and politics as well as that”. Participant 5.*

“And then the next mayor, Mayor Khan was able to come in, and to some degree on a platform where that felt legitimate to think about health in that way, you know, how London compared internationally. And that was quite motivating for everyone, but also, the disparities in health, which is not peculiar to London, but you know, it gave that mayor the opportunity to think about the kind of health dimensions that he wanted to be known for. So, you can see the kind of progression over the three mayoralities”. Participant 8

Public perception is important, particularly when every four years the public vote to decide if

you stay in your job as Mayor. Participants identified that the public associated the Mayor with health and healthcare in London.

“even Assembly members, and certainly the public, don't understand the distinction between the mayor's responsible for police and transport, that has nothing to do with health [meant healthcare]” Participant 41

It was felt that there was always more that could be done by the Mayors.

“Has every Mayor taken full advantage of the powers that they've got to improve health?” I would say almost certainly not because there's always more that can be done. Participant 5

“the mayoralty has, depending on what strategy the approach, they can be quite precisely focused on improving health, or we can depend on their remit and their provenance in, you know, some of the wider, the bigger other areas of health, that, you know, we might expect to improve health. Particularly environment, and to some extent, transport, and crime, of course, and disorder. So, the mayor has quite a lot of leverage on the wider determinants of health.” Participant 8

8.5.3.1. The BMJ Question

The London Mayoralty was created in the year 2000. Before this in 1999, the British Medical Journal (BMJ) ran a series of articles essentially concluding that a London Mayor could have a bigger impact on Londoners' health than London's 32 hospitals.⁵⁹² In this context, participants were asked if they thought the that London Mayoralty had achieved this aspiration.

Participants were quite evenly split between those who thought the Mayoralty had a greater impact on Londoners' health than hospitals and those who thought it had not. There were certain participants who strongly agreed:

“So, I'd certainly agree with the initial statement, and I think any of us would, wouldn't we, you know? It's because we know it's determinants of health not healthcare that makes a

difference. Has the London mayoralty achieved that? Do you know, on balance, I think it might have done, you know.” Participant 20

“yes, in terms of health outcomes and health inequalities... yes.” Participant 2

“It is a big one. (Laughter) I mean, yeah, I think, I haven't read the article, but I've understood the logic of it. I think there is some truth in that because of that wider determinant point.” Participant 7

Some Participants were a little more circumspect but still believed that the London Mayoralty had had a bigger impact on Londoners' health than London's 32 hospitals

“it's a good question. I'd say probably... well, in some... lots of domains, in some domains, yes, in some domains, no. .” Participant 32

“I think it's been positive. I think it's been very positive. I think Boris Johnson aside, I think they've had major impact.” Participant 9

“in terms of preventing poor health, then yeah, it would have done, because hospitals don't do anything really about that. In terms of helping people who are already sick with their diabetes or to get a new heart, well, we haven't done that.” Participant 36

Whilst other Participants thought that the London Mayoralty had not had a bigger impact on Londoners' health than London's 32 hospitals. The 'No's' were also divided between those that did not think it was even possible for that to happen and those who thought it perfectly possible, just not achieved.

“No, absolutely not. But I don't think that aspiration was realistic.” Participant 21

“Well, no. But then why not? I think there's a question here about what powers does the mayor have, and so what it is reasonable to expect the mayor to be able to do, particularly in a world with sometimes slightly protective boroughs.” Participant 23

“No. No, no it hasn't... I mean, I suppose it probably hasn't made as much of the opportunities that it could do. ...it's fairly small fry activity that happens on the wider determinants, whereas the NHS continues to get a huge amount of investment to tackle the problems, but you never turned the tap off really.” Participant 25

“I think it has not achieved that aim... I think it absolutely could have done. And that it's a sad thing that it has not done.” Participant 31

8.5.4. Results 4 – Mayor Livingstone

8.5.4.1. Introduction: Mayor Livingstone

Unlike many other electoral systems, the London Mayor takes office immediately after the results of the election. Therefore, particularly for the first Mayor of London, preparation and arrangements needed to be put in place regardless of whichever candidate was successful.

So, the government office of London which was responsible for setting up the forerunner to the GLA needed to start to function in both preparation and to be ready to start from day one of the London Mayoralty. In respect of the health function, a senior member of the health team from the NHS region was seconded, to ensure that this was part of the set-up of the GLA.

Whilst the Mayor and architecture of the GLA did literally ‘turn the lights on’ and start to function at 9am on the 4 May 2000, there was a legacy of learning and assets that needed to be brought in to play. This included the London health strategy and the collaborative process and arrangements that had been set up.

8.5.4.2. Early Days and Context – Mayor Livingstone - Big bold ideas

Ken Livingstone was elected Mayor on May 4th 2000. He had previously held the role of Leader of the Greater London Council (GLC), which was abolished by the Thatcher Conservative government. Mayor Livingstone therefore already had a deep understanding of

London and London politics. Hence his famous line on his election victory "As I was saying before I was so rudely interrupted 14 years ago..."⁵⁹³

The main policies pursued during the 2000-04 period and beyond were focused on establishing London's global city role. As a result, his actions were committed to transport, infrastructure and economic growth. In respect of health, Livingstone had committed in his pre-election hustings to establish what he called a 'London Health Commission' to examine how Londoners' health and health inequalities could be improved. Therefore, the arrangements that had been in place for the London Health Strategy morphed, with a few additions, into the London Health Commission.

Participants felt, due to his background and appetite, Livingstone came with a clear agenda and plan.

"some politicians turn up and they've got an agenda of what they want to achieve and it's a substantial agenda. And that's how they work. And Ken was like that. " Participant 31

"whatever you think about Ken and how he's ended up, I think, you know, he knows London intimately and is a real sort of details person and knows the detail of sort of policy and strategy and how things work and how to get things done, and I think as an incoming Mayor that knew London and the way London works in that sort of way, he was the ideal sort of person to have got things up and running." Participant 4

"I thought of all the three mayors, he's been the great visionary" Participant 43

"the first mayoralty was that first four years was kind of getting a grip, again, so there were issues like the statutory strategies, which were different to what they are now, so there's things like noise strategy that actually added a lot of value in London, because there hadn't been any consistency around noise standards, for example, there was loads of variation of approaches, there was no way of linking that consistently across London. " Participant 2

"I mean, the Ken administration was super organised, very politically disciplined and strategic, if a bit kind of mad and unpleasant as well. Some quite unpleasant individuals, of course were in his team. But it was very, very organised and had a clear view about things

and that was the kind of London as world city period where he really embraced that kind of approach to London... they kind of managed to bridge that to international capitalism quite easily.” Participant 11

”his biggest impact would be not because he was interested in health per se, it didn’t feel like that to me, but he was interested in public transport and making the city better, which of course has a very significant benefit on health.” Participant 20

“I’d characterise him on, he did big things, like really big things. And it was about transformation.” Participant 9

8.5.4.3. Health and Healthcare – a Mayor Livingstone priority ?

Participants did not feel that health was a priority for Mayor Livingstone. This was in part because of the context of the time, where health was even more strongly associated with healthcare (and therefore an issue for national government rather than the Mayor) and because the Mayoralty was newly created with other priorities, not least establishing itself.

“I cannot remember health being discussed very much at all.” Participant 11

“I don’t think it was a massive priority for Ken himself personally... There were bigger issues to deal with in establishing a new Mayoralty, I think the actual powers around health were pretty weak, as you know” Participant 4

“So, I feel like that in the first Mayoralty I think really new grounds was broken in terms of how London analysis... an analysis of pan-London mayoral policies against health and health inequalities. I think that’s a huge step to have taken.” Participant 5

“Ken personally was driven by trying to make life better for Londoners, particularly for poorer Londoners” Participant 26

“I don’t think it was probably front and centre of what he was trying to do, in part because he was the first mayor, he was very focused on getting the institution up and running, sorting out

TfL. And then later on in his, around the Olympics, even the congestion charge wasn't about health. It was about reducing congestion, you know? So, I think it was peripheral I think for him.” Participant 16

However, whilst it was not a personal priority for Mayor Livingstone, participants felt he did empower others to lead on the health agenda and that he embodied the convening role in his position as Mayor.

“I think he agreed with the case that was made, as in, “Let’s go with what we’ve already got and kind of keep some momentum going where it started, and that sort of buy in from stakeholders that we’ve already got,” and largely kind of left people to get on with it really, I think.” Participant 4

“first mayor, Mayor Livingstone did have an interest to some degree. It didn’t completely run through, but it did run through enough to ensure that the health advisor of the time was able to set up, for instance, a London Health Board [actually the London Health Commission]. And that brought together the convening power of the mayor;-- So that brought some great benefits in terms of bringing health into people’s awareness in London and particularly on nutrition and on, you know, healthy food and so on in London.” Participant 8

“I mean, I would go to functions that were health related and the Mayor would be there, and he would be in animated conversation with my predecessor, who had an excellent relationship with him, about issues that she clearly was interested in and so was he. So, I just got the impression that this ‘culture’, if you like, of concern for health inequalities was not something that was just thrust upon the first Mayor and I genuinely... I mean, I think it’s pretty obvious that the statute would not have been allowed to go through in the way that it did if the Mayor had been negative towards it.” Participant 42

“So, but I don't think, I don't recall him [Mayor Livingstone] being as a mayor, it reflects the point you made at the beginning. I didn't really, I wouldn't really associate him with a champion for health improvement in the capital, really.” Participant 20

8.5.4.4. Healthcare

Mayor Livingstone was predominantly described as not focused on healthcare. Participants describe that he concluded that it was not part of his remit and he thought that it would require a disproportionate effort on his part to have any positive impact. There was also a view that he thought that healthcare was too difficult, too complex, too political, too likely to just result in getting stuck in the mire without having any impact. Participants thought that this stance softened slightly towards the end of this tenure through the work of Healthcare for London.

“Ken definitely wasn't interested in health [meaning healthcare]. I mean, you know, his view was that it's madness to run a system like that on a national scale” Participant 31

“I think it's their wider functions [Transport, Housing] that have had much more impact on the health and wellbeing of the city than any actual involvement in health” Participant 15

“He took an interest in healthcare for London so Individual Fourteen and I used to go and see him regularly and brief him about what we were doing and what the emerging conclusions were. And he, at the beginning, he was resentful and difficult about it. So, his attitude was you're not going to do anything that's, you're bureaucrats, you're employed by the system, you're not going to do anything that's of any value or any relevance and I'm not really interested, but I'd better find out what you're doing in case I don't like it and I don't agree with it. So, his attitude to some of our presentations was pretty rude and pretty dismissive. However, over the course of the time that we went to see him, he did get more engaged and more interested in some of it, and I think that that was largely due to Individual Fourteen's leadership..” Participant 28

8.5.4.5. Housing Economy and Regeneration

Participants identified Mayor Livingstone as having a strong focus on the economy. The work on housing, however, was related to health by participants.

“he was most interested in the housing and the economic powers really because his analysis was those were what were most important for health.” Participant 26

“the big thing is urban development and he set up a healthy [London] development unit which was to engage with the big housing and planning in places like Thames Gateway and a whole range of other areas, where planning and health actually became one. We did an awful lot of work on developing impact assessments, intervening, getting health in developers thinking. So, there was an awful lot of work on what is a healthy city.” Participant 9

“Ken had an economic view of what he was going to do and also he’s very 20th century. He’s very top down. And actually, the mayoralty, in his time it really needed that because he did sort of setting up TfL, Tubes, escaping from the stupid funding system....Attracting loads of developers to build stuff because we were still in the first ten years of London reversing its 50 year decline. From London’s population falls until the end of the Cold War, and then it starts to rise. But it takes five, seven years before people notice that. Participant” 31

8.5.4.6. London Health Commission and Health Impact Assessments

The government office of London was responsible for setting up a function that would become the Greater London Authority, because once elected the Mayor is expected to hit the deck running that same day. Therefore, the function needed to be ready to go and support the Mayor, whichever Mayor was elected. Also prior to the Mayoral elections, Donald Acheson was commissioned to undertake a national review of health inequalities. In response to the findings of this review, a London Health Strategy Steering Group was set up to oversee the ‘London Strategy’, which was London’s response to the national Acheson review of health inequalities. The Health Commission was a standalone quasi-independent body of a broad range of members. It produced a whole range of reports and importantly produced ‘health impact assessments’ (HIA) on other, non-health focused, Mayoral strategies. Other priority areas included, regeneration, inequalities, black and minoritised health, community development, and setting up the London Health Observatory which was the mechanism used to monitor what was happening and produce quantitative analysis. Later priorities included drugs and alcohol, mental health and ‘smoke free London’. The Mayor formally selected the chair of the Commission but did not sit on it himself.

“one major thing that Ken did for health was set up the Health Commission.” Participant 3

“the London Health Board of the time [meaning the London Health Commission]-- it was seen as very progressive and people welcomed it, and it did focus in on particular elements of health, you know, on these sorts of preventative elements.” Participant 8

The London Health Commission was slimmed down in its later years before finally wound up in 2011.

8.5.4.6.1. Health Impact Assessments

Health Impact Assessments (HIAs) were seen by participants as a significant contribution of the London Health Commission. HIAs were developed as a structured method for assessing and improving the health consequences in non-health policies. Mayor Livingstone agreed that a HIA should be undertaken during development of each of his mayoral strategies as it provided a way for him to fulfil his statutory requirement to have due regard for the health of Londoners. From 2000 to 2008, HIAs were undertaken on the majority of Mayor Livingstone’s strategies. They were seen as a real opportunity to embed health into the work of the GLA and its functional bodies and to create a greater understanding about the wider determinants of health, incorporating health into all other Mayoral strategies. Whilst HIAs did not continue into Mayor Johnson’s Mayoralty, they were seen as being influential in the development of the role in health brought about by the GLA Act 2007.

“we did a lot of work on the health impact assessments to be able to influence all of those strategies, which was the Mayor’s responsibility, to bring health into account. -- Ken was very receptive of that and saw it as a good way to – so, I’m saying in terms of the things where – and I’m using that as an example of where he saw how the health of Londoners could be improved by his strategies.” Participant 33

“health inequalities impact assessments – I think they were both health and health inequalities impact assessments – of all mayoral statutory strategies.-- Ken Livingstone very much got the... I mean obviously health inequalities would be from a political point of view for him would be something that would be very important to tackle and I think he got the health in all policies agenda and the fact that through mainstream policy work you can

improve health, which are obviously the levers that all Mayors have at their disposal. So, I felt like he really got that.” Participant 5

“we did an awful lot of work on developing impact assessments, intervening. So, there was an awful lot of work on what is a healthy city.” Participant 9

“we did a lot around the health, very specifically the health impact of each of the strategies, because it was the first time they were being done.” Participant 2

8.5.4.6.2. The big smoke debate

Another influential area of work led by the London Health Commission was the ‘Big Smoke Debate’. The ‘Big Smoke Debate’ was engagement and a conversation with Londoners on the impact of smoking. At the time, it was the biggest public engagement globally on a health issue (almost 50,000 responses were received) and it gave political leverage to support the UK banning smoking indoors.

“the big smoke debate-- had kind of spearheaded, and it was ahead of the legislation of the smoking ban in public places--findings from that debate showed that a lot of people would support such a ban and it was a great concern for Londoners for health the impact of passive smoking on Londoners’ health. So, yeah, that was a big project that the Health Commission ran back in those days.” Participant 5

“it was only until Ireland introduced a smoking ban in pubs that the whole system woke up. And it became newsworthy and then Ken was interested. And Ken allowed us then to have the big smoking debate in London.” Participant 3

“the big smoke debate was really massive in getting a lot of the tobacco control changed, which is nothing to do with Ken having any powers around tobacco or whatever, but being the mayor of a big city, with partners that were orchestrating this conversation about the risks of tobacco smoke, working with national politicians that were maybe coming at it from a particular place and didn’t feel they had the public mandate behind them was massive. I

mean, that shot it forward, it was really hard work but that was incredibly powerful.”

Participant 2

8.5.4.7. Transport

Mayor Livingstone was identified by participants as having a strong focus on transport, covering congestion charging, improving public transport, particularly buses, and setting up the public bike scheme, which ironically went on to be colloquially called the ‘Boris bikes’ scheme.

8.5.4.7.1. Congestion Charging

Participants identified that Mayor Livingstone pioneered and led on the congestion charging in London. Participants also identified Major Livingstone as arriving with a clear agenda and “*a very aggressive team, saying we promised the congestion charge, we’ve got to get that in*” (Participant 26). Congestion charging, through reducing emitting traffic, will have had a positive impact on air quality and therefore health, particularly in central London.

“not only did he have the bravery and sort of courage to implement the congestion charge, I think one of the best things he did as well... so basically Ken’s biggest impact on public health I would say would have been through his transport policies, and primarily I think thereof the congestion charge” Participant 43

“the landmark things for Livingstone for me are the transport things, are the congestion charge and the buses.” Participant 32

8.5.4.7.2. Public Transport

Participants identified Mayor Livingstone having a major impact on public transport in London, particularly buses, and through this having an impact on Londoners’ health. Wider advances under Mayor Livingstone included environmental sustainability with the introduction

of the Oyster card scheme. After 2 years, public transportation was up 5% as well as 100,000 fewer paper tickets being sold - a saving of 32 million paper tickets a year.⁵⁹⁴

“he started the whole kind of green, greener transport thing. I wonder whether he even meant it. Yeah, but anyway there was all that kind of congestion charging, bikes, stuff did start under him. There was the kind of green person in those days. There was a kind of green thing which had a health dimension obviously at, I don't think it was really framed in those terms.”

Participant 11

“It was all about how to make the most efficient transport infrastructure so that people could commute and jobs.” Participant 3

“I see him as something of a champion of better travel. You know, I sort of associate him with seeing improvements to public transport in London. Participant 20

“The overarching thing was doing good for London and the expertise was particularly in things like transport where we had a great command, and I think you could argue better transport equals better health. The thing that Ken brought in is that everybody should be within five minutes of a bus stop.” Participant 34

“transport type initiatives were very significant, and in many ways, I think that's continued through all the mayors that actually, it's there – I know this is an easy point to make, but I think it's their wider functions that have had much more impact on the health and wellbeing of the city than any actual involvement in health services or even wider public health for that matter” Participant 15

“he was certainly very committed to the concept of working across London to try and make some fairly bold moves to improve health and well-being and particularly to address inequalities. So, I think really pushing on developing the public transport system: a massive thing for the good which I think has been underappreciated; a big impact obviously in air quality but also for some ability to get around, efficient working.” Participant 18

“what he did on transport had a significant impact on health because he transformed buses and in doing so he transformed people's mobility; I remember at the start of the 2000s -- I

remember waiting half an hour in the rain all the time [for a bus]. And suddenly buses were things that came every two or three minutes. That had never happened in my life, and Ken made that happen. And so suddenly you could move. So, I bet that actually had quite an effect.” Participant 31

“I think Livingstone’s mayoralty was probably the strongest on transport given... it was Livingstone that massively expanded buses and I think he obviously did the congestion charge” Participant 32

It was not just proximity and frequency of buses that were improved. Mayor Livingstone also reduced bus fares with a flagship £1 fair. Mayor Livingstone also changed the bus charging structure, so that users were able, for example, to get a zone one and zone two travelcard for buses.

“he’d made the buses cheaper for people in the suburbs as well, and that then led to a huge success of the buses when, you know, bus passenger numbers went up to about 6 million a day.” Participant 43

“It wasn’t just bus, it was overground trains too. Mayor Livingstone took over the poorly performing North London line run by Silverlink and turned it into the London overground. I think that’s [taking over the North London Line and creating the London overground] probably one of his greatest achievements because now it’s probably the most reliable and successful railway line in the country and, the overground network has expanded quite substantially under TFL’s control So, I would say that’s one of his greatest legacies.” Participant 43

8.5.4.7.3. Cycling

Participants credited the London public bicycle hire scheme to Mayor Livingstone.

“when everyone talks about Boris Bikes, I think the scheme was actually, the gestation was under Ken Livingstone and Johnson, he implemented it and credit for it. We should have learned a lot from that, yeah.” Participant 20

*“things like Santander Bikes-- this is well before, you know, they were Ken Bikes.”
Participant 2*

“And they also had the cycle scheme which became Boris Bikes but actually weren’t Boris’s Bikes, they were Ken Livingstone’s cycle scheme.” Participant 9

“what became Boris Bikes was really Ken’s Bikes, wasn’t it? So, you know, so I think Livingstone arguably made a big impact... made the biggest impact.” Participant 32

“bikes became Boris Bikes, but of course, they were part of the initiatives that that [Livingstone] mayoralty initiated.” Participant 15

“that he did sort of start the move towards what we now know as the Boris bike. It was Ken.” Participant 33

“active travel I think started back then, but also the Boris bikes, which weren’t Boris, but Ken, you know, but a really kind of major bit of kind of active travel/early clean air-type infrastructure, you know.” Participant 36

It was slightly ironic in that whilst Mayor Livingstone agreed the bike scheme, he could not actually ride a bike himself, a fact which one participant recalled.

“I still recall a press poster shoot outside City Hall, or the old City Hall as now we should call it --and the funny thing about the press conference was that where his deputy could cycle the bike round City Hall, Ken couldn’t move on it because he’d never learnt to ride a bike so he sat very nervously on it and daren’t move it, because not only could Ken not ride a bike, he couldn’t drive a car either. So, I think it was that kind of thinking which helped inform him doing things for the sort of little man or the little woman.” Participant 33

8.5.4.8. Olympics

The bid for the 2012 London Olympics was developed during Mayor Livingstone's tenure. For Mayor Livingstone, the only, or certainly, primary driver was always the regeneration of north east London. Mayor Livingstone had no interest in sport, and yet he saw the potential of sport and in particular the Olympics in respect of regeneration of east London.

"using the Olympics as a way of regenerating the Stratford area, because of course he had no interest in sport either." Participant 43

"from Ken's point of view, the Olympics was a massive Trojan Horse to redevelop East London, and there were huge health benefits from that, and I think by then we'd sort of coined these phrases around the, you know, that tube map was kind of common currency by then, and that losing a year of life expectancy for every stop on the Jubilee Line, and it really tied in quite well with the Olympics and the development of that part of London." Participant

4

"he brought the Olympics, somebody who hated sport." Participant 9

"London's transport infrastructure at that point, the East London Line, -- the whole upgrade of the North London Line, the East London Line, London Overground really effectively was leveraged on the back of the Olympics. And it's a very significant new bit of much higher quality public transport infrastructure, and in that good public transport is more active than other modes of travel, probably that has had quite a positive impact in terms of health."

Participant 26

Participants identified that health did not feature much in the Olympics planning or thinking.

"We were certainly there for an emergency response, but there was huge involvement in that and how do you provide healthcare to the millions of people that were going to arrive and all of the different countries and their different health systems and huge amounts about different regulation -- In terms of its health legacy, there was certainly huge ambition around it and obviously Boris talked a lot about it. I don't think from the reports I've seen; I've read all of them in detail that that has been realised." Participant 41

“Oh, the Olympics, of course. Now, I should have given Ken a bit of credit for the Olympics, I would have thought, but in truth, I don’t know what impact the Olympics has really had on healthy lifestyles in London. The studies I’ve seen don’t suggest it’s been much, but I think the event of the Olympics was a powerfully kind of social cohesive moment. So, I would attribute the Olympic benefits more in the social space” Participant 32

8.5.4.9. Changes to the GLA Act (2007)

Participants identified the amendments to the GLA Act in 2007 as having a positive health legacy credited to Mayor Livingstone and his wider team.

“I think he had quite a big effect actually partly because obviously improving Londoners was the line that was built into the GLA (2007) Act.” Participant 33

[in relation to the GLA Act 2007 changes]... “it doesn’t matter which Mayor we have; they have now got to take account of this, it’s a statutory responsibility to write a Health Inequalities Strategy”. In essence... if you like, [it was] our insurance policy against a change of Mayor ...that didn’t want to be interested [in health] you could slam the statute in front of them and say, “You may not be interested but you have to be interested”. Participant

42

“he was involved in bringing in the provisions under the GLA Act to have a health advisor; I mean, the statutory health advisor, I think is a pretty significant thing. -- structurally and systematically, you know, it’s significant medium to long-term impact.” Participant 36
“I don’t know the process by which that was secured but it could not have happened without his support or interest I’m sure of that, absolutely.” Participant 5

It was not just the changes to the GLA Act 2007 that had direct reference to health. Participants referenced the wider powers achieved in the Act which whilst not directly relating to health do have a significant impact on health (i.e. the wider determinants). For example, the Act also gave the Mayor the London Regional Housing Corporation budgets, which was a main revenue budget supporting affordable housing delivery.

“Ken was an empire builder, so he was perfectly happy to get more powers, “Give me more powers wherever you can,” Participant 26

8.5.4.10. Mayor Livingstone – the end

Mayor Livingstone’s personality and background was viewed by participants as having influenced his style, approach and priorities.

“he understood about evidence and about science and about research and that that was the foundation on which you should actually have policies and things. So, from that point of view he warmed to those approaches of having the evidence to go into his strategies and being able to have a proper process on it.” Participant 33

“I think by the end of two terms, he was running out of steam, and he ran a pretty lazy campaign, I think, really, and underestimated Boris.” Participant 4

[under Mayor Livingstone] “there seemed to be much more of an emphasis on stuff that was more community roots, grass roots kind of stuff. So, lovely projects that had, where people with mental health maybe working in an allotment or something like that, which is incredibly worthy. I think Boris would have thought how am I ever going to scale that up? I don't have any money and I'm not really that interested in it” Participant 10

“Ken losing was kind of deeply ironic because we had some quite detailed plans in terms of what to do with those powers.” Participant 26

“What I do think that Ken Livingstone did is the way he drove the equalities agenda, I think has had a profound impact on I think probably British society, but certainly on London. I remember when I was first looking back, I was a relatively young manager, having to sit round in all of these women's committees and all these race committees thinking, “What the hell is this all about?” And of course, I was too young to really understand the political importance and the social importance of what was going on. But retrospect, I think that's probably the biggest legacy that he left.” Participant 46

“Ken just thought he was right and just got on with it. That’s what got him into trouble in the end, he just bruised people through and had a poor relationship with the boroughs.”

Participant 9

8.5.5. Results 5 - Mayor Johnson

8.5.5.1. Introduction: Boris Johnson

When Mayor Johnson took office on 3 May 2008, there was an established infrastructure and governance around health, a draft health inequalities strategy and a small health team at the GLA.

8.5.5.2. Early Days and Context – Mayor Johnson

Where participants felt Ken came in with a clear plan ready to hit the floor running, participants thought the opposite for Mayor Johnson. Participants identified the first six months of Mayor Johnson’s tenure as being quite turbulent.

“City Hall was not, in my view, the most functional of organisations” [during the first year of Mayor Johnson]. Participant 10

“I then worked through the transition to Boris Johnson's first term. So, I saw the kind of carnage and then some of the emerging strands of what became his stint. --- Chaos”

Participant 11

When explored further....

Interviewer:[then so Boris comes in. Then what happens?] Respondent: *“Oh, just a sort of mess and a shambles for about six months of people coming in, being fired after five minutes.*

And then it settled down--- Individual Seventy Nine, you know, the kind of person who

actually ran the place. Then it settled down very much settled down and was quite successful really.” Participant 11

“So, when Boris arrived, he didn’t have any plans for anything at all about anything...His administration stumbled around for, I mean, by the time they went through three chiefs of staff in the first six months, he kept hiring advisors and firing them because they’d be liars or cheats... [Conservative] Central office started dropping people in to try and manage Boris, you can...and he was not manageable, so Individual One Hundred and Ten, I think, who was from...who’s now a Tory MP, suddenly was sharing my office, but was plainly not particularly liked, but Boris quite liked whoever he’d met over dinner last night was whoever he...that’s who he wanted to listen to, as it were, so it was just kind of weird.... And it was a very difficult time.” Participant 26

Which probably explains the following.

“there wasn’t a lot going on between the mayor and the boroughs in the first few years on health. We in London government, yeah, we thought there should be more, but it wasn’t a priority.” Participant 31

8.5.5.3. Inheritance

However, whilst participants did not think Mayor Johnson had a particular plan, they did believe that he benefitted from plans and initiatives that had been put in place by the previous Mayor Livingstone. In particular, the Olympics and city-wide public bike rental.

“everyone talks about Boris Bikes, I think the scheme was actually, the gestation was under Ken Livingstone and Johnson, he implemented it and took credit for it.” Participant 20
“We used to call them the Boris bikes, but the Santander bikes and cycling in the city I think are perhaps one of the [Mayor Livingstone] legacies.” Participant 37

“some of the good ideas like the Boris Bikes they were called the Boris Bikes but actually those were put in place by Ken. It was the transition from one to the other. I mean Boris took

the name of them, but it wasn't him; they just happened to come about in his time."

Participant 33

"Boris got both the Olympics and the cycle scheme on the back of Ken Livingstone's work."

Participant 9

"so I mean, yeah, that transition was really interesting, because I think Boris gained, didn't he, from sort of all of the groundwork that Ken Livingstone had done around the Olympics and, you know, the Boris Bikes, both of which-- And I really did feel for Ken Livingstone when I saw Boris on that stage in Beijing, kind of waving the flag and you think..."

Participant 4

8.5.5.4. Health or Healthcare – a Mayor Johnson Priority ?

Participants, including those that worked closely with him, for the most part agreed that health and healthcare were not a priority for Mayor Johnson.

"He wasn't in the slightest bit interested" Participant 33

"I never detected the sense that... with Boris in terms of health, that didn't seem to be on the Boris agenda." Participant 43

"I would say that I think the priority of health took a slightly backwards step if I'm honest when Boris was Mayor in terms of the importance -- towards the end of his term I think he was more knowledgeable and kind of confident about those issues". Participant 5.

"I think it's been very positive [Mayoral impact on health]. I think Boris) Johnson aside, I think they've had major impact." Participant 9

"with respect to health, I actually never really felt that it listed high on Boris's priorities of things to worry about." Participant 10

“the real politic of it was that, you know, Boris Johnson himself did not appear to have any great personal interest in health other than, I might say, about his own health where he seemed to spend quite a lot of time asking me about his own health. (Laughing) But that’s, you know, just during chat. But I think he felt probably not very well informed about health.”

Participant 42

One participant did think that Mayor Johnsons did prioritise health.

“I think Boris, I think, again, sort of at a high level, was...I think he was interested, he was pretty serious, you know, he chaired the meetings and did get stuck in to that extent. And we did lots of interesting things with them, you know, he was quite interested with HIV, and you’ll remember Individual Fifty Three from that time, you know, again, who... I mean, she was a lovely woman, but had some quite interesting ideas and quite some interesting styles, and we kind of ended up with some...a fairly eclectic mix of odd subjects.” Participant 4

8.5.5.5. Healthcare

NHS services, in particular service reconfiguration, was identified as an area that forced Mayor Johnson’s attention, particularly during his first term in office. This was primarily because during this time the NHS, particularly in London, was undergoing development and proposed changes to hospital services in south east and north west London. Also, during this time, Mayor Johnson appointed a political health advisor whose healthcare background was in chairing a major London hospital trust.

“I remember him talking as well, “We Politicians have to be very careful that we don’t get on a bandwagon about opposing hospital closures when there are intellectual arguments to be made for some of this consolidation of services” Participant 5

“he had some specific policy aims, which I thought were not difficult to support. And we did support them. And as a result, he became pretty supportive to the extent that, you know, his starting position on say Queen Mary’s Hospital Sidcup was, “It’s got to be DGH [District General Hospital]. It needs to be kept open and why are you bastards trying to shut it?” That was his opening gambit. And eventually he would say, “I wish I’d never opened my mouth on Queen Mary’s Hospital because I understand now why you think it shouldn’t be a full

functioning hospital, so I wish I'd kept my mouth shut, but I didn't. So, now you're going to have to help me with how I managed to get an aligned position". Participant 28

"One of the tensions that arose during my time there was that Individual Forty Six as Chief Executive of NHS London felt that they needed a stronger relationship with the Mayor and they wanted to try and get the Mayor much more involved in the stuff around reconfiguration, which, as you can well imagine, the Mayor didn't want to touch with a bargepole"
Participant 42

"it's seen as a political hot potato. But I think to the public, they would find that astonishing, I think, but a set of politicians with so much at their disposal that aren't prepared to go near health [meaning healthcare]." Participant 41

8.5.5.6. Health & Social Care Act 2012 (the Lansley reforms)

The changes to the way that the NHS was organised that were brought about by the Health & Care Act 2012 were said by the NHS Chief Executive of the time to be *"so big you could see them from space"*.⁵⁰⁶ The contentious changes were much maligned and had a difficult passage through statute and have taken around a decade to undo. Ever the opportunistic, Mayor Johnson spotted an opportunity with the Health and Care Act (also known as the Lansley reforms, named after the health secretary of the time Andrew Lansley). The changes, amongst many other things, separated public health from the NHS into local government which gave Johnson an opportunity to play a bigger role in (and obtain resources for) public health.

"What prompted the buy-in [from Mayor Johnson] was the Lansley reforms because around the same time you had the Health and Care Act Lansley bit and with that came all sorts of changes most specifically the separation of public health from the NHS into local government, and that was quite catalytic for the Mayor to be able to play a role with local government on health." Participant 3

"The thing that shifted [Mayor Johnsons interest in health and healthcare] it was the Lansley Act and its public health stuff. And that led to Boris beginning to think, "Well, I should get all the public health money". And the tension that that created. And I don't mean tension, anger,

I mean tension, the dynamic, “Right, how are we going to manage this politics?” Participant

31

The threat of the London Mayor taking money that was earmarked for their members spurred London Councils to take action. As a rear guard action, they developed a joint proposal with the Mayor to establish a London Health Improvement Board which the Mayor would chair and would take a small percentage of London’s total public health money. The remaining majority was to stay with London boroughs. This proposal was submitted to central government and initially received a warm reception.

“this was a massive mechanism to one, put Boris back in a box and stop him nicking our cash, but two, actually to construct a platform which I was thinking, “Well, this will be good because it’ll draw everyone together and with a bit of money it’ll force us to think strategically and across London and get the mayor involved”. Participant 31

This approach was very nearly successful but ultimately failed. The noise and subsequent additional focus on the Bills proposals meant the relevant parts were deleted at the eleventh hour. However, by this point the London Health Improvement Board had already been established.

“when the reforms of 2013 came in, we got into the Queen’s Speech that the boroughs were going to be top-sliced 3% and it was agreed, even with the SPAds (Special Political Advisor that each MP had), and then Individual Eighty didn’t like Boris so he just vetoed it in Cabinet the next morning.” Participant 9

“we were left with the [London] Health [Improvement] Board, and he [Mayor Johnson] had a bit of a strop, but decided to stick with it. And that’s when those projects came. And he was, you know, sort of half interested.” Participant 31

8.5.5.7. London Health Improvement Board

The London Health Commission was stood down during Boris Johnson’s first term as London Mayor. It was replaced with the London Health Improvement Board (LHIB), which was a

significantly smaller group and significantly more focused on key priority areas of cancer, alcohol, obesity and a cross cutting enabler of digital health. The board was funded by NHS London.

“I remember Boris Johnston saying in his manifesto, and then he said it actually when I met him in his first day in the office because he came around and shook everyone’s hands, he said... he put in the manifesto he wanted to beef the London Health Commission and he said the same thing when he came and did his walk around and greeted every member of staff, and he said, “Well, the London Health Commission is still... I’m going to beef you up”, and actually what he eventually did was disband the Health Commission.” Participant 5

“It was literally just starting to get up and going when, you know, the floor fell in. (Laughs) And I’m trying to remember the provenance of it. I think it was because... Oh, I know why. It was because... Oh God, this is all coming back. If you remember that suddenly local authorities had to have these Boards.[Health and Wellbeing Boards] And it was actually Boris that said, “Why haven’t I got a Health and Wellbeing Board? Surely if all the authorities have got this we should have one and why isn’t it in the statute?” etc. So, to be fair to him, I think it did come from the top.” Participant 42

8.5.5.8. London Health Board

The London Health Board (LHB) replaced the LHIB. The LHB was formally established with a primary purpose to facilitate and support improvement in the health of all Londoners through collaboration at a pan-London level. It would do this through making the case for proper resourcing of the London health economy and supporting local government and the GLA in meeting their statutory duties for health and wellbeing where a pan-London perspective could add value. However, as noted above, it was under the expectation that it would receive funding to support its activities.

“What prompted the buy-in [from Boris Johnson] was the Lansley reforms because around the same time you had the Health and Care Act Lansley bit and with that came all sorts of changes most specifically the separation of public health from the NHS into local

government, and that was quite catalytic for the Mayor to be able to play a role with local government on health. And that's when we created the London Health Board and we sought to make it statutory. We made a bid to central government to make it a statutory function of the Mayoralty. And we failed. Individual Thirty Nine [senior cabinet office minister] kicked it out. He kicked a whole load of the statutory health lobbies out including that one."

Participant 3

Interviewer: What impact did that have? Respondent: *"It was incredibly derailing quite simply because had we had the statutory responsibility we would've had the mechanism and the infrastructure to do lots more, but because we didn't have that we had to regroup. But in anticipation of that we had created the London Health Board."* Participant 3

"Boris is king, he doesn't care at all. He's got no particular agenda on anything. He's got a huge amount of self-confidence and flexibility, leads to him letting his deputy mayors do all sorts of stuff. The thing that shifted it was the Lansley Act and its public health stuff. And that led to Boris beginning to think, "Well, I should get all the public health money". And the tension that that created. And I don't mean tension, anger, I mean tension, the dynamic, "Right, how are we going to manage this politics?" Participant 31

"when the reforms of 2013 [Lansley] came in, we got into the Queen's Speech that the boroughs were going to be top-sliced 3% and it was agreed, even with the SPADs, and then Individual Eighty didn't like Boris so he just vetoed it in Cabinet the next morning. And that was going to be a way of not just using the mayor to decide singularly, but the system at a pan-London level to use collective resource on a do-once-for-London basis, trying to corral 32 boroughs, all of the NHS organisations, even when it's the most sensible thing in the world to do it once for London, takes forever." Participant 9

"the issue back under Boris about not being backed with a top slice to therefore do something but a bit of the governance had already been set up to take that forward and then history repeats itself again in the devolution agreement" Participant 5

Because the top slice and LHB were not included as part of the formal changes to the Health Act, Mayor Johnson and his team decided to change the format of the LHB; reducing the size of the membership and making it more informal and held in his office (in private)

“the London Health Board as run by Boris Johnson was very casual, you know, was just a group of people coming together and having a chat in the Mayor’s office” Participant 1
“I always used to be slightly disappointed because there were very short meetings and not a lot happened. Now, there are two things about that. One positive and one negative. So, I now know a lot more about Boris Johnson than I knew then, so it's no surprise that they were short and seemed to lack much substance.(Laughter)” Participant 20

“Boris did a, “I don't like the shape of the Health Board. I want to change it”. And then the membership was completely changed. The project idea was sort of killed off. There had been quite a bit of cash put into that, not well spent, was my view. -- but changed the constitution and produced a smaller health board. And there was the intention of winning devolution and winning change.” Participant 31

8.5.5.9. London Health Commission (LHC)

The London Health Commission (LHC) also features in chapter 6. This section is particularly focused on the Mayor role and their positive or negative contribution. The London Health Commission was created in response to the ‘Langsley reforms’ and the resultant Health and Social Care Act 2012. As discussed in section 8.5.1 the Act omitted any powers or resources for the Mayor in respect of health or healthcare. The Act also significantly fragmented the management of healthcare. The NHS contributed the funding (£4m) and the Mayor agreed to sponsor the Commission. Participants identified that Mayor Johnson deserved credit for the Commission and its approach. Mayor Johnson appointed a then Labour Peer (Lord Ara Darzi) to lead the Commission.

“he established the London Health Commission, yeah, sorry, the Darzi Commission, and much to his credit” Participant 4

“I think he was brave in doing the Health Commission because he didn’t you have to do it. And he spent time on the agenda.” Participant 41

“we were not going to simply have a commission, yet another commission talking about hospitals, and that this one had to be somewhat different and add value by thinking about the population.” Participant 8

The LHC was universally well regarded by Participants.

“That document that said, “These are the ten things we want to change,” and it was really accessible and simple. I thought it was good actually. And I don't think that would have happened without the Health Commission being set up. So, I think that's definitely a good thing.” Participant 20

“that was a really powerful piece of work. And in a way, I think the appendices were more powerful than anything else because it laid out this massive critique of primary and integrated care as being awful in London. Really clear evidence that well, this is just a disgrace.” Participant 31

“I think the fact there the Individual Fourteen infrastructure was really helpful, because it wasn't just public health, people talking about public health.” Participant 9

Participants commented that the Commission became a launchpad for seeking devolution powers and laid the foundation for the London Vision and other Mayor Khan led initiatives such as food super zones and London committing to ‘getting to zero’ HIV infections.

“that [the London Health Commission] paved the way to do the London Healthcare Devolution Agreement.” Participant 4

“And then I think that led to us being asked to be given powers to make things.” Participant 20

“The other thing that came out of all of this was the devolution ambitions for London” Participant 8

“I think the health commission's work really laid the foundation for the London Health and Care Vision” Participant 37

“and from then [the London Health Commission], we built on all those programmes which fell out of it, around super zones and around air quality, all this stuff came out of that...we then started to work on London as a zero HIV city, we got the mental health stuff going, you know, the Thrive London, all that came on the back of that commission. And Boris did support most of that, at least he didn't object to it, and we were then really well placed to have, you know, a platform for an incoming mayor to develop further if he so chose which he did.” Participant 8

However, Participants were disappointed that more was not done by Mayor Johnson.

“I had that involvement for that period of time, but it was a source of great frustration to me and to Individual Fourteen because our sort of attitude was we've got you £4 million to spend on doing this review in whatever way you see fit and that could have a big positive impact on London and on London's health.—And he [Mayor Johnson] he just didn't exploit it. In fact, he got embroiled in a whole load of nanny state arguments, you know, I'm not going to, I mean, for example, one day he said, “I'm not going to ban smoking in the park because every man deserves to have a cigar when they've had a baby”. You know? I was just like complete...[left hanging]” Participant 28

“if the mayor had much more systematically said, “I want to see reform in the London health service and how it interacts with local government care services and so on. It's not good enough”. And had thought about how to corral NHS managers and council leaders, I think we could have made some really dramatic changes and I think the Darzi report in 2015 gave the evidence base and the--in a way I'm being harsh because very few politicians are criticised for the good things they never did. But having been closer to it, I'm conscious I think that that could have happened quite easily.” Participant 31

“at the end of the day, politics trumps the idea. So, banning smoking in London's parks, bringing in sugar tax, all of those things weren't seen as politically popular and ideologically at that point with a Tory mayor when we did the Health Commission, ideologically not into regulating people's lives and therefore not wanting to do that despite the evidence that actually regulation does actually have a big impact on people.” Participant 41

8.5.5.10. Devolution

Similar to the previous section, the substance of attempting to get devolution in London is covered in a chapter 6. This section is particularly focused on the Mayor's role and any positive or negative contribution made.

Mayor Johnson's competitive nature and his approach of delegation was identified as a strength by some Participants...

"Boris was still on board for that because he liked to win things, tangible things."

Participant 31

"My sense of Boris has always been that he's quite a...like, he's an ideas, big picture kind of person, he is not really into the detail. -- And he was, he seemed to be quite open to some slightly wacky ideas, and the thing which seemed to respond quite well to was this idea of competition with other city mayors." Participant 13

"But then, in a way, everything was blown away because that's December 2015. Now it's 2016, yes, 2015. He's already an MP. He knows he's going back. So, he's back in Parliament by the end of 2015, because the general election was 2015. And he's out of, and he's not standing, so really, that must have been one of the last political acts as mayor of any substance was the signing off of that deal. And then he's gone. And of course, by June, Brexit happens and that destroys the bandwidth of any government. And so, that's the end of Boris."

Participant 31

"So, in an odd way, by the time he left, one might have thought we're on our way, and I must say I was optimistic then that we could be. But we were about to walk into a whole series of things that destroyed that momentum. And so, what was Boris doing? He was a sort of a weekend supporter of progress who delivered a bit of progress, which might have turned into something substantial and probably if he'd been really focused, it would have, we'd have had a lot more in the bag by the time it came." Participant 31

8.5.5.11. Health in all Policies (HiaP) and Health Inequalities Strategy (HIS)

Mayor Johnson was the first Mayor with responsibility to publish a statutory health inequalities strategy (HIS). The first health inequalities strategy was in development and had reached quite an advanced stage at the point at which Mayor Livingstone lost the election and Johnson became Mayor. Therefore, the draft HIS was amended to reflect a different political ideology. This, along with other approaches continued the embryonic use of ‘health in all policies’ approach to improving health.

“where I think we were able to have some influences in looking at his mayoral policies, other things he directly controlled like TfL or whatever, but also thinking about what's his housing strategy, what's the economic strategy, how does health and wellbeing fit into that framework through the back door try to influence those mayoral advisors to be ensuring that health was recognised.” Participant 10

“The health in all policies work that we did as a team [under Mayor Johnson]: we were very strong in some areas, so we had quite a presence at TfL but there wasn't a systematic consistent kind of health in all policies approach during that Mayoralty I would say. It was not articulated as a mayoral priority as it is in the current mayoral term, Sadiq's second term” Participant 5

8.5.5.12. Olympics

Five Olympic legacy commitments were set out by Mayor Livingstone in 2008 and subsequently endorsed by Mayor Johnson. This included the commitment to increase opportunities for Londoners to become involved in sport. Participants identified a number of mostly small scale local examples of where hosting the 2012 Olympics had provided an impetus or expedient for making things happen.

“a simple example – I can remember it well – was trying to get wellbeing facilities for Muslim women in the East End...The issue was these were women who weren't exercising because of cultural issues, because of venues not being willing to deal with them in the right way, all those sorts of things, swimming pools, all the things you can imagine. ---The minute

that it was actually aligned within our strategy for the health legacy of the Olympics it was given extra oomph, like many other things I think in London at the time.” Participant 42

However, there was perhaps a missed opportunity for making a major systemic step change in respect of health through the Olympics.

“I went off to see Individual Forty Six [chief executive of NHS London] with Boris, having done a briefing note for Boris to say, “We’re trying to persuade the NHS in London to get on board with delivering the kind of health legacy, because we promised the IOC [International Olympic Committee] a health legacy, we’re asking NHS partners to perhaps identify some...” I think we said to Individual Forty Six, “How about 0.5% of NHS revenue budgets over the next three years to the games, and start being spent on some kind of health prevention, health promotion stuff in a systematic way?” And Boris didn’t really ask her... That’s the point where I decided to leave really.-- So I prepared a briefing note which said in the middle of the meeting, “Boris, ask her whether she might come at 0.2/0.5% of revenue budgets on a pre...like a precept, a pre-Olympics, driving into the Olympics around childhood obesity, exercise,” because the Olympics broadly linked things, infrastructure and investment, and Boris had my briefing note and we’d walked to the meeting together, and it said in bold, “Ask her,” and he didn’t. And I didn’t know whether it was because he didn’t trust me and I’d done all the work to warm her up, she was expecting to be asked.” Participant 26

“there were all the walking signs, “It’s three kilometres to Embankment”; you know, all those types of things? And it was driven by trying to make the city work through the Olympics as distinct from trying to make people healthy. But it was picked up as part of the health impact of the Olympics. With that came all of the... Boris bikes came as a result of that etc. to try and take the pressure off the transport infrastructure in and around the Olympics.”

Participant 3

“everything in London with Boris has a sort of link through to the Olympic years and there’s no question that when we were heavily promoting the idea of the Olympics having some sort of health legacy, there was no question of him being negative about that and it was always one of the things that he used.” Participant 42

“In terms of its health legacy, there was certainly huge ambition around it and obviously Boris talked a lot about it. I don't think from the reports I've seen; I've read all of them in detail that that has been realised.” Participant 41

8.5.5.13. Transport

Mayor Johnson's priority of health and wellbeing was questioned when he abolished the western expansion of the congestion charging zone and was accused of failing to publish an independent report on air pollution which demonstrated illegal levels of nitrogen dioxide.

“The congestion charge stuff I know was politically a bit of a yo-yo as to what happened with the congestion charge and in fact Boris unpicked some of that initially because he unpicked some of the congestion charge expansion.” Participant 33

“Johnson clearly didn't want to extend the congestion” Participant 32

However, Participants did credit Mayor Johnson as having a significant role in respect of promoting and expanding cycling in London.

“Yeah, exactly, (laughs) but I mean, you know, so much is luck, isn't it, with politics. And the Boris Bikes similarly, you know, I think we'd done an assessment of the Vélib' out in Paris, and all that had been done pre-Boris arriving, and he just sort of rubberstamped it, again, as far as I understand, he wasn't intimately involved in any of that work. But again, that sort of active travel agenda was really pushed on through Boris.” Participant 4

“cycling and parks and all that stuff is good, and he was definitely behind that.” Participant

10

“So, his line to me was, “I'm interested in bikes”. I mean, I know it sounds ridiculous, but Boris bikes were one of his big things. Apprenticeships and obesity. “I'm interested in those things. So, you tell me how you can help advance my policies on those, and then we can talk about the things you're interested in me doing to help you”. Participant 28

“I do remember Boris being a strong advocate of kind of cycling and active travel.”

Participant 32

“So, Boris Johnson is an absolute twat, isn't he? I mean, he's a venal, self-interested disgrace. But if you were to say, I'd say one impact, cycling.” Participant 46

“he kept the Boris bikes and really raised their profile, but you know, he did...I mean, it might not have been his idea, but he went with it and for the same reasons as Ken, I think that's probably really significant.” Participant 36

“Boris who then built the cycle superhighways because there was the first draft of the... or the first version of the cycle superhighways, the blue painted lines-- the big flaw was that, it was a great idea, but the big flaw was it wasn't segregated so partly you were at risk from passing traffic and partly it was the frustration that cars parked in it and you had to swing out into the main carriageway. So, basically it was through cycling was my main memory of Boris and health.” Participant 43

“So, basically, primarily on Boris on health, it was about cycling” Participant 43

8.5.5.14. Mayor Johnson – Approach

Participants identified Mayor Johnson approach as being interested in big bold ideas but less focused on the detail. Some participants viewed this approach as a positive.

“he actually probably had one of the biggest impacts I would say... I think that let Ken Livingstone down was it was too political. I think Boris in fairness to him actually wasn't particularly interested in politics, he was much more interested in being a figurehead and saying, “We should be doing these big bold things”. So, the stuff that we'd all criticise him for now: not being really particularly interested in the real stuff that matters in some ways I think was quite a benefit because it allowed him and Individual Fourteen and Individual Forty Six and others to almost just not get bogged down in this continual local government politics all the time.” Participant 18

“I mean, I think he was interested in the health and healthcare stuff, but I get the sense that he thought that was all just, like, quite a lot in the weeds, and what he wanted to do as a mayor was do the other stuff. And I think that was quite powerful actually---I think there’s a lot of merit in Boris’ approach... “with Boris, if you got him to support something, personally advocate for something, he would do all sorts of things going to bat for it. And he wasn’t so much on the details, so you could just get on and implement things.” Participant 13

“actually, surprisingly under the radar screen, this isn't very well known about Boris, but was very, very active and personally championed a lot of interventions around violence against women and girls. Particularly he was very, very strong on domestic violence and he really challenged the local authorities to improve their investment in domestic violence services and GLA kind of pump primed a lot of activity. And that is a really kind of fundamental public health issue. So, that is probably significant to mention.” Participant 21

“I think he was pretty good on social cohesion. Anyway, I don’t... yeah, I’ll stop. I won’t say any more on that. I think he was quite good on social cohesion as the London Mayor so, you know, should give him credit for that. I think on... I think the democratic, you know, he was an engaging mayor and people knew him, etc., so I think that was a positive.” Participant 32

“Well, Boris’s style is, “Go and make things happen”. I mean I think in fairness whatever everyone says to criticise or praise him Boris feels if you put somebody in to do a job he sort of expects them to go off and do it. And I observed that with policing and stuff like that. He thinks if you’ve got that job then your job is to go and make it happen to the best of your ability. He’s not an interventionist.” Participant 34

Others thought Mayor Johnson’s approach was negative.

“I think Boris did, like Ken in many ways, and like Sadiq, I think did many of the right things. I think the problem with Boris was that while he was engaged in bits of it and was always quite...very affable on almost all of it, it wasn’t...he clearly skimmed across the top of it and wasn’t really seriously engaged in it.” Participant 15

“I was quite clear that that leadership never prioritised the health and wellbeing of its population, but also that he didn't understand how the structural inequalities in employment, in housing, in education were features, significant features, social determinants then of what

would impact on people's lives in either a detrimental or positive work along a spectrum that is.” Participant 14

“I mean Boris was really interested in Boris really; it’s anything that’s useful to him.”

Participant 33

“I don’t want to say that Boris wasn’t serious, but I think Sadiq is a more serious sort of candidate in terms of the driving through a policy agenda and having more of a sort of strategic view and approach to things.” Participant 4

“Boris wasn’t really interested, scrapped a lot of what had previously been done, stripped out the planning and all of the infrastructure and had a policy of just letting things rip. He’s a libertarian, that’s what he did. So, we found it very difficult... it was a complete shambles every time you went in to see him, a complete and utter shambles. Never read anything. In the end we stopped doing briefings because there was no point. He used to be briefed in the lift coming from his room down, and then he used to have the health board, which used to be a teaching for Boris about how the NHS worked So, he just had this... the great and the good around this table and it was awful, certainly awful. So, anyway, so that was Boris.”

Participant 9

“Ken is the focused one who had an agenda and knew about how to govern and got on with it. Boris is king, he doesn't care at all. He's got no particular agenda on anything. He's got a huge amount of self-confidence and flexibility, leads to him letting his deputy mayors do all sorts of stuff.” Participant 31

Mayor Johnson’s political ideology of not wishing to impinge on personal liberty and wanting to avoid a perception of ‘the nanny state’ quite often meant he would not support intervention proposals to protect and improve health.

“the kind of Conservative approach is, “Well, we can’t possibly do nanny state stuff or any of these structural interventions, we don’t want to hear about that. So, let’s talk about rugby, let’s talk about poor people need to be told about how to cook,” and kind of lots of that kind of behaviour.” Participant 26

“lack of interest and got rid of stuff and a bit of in terms of the principles in terms of libertarian so therefore kind of very opposed to anything that could be remotely perceived as nanny state” Participant 9

“he got embroiled in a whole load of nanny state arguments, you know, I'm not going to, I mean, for example, one day he said, “I'm not going to ban smoking in the park because every man deserves to have a cigar when they've had a baby”. You know? I was just like complete....” Participant 28 (think I have used this quote a few pages before)

Participants identified a significant ramp up on media interest generated by Mayor Johnson. His predecessor, Mayor Livingstone, held a traditional weekly Tuesday press conference from City Hall with a small number of journalists for 20-30 minutes. Participants identified Mayor Johnson as much more of a ‘celebrity’ or ‘rock star’. The traditional press briefings were scrapped, and bigger prearranged out-of-City-Hall photo shoots were the new approach.

“the world changed when Boris became mayor compared to Ken, it was almost like it turned from a sort of... having a kind of an off-West-End production or a sort of pub theatre pantomime with Ken to suddenly having Hollywood box office there...he would do some sort of photo stunt in front of the cameras, do his funny faces and then, you know, the TV guys would get a chance to chuck a question at him” Participant 43

“I remember when he launched the Boris Bikes and it was at the London Eye, and that might have been 2011, 2010, it was him and the Chairman of Barclays Bank, because Barclays were sponsoring them. They were the first ones because they used to blue rather than red. And the Chairman was baffled by this, but there must have been about 150, 200 journalists around there and it was complete pandemonium. Of course, Boris came round the corner waving on a bike absolutely loving it.” Participant 43

Mayor Johnson’s approach was best summed up by Participant 10

“His slightly gung-ho, you know, tell everyone to get on their bike and have a nice life, wasn't going to lend itself easily to engaging with Michael Marmot on public health issues. And yeah, it was an interesting experience, frustrating and exhilarating in equal measure.”

Participant 10

8.5.5.15. Mayor Johnson – the end

Mayor Johnson became a Member of Parliament (Uxbridge and South Ruislip) in 2015 and therefore was both MP and Mayor of London until May 2016. Participants felt that he was focused on becoming an MP and ultimately Prime Minister several years earlier.

“what actually happened there was he lost interest in being the Mayor of London and started to become interested in being the Prime Minister.” Participant 28

This was corroborated by Will Walden (Mayor Communications Director 2012 – 2016 and official spokesman) who said *“it was very clear in October / November 2012 that he was going to run for Prime Minister”* From The Rise and Fall of Boris Johnson. Channel 4. Episode 1. Minute: 54:16 ⁵⁹⁵

8.5.6. Results 6 – Mayor Khan

8.5.6.1. Introduction

Mayor Khan took office as Labour Mayor on 9 May 2016. Prior to this he had been MP for Tooting (south London) for 11 years, having trained and practiced in law, specialising in human rights, before becoming an MP. Similar to Mayor Livingstone he was born in and had lived in London his entire life.

8.5.6.2. Mayor Khan early days and context

Similar to Mayor Johnson, Mayor Khan was operating in the context of a national austerity programme. However, whereas Mayor Johnson was from the same political party as the national austerity government, Mayor Khan was from the opposition, Labour Party. This will have undoubtedly made the relationship more challenging, as was identified by participants. In addition to this, within 6 weeks of Mayor Khan taking office, the UK voted to leave the EU.

Discussions and preparations for 'Brexit' absorbed most national political attention for the whole of Mayor Khan's first term.

"headwinds on the economy have been that this is probably the worst any mayor has had to deal with...so I would say the economic determinants of health, this has probably been the hardest mayoralty for that". Participant 32

"there were public health things done by Sadiq. We can see governance improvements. But the environment for achieving a lot was dramatically worse." Participant 31

"he doesn't have the powers, he's got hostile, and now chronically, catastrophically incompetent, mad national government, and the most challenging economic circumstances, so it's not...really clearly not easy at all." Participant 26

"his problems with national government have definitely impacted his ability to deliver both on housing, on transport aspirations. So, my big comment about Sadiq was he hasn't really been a mayor that has learnt to work with a government of a different colour". Participant

21

8.5.6.3. Inheritance

Similar to Mayor Johnson but unlike Mayor Livingstone, Mayor Khan came into governance and programmes of work that were already established under the previous Mayor. Whilst Mayor Khan may not have had the fortune to inherit such eye-catching initiatives as an Olympic Games or the bike hire scheme, there were a range of programmes and initiatives identified by participants, that Mayor Khan maintained and in some areas enhanced.

"He did continue to adopt some of the things that started with Boris like workplace health and he did continue stuff to do with obesity." Participant 3

"I know that Sadiq Khan decided to keep the London Health Board and run with it, something which had been established by his predecessor, but my understanding is that the London Health Board as run by Boris Johnson was very casual, you know, was just a group

of people coming together and having a chat in the Mayor's office, whereas now it is a formal meeting which is livestreamed, with lots of preparation and papers and so on." Participant 1

8.5.6.4. Health and Healthcare – a Mayor Khan priority ?

Mayor Khan received strong praise from those interviewed, in particular those who worked directly in city hall and who had worked across a number of Mayors, for prioritising the health of Londoners.

"Sadiq, who seems to have a genuine interest in issues relating to health inequalities."

Participant 25

"having the mayor very pleasantly holding our institutions to account in a direct way I think will have, you know, it will have been an enabler of integration of health and social care,"

Participant 32

"I think the focus on health specifically has increased in this Mayoralty, or in, you know, since 2016. That's not to say that the initiatives that were started in previous Mayoralties were not health, did not have health benefits, they did, but they were very...it wasn't necessarily the primary aim." Participant 1

"Sadiq has been by far the most engaged, involved in the sort of management sense, and given, I think, probably more time and conviction to these [Health] issues" Participant 15

[Mayor Khan has...] "a clearer perspective of the importance of health and health inequalities." Participant 23

"I mean, plainly better than Boris" Participant 26

"the mayoralty has become more interested in health, even before the pandemic started that Sadiq got much more interested in this" Participant 43

“he has a strong interest in health, and I think that’s expressed both in the work that has been championed throughout the GLA –on the social determinants of health but also his relationship with the NHS which even before Covid I would say he had a strong interest in developing and maintaining and so on... it’s clear to me that health is a significant priority for him.” Participant 5

“Mayor Khan was able to come in, and to some degree on a platform where that felt legitimate to think about health in that way, you know, how London compared internationally. And that was quite motivating for everyone, but also, the disparities in health, which is not peculiar to London, but you know, it gave that mayor the opportunity to think about the kind of health dimensions that he wanted to be known for. So, you can see the kind of progression over the three mayoralities.” Participant 8

“Sadiq, the nicest of the three, very supportive, very respectful, achieved an awful lot. You know, if you think about the ad ban, which has just had its evaluation of... yeah, it’s positive. So, he absolutely is committed to inequalities, and he’s done a lot of work on the inequality strategy, a lot of sort of investment, engagement. And then in the last two years, you know, fabulous to work with on the pandemic.” Participant 9

8.5.6.5. Healthcare

Similar to the previous London Mayors, Mayor Khan had limited experience of healthcare services and participants describe a journey he has been on to work with the NHS and in particular the London regional team. When Mayor Khan came into power in 2016, the NHS was establishing STP (Sustainability and Transformation Plans, later rebranded to Sustainability and Transformation Partnerships) which included modelling for future NHS provision requirements. Mayor Khan commissioned an external review of the STPs plans against a number of factors, including credibility of assumptions, impact on inequalities and engagement of the public. These factors would develop into the Mayor’s six tests of proposed service change, covering: healthcare capacity; financial sustainability; inequalities; impact and integration on social care; clinical engagement; and patient and public involvement. The initial assessments of STPs were quite critical of the credibility of the plans, particularly in respect of capacity and financial assumptions.

“for the mayor to either ignore or be in a hostile position vis a vis NHS structures is not a helpful place to be, it isn’t for local government, it isn’t for the mayor, and I think, you know, one of the reports, I think it was the second one, it was tricky. It was tricky for NHS in London because it criticised them quite a lot and I know they didn’t like it. But it was really interesting to see how the relationships were rebuilt and did get built after that. And I think that is strategically very sensible, because it is an easy choice for a politicians, and you can see it often, just to throw bricks at the NHS and complain about it all the time and go, “It’s got to sort out getting a GP appointment,” and just chuck stuff at them that they can’t do anything about and not attempt to see if you could help. But there was a more positive and constructive tone about the conversations that I know the NHS was taking seriously.”

Participant 23

“Sadiq’s engagement of health and care services has been deeper than previous mayors. that predates... that’s partly a pandemic issue, but I think it does predate the pandemic.”

Participant 32

“then there’s the Mayor’s interest in the health and care system and the reports that he’s commissioned, --- on how STPs were developing at the time and the Mayor’s five tests, I think, one of which included health inequality reduction. So, I can see quite a lot of activity.”

Participant 24

Participants were not always complimentary regarding Mayor Khan’s ‘six test’ interventions and perceptions of either the Mayor as meddling or not being enough in challenging the NHS.

“People knew about Sadiq’s tests. You know, you could get NHS people talking about them. And speaking with mostly local government chief execs but not only, I wouldn’t say always... you know, if I’m being completely frank, I wouldn’t say they were always pleased or grateful for the mayor’s interventions, but you knew that they knew that they were going on, and in the health and care territory.” Participant 23

“in the GLA Act, the mayor is given no direct power to interfere with NHS services or to fund them but has a strategic role or to be aware of the sort of strategic health of Londoners I

think is the term. It's that sort of slightly meaningless phrase that allows them to meddle, and Sadiq is particularly good at meddling or seeking to influence, shall we say." Participant 43

"I don't think I've seen him be brave in relation to sort of general health issues in terms of the NHS, I haven't seen him wade into, apart from during the pandemic where he declared an incident, I don't think I've seen him saying London's health service is crumbling, we need a different model. I do think if he was showing leadership around this, he would start to show concern, perhaps." Participant 41

8.5.6.6. London Health Board (Mark II)

In consultation with his team and members of the LHB, Mayor Khan decided to reboot the LHB to LHB Mark II, when he took office. This mark II version was significantly more formalised and transparent and had the addition of Acute and Mental Health Trust representation.

"I'm not saying it wasn't valuable having those leaders coming together under Boris, I think it was, but it is much more collaborative, a real partnership endeavour, and I think that it's now...I think the impact of it has changed insofar as I think that the leadership from the other organisations see it as, you know, a sort of enhancing what they do, rather than just having, you know, being held to account by the Mayor, it's much more about partnership."

Participant 1

"Sadiq came in 2016 and agreed that, you know, he wanted to keep that health board going, he wanted to strengthen it, we brought in, you know, trust representation and a mental health trust at that point, so that's when Individual Fifty Four joined the board. And his sort of commitment around transparency and wanting to see that sort of conversation taking place in a public arena, and having those meetings broadcast, which in previous iterations, had been, you know, behind closed doors." Participant 4

"Sadiq pushed it on to the next level and made it more transparent, I think it gave it more kind of status." Participant 16

In 2018, borough membership increased to five leaders to include the Portfolio holder for Health and Care and to be drawn from the five London ICS. From December 2018 all meetings were webcast live, increasing both accessibility and transparency. Participants considered this to be another positive step forward.

“Well, I think that's a really good improvement to the, you know, who should be on that board, no doubt about that.” Participant 31

“the really positive thing I'd say is that the way that the mayor has formalised the partnership around the London Health Board and has been responsive to a changing system because it is a constantly changing system, as you know, has been really good. So, if I go back to my first ever meeting of a London Health Board back in the day when Boris was still around, and you probably were there before me, you'd go up to his office and sit on the sofas literally. That's what you would do. And if there was space round the table for you, you're lucky. And that was a meeting of the London Health Board.” Participant 7

“And that goes to not just where we meet but who's at the table? So, going back to that point about five leaders having the ICS chairs in the room, having the meetings in public. I think all start to get us to a place where we are now behaving as a partnership, as serious players, as people who are serious about the work we do together.” Participant 7

However, there remains no formal authority and progress is on the basis of good will.

“If the NHS decided that they didn't want to cooperate, then it'd be very limited for what it could achieve.” Participant 16

“I think perhaps the London Health Board struggles a bit with something tangible to do in a way, and that comes back to because the mayor hasn't really got any powers over health (care).” Participant 20

“I think people, again, have sort of treated it for what it is, I mean, it's a voluntary, non-statutory body, it's not directing and kind of controlling resource or making any sort of formal decisions over, for example, NHS or which hospitals go where or which resources are... So it's, I guess it's kind of less politically hot in that sort of sense.” Participant 4

“But again, there's no real petrol being put in the engine and it's a better engine being designed, but no real petrol coming from the mayor.” Participant 31

There were however, also, mixed views on the content that the board covers

“I think the health boards, this is odd, and I've asked within the health service as well. I think it's weaker now than it was. So, although the design is better I think it's become weaker, and I think that is because it's not focused on this systemic stuff. And so, it's sort of lost traction because the NHS is great at in response to a politician who's got a particular thing, you know, wrapping it up in cauterised ball and giving them their thing while getting on with their own agenda.” Participant 31

“I sit on London Health Board. But I've got to be honest, having sort of attended four meetings, five meetings maybe in the last two years, I'm not quite sure what it does. I don't know whether that's being particularly rude, but it doesn't really, I made a point of looking back the other week actually, in anticipation partly of this conversation as to, you know, what was it in terms of, what were its terms of reference? What was it there for? But I don't see it actively, I don't see the Health Board, the London Health Board, as a piece of governance structure actually driving anything.” Participant 17

8.5.6.7. HIV & Fast Track Cities

In 2018, London signed up to the ‘HIV Fast Track Cities’ Initiative. HIV was identified as a priority in Mayor Khan’s 2016 manifesto and subsequently the 2017 Health Inequalities Strategy. Participants identified Mayor Khan as key to this work.

“We could talk a lot about the work we've done in HIV and what the successes we've had... will save the NHS thousands and millions of pounds over the lifetime of people who don't get HIV.” Participant 7

“where he did use the pulpit quite well was on HIV where I think there was a, you know, I think the mayor really did bang heads together and the health partners in London did all come together and agree to that very ambitious targets over tackling new HIV infections. In fact, I think London was the first city to 90-90-90 thing? --- And I think that was quite a good example of where the mayor’s not got any responsibility but did use that kind of convenient power to get the city to sign up to something very ambitious.” Participant 16

“the Mayor has signed up to HIV Fast-Track Cities, you know, he pledged, he made a pledge to eradicate new infections by 2030. And actually, we’re doing really well, we are doing really well.” Participant 1

8.5.6.8. Obesity

Participants also identified Mayor Khan as playing a key leadership role in actions to address obesity. This included expanding the healthy schools programme to early year settings, creating super zones around schools and banning high fat sugar salt (HFSS) advertising on London’s transport network. ‘Super zones’ are areas (of around 400 metres) around schools where there are restrictions on unhealthy food provision and advertising in order to give children and parents a healthier environment.

“child obesity work is clearly Sadiq work, and so, the ad ban and the establishment of the child obesity taskforce, and that has now become the recovery mission. --- So, I think that is pretty significant.” Participant 1

“Now I think things like obesity, childhood obesity and obesity in general is quite an interesting example because he was really keen to do something. The government has kind of ummed and ahed about it. There’s always the feeling in London that you could probably go further because the city’s a bit more up for being progressive on things. And he [Mayor Khan] decided to use obviously TfL Estates advertising to stop advertising fast food, use the London Plan to limit new fast food restaurants near schools. You know, again, just trying to kind of stretch and push powers as far as they will go to deliver on wider kind of societal issues without ever actually being given any powers to deal with either kind of health prevention issues.” Participant 16

“changing its approach within the GLA again just reinforces that he’s trying to use his powers more broadly speaking to contribute to the health agenda. So, there was some interesting work around super zones and learning about how we can make those kind of a more common thing that we’re doing across London.” Participant 7

“So young people and children and obesity and the ‘fat kids’ things was a big deal. And we began to realise that in those schools, actually, and in that environment where they lived, they had multiple disadvantage, they had, you know, higher levels of violence, higher levels of accidents, more gambling in the high street, crap food on offer, and very little places to play. So, it was all kind of a...so we then thought about the idea of the super zones.” Participant 8

“the other big one that Sadiq has brought in has been the ad ban on the TfL network for high fat, high salt, high sugar foods, which was pretty controversial, and that, again, is absolutely about child obesity. You know, that’s a very, very, very much focused on health, and you know, a similar thing is being developed at the moment for an ad ban on gambling, you know, to reduce problem gambling, which is another health issue.” Participant 1

“adverts on the Tube and so on. So, you know, this stuff is not to be sneezed at.” Participant

31

“junk food ad ban, and the planning restrictions, you know, really taking the message that you can only make a difference to these things by changing the environment and thinking about, you know, planning rules and so on, like that, and trialling things which are quite innovative and always going to get some pushback, but kind of being, you know, brave enough to give that a go.” Participant 36

“I mean, an issue I would and I think most people would sort of credit him with in terms of prominence, and which he was, you know, still has resonance, is the sort of banning of junk food advertising on the tube.--- it was done purely for health-related reasons, and you know, I think that’s been...that has had a wider recognition as the mayor putting his money where his mouth is, in that sense.” Participant 15

8.5.6.9. Mental Health & ThriveLDN

Another area of personal interest and concern for Mayor Khan has been mental health. Firstly, he has championed it through launching Thrive LDN and more latterly he has spoken personally about his own mental health during the covid-19 pandemic. Thrive LDN was launched by Mayor Khan in 2017 as a programme to improve Londoners' mental health. Amongst other things, Thrive LDN has trained nearly 400,000 Londoners in suicide prevention and engaged over 200,000 Londoners in positive mental health training.

"Sadiq was very committed to is mental health. So, he was the first Mayor to do anything on mental health really and within that you had suicide prevention, Thrive London etc. some really good stuff." Participant 3

"...haven't mentioned at all, which I feel I definitely should, is mental health. And that's partly because it's an area of personal interest to the Mayor; you know, he...I think he's been, again, quite bold in that. Firstly, in championing it, you know, quite single-mindedly, but also little things, well, they seem little on the face of it, but little things like talking about his own mental health publicly,--- Also, the work that's been done, particularly on Thrive."

Participant 1

"...championing, Thrive, on the public mental health front, for years, the mayor's been happy to talk about his own mental health, particularly during the pandemic." Participant 36
[How Mayor Khan has made a difference to Londoners health...] "I think one of the things is being prepared to have conversations with Londoners. And really, emphasising that kind of engagement. I think it's a very positive aspect of what his mayoral ship has done or is doing...I think that that's one of the things that we've been able to cultivate under this particular mayoral ship that wasn't really present in the previous one because it was more like there's not really a problem, there's not really a challenge, you know? It's like in denial. Whereas this mayoral ship accepts that there's a very divergent sort of range of realities of people's lived experience, the impact on their emotional and mental health and whatever and wanting to attend to that in a range of ways." Participant 14

8.5.6.10. Health in all Policies (HiaP) & GLA Public Health Group

Participants agreed that there had been a step change in relation to Health in all Policies (HiaP) under Mayor Khan.

“Sadiq he has made it [HiaP] very explicit within the London Plan because it relates to air quality, because it relates to cycling, active travel etc” Participant 3

“To be honest, I mean, that’s probably the biggest impact, this, “Health in All Policies,” commitment, ---People want to speak to us about health in their work, and that’s amazing, because we know that through the quite limited powers really that the mayor has, we’ve got that, that is our opportunity, and we’re in a really good place, and it’s because of the mayor’s support. We couldn’t have done it without him, obviously.” Participant 36

“I would say his commitment to – I think Individual Twenty would say as well his commitment to health in all policies as a means of tackling health inequalities has grown and grown. I think it’s something that he would probably say he’s become more aware of. Well, Individual Twenty always says he credits himself with inventing it, and I think comes through very strongly even in the strategies that were published in his first term. So, for example, the economic development strategy: his top priority was... I won’t get the wording of this right but it was about that Londoners live healthy and happy and longer lives and so on, which as the top objective for economic development strategy I think is pretty strong...health has been incorporated into policies more widely under this Mayor.” Participant 5

As part of his legacy, Mayor Khan has established a GLA Public Health Group. This is fundamentally changing the hard wiring of how health is integrated into aspects of the wider GLA family.

“setting up a GLA group public health function that will be public health advice to the GLA group, so Transport for London, MOPAC, fire, OPDC, the Mayor, the Assembly, sort of one place, a GLA group director of public health that serves the group explicitly, but isn’t the regional director of public health, they’re not doing everything for everybody, they are serving...and not just the GLA, but the group.” Participant 2

“again, whether this is the Mayor or his officers, you know, it does... And you’ll be very familiar with this, you know, very good things about Transport for London, having a public health consultant in there - again, whether that’s health inequalities or not or whether that’s a broader public health contribution - about trying to seed public health approaches in wider strategies.” Participant 24

“that visible engagement and investment in a public health team within the GLA has been a key thing. So, supporting that and ensuring that that becomes part of the infrastructure for subsequent administrations would be key. So, ensuring that there is commitment and building into the structure of the GLA that function.” Participant 37

8.5.6.11. ULEZ

Mayor Khan advanced the introduction of the world’s first ultra-low emission zone (ULEZ) in central London before expanding it to outer London. Many participants identified this as having the potential to have a big impact on Londoners’ health.

“he wanted to do something about air quality. That was a personal thing, I wouldn’t take any credit for it. He wanted to do that.” Participant 8

“the ULEZ expansion is very much about health improvement, whereas some of the initiatives that were taken earlier, like for instance the cycle hire scheme... I don’t think was really introduced with a primary health benefit focus; it was more about enabling people to get around... So, I do think the big achievement, the big ticket achievements are the ULEZ and air quality.” Participant 1

“the ULEZ and the extension of, well, the extension of ULEZ and the floating of extending that to the M25 or London’s boundary, is in some ways one would argue probably more likely to have an impact on wider health and care, wellbeing, than any of the sort of direct health policies.” Participant 15

“I think he always been prepared to be more kind of muscular with the powers that he’s got, even when they’re limited. Some of it was just using the pulpit of City Hall to be the kind of

strong voice that that gives you. Some of it through convening. Some of it through direct powers like the ULEZ, obviously using TfL to tackle the public health emergency caused by poor air quality, realising that there's always limitations and that also only half of emissions come from transport, you know, and then the rest you haven't got any powers over. But trying to do what he could do with the powers that he had.” Participant 16

“I do think his really big focus, which I think builds on the previous two, on air pollution is good.” Participant 18

*“you can’t underestimate the positive effect Sadiq has had in terms of air quality.”
Participant 3*

“ULEZ, and that does seem to be a real, you know, the thing he's genuinely interested in--- and that's a significant thing.” Participant 31

“he’s done a lot of things on air quality. I mean we’ve got the ULEZ, as you know we’ve had the congestion charge – and then that’s just been reduced again – but ULEZ and he’s obviously considering expanding the ULEZ. I mean I think his focus, for want of a better word, has been very much on air quality.” Participant 34

*“I suppose from the Mayor’s point of view it is what you do have power over because you have power over transport. I think he has appreciated that he doesn’t have any NHS input really so he’s looked at what he can do and picked a topic where you can make a difference”
Participant 34*

“Air quality. Which has been, you know, it’s really, from a health perspective, it’s a really...like basically, the reframing or the framing of the air quality conversation is a health message, I think it’s really important to it actually kind of taking off, and you know, now we’ve seen with the way ULEZ has been shifting, you know, it’s largely accepted as a thing we have to do for Londoners’ health.” Participant 36

“there are a number of policy initiatives which he has justified, presented, framed, around health. I mean the ad ban is a very obvious one; the other is ULEZ and his work in air quality, which was entirely predicated on the health impacts of poor quality air. --- There is

evidence to show how pollution is reduced significantly in the areas that are within ULEZ and less significantly in the areas that are without it.” Participant 5

8.5.6.12. Major Khan Approach

In terms of Mayor Khan’s approach, there were two areas which dominated from participants. Firstly, his training and background in law came through with him wanting to see the detail and evidence. He was regarded as being logical and analytical.

“Sadiq, he, I would say that he is more...almost more academic, not in terms of, like, being distanced from something, but in terms of the process by which he expects things to have gone through before he will take a view. I think he expects more background, more research, like, more options.” Participant 13

“this particular Mayor and administration is, you know, legal background, swayed by evidence, will not pass anything unless they understand what the evidence is, and that’s applied through the whole pandemic, you know, and is used to interrogating that. But it does mean that once they’re persuaded and convinced, they’re also prepared to take action. So, it’s not a comfortable sort of slack place to be, “Let’s just see what we can whip through,” on a sort of, you know, “I care about these things, so we’ll just do it.” Participant 2

The second area that came through very strongly was the collaborative, inclusive and open style of Mayor Khan.

“I do think that gentle accountability and collaborative spirit he’s created has been quite helpful.” Participant 32

“everything involves us all working together, and particularly obviously working with the needs of those local populations...it’s certainly been really important in the way we’ve worked in this administration.” Participant 36

“we really value that kind of ongoing political soft power he uses to keep our relationship with the NHS in a kind of healthy place and a kind of equal place. Again, that's really good.”

Participant 7

“relationship with local government seems to be stronger.” Participant 13

“Sadiq has a different approach [to Mayor Johnson], which isn't wrong. It's just different. He's [Mayor Khan] a lot more communitarian... He's got very good relationships with local boroughs, which is helpful.” Participant 9

“he [Mayor Khan] did that [the Health Inequalities Strategy] very much in a partnership way which actually increased the likelihood of anything happening.” Participant 3

“the cohesion headwinds have been quite strong under Sadiq's mayoralty, so I think the fact that it feels to me like London has sustained cohesion or improved cohesion perhaps on some measures, that should be marked in Sadiq's favour, I think, because whatever one thinks about all these things, Brexit, Trump and all of this kind of stuff, this has been a pretty polarised period coinciding with his mayoralty.” Participant 32

“there's something about this mayor and his commitment to inclusivity and a deep sense of social injustice.” Participant 37

However, this collaborative approach did not always extend to national government.

“Sadiq has probably tried quite to play in the sort of direct health, and he's probably had even less traction than Boris. --equally had a tough time contextually-- his problems with national government have definitely impacted his ability to deliver both on housing, on transport aspirations. So, my big comment about Sadiq was he hasn't really been a mayor that has learnt to work with a government of a different colour”. Participant 21

8.5.6.13. Covid-19 Pandemic

Each of the Mayors has had to face a health crisis of some description. These are not situations that they have created but situations that they need to respond to. Mayor Khan has had, by a

considerable distance, the biggest health challenge, with the Covid-19 pandemic. Participants were universal in their praise for Mayor Khan's stance, support and leadership.

"And definitely in the pandemic I think the mayoralty had a positive impact in the response to the pandemic, so clearly the other mayors didn't have that event, kind of an event. But I do think, again, it's hard to be counter-factual, but I think the mayoralty helped convene London during the pandemic in a way that was... and the GLA more broadly helped to convene the city." Participant 32

"the mayor's leadership has been pivotal, I think, to getting the city through. Participant 37

"it took a long time during the pandemic for the government to realise that other voices talking to the public, other than ministers really didn't matter in telling Londoners to stay at home, not use public transport, get vaccinated, etc. Late in the day they realised, "Oh, actually the mayor's really important in this and there's a constituency out there that will listen to him, and they won't listen to SoS for Health and they won't listen to Boris Johnson,". So, there's just this kind of recognition that at the very least, the mayor and particular the local authorities know the city better than they do." Participant 16

"certainly, through Covid he [Mayor Khan] has been quite forceful to say that people should wear masks – they should – on the tube and on buses and so on and so forth." Participant 33

"Covid has been a game changer... that's been transformational in terms of the relationship between the NHS in London and public health and the GLA, that sort of tripartite sort of arrangement." Participant 4

"I think Sadiq's leadership of London during COVID was absolutely exemplary. So, he had a choice, he had a choice. There was a time when I was really under the cosh from government about what was going on in the vaccination campaign. And I was absolutely in the crosswires. And he had a choice that he joined the riot, or he worked with us because he knew it was bloody difficult. And he chose to work with it. And if he'd had turned on me and I know, as I say, Interviewer, I'm really not personalising this. It's not about Respondent, it's what my job was, isn't it? You know, it's just a bloody job at the end of the day. And I thought

the leadership, he showed across London was exemplary. It really was exemplary. So, do I think he had an impact? Absolutely bloody enormous.” Participant 46

“what’s been valuable about doing that partnership working has been that during Covid, we already had initial relationships with those bodies, and those were exactly the bodies that needed to come together to respond to the Covid pandemic, so inevitably those relationships have got stronger during Covid because there have been far more frequent meetings over that time, you know, to the point where the Mayor has been meeting mostly weekly with the regional director-level tier of those organisations, so now the relationships between the Mayor, the Regional Director of NHS London, the Chief Executive of London Councils, and the Regional Director of PHE are very strong, which has been fantastic really.” Participant 1

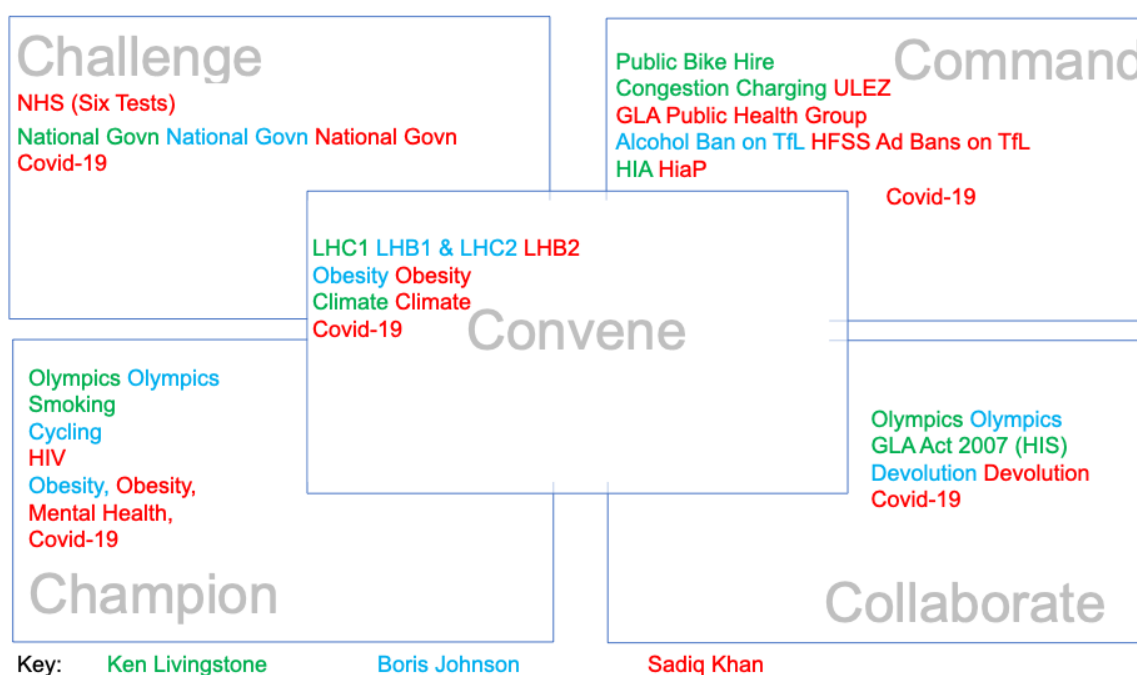
“But in that Covid period, there was Sadiq with the London Councils’ leaders, Public Health and NHS, very actively providing the collaborative leadership that then, you know, was a context for the real life collaboration that all those leaders were meeting during Covid,”

Participant 6

8.5.7. Results 7 – Mapping to 5C Mayoral Framework for Action on Health

The grounded theory study presented in chapter 7 developed a ‘5C Mayoral Framework for Action’ on Health (MFfAH). This is applied and tested with the results from this thematic study. The populated framework is presented in Figure 8.1

Figure 8.1 – Populated 5C Mayoral Framework for Action on Health



There are several interesting features of this populated framework which are described in the discussion section. In relation to the results, Mayor Khan has the most initiatives across the Framework (#18) compared to Mayor Livingstone and Mayor Johnson who have 10 and 9 initiatives respectively. However, it is not just the number of initiatives that are noted. Based on the interviewee data, each initiative in the Framework has been weighted in respect of the research question, i.e. the impact of the initiative on Londoners’ health. A simple ‘low’, ‘medium’, ‘high’ and ‘very high’ impact scale has been used. The rating of each initiative, along with the rationale for the rating based on the interview data, is provided below.

- NHS six tests (Mayor Khan)
 - o Summary: There was only passing mention to the Mayoral Six Tests on NHS service change

- Weighting: Low
- National Government (All Mayors)
 - Summary: All Mayors have challenged national government to varying degrees at different stages. There were no examples of where this had produced a significant impact
 - Weighting: Low
- Olympics (Mayor Livingstone and Mayor Johnson)
 - Summary: Mayor Livingstone is credited with developing the bid for the 2012 London Olympics, primarily driven by the regeneration of north-east London, despite his lack of interest in sports. Participants noted potential health benefits from this regeneration, particularly regarding transport infrastructure improvements. However, health did not feature prominently in the initial planning. Mayor Johnson oversaw the delivery of the Olympics and legacy commitments. However, participants felt there was a missed opportunity to create a major systemic step change in health through the Olympics.
 - Weighting: A weighting of medium is given due to the impact of regeneration (Mayor Livingstone). A weighting of low is given to the direct sport legacy and opportunity missed to propose the NHS ringfence a prevention fund (Mayor Johnson).
- Smoking / big smoke debate (Mayor Livingstone)
 - Summary: London Health Commission led the "Big Smoke Debate," a significant public engagement that provided political leverage for the UK's indoor smoking ban. Participants considered this to have significantly influenced national tobacco control.
 - Weighting: A weighting of medium is given. This initiative had a high impact on shaping the environment for national smoking legislation, positively affecting Londoners' health by reducing exposure to passive smoking.
- Cycling / public bike hire scheme (Mayor Livingstone and Mayor Johnson)
 - Summary: Mayor Livingstone was widely credited by participants with the initial conception and agreement of the public bicycle hire scheme, later known as "Boris Bikes". Mayor Johnson was widely credited by participants in adopting, promoting and extending cycling.

- Weighting: Mayor Livingstone's initiation of the public bike hire scheme and Mayor Johnson's promotion of the scheme has been assigned a medium impact on active travel and potentially clean air in London
- HIV (Mayor Khan)
 - Summary: Mayor Khan identified HIV as a priority and was key to London signing up to the "HIV Fast Track Cities" Initiative with ambitious targets to eradicate new infections, on which London led internationally. Participants believe this will have significant long-term health and financial benefits for London.
 - Weighting: Impact high.
- Obesity (Mayor Johnson and Mayor Khan)
 - Summary: Mayor Johnson is referenced as overseeing the creation of initiatives such as 'healthy schools' to promote action on healthy diets and physical activity in schools. Mayor Khan is seen as playing a key leadership role in addressing obesity through the expansion of healthy schools programmes, the creation of super zones around schools, and the ban on high fat, sugar, salt (HFSS) advertising on London's transport network.
 - Weighting: The impact of Mayor Johnson is weighted as low. The impact of Mayor Khan is weighted as medium.
- Mental Health (Mayor Khan)
 - Summary: Participants identify Mayor Khan as championing mental health through the launch of Thrive LDN, a program with significant reach in suicide prevention and positive mental health training and through speaking personally about his own mental health.
 - Weighting: Mayor Khan's focus and initiatives on mental health, particularly Thrive LDN, represent a significant positive impact in this area. This is weighted as high.
- Congestion charging and ULEZ (All)
 - Summary: Mayor Livingstone initiated the original congestion charging zone in London to address traffic congestion rather than health concerns. Mayor Johnson initially opposed expanding the congestion zone but later agreed. Mayor Khan significantly advanced the introduction and expansion of the Ultra-Low Emission Zone (ULEZ), explicitly linking it to improving air quality and

Londoners' health. Participants believe this will have a substantial impact on overall health and well-being.

- Weighting: Mayor Livingstone impact medium. Mayor Johnson Impact low. Mayor Khan impact high.

- GLA public health group (Mayor Khan)
 - Summary: Mayor Khan established the GLA Public Health Group, which is seen as fundamentally changing how health is integrated across the GLA and its functional bodies, providing public health advice across all parts of the GLA. This was viewed as a key structural change with potential for long-term impact
 - Weighting: Mayor Khan's creation of the GLA Public Health Group signifies a systemic effort to embed health considerations across the Mayoralty. However, the benefits of this are yet to be realised therefore the weighting is low (with future potential of medium/high)
- Alcohol ban on London's Transport System (Mayor Johnson)
 - Summary: Mayor Johnson banned drinking alcohol on London's transport system (including tube and buses). However, this was for safety and public order reasons not health.
 - Weighting: This initiative is weighted as low due to its intended focus.
- HFSS advertising ban on London's Transport System (Mayor Khan)
 - Summary: Participants identified Mayor Khan as instigating this policy to address child obesity. Participants considered it a significant, and controversial at the time, step in the Mayor using his direct powers to improve public health.
 - Weighting: This initiative is weighted as medium.
- Health Impact Assessments (HIA) (Mayor Livingstone)
 - Summary: Mayor Livingstone's London Health Commission introduced and extensively used Health Impact Assessments (HIAs) on Mayoral strategies from 2000 to 2008. Participants viewed HIAs as a significant contribution to embedding health into the GLA's work and understanding the wider determinants of health.
 - Weighting: This initiative is weighted as high impact
- Health in all Policies (HiaP) (Mayor Khan)
 - Summary: Building on the HIA, 'Health in all Policies' (HiaP) became an explicit and growing commitment under Mayor Khan, integrated into the London Plan and seen as a key means of tackling health inequalities.

- Weighting: While the groundwork was laid under Livingstone through HIAs, participants identified that HiaP has become a fundamental and explicit part of the Mayoral approach to health under Khan. This initiative is weighted as high.
- Devolution (Mayor Johnson and Mayor Khan)
 - Summary: Participants noted Mayor Johnson's competitive nature motivated him to seek devolution, and the London Health Commission under his tenure laid the groundwork for the London Healthcare Devolution Agreement. However, this momentum was largely lost after he left office. Mayor Khan continued with some devolution endeavours, however Participants considered these did not gain traction or make much impact. Participants did point out that although the devolution work may have not delivered any direct health impact it did support partnership working.
 - Weighting: This initiative is weighted as low.
- GLA Act 2007 (Mayor Livingstone)
 - Summary: Mayor Livingstone's pursuit of increased powers was generally noted by Participants and amendments to the GLA Act in 2007, which included a statutory responsibility to write a Health Inequalities Strategy and the provision for a statutory health advisor, were credited to Mayor Livingstone and his team. Participants see this as a crucial structural change ensuring that health remained a consideration for all future Mayors.
 - Weighting: The GLA Act 2007, influenced by Livingstone, created a lasting framework that mandates a focus on health inequalities for the Mayoralty. This initiative is weighted as high.
- LHC1 / LHB1 / LHC2 / LHB2 (All)
 - Summary: Each of the Mayors have instigated different types of oversight and governance in respect of health. Participants have had different views on the utility of these groups.
 - Weighting: These initiatives are all weighted as low impact.
- Climate (Mayor Livingstone and Mayor Khan)
 - Summary: Mayor Livingstone was credited for instigating what became the C40 cities climate movement, which Mayor Khan then went on to lead and chair.
 - Weighting: Whilst these global city collaborations are important, the impact on Londoners' health is weighted as low (as the impact is also considered through other initiatives such as congestion charging and ULEZ)

- Covid (Mayor Khan)
 - o Summary: Mayor Khan's leadership and the GLA's role in convening London during the Covid-19 pandemic were widely praised by participants. His forceful messaging on public health measures and collaborative work with health organizations are seen as having had a significant positive impact in a major health crisis.
 - o Weighting: This is weighted as very high

The weightings have also been scored, with 'low' scored as 1, 'medium' scored as 2, 'high' scored as 3 and 'very high' scored as 4. The scoring for each Mayor is presented below:

Mayor Livingstone: 17

Mayor Johnson: 9

Mayor Khan: 26

8.6. Discussion

Introduction

This study examined the London Mayoralty and each of the London Mayor's impact on health since the creation of the Mayoralty, spanning a period of over 20 years. The world has changed significantly over these two decades. For example, less than half the population of the UK owned a mobile phone in 2000 whereas now it is over 90%⁵⁹⁶ giving lightning speed access to the vast resources of world wide web. One of the original forms of the now all pervasive social media (twitter/x) was not invented until 2006. Similarly, terms such as 'global warming' or 'ultra processed food' would not have been understood by the vast majority of Londoners in 2000. During this period we have also had the biggest global financial crisis since the great depression⁵⁹⁷ as well as a once in a life time pandemic.⁵⁹⁸ In addition, nationally we have had to manage the negative impact of the period of austerity which followed the global financial crisis and the negative impact on health from voting to leave the EU (Brexit). All of which has had and continues to have a profound impact on health and health inequalities.⁵⁹⁹

London has not been immune to these international and national challenges. Indeed, some challenges it has felt most acutely. Most recently there has been the Covid-19 pandemic, where

London was hit first and hardest.⁶⁰⁰ These and other contextual factors are important when considering the impact of the London Mayoralty and the three London Mayors on Londoners' health. Things which would be considered uncontroversial and totally acceptable in the present day were not necessarily so at the time. The 2006 national smoking ban in England is a good example of this where the health secretary at the time, John Read, was initially opposed to the ban despite the weight of evidence. This is partly because it is not just about weight of evidence; it is also about public perceptions and political timing. This point around context being important was also identified by participants in the interview study.

"I think what has helped Sadiq is that there's much more passion for the environment now. So, I mean if you talk to people if you were standing trying to get someone to vote for you ten years ago you probably just would've talked about crime and housing; now if you want people to vote for you you'd have to talk about crime, housing, and the environment."

Participant 34

Mayoralty generally and BMJ question

Notwithstanding the ever changing context, interview participants were universal in their support for the role of the London Mayoralty and the positive benefits to health that it has brought. This should be celebrated and acknowledged.

When pushed on this impact and asked whether they agreed with the 1999 BMJ analysis that "the Mayoralty had achieved a bigger impact on Londoners health than London's 32 hospitals", the responses were more nuanced. Participants with an academic background immediately responded with "well it depends on what your measure is !", which is of course correct. However, the purpose of this question was not intended to get a definitive quantitative answer, it was to get participants to think about firstly whether it was a realistic proposition, to reflect on their perspective and definition of health and what affects health and to come to a viewpoint. It was quite striking how participants were divided on this question. Both in their opinions on whether it was a realistic proposition (some strongly linked health as a primary outcome of healthcare) and on whether the Mayoralty had achieved this aim. Whilst the healthcare system, generally, treats disease and illness, and generally does this very well, it has a limited role in respect of promoting health and reducing disease. The responses of participants, who should be considered informed on the difference between health and healthcare, further reinforces the

need for a wider public discussion on the importance of health and health as an asset without which other societal progress will slow.

It is perhaps because of this conflation of health and healthcare that participants identified that there has always been a case to be made, and quite a lot of explanation with all three of the Mayors, as to, “Why am I involved in it when I don’t have any powers over healthcare? Isn’t it the NHS’s job?” This has improved over the course of the Mayoralty, probably as society has a greater understanding that health is much wider than healthcare alone and as health issues have become increasingly important for Londoners and it has looked to the Mayor to do something and show some leadership. All of the Mayors have “*embraced it to varying degrees*” Participant 4 and “*progress has been made on health by each of them.*” Participant 8 and “*there’s been actually admirable continuity between mayors on some of those wider improvements to the city*” Participant 15

While this question in the research was not intended to produce a definitive quantitative answer, obtaining one would be valuable—though challenging. It could help assess the London Mayor’s impact on Londoners’ health and contribute to a broader discussion on how the primary drivers of health lie beyond the healthcare system. This could be an area of future study.

What follows is a summary of the main achievements and failings of each of the Mayors in relation to health and healthcare in London. Just as London is not immune to contextual factors, the same is true for the Mayors and each of them has brought to the role of Mayor something from their background and personal and political priorities, which are also briefly summarised.

Following analysis of each of the Mayors, the commonality and evolution across all the Mayors is examined, as is the importance of the roles and infrastructure around the Mayoralty. Finally, the application of the 5C Mayoral Framework for Action on Health (MFfAH) is discussed.

Mayor Livingstone

Before becoming Mayor, Kenneth (Ken) Robert Livingstone was state educated and originally trained as a science technician in a research laboratory before becoming politically active and joining the Labour party. Livingstone held various political roles in London and would go on to become known as ‘Red Ken’ for his far left socialist views. These roles reflected what

participants described as both detail and strategy with big bold ideas and a drive to make things happen.

Considering that Mayor Livingstone was the first Mayor of London dealing with new infrastructure to be set up, participants identified that he came with a clear plan and hit the ground running from day one. Mayor Livingstone was also identified as being strong on establishing London as a global city, transport and landing the Olympics. Participants particularly identified Mayor Livingstone as using the favourable wider economic environment to improve health and inequalities through wider determinants of transport, regeneration and housing. The focus was on economic growth, securing investment from the Treasury for a subsidy for London buses and large-scale transport infrastructure such as the Crossrail and support for the 2012 Olympics, and therefore the regeneration of East London. These improvements were very significant.

Mayor Livingstone laid the foundations for future Mayors to build on after decades of decay, particularly in transport. In respect of health and healthcare, the importance of these has grown over the period of the three London Mayors. Whilst neither health or healthcare was a priority for Mayor Livingstone, certainly in the first term, there was broad consensus from participants that his economic and transport priorities will have positively impacted health. Also, the structural changes of the GLA Act 2007 supported by Mayor Livingstone, have had a lasting health legacy in respect of embedding health as part of the way the Mayorality and wider Greater London Authority operates.

Mayor Johnson

After two terms and 8 years, London voted for a different type of mayor. Alexander Boris de Pfeffel Johnson, was in many respect the polar opposite of Ken Livingstone. ‘Boris’ as he preferred and was known, was privately educated before training in journalism becoming an editor before moving into politics as MP for Henley (Oxfordshire). Participants identified Mayor Johnson’s engaging flair and charisma for attracting attention.

Participants recalled the initial period of Mayor Johnson as being quite chaotic and seemingly without any particular plan. However, Mayor Johnson benefitted from plans and initiatives that had been put in place by the previous Mayor Livingstone. In particular, the Olympics and city-wide public bike rental. Whilst Mayor Johnson may not have instigated what became known

as ‘Boris Bikes’ he was widely credited with promoting and increasing cycling in London. He often used his ‘celebrity status’ to attract attention to initiatives whilst delegating and empowering others with the detail.

Mayor Johnson was described as more opportunistic and less interested in the detail than his predecessor or his successor, and as such he established Deputy Mayors to whom he delegated these tasks. He could be seen to give freedom to people which came with expectation that people would get on with their agenda. Some participants gave merit to this approach. There is something quite powerful in Mayor Johnson’s approach in that, because he was not into the detail, he delegated and gave autonomy to others to operate on his behalf. As long as the people and infrastructure are in place this can be quite a powerful approach, as opposed to everything having to go through the single point of the Mayor, which would clearly be a bottle neck. When he needed to step in to unblock he did. Participant 6 described the time when in the middle of a meeting an issue / block arose and Mayor Johnson, in the middle of a meeting, said “*That’s a good idea, I’ll just ring Osborne [Chancellor of the Exchequer] now,*” and that’s what he did in order to resolve the issue.

In relation to health, Mayor Johnson was described by participants as clearly not wanting to impinge on personal liberties. Rather, he favoured basing any interventions on education and advice. Participants did however cite a number of programmes to promote action on health during Mayor Johnson’s time as being successful. These included the Healthy Early Years and Schools programme, the Healthy Workplace charter and work on Healthy Streets. However, in relation to such powerful and pervasive commercial drivers of poor health, more structural changes are required to gain impact. When it was an issue of crime prevention, as can be seen by banning alcohol on the London transport system, Mayor Johnson did act. Mayor Johnson was identified as deserving credit for, if not instigating, then allowing and sponsoring the LHC which was universally praised.

Mayor Khan

Sadiq Aman Khan was raised on a council estate and state educated in Tooting (south London), the area he still lives in today. His early career was as a human rights lawyer before moving into politics as a local councillor and then MP for Tooting. Participants describe him as forensic on evidence and with a desire to look to address social injustices. In terms of personality, he is

perhaps a hybrid of Livingstone and Johnson, having the detail and social justice antenna of Livingstone but with some of the celebrity of Johnson.

Mayor Khan was most noted for his focus on the health impacts of transport, in particular the Ultra Low Emission Zone (ULEZ), and on mental health. Mayor Khan used a lot of personal and political capital to see through the implementation of ULEZ. Even when challenged by the Labour leader, Sir Kier Starmer, “to reflect” on ULEZ after the poor by election results ahead of the national election in west London in 2023. In respect of mental health, participants cited the ThriveLDN initiative and also the Mayor Khan’s personal reflections of his mental health during the Covid-19 pandemic. Mayor Khan also applied a health approach to areas not typically considered ‘health’, such as violence reduction. Mayor Khan took a ‘public health approach’ to violence in London creating the Violence Reduction Unit (VRU).

What also came out during the interviews was that much of what Mayors Livingstone and Johnson did that positively impacted health was not primarily done for health reasons. Congestion charging was to reduce traffic to enable Londoners to get around the city, restricting alcohol on public transport was to reduce criminal activity. However, regarding Mayor Khan, participants were clear that the driver for actions were primarily health related.

Mayor Khan’s leadership during the Covid-19 pandemic was universally praised. Participants say that it forged and developed relationships during a once in a lifetime shared traumatic experience. Comparison between Mayor Khan and who was then Prime Minister Johnson during the Covid-19 pandemic perhaps demonstrated most clearly their different leadership styles. Going forward the big question is, will the Covid experience make a lasting legacy difference to the way that London and the Mayoralty operates? Early chapters of this thesis have identified the epidemic of non-communicable diseases (NCDs). The health threats of these NCDs are arguably a bigger ongoing risk to Londoners’ health than Covid.

Evolution and continuity of the Mayors

There has been a high degree of commonality in respect of the areas of focus of all three Mayors, with mostly an evolutionary approach rather than divergency between Mayors.

All Mayors have made progress in respect of transport and structural changes. Mayor Livingstone and Mayor Khan stand out for the pioneering work on congestion charging and the ultra-low emission zone (ULEZ) respectively. Major Johnson initially halted the planned

expansion of the congestion charge zone but then relented and made improvements. Although the congestion charge under Mayor Livingstone was not primarily designed to tackle emissions and improve air quality - it was designed to tackle congestion - it had the positive side effect of reducing emissions. It could arguably be seen as the beginning of the drive towards cleaner vehicles with participants referencing the increase in hybrid taxis and mini-cabs, as they were exempt from the congestion charge. Mayor Livingstone's transport policies were seen as radical at the beginning, Indeed Westminster Council unsuccessfully took the congestion charge to court. Similarly, almost twenty years later, Mayor Khan's ULEZ was taken to court unsuccessfully by some London borough councils. It is still relatively early days for the ULEZ but initial signs are encouraging.⁶⁰¹ Similarly, critics of congestion charging were proved wrong when Transport for London (TfL) reported one year later that traffic reduced by 15%, congestion time by 30%⁶⁰² . What perhaps sets Mayor Khan apart is twofold. Firstly, the scale of the ambition in respect of ULEZ and secondly the fact that health was the driving factor.

Mayor Livingstone and Mayor Khan were also referenced as playing leading roles in respect of climate change. In 2005, Mayor Livingstone convened representatives from 18 megacities to agree to work cooperatively to reduce climate pollution and created the 'C20'. This network grew in numbers and level of commitments, such that by 2021 Mayor Khan took over chairing the group, now named C40. It has over 90 member cities, all committed to limiting global temperature rise to 1.5°C.⁶⁰³ Mayor Johnson was the only London Mayor not identified as playing a key role in the work of this group.

Each of the Mayors made structural changes to 'bake in' the ability for future Mayors to take action . Mayor Livingstone led on the amendments made to the GLA Act in 2007 which were described as significant in relation to health. It is worth noting that for the majority of Livingstone's time as mayor, his statutory duties related to health were significantly less than for Mayor Johnson or Mayor Khan. From the original GLA act 1999, the only responsibility stated for health was to have due regard to and "*to promote improvements in the health of persons in Greater London*". However, in 2007 there was the addition of a requirement to develop a Health Inequalities Strategy for London. The amendment in the 2007 GLA Act is said to have been influenced by the success of Health Impact Assessments, together with other health-related activities that undertaken by the GLA under Mayor Livingstone.⁴⁹⁶ Mayor Johnson created Deputy Mayors, albeit not a health related deputy Mayor. Mayor Khan

oversaw the creation of the GLA Public Health Group, giving public health advice and resource across the entire 'GLA family'.

In respect of healthcare (the NHS), each of the London Mayors has been careful to not become embroiled in NHS affairs. This is perhaps unsurprising given the Mayoralty has no responsibility or powers in respect of the NHS. Unless it is simply opening new NHS services, making changing to NHS services is always controversial and, understandably, attracts public and therefore national and local political attention. However, as with other areas, this has been a journey of development over the last twenty years. Mayor Livingstone took a position to actively avoid getting drawn into London NHS issues. Mayor Johnson, who was Mayor during some significant reconfiguration proposals in south-east and north-west London, developed a form of words *"These are matters for the NHS to direct; this is not for me to interfere, I don't have powers over health services"* Participant 5 that made clear the distance between himself and NHS decision making. However, this increasingly became untenable when he offered a view on many other areas that were not within his direct remit. Eventually, with support from the health team, a form of words was crafted that said, *"It's not for me to direct but I will want assurances that the public's views are taken into account, that health inequalities are considered"*, because that was within his area of statutory responsibility, *"And that they have clinical support"*. And therefore, the message was, *"I'm not going to get into the detail of this and tell the NHS what to do but I'm going to broadly say, 'This is what I expect'".* This approach was developed by Mayor Khan who formalised the principles into four then six 'tests' His approach was, *"I want to get much deeper into what's going on and we'll set up these six tests"*. Participant 5

Each Mayor has set up a group of senior stakeholders responsible for health and healthcare. Generally, this too has been an evolution of what was existing and in some case came full circle to a previous incarnation. The first Mayor Livingstone inherited a London Health Strategy group which was adapted and became the 'London Health Commission' a wide ranging group. Mayor Johnson stood this down and established firstly the London Health Improvement Board, then recast as the London Health Board, before establishing a time limited London Health Commission whose membership was as broad, or broader, than the original London Health Commission. Mayor Khan took a similarly evolutionary approach by adopting what he inherited. All participants agreed the changes made by Mayor Khan to the LHB (formalising it, making it more representative of the health and care system and making it transparent) had

been a positive improvement. However, there were issues raised by participants around the content of discussion and the limited powers it holds. What has been consistent across each of these incarnations is that the group has had no formal responsibilities or powers.

There have been attempts to increase and formalise the role of the London Mayor in respect of health. There have been some successes, such as the changes of the GLA Act 2007. There have also been unsuccessful attempts such as the proposed changes during the Health & Care Act 2012 and the Devolution agreements of 2015 and 2017. These highlight the fact the London Mayor (and other English Mayors) have very limited powers in relation to health and healthcare when compared with international Mayors.

Through the London Health Commission, Mayor Livingstone took embryonic steps towards ‘Health in all policies’ with the use of health impact assessments. This was a structural change that integrated health as a consideration into other areas of work and statutory strategies. The statutory strategies covered a broad range of areas, for example transport, planning, and economic development. This was built upon by the following Mayors, in particular Mayor Khan who explicitly adopted a ‘Health in all Policies’ approach throughout City Hall and also made structural changes to create the public health function for the entire GLA family (Transport for London, Metropolitan Police, London Fire Brigade)

At the beginning of this discussion section, the author references the importance and evolution of context. Just as Mayors have changed, so has the role of the Mayoralty. In part due to wider changes in society, in part due the incumbent Mayors and in part due to it maturing as a role. The Mayor Livingstone era could perhaps be described as the birth and informative years, sprinkled occasionally with what parents call the ‘terrible twos’ best illustrated by Participant 11 “*...if a bit kind of mad and unpleasant...*” Mayor Johnson was the teenage years learning from quite a few mistakes but a lot of fun, best captured by Participant 10 “*an interesting experience, frustrating and exhilarating in equal measure.*” Whilst in Mayor Khan’s case we are coming of age in early adulthood where things are a little bit more serious, or as captured by Participant 13 “*a lot more of a kind of traditional [approach] ...and a bit more hierarchical*” At the end of the day, as Participant 4 put it... “*London’s kind of voted in the right mayors that it’s needed at the right times.*”

What impact has each of the Mayors had on Londoners' health ?

This leads back to the second part of the research question: What impact has each of the three London Mayors had on the health of Londoners ? The interview data, perhaps unsurprisingly, reveals different perspectives on the merit and impact of each of the three London Mayors. This, along with different contextual circumstances, make it difficult to draw definitive conclusions. However, by examining the available data and evidence objectively, it is possible to assess their comparative contributions to Londoners health.

Mayor Livingstone, as the first Mayor of London, played a foundational role by establishing new infrastructure and embedding health considerations into the GLA. Participants in the study identified that he came with a clear plan from the outset, leveraging a favourable economic environment to improve health and reduce inequalities through wider determinants such as transport, regeneration, and housing, including securing the 2012 Olympics. Furthermore, the structural changes of the GLA Act 2007, supported by Mayor Livingstone, created a "lasting health legacy" by integrating health into the operations of the Mayoralty and the wider GLA. It is important to note, however, that while these actions had positive impacts on health, they were primarily driven by economic and transport objectives rather than explicit health goals.

Following Mayor Livingstone, Mayor Johnson brought a different approach, characterized by his engaging flair and charisma. While participants recalled his initial period as somewhat chaotic, Mayor Johnson benefitted from the plans and initiatives established by his predecessor, notably the Olympics and the city-wide public bike rental scheme, which he actively promoted and expanded. However, Mayor Johnson was described as hesitant to impinge on personal liberties, favouring education and advice-based interventions. He also acted on issues with indirect health impacts, such as banning alcohol on the London transport system to reduce crime. Similar to Mayor Livingstone, many of Mayor Johnson's actions that positively influenced health were not primarily motivated by health concerns.

In contrast, Mayor Khan is most notably recognized for his direct and primary focus on the health impact of transport, particularly through the implementation of the Ultra Low Emission Zone (ULEZ), for which he invested significant personal and political capital. He also placed a strong emphasis on mental health through the ThriveLDN initiative and by openly discussing his own mental health experiences. Furthermore, Mayor Khan adopted a "public health approach" to violence in London by establishing the Violence Reduction Unit (VRU).

Participants in the study were clear that for Mayor Khan, the driving force behind many of his actions was primarily health-related. His leadership during the Covid-19 pandemic was also universally praised, potentially leading to lasting changes in how London addresses health issues.

Considering these points on the basis of the gathered evidence, Mayor Khan had the most direct and intentionally health-focused impact on Londoners. His key policies were primarily motivated by improving health outcomes. Mayor Khan's tenure is distinctly characterised by an explicit and central focus on health.

Infrastructure and people around the Mayor

There is an understandable attraction and a risk of overstating the importance on the Mayoralty or individual Mayor, as this is the subject under study. However, neither the individual Mayor nor position operates as an island. The role and function are supported by the considerable infrastructure of the Greater London Authority. This includes the London Assembly which provides an important 'check and balance' role. The individual Mayor is also supported by a politically appointed team of trusted advisors. Throughout the interviews, participants identified this support and individuals as being key to the work attributed to the Mayoralty and individual Mayors. At times, it has been very difficult to distinguish between the Mayor and his health advisor in relation to who is the driving force. There was universal praise for health advisors. It is also true, that looking more widely, the infrastructure and individuals within London's local authorities and the city of London, London Councils and the London NHS are a necessary and key part making improvements in Londoners' health. It is all part of the system working together that will achieve transformation change. This conclusion of the Mayor and Mayoralty needing to work together with other parts of the national and city system leads on to the 5C Mayoral Framework for Action which is discussed below.

8.6.1. The 5C Mayoral Framework for Action on Health (MFfAH)

There are a number of interesting findings from the application of the 5C Mayoral Framework for Action on Health (MFfAH) over the period of the London Mayoralty. When viewed from each of the component 'Cs', Challenge is the least populated and Command is the most

populated. These are both surprising. Given that the Mayor has few powers in relation to health and healthcare, it might be thought they would rely on the domain of Challenge more to challenge on behalf of Londoners both the NHS and others who have a role in protecting and promoting Londoners health. Throughout the interviews, many participants referenced the limited powers the Mayoralty has in relation to health. It was therefore, initially, surprising to see Command as the most populated behaviour.

In relation to considering each of the Mayors. Mayor Khan can be seen to be the most proactive in using the existing powers of the Mayoralty to directly intervene (command) in areas such as ULEZ, creating a GLA public health group, banning HFSS adverts on the transport system and using HiaP across other Mayoral policies. This was also supported by *Participant 16 who said "I think he always been prepared to be more kind of muscular with the powers that he's got, even when they're limited."* Mayor Johnson, with his conservative values was the least interventionist. Across the other domains of the 5C MFfAH, the Mayors are more evenly distributed. This reinforces the earlier assessment that Mayor Khan has been the proactive and impactful Mayor on Londoners health.

The analysis and weighting of mayoral health-related initiatives within the provided framework highlights notable differences in approach and impact across the tenures of Mayor Livingstone, Mayor Johnson and Mayor Khan.

Mayor Khan had both the most initiatives (18) and the highest overall impact score (26). His leadership in ULEZ expansion, HIV prevention, mental health advocacy (Thrive LDN), and COVID-19 response were identified as having high or very high impact. His commitment to 'Health in All Policies' (HiaP), the GLA Public Health Group, and HFSS advertising bans further demonstrated his systematic approach to health improvement.

Mayor Livingstone (10 initiatives, impact score: 17) was credited with foundational policies, such as the congestion charge, Health Impact Assessments (HIA), and the GLA Act 2007, which baked in health, and in particular health inequalities, as part of the Mayoralty. His work on smoking and early cycling schemes also contributed to potential health improvements.

Mayor Boris Johnson (9 initiatives, impact score: 9) had fewer health-focused initiatives, with a lower overall impact. His Olympics legacy, obesity programs, cycling promotion, and

devolution efforts were noted but seen as missed opportunities for more systemic health improvements. His alcohol ban on transport was deemed low impact, as it was primarily a public order measure.

Therefore, overall, Mayor Khan's tenure demonstrated the most significant and wide-reaching health impact, while Mayor Livingstone laid the groundwork for systemic health integration. Mayor Johnson's contributions, while present, were less substantial.

Finally, when applied to any period of the Mayoralty, the 5C MFfAH can be seen to be dynamic not static and also contextually sensitive. It is dynamic as the issue or opportunity can be seen to move around the framework depending on the lifecycle stage or specific element of the issue or opportunity. This is illustrated by the 'Olympics' which features in both champion and collaborate – and would likely feature in other domains at other times. Additionally, there is no right or wrong or correct distribution of issues or opportunities in the MFfAH, they are issue or opportunity and context specific.

8.7. Implication of this study for current and future Mayors

The author has engaged the current Mayor's political health advisor and discussed the results of this study and the 5C MFfAH. They are keen to prepare a joint publication on the 5C MFfAH and support testing it further as a proactive planning tool for Mayoral priorities. It may well be that the framework has broader application to other cities and Mayors both nationally and internationally. Therefore, the author will explore opportunities for wider application and testing.

Through the document review and interviews, this study provides a record of Mayoral activity in relation to health in London over the last 20 years. This will be important for future Mayors, and their teams, so that lessons can be learnt and not re-invented. As captured by *Participant 2* ... "there's a massive reinvention in London, which as I get older , I just get pissed off, to be honest...we're not very good at maintaining the origin or legacy".

8.8. Implication of this study for policy makers

The author believes there are two main implications for national policy makers. Firstly, city Mayors can make significant impact on factors affecting the health of their population through a variety of different approaches and areas. Mayors should be empowered and given the tools to increase this impact through further devolution of powers and responsibilities. Also, throughout the interview process, participants consistently conflated health as meaning healthcare. Healthcare is of course important for health but it is only one part and yet it often dominates all discussions. A public conversation on the primary importance of health to everything and what affects health is required. This requires our collective societal action. As has been particularly demonstrated over recent years, good health is the foundation for all else.

8.9. Implication of this study for academics/research and future work

This study provides a record of Mayoral activity in relation to health in London over the last 20 years. There have a number historic records of each of the London Mayors and quite recently the London Mayoralty⁶⁰⁴ but none of these, or any other publications, have included the role of the London Mayoralty or each of the individual London Mayors' role in relation to health in London. There is therefore an important gap filled by this study.

In addition to this historical record, this study has been the first to establish and consider the 5C MFfAH The author believes this framework has broader applicability to other cities and Mayors and would therefore welcome its further testing.

8.10. Strengths and Weaknesses/Limitations

A key strength of this study is that it is unique, having never been performed before. It has, in part, been enabled by the author's role and relationships in London over the last 15 years which have enabled access to key documentation and key very senior individuals that would otherwise likely not been possible. In testing, a strength identified for 5C MFfAH is its simplicity, which will support its wider use.

That said, there are a number of weakness and limitations of this study. There is always a risk

in a study such as this that an impact of the Mayoralty or individual Mayors is not seen within the wider national and international context. The author has tried to mitigate this risk by presenting wider contextual factors, as far as possible. The long time period that the study covers, over 20 years, will mean that, understandably, some individuals recollection of events from further in the past will likely be less precise. This is known as recall bias and was somewhat managed through the document analysis to provide a scaffold and timeline of events that could be used to prompt questions. Equally, the expectations or subjective interpretations of the researcher, known as researcher bias, can influence results. This was managed through developing the framework with an experienced qualitative researcher, with no knowledge of the subject area, to ‘check and challenge’ during the process. As noted in the previous chapter, the omission of representation from the London Assembly is a weakness.

Finally, the 5C framework has been developed based on the Mayoralty in one city (London). It would benefit from wider testing, which could be a follow up study or studies.

-

8.11. Conclusions

In conclusion, the analysis shows that Mayor Sadiq Khan implemented the greatest number of health-focused initiatives and achieved the highest impact—particularly through the ULEZ expansion, HIV prevention efforts, mental health advocacy, and ‘Health in All Policies’—demonstrating a systematic approach to improving Londoners’ health. Mayor Ken Livingstone laid crucial foundations by embedding health considerations into London’s governance, notably through the congestion charge, Health Impact Assessments, and the GLA Act 2007, which institutionalized a focus on health inequalities. In contrast, Mayor Boris Johnson introduced fewer health-centered initiatives, with his contributions—such as the Olympics legacy, obesity programs, and devolution efforts—ultimately seen as missed opportunities for broader systemic impact. Overall, Khan’s tenure stands out for its wide-reaching and integrated health impact, building on Livingstone’s groundwork, while Johnson’s influence on health outcomes remained comparatively limited.

This study has also provided a historic record of activities and perceived impact of the Mayoralty and each of the three London Mayors in respect of Londoners’ health. This ‘look

back' aims to provide a useful tool when we look forward. With this future orientation in mind, the testing of the 5C MFfAH provides a useful measure by which behaviours can be assessed.

The catalyst for this study and the study in the previous chapter was the systematic scoping review (chapter 2) which did not identify a Mayor as having a consistent and prominent role in respect of health. This study concurs with the findings from chapter 5 in that a Mayor does have an important role in respect of health of the city residents.

8.12. Researcher reflection

Similar to previous studies, the time taken to complete this study was underestimated. This study, along with the grounded theory study presented in the previous chapter, above the others, provided the steepest learning curve. It involved learning and applying the theory to a large number of interviews, which created a large amount of data. The iterative nature of generating themes and codes and the process of refinement and reflection took considerable time. However, this was all to the benefit of the end product and the process of learning.

Given time again, a greater focus during the interviews would have been beneficial. A significant amount of data from the interviews was collected but ultimately not used – as it was not relevant to the research questions. This was therefore not always a productive use of the interviewees' time.

8.13. Acknowledgement

The author would like to thank Dr Stephanie Archer for providing expertise and supervision to this study. Thanks also go to the Greater London Authority Health team under the leadership of Vicky Hobart, particularly Gus Wilson for help during the document analysis.

Chapter 9: Conclusions

“...to make an end is to make a beginning. The end is where we start from...”

TS Elliot (Little Gidding 1942)

9. Introduction

In this final chapter, the aim of the research and the research questions are revisited with reflection on how the studies individually answer the secondary research questions and collectively contribute to answering the primary research question. This collective body of findings is integrated to answer the primary research question and presented as a forward looking 10 - 15 year outline plan for cities to improve population health. Discussion of the overall limitations of the work and implications for academics and potential future work are put forward before concluding with personal reflections and final remarks on the thesis.

9.1. Thesis aims

As stated in chapter 1 section 1.4, the overarching aim of this thesis was to **identify and understand in what way cities are improving the health of their residents and bridge the gap between academic research and policy interventions for real-world impact.**

Associated with the above aim, the primary research question (RQ) of this thesis was:

- 1) RQ 1 – In what ways are cities improving the health and healthcare of their residents and what further opportunities are there ?

This primary research question was supported by these secondary research questions:

- 2) RQ 2 - What does the existing body of knowledge tell us about city-wide health and healthcare transformation?
- 3) RQ 3 - What initiatives are cities undertaking to stem the rise in obesity ?
- 4) RQ 4 - What opportunities are there for urban healthcare to work with physical activity providers ?
- 5) RQ 5 - What initiatives are cities undertaking to improve population health, including their response to Covid-19 and the role of the Mayor ? What impact have these initiatives had ?
- 6) RQ 6 - What comprehensive reviews, strategies or visions for health and healthcare have been developed for London over the last 200 years ?
- 7) RQ 7 - How have Mayors used their positions to improve city residents' health and healthcare ?
- 8) RQ 8 - What impact has the London Mayoralty and each of the 3 London Mayors had on the health of Londoners ?

9.2. Summary of this thesis

This thesis, titled *Characterising Policy Solutions for City-Specific Health Needs*, explores the ways in which cities are improving and can improve the health of their residents. Organised into nine chapters and encompassing eight distinct studies, the thesis begins, in chapter 1, with an introduction to the subject of cities and health and the author. Chapter 2 establishes the foundation of the thesis through a systematic scoping review and answers the research question RQ2 - what does the existing body of knowledge tell us about city-wide health and healthcare transformation? This was the first time a systematic scoping review had been undertaken to answer this question. The 1,614 results of this scoping review were organised and categorised in a simple database and made available through the associated peer review publication, such that it can be freely used to support the aim of bridging the gap between academic research and policy interventions for real world impact. The subsequent secondary research questions were formulated based on the results of answering this initial research question and the gaps that were identified.

Chapter 3 and chapter 4 focused on obesity, which was identified as the most prevalent risk factor of concern by cities in the systematic scoping review. These chapters answer RQ 3 - What initiatives are cities undertaking to stem the rise in obesity? Chapter 3 details a systematic review into city-wide initiatives to address obesity. This was the first time a systematic review had been undertaken to answer this question. The results were used to develop a 'composite model' of initiatives that any city could use to address obesity, to support bridging the gap between academic research and real world impact. Chapter 4 examines the perceptions, through a cross sectional survey, of gaps and disconnect between those working within healthcare and those working in the physical activity sector in London. It answered RQ 4 - what opportunities are there for urban healthcare to work with physical activity providers? The recommendations within this chapter have resulted in an ongoing network and actions to improve confidence for real world impact.

To counter the geographic and publication bias inherent in the chapter 2 scoping review, a novel survey of eleven diverse cities across five continents is reported in chapter 5. This comprehensive survey answered RQ 5 - what initiatives are cities undertaking to improve population health, including their response to Covid-19 and the role of the Mayor? What

impact have these initiatives had ? The results of these surveys were shared with the respondent cities such that they were able to connect and share learning for real world impact.

The scoping review also highlighted a pattern of what appeared to be fragmented initiatives lacking cohesive strategy or vision, prompting a focused analysis of health strategies and visions in London over the last 200 years. This is presented in Chapter 6. This study answers RQ 6 - what comprehensive reviews, strategies or visions for health and healthcare have been developed for London over the last 200 years ? The results of this study will form the basis of a high quality peer reviewed publication and a policy briefing to London health and care leaders to support bridging the gap between research and real world impact.

Finally, there was a paucity of references to the role of Mayors in the scoping review. This was explored in the city health survey in chapter 5 which interestingly identified Mayors as playing an important role. Therefore, the role of Mayors was further explored in chapters 7 and 8. Chapter 7 is a grounded theory study which developed a framework for how Mayors could positively impact health and healthcare, addressing, RQ 7 - How have Mayors used their positions to improve city residents' health and healthcare ? Chapter 8 combines a document analysis of files from the Greater London Authority and interview data to explore the impact of the London Mayoralty and each of the three London Mayors on Londoners' health and to test the framework developed in chapter 7, addressing, RQ 8 - What impact has the London Mayoralty and each of the 3 London Mayors had on the health of Londoners ?

The conclusions from all eight studies are brought together in chapter 9 which provides overarching reflections on the body of work of this thesis.

9.3. Summary of findings and discussion

The findings of each study are discussed in detail within the relevant chapters of this thesis. This final chapter aims to summarize the findings from each of the studies and then integrate them into the thesis collective body of knowledge. This approach allowed for a higher-order synthesis, enhancing and refining the key concepts and conclusions initially identified within each individual study. In doing so, the research draws connections across studies, offering a broader holistic perspective on the topics addressed and contributing to a more comprehensive

understanding of the primary research question. In this section, the secondary research questions are addressed first before concluding on the primary research question and the aggregated and integrated findings and discussion.

9.3.1. RQ 2 – What does the existing body of knowledge tell us about city-wide health and healthcare transformation

At the beginning of the research a systematic scoping review was undertaken to provide answers to RQ 2 – what does the existing body of knowledge tell us about city-wide health and healthcare transformation ? This systematic scoping review provided the foundation for the entire thesis and was therefore purposefully broad and wide ranging. The 1,614 original citations that met the inclusion criteria identified that academic interest in cities and health is growing. The citations revealed that there is a large complex range of issues, particularly focused on non-communicable diseases (NCDs), and actions being taken by cities. Five key findings and five associated policy recommendations are put forward in section 2.7 and are therefore not repeated here.

When the results of this study are considered in the context of the other studies of the thesis additional important conclusions can be drawn.

In addition to the complexity of results, cities themselves are complex systems. In the context of this ‘meta-complexity’ the most frequently used approach to improve health or healthcare was education. Non-communicable diseases, which accounted for over 90% of the initiatives identified, are also referred to as "lifestyle choices". There is inference with the term lifestyle choices that, if educated, individuals can make better choices. The term "lifestyle choices" is a misnomer, as individual behaviours are heavily influenced by both explicit and implicit prompts in their environment, including powerful ‘commercial determinants’ of health. Whilst education is an important element of improving individual and population health it needs to be part of a suite of wider reinforcing initiatives. Interestingly, in the self reported city survey in chapter 5, education was reported frequently. However, restrictive or punitive initiatives were reported as having the biggest impact (section 5.7.2.1).

This leads to the point that language and understanding of meaning is important. In this study, the term ‘lifestyle choice’ is identified. This, unfairly in the author’s view, places emphasis on

the individual. Language and conflation of terms is also identified as an issue in Mayoral studies, where ‘health’ is conflated and used interchangeably with ‘healthcare’. This results in discussion about health being reduced to conversations about healthcare. These issues of language have at least two negative consequences. Firstly, whilst healthcare is important it is estimated to account for only 20% of what impacts an individual’s health. The remaining, largest proportion impact, in areas such as education, employment, housing, environment are therefore often not part of the conversation in respect of health. When there are a number of factors affecting an issue the question should always be, where can I make the biggest difference ? And yet it seems to the author that we are ignoring the areas where we could make the biggest difference in health. Also, putting responsibility on the individual – with the term ‘lifestyle choices’ - whilst at the same time creating the environmental and contextual conditions to make individual healthy choices difficult if not impossible is at best disingenuous and unethical. Obesity, as described in chapter 3, illustrates this point.

The start of a solution to these issues is a national conversation on what contributes to, and negatively impacts on, health as our most important asset. Whilst the focus of this thesis is cities and health, this conversation would best be even wider and best suited to national scale. Mayors would have an important role in leading this for their respective cities, particularly as city populations have distinctive characteristics of being more transient, younger and more diverse. As identified by the author in his related publication⁶⁰⁵ this will also require a move beyond simple singular measures of progress such as GDP to a wider more balanced suite of measures. These too would benefit from engagement with communities as part of their development, as there are always trade-offs to be made. These conversations and engagement would form the basis for a new social contract between public services and communities. There are a number of specific examples of new social contracts^{606 607} but what the author is proposing here would be a significant scale up to national level.

9.3.2. RQ 3 – What initiatives are cities undertaking to stem the rise in obesity ?

The systematic scoping review identified obesity as a leading area of concern in cities. Therefore, a systematic review was undertaken to answer RQ 3 – what initiatives are cities undertaking to stem the rise in obesity ? This review used the scoping review from chapter 2 as a basis, to demonstrate its utility. Nearly 100 initiatives from 36 cities between 1997 to 2019

were included. Inductive thematic analysis identified seven themes; schools and childcare settings, education and support, multi-component, healthy food availability, physical infrastructure, restaurants and food outlets, and marketing and nutritional information. From these findings a composite model of initiatives for cities to reduce obesity was developed for real world benefit.

The results reinforced and build on the themes from the scoping review, namely; there is a need for a comprehensive suite of reinforcing component approach. The interconnected nature of issues and solutions, across health and climate change was also apparent. As discussed in section 9.3.1 this can lead to complexity of issues within the complexity of a city. This leads the author to two consider two separate but related reflections.

The first is from the first half of his career as a systems engineer. One role he held was to lead operation improvements at Airbus during the launch of the A380 superjumbo. The A380 superjumbo is constructed from around 4 million parts. There is a complex supply chain to organise and ensure every part is where and when it is needed to ensure most efficient assembly. In manufacturing, this would be managed through ‘Theory of Constraints’ a concept developed by Goldratt.⁶⁰⁸ Theory of constraints is a process improvement approach which when faced with a complex process advocates identifying and focusing on the bottleneck (as a process or chain will only go as fast as the slowest or weakest link).

The second reflection is based is also based on systems thinking. During the 19th and early 20th century, wolves had roamed freely in Yellowstone Park in the USA, until they were hunted to extinction in the park in the mid 20th century. Without the wolves, the coyote and elk population increased which resulted in overgrazing and destruction of trees, which resulted in a lack of natural habitat for beavers to build dams which results in flooding and erosion.⁶⁰⁹ The park ecosystem was out of balance. In 1995 wolves were reintroduced to Yellowstone park. The wolves, as predators, kept a check on coyotes and elks and research has demonstrated that the natural balance of the park has returned⁶¹⁰ and flooding and erosion been eradicated.

These reflections lead the author to advocate for identifying and making a policy change that will have a significant system ripple effect of improved health in cities and identifying the very small number of initiatives that will have the greatest impact (at “the bottleneck”). A good example is from the city survey presented in chapter 5, where fluoridation of water had been

implemented and scored the highest impact. Interventions that change the context and do not require personal motivation of action should be the preferred approach.

9.3.3. RQ 4 – What opportunities are there for urban healthcare to work with physical activity providers ?

In answering RQ3, the systematic review identified that healthcare professionals were trusted and well placed to offer advice and referrals into physical activity providers. This led to RQ 4 – what opportunities are there for urban healthcare to work with physical activity providers ? The cross sectional survey with almost 200 responses covering all the 33 London boroughs identified a good understanding of the contribution physical activity made to mental and physical wellbeing. It also, however, identified gaps and a disconnect between those working within healthcare and those in the physical activity provision sector. This was supported by ‘collaboration and networking’ which was identified as a priority from the NLP analysis. As with other studies in this thesis, an underlying aim has been making a real world impact. Therefore, a network has been established to connect and breakdown the barriers between the healthcare sector and physical activity sector. This will be evaluated after 12 months to decide if it is beneficial to continue.

The siloed nature of the healthcare sector and physical activity sector identified in this study speaks to a wider point about lack of integration, which was identified when answering RQ6, and the need to take a system and whole person perspective, identified in RQ2 and RQ3. In any patient or customer journey or pathway issues can typically happen between steps in the journey or pathway. This can mean at best individuals are not treated in the effective and efficient way or at worst individuals fall completely between the (many) gaps in departments or organisations. Linking to the earlier point on systems and supply chains, the chain only needs to break once for it to break entirely. To illustrate this point, if a patient pathway is a simple 10 step pathway such as 1) GP appointment 2) referral to diagnostics 3) diagnostics appointment 4) diagnostic results 5) GP (with diagnostic results) 6) referral to secondary care 7) secondary care appointment (with all diagnostics information) 8) secondary care tests 9) secondary care follow up 10) discharge. Each step on the pathway has a 90% likelihood of being completed successfully, then the likelihood of the entire process working successfully is only around 65%.

Taking the learning from answering RQ2 and RQ3, thought should be given to what incentives can be put into the system to promote integrated working. This could involve joint financial incentives. Similarly thought should be given to ‘error proofing’ the process. In systems engineering there is a concept called ‘poka-yoke’ which comes from the Japanese manufacturing sector and roughly translates to ‘error avoidance’.⁶¹¹ A good example of ‘poke-yoke’ is a UK 3 pin plug. It is impossible to put it in the socket incorrectly. Wherever possible, human error should be designed out of the process.

9.3.4. RQ 5 – What initiatives are cities undertaking to improve population health, including their response to Covid-19 and the role of the Mayor ? What impact have these initiatives had ?

The geographic bias and notable omissions, principally Mayors and city visions, in the scoping review led to the development of a cross sectional survey presented in chapter 5. The comprehensive survey, containing 173 questions, examined priorities and initiatives from a diverse group of eleven cities from 5 continents. The results present a rich and, similar to the scoping review, sometimes complex picture. Whilst cities have much in common they can also have a wide range of individual priorities and initiatives. This was particularly interesting as every city broadly followed the process of basing priorities and initiatives on the population need, with varying degrees of pragmatism and political prioritisation included. And also that the same initiative was on a number of occasions reported to have significantly different impact in different cities. This warrants further exploration which is discussed in section 9.5.

In respect of ways of working in response to the recent Covid-19 pandemic, cities identified collaboration as the number one priority (along with virtual and digital). Collaboration links to other studies priority of integration. The ambition to increase virtual and digital (‘analogue to digital’) and further integration have been long priorities that have been slow to progress.

In the author’s view, the same level of health emergency that was applied to the Covid-19 response should be applied to NCDs and the ‘vital 5’. The systematic review identified Mayors as having played an important role both in system leadership and taking direct policy action, so they are well positioned to enact these two things.

Focusing on future healthcare requires building robust systems that can rapidly adapt to emergencies. Strengthening response capabilities through improved coordination, rapid resource mobilisation, and integrated systems can minimise the impact of crises and save lives. Equally important is enhancing capacity in primary and community healthcare—particularly in health promotion and disease prevention—which helps create a healthier population and enables further investment in health services. As discussed in this Thesis, this approach is especially vital in cities, which are often focal points for health emergencies, host extensive healthcare networks, and contribute significantly to national economies. This dual strategy not only ensures a resilient healthcare system in the face of unexpected events but also enhances routine care, ultimately fostering a healthier and more crisis-resilient society.

One of the aims of this research is to make real world impact. Along with the suggestions in section 9.3.2 of identifying and making a policy change that will have a significant ripple effect of improved health in cities and identifying the very small number of interventions that will have the greatest impact, the author believes there would also be benefit from the very practical and specific nature of this survey. As described in section 5.12 there is no one city that is doing everything well but there is something to learn from every city. Therefore, for example, an informal light touch network could be established whereby if a city were looking for advice on an initiative they could identify and approach a city that had previous experience and this would be reciprocated. This will be particularly useful because, as identified in section 5.5, policy making is a combination of evidence, public and political opinion and opportunistic timing. It requires agile support to city health policy makers. This network connection was also requested by participants of the city survey.

The systematic scoping review identified a lack of reference to a city strategy and role of the Mayor. However, eight of the eleven cities reported having a city health vision or strategy and respondents reported the role of the Mayor as highly important (average of 9 out of 10, with 10 being the highest). These areas were therefore explored further in two subsequent studies.

9.3.5. RQ 6 – What comprehensive reviews, strategies or visions for health and healthcare have been developed for London over the last 200 years ?

London was used as the setting to explore city reviews, strategies or visions for health or healthcare, over the last 200 years. Analysis from the 30 identified reviews identified several

recurring themes including; variability in quality and accessibility of services, inefficient use of resources, leadership and coordination issues, inequality in outcomes and an over focus on healthcare to the detriment of health.

Many of these issues first highlighted over a century ago persist today, for example concerns about the ‘nanny state’ almost 200 years ago in the 1834 poor law, ‘vaccine hesitancy’ in 1853 and the recent Covid-19 vaccination experience, Charles Booth poverty and housing impact on health and more recently Marmot.⁶¹² These all still resonate today. This reinforces the need for a sustained and relentless focus, as also identified in the other studies, on a small number of priorities.

Similarly, many of the solutions identified recur. For example, the need for better integration dating back to 1913⁴⁴² the need for preventative and health wellbeing services in 1944⁴⁴⁹ the shift of resources to community care and links to social care in 1980⁴⁵⁷ and development of community clinics from Dawson in 1920⁵²⁸ could be replaced by Darzi⁴ and polyclinics in 2007 and an overfocus on (reorganising) healthcare to the detriment of health.

Transformations have occurred in response to a health or social emergency, be that cholera or now Covid and the world wars or current war in Europe. The same level of health emergency response to Covid-19 should be applied to NCDs and the Vital 5

9.3.6. RQ 7 – How have Mayors used their positions to improve city residents health and healthcare ? and RQ 8 – What impact has the London Mayoralty and each of the 3 London Mayors had on the health of Londoners ?

London was also used as the setting to answer RQ7 and RQ8, which are presented in chapter 7 and chapter 8 respectively. Both studies employed an interview study design with 35 interview participants. RQ 7 was answered using adapted constructivist theory to construct a framework for how mayors of cities could positively impact health and healthcare. The resultant framework, the 5C Mayoral Framework for Action on Health (5C MFfAH) consisted of: convene, champion, collaborate, challenge and command. These behaviours were underpinned by relationships and building trust. The subsequent study to answer RQ 8 integrated two studies; a document analysis and interview study to describe the impact of the

London Mayoralty and each of the 3 London Mayors on the health of Londoners and to test the MFfAH developed in the previous study.

Interview participants universally supported the role of the London Mayoralty in improving health. Each of the three London Mayors has embraced this challenge to varying degrees, with progress and continuity noted across administrations. The studies suggest that increased authority and accountability in health matters would allow the Mayor to address health issues, most of which require cross-borough collaboration, more effectively. However, complexity and political differences have often hindered progress. To enhance impact, the studies recommend putting certain health collaborations on a statutory footing and fostering strong relationships among city, health, and national leaders.

The "5C MFfAH" offers a model for other cities and highlights that, while more Mayoral authority could benefit improvements in health, effective use of existing powers is a critical first step.

9.3.7. RQ 1 – In what ways are cities improving the health and healthcare of their residents and what further opportunities are there ?

This thesis in many ways has gone back to basics to try to work through the complex topics of improving city health. It starts from the author's paradigm that good health is the bedrock of everything else. This is also true at a population level. Good health enables and boosts employment and good employment boosts health. This enables investment in public services, which themselves support good health. The opposite creates an ever decreasing societal spiral. Therefore, health is our most important asset and something that should be invested in and protected.

The studies in this thesis have through different lenses and different study types examined the ways in which cities have endeavoured to improve the health of their residents. Some important messages and learning have emerged.

Increasing global urbanisation has made urban population health a critical area of focus. Cities grapple with challenges that can create an "urban health penalty" - marked by higher rates of infectious diseases, poor mental health, air quality issues, and obesity - while striving to create an "urban health advantage" by leveraging cultural and infrastructure assets, leadership that balances scale with community connection, enhanced social connectivity and proximity to healthcare services.

This Thesis investigated how cities are improving the health and healthcare of their residents. The evidence shows that cities can and do enhance people's health in a variety of ways. The evidence also reveals that those cities that adopt a comprehensive approach - integrating education, service and policy reform, and physical environment changes - achieve the greatest impact. Although many of these health challenges are long-standing and no single city excels in every area, there remains significant potential for further progress, particularly by better integrating healthcare with community-based services, with mayors playing a crucial leadership role in advancing a holistic urban health strategy.

These messages and learning are now used to look forward and consider what would need to be true if over the next 10 – 15 years population health in cities was transformed and therefore global population health was transformed.

9.3.8. City 10 – 15 year outline action plan for health and healthcare

The aim of this plan is to use the outputs of the body of this research, into practical real world benefit. The areas identified below are additional collective conclusions to the individual studies.

- 1) Language is important.
 - a. National and city conversation on health which develop metrics over and above GDP and for the basis for a social movement and new social contract.
- 2) Education is important but needs to be part of a comprehensive plan.
 - a. There is a need for a comprehensive vision and associated action plan. This needs to include structural and regulatory changes. The engagement above will form the first part of developing and gaining a mandate for this plan.

- 3) Identify 1-2 ‘system enablers’ and 1-2 ‘bottleneck’ projects
 - a. One of the system enablers or bottleneck projects should focus on integration. These could include, for example, data sharing, incentives, leadership.
- 4) Create a burning platform and take a relentless focus
 - a. The same level of health emergency that was applied to Covid-19 should be applied to health, in particular the Vital 5 and NCDs.
- 5) Utilise the Mayoralty in cities to drive improvements in health, providing system leadership and direct policy interventions.
 - a. Mayoral and health teams to form networks to learn and share from other cities

The outline plan is discussed further below.

A comprehensive approach to the Vital 5 that includes education and support along with structural and policy changes is required. This will require and should begin with a collective conversation with communities on the primacy and importance of health and how healthcare is only a partial answer. The discourse so far has focused only on healthcare. Healthcare is the means to an end not the end itself. Indeed, if healthcare is to become sustainable there is a need to stop focusing and tinkering and restructuring healthcare and focus instead on health in the widest sense, i.e. including wider determinants. This will require and result in wider set of measures of progress rather than just GDP and will be the start of a movement and new social contract. Which will take time.

In parallel, political leaders will need to be collectively brave on making system policy changes that will positively impact health. The same level of health emergency that was applied to the Covid-19 response should be applied to NCDs and the ‘vital 5’. This will only be possible by starting a collective conversation with communities.

Mayors will need to play an important role both in system leadership and taking direct policy action. RQ2 identified a gap in the role of Mayors. RQ3 and RQ5 identified Mayors as having an important role. RQ 6 suggests Mayors could have a bigger role. RQ7 and RQ8 identified and tested behaviours and ways of working for Mayors to improve urban health. Cities have led the way - where arguably national governments have not – in respect of transport and climate change. None more so than London. Mayor Livingstone was the instigator for the global city movement now known as C40. Twenty years later Mayor Khan is leading and chairing this group of over 90 global cities. These two examples make the point of the positive impact of

centralised powers of the Mayor as actions such as these would not have been realised prior to the creation of the Mayoralty.

Cities and Mayors will only be able to do this through collaboration. With the continued and significant growth in the number of cities and population that will live in cities, it would be wise to share learnings from what other cities have done or been through so that new or growing cities do not have to make the same mistakes. This could be particularly beneficial as the growth in cities is particularly focused on areas with lower life expectancy (section 1.3.3). In the city survey (RQ 5 and chapter 5) it was surprising that ‘making the most of the cities wider assets for the benefit of health’ was reported so little. The very uniqueness of cities should be used by all cities.

9.4. Thesis limitations

This section offers a broad critique of the thesis. Limitations and biases of the individual studies are included within the relevant chapters.

The biggest limitation of this thesis is unquestionably the author as a novice researcher and part-time student. As a result, much of the research theory, study design, and analytical methods were learned—and in many cases applied - for the first time during the course of the research. This choice was intentional, as the studies and design were specifically selected to challenge and develop the author’s skills as a researcher. However, this real-time learning will have affected the research's overall effectiveness and efficiency. Fortunately, this limitation was mitigated by the excellent guidance and support provided by the supervisory team and to a much lesser extent the reflective journal. In addition, the author conducted this research part-time while working full-time in a demanding senior role within the NHS and managing responsibilities as a parent to a young family. The author will have also brought personal bias from experience of working within the subject area. Further details on these limitations are discussed in the personal reflections section 9.6.

The sample sizes of the studies have also been a limitation, perhaps for contrasting reasons. The interview studies related to Mayor (chapters 7 and 8) had a significant number and broad range, with some exceptions, of participants. The significant number of interviews and

associated analysis took a considerable time. In contrast, a significant amount of time was spent identifying potential participants for the city survey (chapter 5) yet only 11 cities completed useable data.

The choice of study design and approach has also given rise to limitations. Qualitative research is not typically generalisable; it provides an in depth specific explanation and meaning to a phenomena. This will be a limitation for wider city applicability. This is identified as an area of potential future work in section 9.5. Similarly, there is a bias towards London, with five of the eight studies are based within London.

In addition to the study's limitations, several biases were encountered throughout this research. These biases have been identified and discussed in the relevant chapters, along with the strategies employed to mitigate them. This final chapter provides an overall reflection on these biases and the approaches taken to manage them.

The thesis began with an introduction to the research subject area and the researcher's role. As the "primary instrument for data collection" in qualitative research, it was essential to consider potential biases of the author and research supervisors from the outset. These included confirmation⁶¹³ and cultural bias.⁶¹⁴ To manage these biases and associated risks, the researcher maintained transparency, critically reflected on personal experiences, and considered his worldview. This marked the beginning of reflexivity, which was a continuous practice throughout the research. Table 1.2, in chapter 1, sets out the key components of rigour and managing bias.

The scoping review (Chapter 2), which set the foundation for the subsequent thesis research, and systematic review (Chapter 3), were susceptible to publication bias and the results revealed a geographic bias. These limitations were mitigated through explicit and transparent research methods and the bias, in particularly geographic bias, in the results was managed through carrying out the subsequent city survey (chapter 5). Other biases were addressed within the relevant chapters, including recall bias, which was managed by incorporating document analysis to scaffold and prompt responses, and social desirability bias⁵⁶⁴, which was controlled through careful written and verbal explanations of confidentiality.

Throughout this research, the author has sought to remain open and transparent about the methods used, including their limitations, to ensure a clear audit trail. Reflexivity was employed as a key strategy to counter bias, alongside engagement with others to provide critical challenge and reduce subjectivity. Recognizing the potential for bias and the need for further expertise, the researcher sought guidance from an experienced qualitative researcher (Dr. Archer). Additionally, continuous reflexive discussions with supervisors helped both to minimize bias and to support the researcher's development. This process reinforced the commitment to rigour, self-awareness, and continuous learning in conducting high-quality research.

Finally, all material and data included only results in the English language. This is a limitation for what was intended to be globally relevant body of work.

9.5. Implications for academics and potential future work

There are a number of resources this thesis offers that would be useful for further interrogation and study. The studies have also opened up a range of potential future studies. These are both discussed in this section.

The systematic scoping review database presents both an open access asset to other researchers interested in initiatives to improve health and healthcare in cities for applied and real world benefit and also opportunities for developing further systematic reviews and policy briefings.

As noted in the limitation sections, the framework and model developed as part of this thesis would benefit from generalisability testing in other settings. This is something the author would be keen to explore.

The city survey presents both an asset for further interrogation and analysis and also further questions for follow up studies. Further interrogation could be in the form of a follow up interview study. This could explore areas where the same initiative has had very different impact in different cities, to try to understand reasons and success factors.

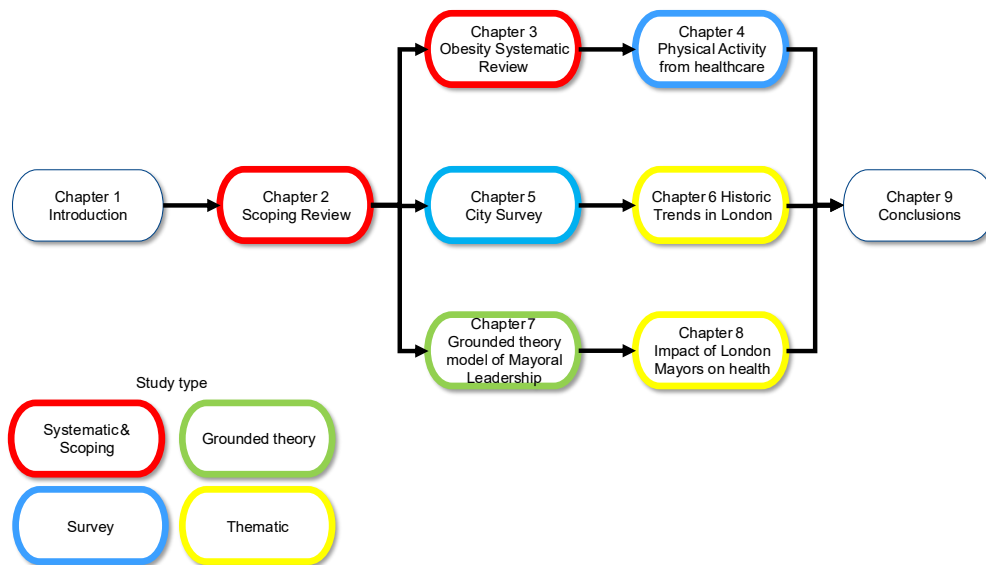
The participants of the city survey asked to be connected with other cities that participated. This could indicate there is appetite for the beginnings of an informal research collaborative.

9.6. Personal reflections

As I near completion of my PhD journey I reflect on lessons learnt and the potential of what comes next. The chapter quotation is TS Elliot “... *to make an end is to make a beginning. The end is where we start from...*” At the beginning of this thesis and my PhD journey I referenced the aim of learning to be a researcher. As I come to the end of the PhD I realise I am only at the beginning of learning to be a (good) researcher. It feels quite similar to a driving test. It is a point in time where I am judged good enough but not perhaps good. I look forward to the next stage of my journey.

As identified in section 1.1, the process of learning to be fledgling researcher was a key part of completing this thesis. Therefore, along with the subject areas of the research studies, careful consideration was given to how the studies were carried out, to maximise the breadth and depth of learning opportunity. This is shown in Figure 9.1, which is based on the authors Figure 1.2 from the introduction chapter one.

Figure 9.1 – Thesis flow diagram: chapter study type



Throughout this research journey, I have learned the importance of precision, especially regarding the research question and scope. Initially, I approached each study with a broad perspective—from the scoping and systematic reviews to the city survey and interview pool—leading to a huge workload. In hindsight, I realise that focusing more narrowly could have reduced this effort without significantly affecting the findings. While the extended timeline of nearly eight years allowed for this broader approach, it may not always be feasible for future projects. This experience underscores the balance between depth and breadth, and the necessity of making strategic trade-offs.

Another valuable lesson is that there is no universally "best" study design. Each research question requires a design that best fits its specific aims, as every method has its strengths and weaknesses. Conducting preliminary scoping or user testing before diving into data collection would have also been beneficial, allowing for more tailored and efficient study designs.

Reflecting on my research process, I recognize a recurring pattern: the initial excitement about a new idea, followed by feelings of panic, procrastination, and uncertainty, and then the gradual process of making sense of it all. This progression—from feeling overwhelmed by complexity to finding clarity—became a familiar cycle. If I had known from the start just how much I did not know, I might not have embarked on this PhD. My ignorance serviced me well, as despite the challenges, I am immensely grateful to have completed it and excited to continue my journey as a researcher.

Completing this PhD largely on my own, without a peer support network, has been challenging. Every aspect of the research process has been a learning curve, from mastering software like NVIVO to confronting my own gaps in knowledge. My primary learning has been not in urban health—an area I know well—but in developing research rigor and a deeper understanding of methodologies. I have also come to appreciate the biases and assumptions I bring into my work, which I have aimed to acknowledge throughout this thesis.

Overall, this experience has taught me the importance of perseverance, adaptability, and humility in research. Despite moments of doubt and setbacks, I am proud of the growth and knowledge I have gained along the way.

9.7. Final conclusions

City population health has emerged as a critical focus area due to the accelerating trend of global urbanization. As cities grow, they face complex health and environmental challenges that stem from how urban spaces are structured and managed. The World Health Organization and other global bodies emphasize urban health as a priority, especially as urban living continues to reshape population dynamics, environmental resource use, and health outcomes.

While cities are home to some of the most advanced healthcare resources, they also bear a disproportionate burden of health disparities, with significant variation in health outcomes and persistent inequality. Many urban health and environmental issues stem from decisions or lack thereof – of policy makers that inadvertently lead to negative health impacts, such as increased rates of chronic illness and social isolation. Covid-19 further underscored the vulnerability of urban populations and the urgent need to address these systemic issues.

Although there is no universally accepted definition of a city in the literature, the author suggests that cities share several common characteristics. These include a typically younger and more transient population, a sufficient population size, and geographic coherence that allows for an ability to work at scale while maintaining a connection to the city individual. Additionally, cities possess cultural and socio-economic assets, as well as infrastructure systems, all functioning as a connected ecosystem under the leadership of a mayor.

Therefore, this trend toward city living should be seen as an opportunity to improve both population and planetary health. Whether cities successfully seize this opportunity will depend on learning from other urban centres and the leadership of policymakers and political leaders, in particular mayors. The solutions to current urban health crises are largely known and, in many cases, already in practice somewhere in the world. The challenge is not about discovering what to do but having the courage and commitment to take decisive action.

Therefore, there is cause for optimism. Cities drive economic growth, innovation, and social progress, and urban living has been shown to offer environmental benefits over rural living, particularly in terms of reduced resource use and lower carbon footprints. Historically, city dwellers have generally enjoyed better health outcomes than rural populations, even in low- and middle-income countries. As climate change becomes the foremost threat to public health, cities are increasingly taking the lead in adopting carbon-neutral policies and climate resilience measures. In some cases, cities have been more effective than national governments in advancing initiatives that improve population health.

It is widely recognized that achieving equitable health outcomes in cities is not only a moral imperative but also a sound financial investment. Good health is both a driver and an outcome of sustainable economic development, creating a virtuous cycle that benefits the city and the nation as a whole. In this context, there is a compelling case to prioritize health improvements in urban populations, positioning cities as vital hubs for promoting sustainable health and economic prosperity.

Appendices

10. Appendices

10.1. Appendix One: Consideration of different qualitative analysis

There are a “baffling” number of different types of qualitative approaches that can be used.^{8,9} Every research technique or analytical approach has strengths and weaknesses.⁶¹⁵ Therefore, the main types are presented in this section to demonstrate they have been understood and considered and the chosen approach can be justified.

Content Analysis

Content analysis is a well-established method designed to identify and interpret meaning from a wide variety of data sources, including textual, visual, and audio files.⁵⁵⁰ There are two types of qualitative content analysis: manifest and latent.⁵⁵⁰ Manifest content analysis describes what is easily observable from the data without the need for understanding deeper meaning. On the other hand, latent content analysis is interested in gaining a deeper understanding of what is in the data.⁵⁵⁰ Content analysis is particularly useful in situations where there is a large amount of unstructured and unanalysed data^{550,615} and in the absence of direct observational evidence.⁶¹⁵

The data obtained by the author is, by definition, semi structured and I have had the benefit of observing and being part of the phenomena being studied. Therefore, content analysis was not chosen as the analysis tool.

Document Analysis

Document analysis, synonymously called ‘document review,’⁶¹⁶ is a systematic approach to reviewing and extracting data from, printed and electronic, documents,⁵⁸⁹ commonly used in health policy.^{588,616} As an approach, document analysis can be a stand-alone research tool or commonly used in conjunction and to compliment other analytical tools.^{589,588,616 617}

In areas of policy,⁵⁸⁷ there are two broad sources of data: documents and people.⁵⁸⁷ Both were used in the study presented in chapter 8. The document analysis developed a chronological

outline of events to support memory recall during the interviews.¹⁴ For this study, the ‘READ’ approach⁵⁸⁸ was used as it was simple and straightforward suiting the purpose of this part of the study.⁵⁸⁸ First skimming the material to get a sense of the overall content.⁵⁸⁹

Advantages of document analysis are; it is efficient, for the researcher and any complimentary research approach, it is cost effective and it is a stable approach (in that it doesn’t emotionally react to a question as an interview participant could).⁵⁸⁹ Disadvantages of document analysis are: it can lack detail, can be difficult to access or retrieve (albeit increasingly less so with digital access) and could include recording bias.⁵⁸⁹

A common approach to document analysis is content analysis, which is concerned with the content of document.⁶¹⁸ There are two types of qualitative content analysis: manifest and latent.⁵⁵⁰ Manifest content analysis describes what is easily observable from the data without the need for understanding deeper meaning. On the other hand, latent content analysis is interested in gaining a deeper understanding of what is in the data.⁵⁵⁰ The author used manifest for this document analysis.

Thematic Analysis (TA)

Thematic analysis (TA) as first put forward by Braun and Clarke¹²⁵ has been called a landmark moment in qualitative analysis.⁴¹⁹ It is the most widely cited of the TA approaches.²⁴⁷ The spectrum of thematic analysis methods^{17 619} is fundamentally a systematic and reflective method for developing, analysing and interpreting patterns through coding qualitative data.¹⁷

Grounded Theory

Grounded theory⁵⁴² is a qualitative research design where the researcher plays an active part in generating results and conclusions from the data. It is inductive, in that it starts with the data and from this the researcher develops a theory or model (which is ‘grounded’ in the data – hence the name; grounded theory).^{546,545,543}

Grounded theory is in contrast to the deductive approach of testing hypothesis or applying previously created models or theory, so it develops new models or theory uninfluenced by previous (potentially flawed) research.^{546,573,545,17} It remains one of the most popular qualitative

approaches.¹¹ One challenge with grounded theory is knowing when sufficient data has been coded to satisfactorily develop a theory or model.⁵⁴⁵

Discourse Analysis

Discourse analysis was first established by sociologists Gilbert and Mulkey⁶²⁰ in the 1970s. Their interest was in how knowledge was developed and accepted. They found that the way in which knowledge was written and spoken about affected the perceived validity by the research community.

Contemporary discourse analysis is more rooted in psychology.⁵⁴⁶ In their instrumental publication, Potter and Wetherall⁶²¹ concluded that language is used for a variety of functions and has a variety of consequences; language is both constructive and constructed; the same phenomenon can be described in a range of different ways and there can be significant variations in perspectives.⁵⁴⁷

Broadly, there are two types of discourse analysis (albeit that they are not mutually exclusive and can be used together):^{622,623,546}

- 1) Discursive Psychology: which examines what (words used), how (emphasis) and when things are said – to focus on the social interaction.
- 2) Foucauldian Discourse Analysis (FDA): which examines how discourse makes sense for the individual and how reality is constructed.

Both types of discourse analysis follow a similar process to other qualitative approaches; that is line by line coding and thematically grouping. Themes are then tested against “what, how, when” of discursive psychology or “what, how, why” of Foucauldian discourse analysis to gain a deeper understanding.

Phenological Analysis and Interpretative Phenological Analysis (IPA)

Narrative research and analysis is interested in the lived experience of the individual, typically best suited to understanding the detailed perspective of a single individual or small number of individuals.⁹

A phenomenological study examines lived experience to gain an understanding and be able to describe the 'universal essence' ("grasp of the very nature of the thing," van Manen, 1990, p. 177).⁹

Interpretative Phenomenological Analysis (IPA) is used to investigate the interpreted experiences of an individual. IPA is therefore of relativist ontology and typically inductive which aims to get a detailed understanding of personal lived experiences.⁶²⁴ Many of the approaches and tools used in IPA are the same as those used in thematic analysis, for example; active reading, note making, code and theme generation. However, whilst typically in thematic analysis these are applied across the whole data set, in IPA each data set (each individual interview transcript) is fully analysed (including generating themes). This is because, IPA is idiopathic, i.e., it is concerned with an individual's sense making. In bringing the analysis together, IPA considers not only prevalence (i.e. similar to other qualitative approaches) but also the richness and insightfulness of the themes.⁶²⁵(IPA; see Smith et al., 2009) from (Braun and Clarke⁵⁴⁷

Ethnographic Analysis

Ethnographic analysis aims to understand how individuals and society's function. It examines the shared patterns across a large number of individuals to draw conclusions on values, beliefs and behaviours of groups. Data is collected through observation and interviews of individuals and groups. Ethnography is typically used to describe the collective dynamic of a group.^{9,580}

Conversation Analysis

Conversation analysis, as the name suggests, is the analysis of conversations to understand how individuals understand and interact in the social world. First developed by Sacks and colleagues⁶²⁶ in the 1960s, it includes verbal (e.g. words and emphasis) and non-verbal (e.g. gestures, expressions) communication, with data typically collected in real time by observation and audio and video recording that cannot be found in written texts.(Hirschberg & Manning, 2015) from ⁶²⁷ Perakyla and Ruusuvuori in Denzin and Lincoln¹¹

Evidence Mapping

Evidence mapping was considered. A recent systematic review⁶²⁸ and other sources⁶²⁹⁻⁶³¹ identify evidence mapping as a systematic review of a broad area, typically used to identify gaps in evidence presented in a visually and user-friendly way.⁶³¹ Evidence mapping was discounted because: whilst having a visual or user-friendly output would be useful. The research questions were not solely focused on identifying the breadth or gaps in the evidence.

Natural Language Processing (NLP)

Natural language processing (NLP) was first used in the 1950s.³²² A branch of artificial intelligence (AI), NLP is the nexus between linguistics and computer science. It is particularly useful in analysing large unstructured (natural language) data; sometimes referred to a “big data”.^{322 632-634} The opportunities (and promise) of NLP have grown due to the developments of computer processing and information available on the world wide web.^{632 634} NLP enables information and patterns to be identified in unstructured sources.⁶³³

NLP is the application of any computer-based algorithm “that handles augments, and transforms natural language so that it can be represented for computation.”⁶³⁵ In simple terms, NLP transforms unstructured data into useable information.⁶³⁵

Applying NLP to natural language, such as survey free text, provides additional insight to the survey of quantitative information.⁶³⁶ Therefore, NLP was used in chapter 4.

Framework Analysis

Framework analysis is a popular approach similar to thematic analysis in its codebook approach, particularly suitable for analysing interview data to generate themes by comparing data within and across interviewee data sets.^{12 17 637} It is commonly used within policy research.⁶³⁸ Framework analysis follows a straightforward and systematic process to analyse the data, which, unlike other qualitative approaches, is untethered to any particular epistemology. This gives it greater flexibility.⁶³⁷ The 5 stages of framework analysis are: familiarisation with the data, identification of a thematic framework, systematically indexing the data to the framework, moving the data around to compare themes across cases (called ‘charting’) and identifying patterns and typologies through mapping and interpretation.^{557,12}

Reporting a large number of themes or sub themes has been identified as a sign that further refinement is required.¹⁷ Advocates of other analytic approaches, such as grounded theory, argue that Framework Analysis is more exposed to researcher bias, as it is not purely inductive and has less emphasis on constant comparison in theme development.⁵⁴⁹

Template Analysis

Template analysis is part of the thematic analysis family¹⁷ and similar to Framework Analysis, Template Analysis is untethered to any particular epistemological position.⁶¹⁹ What differentiates Template Analysis from other thematic analysis is its focus on hierarchical coding and highly structured process for analysing data to produce a coding template, hence the name template analysis.^{619 639} The coding template is drafted on a selection of the data and applied to the remaining data to revise, refine and finalise.^{619 639} Whilst the process is quite rigid, there is flexibility on the format and style of the template and coding levels.^{619 639} The main steps in Template Analysis are similar to other thematic analysis, with King⁶⁴⁰ describing them as: 1) familiarisation with the data, 2) preliminary coding 3) organisation of emerging themes 4) development of initial coding template (based a on sub set of data) 5) application of template to further data to further develop template 6) Ensuring all data applied to the template is modified and finalised as appropriate.⁶⁴⁰

Acknowledgments

The author would like to thank Dr Stephanie Archer for her guidance and teaching materials used during researching the content of this appendix.

10.2. Appendix Two: Database Search Strings

Embase classic + embase 1947

1. city/
2. city planning/
3. (city or cities).ti,ab.
4. 1 or 2 or 3
5. "transform*".ti,ab.
6. (improve* or improving).ti,ab.
7. "reform*".ti,ab.
8. revolution.ti,ab.
9. "moderni*".ti,ab.
10. (change* or changing).ti,ab.
11. 5 or 6 or 7 or 8 or 9 or 10
12. health/ or adolescent health/ or child health/ or dental health/ or family health/ or health status/ or men's health/ or mental health/ or minority health/ or nutritional health/ or reproductive health/ or sexual health/ or veterans health/ or women's health/
13. public health/
14. "health*".ti,ab.
15. 12 or 13 or 14
16. 4 and 11 and 15

Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present

1. exp Cities/
2. (city or cities).ab,ti.
3. 1 and 2
4. exp Health Care Reform/
5. "transform*".ab,ti.
6. (improve* or improving).ab,ti.
7. (change* or changing).ab,ti.
8. "reform*".ab,ti.
9. "revolution*".ab,ti.
10. "moderni*".ab,ti.
11. 4 or 5 or 6 or 7 or 8 or 9 or 10
12. exp Health Services/
13. exp Public Health/
14. "health*".ab,ti.

15. 12 or 13 or 14
16. 3 and 11 and 15

Central (Cochrane Central Register for controlled trials

<http://onlinelibrary.wiley.com/cochranelibrary/>

ID Search Hits

#1 city or cities:ti,ab,kw

#2 transform* or improve* or improving or change* or changing or reform* or revolution or moderni*

#3 health*

#4 #1 and #2 and #3

Scopus

Searched title, abstract, keyword on: City or cities AND transform* or improve* or improving or change* or changing or reform* or revolution or moderni* AND health*

Limited to English language

Excluded the following subject areas:

Biochemistry, genetics and molecular biology and engineering and agricultural and biological sciences and earth and planetary sciences and computer sciences and physics and astronomy and chemical engineering and chemistry and veterinary, energy, arts and humanities, chemistry, mathematics, decision sciences, material sciences, chemical engineering.

The search script was:

(TITLE-ABS-KEY (city OR cities) AND TITLE-ABS-KEY (transform* OR improve* OR improving OR change* OR changing OR reform* OR revolution OR moderni*) AND TITLE-ABS-KEY (health*)) AND (LIMIT-TO (LANGUAGE , "English")) AND (EXCLUDE (SUBJAREA , "BIOC") OR EXCLUDE (SUBJAREA , "ENGI") OR EXCLUDE (SUBJAREA , "AGRI") OR EXCLUDE (SUBJAREA , "EART") OR EXCLUDE (SUBJAREA , "COMP") OR EXCLUDE (SUBJAREA , "PHYS") OR EXCLUDE (SUBJAREA , "CENG") OR EXCLUDE (SUBJAREA , "CHEM") OR EXCLUDE (SUBJAREA , "VETE"))

Campbell Library

Direct through their website: <http://www.campbellcollaboration.org/lib/>

searched 'keywords' on: City or cities AND transform* or improve* or improving or change* or changing or reform* or revolution or moderni* AND health*

this produced no hits

CINAHL

Searched through link from NHS Evidence and logged in through Open Athens. This covers 1981 – present.

3 (city OR cities).ti,ab

	(transform* OR improve* OR improving OR change*
4	OR changing OR reform* OR revolution OR moderni*).ti,ab
5	health*.ti,ab
6	3 AND 4 AND 5

Health Business Elite

Searched through link from NHS Evidence and logged in through Open Athens. This covers 1922 – present.

Search query:

- 1 (city OR cities).ti,ab
- 2 HEALTH BUSINESS ELITE (transform* OR improve* OR improving OR change* OR changing OR reform* OR revolution OR moderni*).ti,ab
- 3 HEALTH BUSINESS ELITE health*.ti,ab
- 4 HEALTH BUSINESS ELITE 1 AND 2 AND 3

This produced 1341 hits. These were transferred to Endnote and filed on the 11th Feb 2016
Set up weekly email alert too.

Health Management Information Consortium (HMIC)

Searched through link from NHS Evidence and logged in through Open Athens. This covers 1979 – present

Search term:

- 1 (city OR cities).ti,ab
- 2(transform* OR improve* OR improving OR change* OR changing OR reform* OR revolution OR moderni*).ti,ab
- 3 health*.ti,ab
- 4 1 AND 2 AND 3

PyschINFO

Run through OViD interface.

1. urban environments/
2. (city or cities).ab,ti.
3. 1 or 2
4. exp Health Care Reform/
5. "transform*".ab,ti.
6. (improve* or improving).ab,ti.
7. "reform*".ab,ti.
8. revolution.ab,ti.
9. "moderni*".ab,ti.
10. (change* or changing).ab,ti.
11. 4 or 5 or 6 or 7 or 8 or 9 or 10
12. exp health/
13. "health*".ab,ti.
14. 12 or 13
15. 3 and 11 and 14

Centre for Reviews and Dissemination (PROSPERO)

Searched directly through: www.crd.york.ac.uk/PROSPERO. Search term:

1 (city OR cities).ti,ab

2(transform* OR improve* OR improving OR change* OR changing OR reform* OR revolution OR modern*).ti,ab

3 health*.ti,ab

4 1 AND 2 AND 3

Limited to title. This produced 0 hits.

Change search field to 'all fields' and still produced 0 hits.

10.3. Appendix three: Survey questionnaire

City Health Department Questionnaire - Qualtrics

Introduction

The purpose of this questionnaire is to understand what **initiatives cities are undertaking to improve the health of their population**. The research is being led by **Imperial College London** and is supported by the **Mayor of London** and **Kings Health Partners Institute Urban Population Health**.

If you complete the questionnaire, we will **share back with you the results from other cities** (anonymised) so you can see what initiatives other cities have done or are doing to improve population health.

This questionnaire has 8 sections (A – H). All sections, except section D, have between 1 to 7 questions. Section D is longer and is therefore entirely multiple choice to ensure it is as quick and easy as possible to complete. It should take around 20-25 minutes to complete all parts of this questionnaire.

At the end of the questionnaire, you can choose whether you would like your responses in Section D (Strategic Priorities and Health Initiatives) and your email address to be shared with other city health departments that also select this option. This will enable you to connect with other cities to share and promote your work and follow up with and learn from other cities experiences. This is entirely optionally. If you do not positively select this option, your details will be kept in strict confidence.

Before completing this survey, we ask that you read the participant information sheet ([link here](#)).

You must complete the online consent form before being able to begin the survey, [link to consent form here](#).

Survey Instructions:

Please use your expert opinion to answer all the questions by selecting or scoring the most appropriate answer or ranking available. There are no right or wrong answers, and you are not being assessed. The information you provide will not be shared with anyone outside the immediate research team (unless you select the option to share your responses to Section D).

If you feel unable to answer any question, please insert “unable to answer”. If the question is not relevant or applicable to you, please insert “not applicable”.

Please try to complete the survey in one-sitting.

If you have any questions, please contact: shaun.danielli15@imperial.ac.uk

Section A: Information about you & your city

- 1) What is your title, first name, surname, and email address?
 - i. Title (drop down menu) (Mr, Mrs, Miss, Ms, Dr, Prof, other (with free text),
 - ii. First Name (free text)
 - iii. Surname (free text)
 - iv. Email address (free text)
- 2) Name, County/State and Country of your city
 - i. City Name (free text)
 - ii. County/State (free text)
 - iii. Country (free text)
- 3) Your current or recent job title and employer?
 - i. Job title (free text)
 - ii. Employer (free text)
 - iii. Job title of who you report(ed) to (free text)
- 4) Period you were employed in this role?

Section B: Impact of Covid-19

- 5) Compared with the national average, how many recorded hospitalisations and deaths due to Covid-19 has your city experienced. Choose from:
 1. significantly more ☐
 2. more ☐
 3. about the same ☐
 4. fewer ☐
 5. significantly fewer ☐
- 6) Thinking about the economic impact of Covid-19 control measures, compared with rural areas, how has your city been affected? Choose from:
 1. significantly worse ☐
 2. worse ☐
 3. about the same ☐
 4. less ☐
 5. significantly less ☐

- 7) How long do you think it will take for healthcare services in your city to recover from Covid-19? Recover is defined as all healthcare services returning to pre-pandemic levels of activity and waiting times.
1. less than 1 year ☐
 2. 1 – 2 years ☐
 3. 2 – 3 years ☐
 4. 4 – 5 years ☐
 5. 5 – 10 years ☐
 6. Over 10 years ☐
- 8) What, if any, health system ways of working put in place to respond to Covid-19 would you like to see continue post-pandemic? List your top 3.
- 9) What are the health or health service initiatives that need to be put in place to ensure your city is more resilient to any future pandemic? List your top 3.
- 10) What do you think the potential NEGATIVE enduring impacts of Covid-19 could be on your city? List the 3 most significant. (free text)
- 11) What would you like the POSITIVE enduring impacts of Covid-19 to be for your city? List your top 3 (free text)

Section C: Health Vision and/or Health Strategy

- 12) Prior to December 2019, did your city have a health vision or health strategy (Y/N)
- a. If Y please provide links or attachments on the vision or strategy and any related links or attachments to the vision or strategy development or its implementation (free text and ability to drag and drop)

Section D - Strategic Priorities & Health Initiatives in Your City

This section asks multiple choice questions in respect of what you have done, are currently doing, or might consider doing in the future to improve health or health equalities in your city. The health risk factors are identified from the Global Burden of Disease. The initiatives are drawn from a systematic literature review.

Q12 Please answer all multiple-choice questions from the table below.

Health risk factor	#	Initiative	This has been done - but by National or State initiative (i.e. the city did not instigated or play a lead role)	City led - previously or currently doing and the impact			Looking forward (if you are not currently doing it)		
				City led - previously done	City led - currently doing	Impact of previous/current city led (1 minimal impact, 5 high impact)	actively considering	may consider	unlikely to do
Smoking	1	Ranking of impact and importance of Smoking on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	2	Individual or group education (including at schools or particular locations or settings)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	3	Individual or group education and support (support including, for example, smoking cessation services, nicotine replacement products etc)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	4	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	5	Mass health advertising - social media (e.g. Facebook / Instagram / or similar)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	6	Plain packaging of tobacco product	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	7	Restricting advertising of tobacco products	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	8	Restricting smoking in indoor public places (e.g. bars, railway stations)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	9	Restricting smoking in outdoor public places (e.g. squares or parks)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	10	Additional city taxation on tobacco products	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	11	Initiative(s) on illicit / illegal tobacco	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	12	Initiatives or services by healthcare services to reduce smoking (smoking cessation services or clinicians giving advice)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	13	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	14	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
High Blood Pressure	15	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of		Y/N ?	Which initiative # (numeric free text)	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	16	Ranking of impact and importance of High Blood Pressure on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	17	Prevent: initiatives focused around education and behaviour change to prevent high blood pressure	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	18	Detect: initiatives focused around detection and individuals & their clinicians knowing their Blood Pressure	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	19	Manage: initiatives focused around medical management	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Healthy Diet	20	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of		Y/N ?	Which initiative #	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	21	Ranking of impact and importance of Healthy Diet on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	22	Individual or group education (including at particular locations or settings)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	23	Initiatives to promote breast feeding	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	24	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	25	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	26	Restricting advertising of High Fat, Sugar, Salt (HFSS) products	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	27	Restricting unhealthy food availability in certain locations (e.g. in or around schools or public buildings)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	28	Restricting unhealthy food portion sizes	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	29	Taxation on sugar sweetened beverages (ssb) - i.e. sugar tax	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	30	Taxation on any other high fat sugar or salt (not ssb)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	31	Implement or Improve food voucher scheme (for those on low income) to increase healthy food consumption	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	32	Policies or partnerships to increase healthy food availability (farmers markets, vending machines/carts, etc)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	33	Policy to increase the availability of (free) drinking water (e.g. water fountains or free top up of water bottles)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	34	Policies or partnerships to work with the industry to promote reformation towards a healthier diet and/or shops to reduce unhealthy impulse buys	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	35	Initiatives or services by healthcare services to promote healthy diet	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	36	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	37	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	38	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Alcohol	39	Ranking of impact and importance of Alcohol on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	40	Individual or group education	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	41	Individual or group education and support (support including community recovery support, medication or intensive personalised support)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	42	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	43	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	44	Restricting advertising of alcoholic drinks	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	45	Restricting availability of alcoholic drink availability in certain locations (e.g. in or around schools)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	46	Restricting consumption of alcohol in certain locations (e.g. on public transport, in public spaces)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	47	Minimum unit pricing (or other financial mechanism aimed at reducing problem drinking)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	48	Additional city taxation on alcoholic beverages	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	49	Policies or partnerships to increasing non alcoholic alternatives availability	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	50	Policies or partnerships to work with the industry promote reduced alcoholic content	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	51	Initiatives or services by healthcare services to reduce alcohol consumption or treat alcoholism	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	52	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	53	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	54	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?

Health risk factor	Initiative ref #	Initiative (that the city has taken over and above any national initiatives or requirements)	This has been done - but by National or State initiative (i.e. the city did not)	City led - previously or currently doing and the impact			Looking forward (if you are not currently doing it)		
				City led - previously done	City led - currently doing	Impact of previous/current city led (1 minimal impact, 5 high impact)	actively considering	may consider	unlikely to do
Drugs	55	Ranking of impact and importance of Drugs on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	56	Individual or group education	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	57	Individual or group education with support (e.g. needle exchange or drug substitute)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	58	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	59	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	60	Decriminalise personal use cannabis	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	61	Legalise personal use cannabis	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	62	Facilities that allow and support safe drug injection	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	63	Initiatives or services by healthcare services to reduce drug usage and treat drug addiction	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	64	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	65	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	66	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of interventions)		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	67	Ranking of impact and importance of Physical Activity on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	68	Individual or group education (including targeted at specific groups e.g. overweight/obese or specific locations or settings)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Physical Activity	69	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	70	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	71	Introducing physical activity expectations/requirements in schools - over and above national requirements (e.g., the daily mile or other initiatives)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	72	Free to use outdoor gyms in parks and other locations	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	73	Financial incentives / tax relief to incentivise physical activity	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	74	Initiatives or services by healthcare services to increase physical activity	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	75	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	76	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	77	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of interventions)		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	78	Ranking of impact and importance of Obesity on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	79	Individual or group education (including at schools or particular locations or settings)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	80	Individual or group education with support (e.g. calorie controlled diet or personal coaching)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	81	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	82	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Obesity (if not covered by diet and physical activity)	83	Initiatives or services by healthcare services to reduce obesity (including bariatric surgery)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	84	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	85	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	86	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of interventions)		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	87	Ranking of impact and importance of Travel and Planning on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	88	Mass health advertising - traditional (newspapers / magazines / radio / television) - on active travel	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	89	Mass health advertising - social media - on active travel	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	90	Walking - Policies, initiatives or partnerships to promote walking	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	91	Creating or increasing bike lanes - Policies, initiatives or partnerships to promote cycling through increasing bike lanes	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	92	Create or expand bike share / hire availability. Policies, initiatives or partnerships to - creating or expanding bike share / bike hire scheme(s)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	93	Electric Bike Share - Policies, initiatives or partnerships to promote cycling - creating or expanding electric bike share / bike hire scheme(s)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	94	Electric Scooters - Policies, initiatives or partnerships to allow/increase e-scooters - creating or expanding electric scooters / electric scooter hire scheme	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	95	Expanding Public Transport - Policies, initiatives or partnerships to promote public transport - creating or expanding bus, tube/metro, tram or train or other	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	96	Reducing private vehicle use - Policies, initiatives or partnerships to reduce private vehicle usage - Car Free Day(s)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Travel and Planning	97	Restrict traffic (cars, vans etc) around schools during morning and afternoon start and finish times	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	98	Restricting vehicles in residential areas to promote pedestrian safety and encourage walking and play streets	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	99	Restricting vehicles in certain areas through 'low emission zones'	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	100	Incentivising other forms for travel and transport through charging vehicles to enter certain areas	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	101	Speed restrictions - over an above national requirements - in certain areas (e.g., lower speeds around schools or high accident areas)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	102	Policies , initiatives or partnerships to reduce road traffic accidents (including speed restrictions, changes to layout and design)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	103	In all planning considerations, prioritise firstly; play, pedestrians, cyclists/scooters, public transport, electric vehicles and finally cars and lorries.	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	104	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	105	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	106	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of interventions)		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	107	Ranking of impact and importance of Mental Health on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	108	Individual or group education	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	109	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	110	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Good Mental Health	111	Destigmatising Mental Health - Policies, initiatives or partnerships to destigmatise mental health	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	112	Perinatal Mental Health - Policies, initiatives or partnerships to support perinatal mental health	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	113	Children and Young Peoples Mental Health - Policies, initiatives or partnerships to support children and young peoples mental health	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	114	Adult Anxiety and Depression - Policies, initiatives or partnerships to support adult anxiety and depression	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	115	Self Harm and Suicide - Policies, initiatives or partnerships to support reduction in self harm and suicide	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	116	Loneliness - Policies, initiatives or partnerships to support social cohesion and/or reduce loneliness	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	117	Dementia - Policies, initiatives or partnerships around Dementia	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	118	Initiatives or services by healthcare services to promote good mental health	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	119	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	120	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	121	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of interventions)		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	122	Ranking of impact and importance of Mental Health on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	123	Individual or group education	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	124	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	125	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?

Health risk factor	Initiative ref #	Initiative (that the city has taken over and above any national initiatives or requirements)	This has been done - but by National or State initiative (i.e. the city did not)	City led - previously or currently doing and the impact			Looking forward (if you are not currently doing it)		
				City led - previously done	City led - currently doing	Impact of previous/current city led (1 minimal impact, 5 high impact)	actively considering	may consider	unlikely to do
HIV/AIDS	110	Ranking of impact and importance of HIV / AIDS on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	111	Individual or group education (including at schools or particular locations or settings) to prevent the spread of HIV/AIDS	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	112	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	113	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	114	Destigmatising HIV/AIDS - Policies, initiatives or partnerships to destigmatise HIV/AIDS	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	115	Treatments, such as PrEP (pre-exposure prophylaxis), are available - but at a cost to the individual	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	116	Treatments, such as PrEP (pre-exposure prophylaxis), are available - and are free at the point of need/care to the individual	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	117	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	118	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Other Infectious Diseases (excluding HIV/AIDS and Covid-19)	119	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of)		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	120	Ranking of impact and importance of Infectious Diseases (excluding HIV/AIDS and Covid-19) on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	121	Individual or group education (including at schools or particular locations or settings)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	122	Mass health advertising - traditional (newspapers / magazines / radio / television)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	123	Mass health advertising - social media	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	124	Policies, initiatives or partnerships to improve sexual health and reduce sexually transmitted diseases	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	125	Policies, initiatives or partnerships to reduce the transmission and improve the detection and treatment of Tuberculosis (TB) or Hepatitis B and Hepatitis C	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	126	Policies, initiatives or partnerships to increase the uptake of childhood vaccinations	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	127	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Wider Determinants	128	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	129	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of)		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	130	Ranking of impact and importance of Wider Determinants on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
	131	Health Inequalities - Policies, initiatives or partnerships to reduce health inequalities	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	132	Policies, initiatives or partnerships to reduce income inequalities	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	133	Policies, initiatives or partnerships around Minimum Wage	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	134	Policies, initiatives or partnerships around Universal Basic Income	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	135	Policies, initiatives or partnerships to reduce race inequalities	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	136	Policies, initiatives or partnerships to reduce gender inequalities	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Planetary Health (Environment, Air Quality)	137	Policies, initiatives or partnerships to increase social integration	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	138	Policies, initiatives or partnerships to increase green or open public spaces	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	139	Policies, initiatives or partnerships to reduce homelessness	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	140	Policies, initiatives or partnerships to reduce violent crime	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	141	Taking a public health approach to violent and gang crime	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	142	Policies, initiatives or partnerships to reduce hate crime	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	143	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	144	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	145	Ranking of impact and importance of Environmental Issues on your population's health (10 points scale from 1: no / minimal impact, to 10: significant negative impact) 1/2/3/4/5/6/7/8/9/10							
Misc.	146	Food - Working with food supply / supermarkets to promote local food sources and or reduce food waste.	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	147	Food - Working with food supply / supermarkets or other activities to promote a plant based diet	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	148	Food - Working with residents to promote local food sources (including farmers markets) and reduce food waste	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	149	Energy - policies, initiatives or partnerships to reduce/eliminate the use of fossil fuels	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	150	Energy - policies, initiatives or partnerships to increase the use of solar power	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	151	Energy - policies, initiatives or partnerships to increase the use of wind power	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	152	Energy - policies, initiatives or partnerships to increase the use of wind power	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	153	Investments - fully divest from all fossil fuel	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	154	Plastic - reduce/eliminate single use plastic (plastic bags, cutlery)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Misc.	155	Policies, initiatives or partnerships to increase the number of trees in the city	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	156	Electric Cars - financial incentives to promote uptake of electric cars as a replacement for tradition internal combustion engine	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	157	Electric Cars - policies, initiatives or partnerships to increase the number of electric car charge points	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	158	Policies, initiatives or partnerships to improve indoor air quality	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	159	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	160	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	161	Were 2 or more of the interventions previously done or currently doing done together (as part of a comprehensive or multi-initiative programme of)		Y/N ?	Which interventions	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	162	Fluoridate the water supply (add fluoride to the water supply to decrease dental poor health)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	163	Restrictions on sunbed / tanning shops (to prevent skin and other cancers)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Misc.	164	15 minute city	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	165	1 minute city	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	166	Health in all Policies (HiAP)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	167	Social Prescribing	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	168	Making the most of city assets, be that sports teams, industry's (e.g. arts, culture) etc for the benefit of health	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	169	Anchor institutions	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	170	Policies, initiatives or partnerships to reduce city sprawl (outward expansion) and increase use of mixed zoning	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	171	Policies, initiatives or partnerships to reduce problem gambling	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
	172	Other (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?
Misc.	173	Ability to add another line (free text)	Y/N ?	Y/N ?	Y/N ?	1 / 2 / 3 / 4 / 5	Y/N ?	Y/N ?	Y/N ?

Section E - Priorities & Prioritisation of Health Initiatives in Your City

13) How do you prioritise health policy initiatives (free text)?

14) What are your top 3 priorities for the next 12 – 24 months? (3 free text boxes number 1, 2 and 3)

Section F: Mayoral Leadership and Support

15) On a scale of 1 to 10 (1: no support, to 10: fully supported) how strong has the Mayoral support been for the initiatives to improve health and health equalities? (10 points scale from 1: low support to 10: high levels of support)

No support ● — ● — ● — ● — ● — ● — ● — ● — ● *Fully supported*

i. What, if anything, would you find helpful to improve your knowledge of what initiatives other cities are doing (free text)?

16) On a scale of 1 to 10 (1: not at all important, to 10: extremely important) how important do you think Mayoral support is for city initiatives to improve health and health equalities? (10 points scale from 1: not very important to 10: essential)

Not Important ● — ● — ● — ● — ● — ● — ● — ● — ● *Very Important*

Section G: Concluding comments

17) Thinking about the last 5 years (January 2015 – January 2020), which initiative/area of work are you most proud of (free text)?

18) What are your top 3 recommendations / considerations for other cities in terms of what they should do to successfully improve health and health equalities? (free text)

19) Any other comments you would like to make? (free text)

Section H: Connecting with other Cities

20) Would you be happy for your email address and response to Section D to be shared with other city health departments that complete this questionnaire? This will enable you to connect with other cities to share and promote your work and learn from other cities experiences. Yes ☐ No ☐

Acknowledgements

In developing this and sharing questionnaire I would like to acknowledge and thank [City Health Profiles](#) (accessed 10 March 2021), Professor Klaus D. Plumer, Professor Klaus-Peter Stender, Professor Geoff Meen, Professor Ben Clifford, Professor Jonathan Purtle, Professor Lynne Kennedy, Justine Alford (Imperial College), Linda Gibbs and Tamiru Mammo (Bloomberg) and Lori Tremmel (NACCHO)

10.4. Appendix Four: Survey invitation letter

Sent via email

Email Heading: Exploratory City Survey: To understand what initiatives cities are undertaking to improve the health of their population, including their response to the Covid-19 pandemic.

Dear [insert name],

We are writing to ask for your participation in an online survey of what initiatives cities are undertaking to improve health and reduce health inequalities for their citizens. This research is supported by the [London Mayor Sadiq Khan](#) and his [Mayoral Health Advisor, Dr Tom Coffey OBE](#). It is being led by the [Institute of Global Health at Imperial College London](#) and in collaboration with the Institute of [Urban Population Health and Care at Kings College London](#) and Kings Health Partners.

The survey is aimed to be of practical use to cities. Cities that participate will receive – on an anonymised basis - results from other cities. Therefore, participant cities will be able to see which initiatives other cities have implemented, the impact of the initiative and which initiatives other cities are considering implementing.

The survey can be completed on-line in around 20 – 30 minutes through the link below.

[Insert link](#)

If you would like to discuss this survey please contact m: s.danielli15@imperial.ac.uk or shaun.danielli@nhs.net or via telephone +44 7876701349

Thank you very much for considering this opportunity.

Yours sincerely,



Shaun Danielli

On behalf of all research team: Dr Hutan Ashrafian (Imperial College London), Professor The Lord Darzi of Denham (Imperial College London)

Participant information sheet

Exploratory City Survey: To understand what initiatives cities are undertaking to improve the health of their population, including their response to the Covid-19 pandemic.

Principle investigator:

Hutan Ashrafian

Co investigators:

Shaun Danielli

Professor The Lord Darzi of Denham

Introduction & invitation

Global health will increasingly be determined by cities. Currently over half (55 per cent) of the world's 7.8 billion population live in cities and by 2050 more than two-thirds (68%) of the world's population is projected to be urban.⁷⁵ Cities can have a positive^{89,87,90} and negative^{641,371,88} impact on health and high levels of inequality persist.⁶⁴² Globally cities have been hardest hit by Covid-19.³³² Cities have been shown to succeed - where national governments have failed - in making significant improvements in areas affecting population health.^{327,328,127,643,329,644,330}

We invite you to take part in a research study. Before you decide, we would like you to understand why the research is being done and what it would involve for you. We are therefore providing you with this participant information sheet. When you have read the information provided, we would be grateful if you provided a response on your decision to participate – positive or negative – within two weeks. If we have not had a response in this time we will send one reminder email. If we do not receive a response to this reminder email we will have one more attempt to contact you, after which we will assume that you do not wish to participate in this research study.

Please ask us if there is anything that is not clear or if you would like more information. Please take time to decide whether you wish to take part. Thank you for taking the time to read this information.

What is the purpose of the study

This is an online survey study examining the priority issues and what initiatives cities are undertaking to improve the health of their populations.

The survey is aimed to be of practical use to cities. Cities that participate will receive – on an anonymised basis - results from other cities. Therefore, participant cities will be able to see which initiatives other cities have implemented, the impact of the initiative and which initiatives other cities are considering implementing.

This study is part of a PhD.

Why have I been invited?

You have been identified as an individual that has, or had, a role working with or for a city administration in respect of health of the city population. We would like your views and insight in relation to priority issues and initiative(s) cities are taking to improve health for their population. We are seeking broad participation from individuals and cities across the world. We expect an initial minimum of twenty participant cities will complete this survey.

Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part you will be asked to provide online consent prior to beginning the survey. You can withdraw and not continue with the survey process at any point, without giving a reason. If you decide to not participate or withdraw before providing any data you will be recorded as not completing the study. If you decide to withdraw having partially completed the questionnaire or after fully completing the questionnaire you should contact s.danielli15@imperial.ac.uk. Any data that has been submitted may still be used for research purposes.

What will happen to me if I take part?

If you agree to participate in this research, you will have or be emailed a link to an online survey. This email will include a copy of the participant information sheet. Prior to starting the survey, you will be prompted to complete an online consent form. This must be completed before you can access the survey. It is expected the survey will take approximately 20-30 minutes to complete. Your responses to the questions will be kept confidential. Each completed questionnaire will be assigned a number code to help ensure that individual identifiers are not revealed during the analysis and write up of findings.

What are the possible disadvantages and risks of taking part ?

We do not anticipate any risks or disadvantages of you taking part.

What are the possible benefits of taking part?

Your participation will greatly enhance the research. It is anticipated this research will contribute to improved shared knowledge that will go to improved health for city dwellers.

The survey is aimed to be of practical use to cities. Cities that participate will receive – on an anonymised basis - results from other cities. Therefore, participant cities will be able to see which initiatives other cities have implemented, the impact of the initiative and which initiatives other cities are considering implementing. These results from the study will be shared via the email address you provide as part of completing the survey.

At the end of the survey you can choose whether you would like your responses in Section D (Strategic Priorities and Health Initiatives) and your email address to be shared with other city health departments that also select this option. This is entirely optionally. If you do not positively select this option, your details and responses to Section D will be kept in strict confidence and results only used as part of the anonymised reporting. Allowing your email address and responses to Section D to be shared within the participant group would allow participants to contact another participant city to discuss and share experiences on a specific initiative they may be considering. Evidence suggests that policy making is a combination of evidence, public and political opinion and (opportunistic) timing.^{294,97,95 105,106} This would therefore enable you and other participant cities rapid and timely gathering of evidence to support policy initiative implementation.

What if something goes wrong?

If you are harmed by taking part in this research project, there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for a legal action. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been treated during the course of this study then you should immediately inform the Investigator Dr Hutan Ashrafian email: h.ashrafian@imperial.ac.uk If you are still not satisfied with the response, you may contact the Imperial College Research Governance and Integrity Team (rgitcoordinator@imperial.ac.uk).

If you wish to complain, or have any concerns about any aspect of the way you have been treated during the course of this study then you should immediately inform the Investigator (Shaun Danielli s.danielli15@imperial.ac.uk If you are still not satisfied with the response, you may contact the Imperial College [Research Governance and Integrity Team](#).

Expenses and payment

There is no compensation for participating in this study

Confidentiality

Any information collected during the course of the study will be maintained on a confidential basis and access will be restricted to people conducting the study. Your name will not be disclosed.

What will happen to the results of the research study?

The overall findings of the study may be published in a high-quality scientific journal and be used and disseminated to improve policy. Confidentiality will be maintained throughout.

Who is organising and funding the research?

Imperial College London is the study sponsor. There is no funding associated with this research.

Who has reviewed the study?

This study was approved by the Head of Department and Research Governance Integrity Team (RGIT).

Contact for Further Information

If you would like further information please contact: shaun.danielli@nhs.net or s.danielli15@imperial.ac.uk or call +44 7876701349

Thank you for taking the time to read this information sheet.

A copy of the written information be given to you to keep. You can print a copy of your consent online.

Transparency Notice

How will we use this information about you?

Research Study Title: Exploratory City Survey: To understand what initiatives cities are undertaking to improve the health of their population, including their response to the Covid-19 pandemic.

21IC7365

Imperial College London is the sponsor for this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Imperial College London will keep your personal data for:

10 years after the study has finished in relation to data subject consent forms.

10 years after the study has completed in relation to primary research data.

We will need to use information from you for this research project.

This information will include your name and contact details. People will use this information to do the research or to check your records to make sure that the research is being done properly.

People who do not need to know who you are will not be able to see your name or contact details. Your data will have a code number instead.

We will keep all information about you safe and secure.

Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study.

Legal Basis

As a university we use personally-identifiable information to conduct research to improve health, care and services. As a publicly-funded organisation, we have to ensure that it is in the public interest when we use personally-identifiable information from people who have agreed to take part in research. This means that when you agree to take part in a research study, we will use your data in the ways needed to conduct and analyse the research study.

Health and care research should serve the public interest, which means that we have to demonstrate that our research serves the interests of society as a whole. We do this by following the [UK Policy Framework for Health and Social Care Research](#)

International Transfers

There may be a requirement to transfer information to countries outside the European Economic Area (for example, to a research partner). Where this information contains your personal data, Imperial College London will ensure that it is transferred in accordance with data protection legislation. If the data is transferred to a country which is not subject to a European Commission (EC) adequacy decision in respect of its data protection standards, Imperial College London will enter into a data sharing agreement with the recipient organisation that incorporates EC approved standard contractual clauses that safeguard how your personal data is processed.

Sharing your information with others

For the purposes referred to in this privacy notice and relying on the bases for processing as set out above, we will share your personal data with certain third parties.

Other College employees, agents, contractors and service providers (for example, suppliers of printing and mailing services, email communication services or web services, or suppliers who help us carry out any of the activities described above). Our third party service providers are required to enter into data processing agreements with us. We only permit them to process your personal data for specified purposes and in accordance with our policies.

What are your choices about how your information is used?

You can stop being part of the study at any time, without giving a reason, but we will keep information about you that we already have

We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you.

Where can you find out more about how your information is used?

You can find out more about how we use your information

by asking one of the research team

by sending an email to s.danielli15@imperial.ac.uk or

by ringing us on +44 7876701349

Complaint

If you wish to raise a complaint on how we have handled your personal data, please contact Imperial College London's Data Protection Officer via email at dpo@imperial.ac.uk, via telephone on 020 7594 3502 and/or via post at Imperial College London, Data Protection Officer, Faculty Building Level 4, London SW7 2AZ.

If you are not satisfied with our response or believe we are processing your personal data in a way that is not lawful you can complain to the Information Commissioner's Office (ICO). The ICO does recommend that you seek to resolve matters with the data controller (us) first before involving the regulator.

10.6. Appendix Six: Full list of documents identified for chapter six

- Sandhurst 1890 Report from the Select Committee of the House of Lords on Metropolitan Hospitals, &c. : together with the Proceedings of the Committee, minutes of evidence, and appendix.
- House of Lords 1891 House of Lords Select Committee 1892 report on metropolitan hospitals, provident and other public dispensaries and charitable institutions for the sick poor (SECOND REPORT)
- House of Lords 1892 House of Lords Select Committee 1892 report on metropolitan hospitals, provident and other public dispensaries and charitable institutions for the sick poor (THIRD REPORT)
- BMJ 1913 British Medical Association. Hospitals Committee. King Edward's Hospital Fund For London. Report Of The Committee Appointed To Inquire Into The System Prevailing In The London Hospitals With Regard To The Admission Of Out-Patients
- Goodenough 1944 Report of the Interdepartmental Committee on Medical Schools (Goodenough) (1944)
- Gray Sir A M H and Topping A. 1945 The hospital services of London and the surrounding area. London, I-IMSO, 1945. Ministry of Health hospital surveys volume 1.
- Daley 1947 The public health services of London during the past one hundred years.
- Stamp 1948 The health plan for London.
- L Dopson 1949 Public Health in London 100 Years Ago
- Holland 1972 Organisation of health services in London.
- London Health Planning Consortium 1979 Towards a Balance: A Framework for acute hospital services in London reconciling service with teaching needs
- Charlton 1981 The robustness of the London Health Planning Consortium model.
- Francis Avery 1981 "Chronic and critical." A commentary on health care in London.
- Beresford 1981 The relationship between water quality and health in the London area.
- John Habakkuk (London Advisory Service) 1981 The Development of health services in London (London Advisory Group)
- London Planning Consortium 1981 Primary Healthcare Study Group: Primary Health Care in Inner London (The Acheson Report) (1981)
- B Benjamin 1981 Changes in Public Health in London in the Past Fifty Years
- Davidson 1983 London health planning. Who speaks for the capital?.
- Woods 1983 The National Health Service in London: a review of the impact of NHS policy since 1976.
- Hardy 1984 Water and the search for public health in London in the eighteenth and nineteenth centuries.
- Rhodes et al 1986 Primary Health Care in the Inner Cities After Acheson
- Balarajan 1986 On the state of health in inner London.
- The Kings Fund 1987 Planned Health Services in Inner London: Back to back planning

- Mooney 1990 Cost and availability of healthy food choices in a London health district.
- Dauntton 1991 Health and housing in Victorian London.
- Porter 1991 Cleaning up the Great Wen: public health in eighteenth-century London.
- Vall-Spinosa, 1991 Lessons from London: The British are reforming their national health service.
- Geoff Martin 1991 Capital carve up : the future pattern of health authorities in Greater London.
- Michaela Benzeval, Ken Judge and Bill New 1991 Health and health care in London
- Jarman, B.; Bosanquet, N. 1992 Primary health care in London--changes since the Acheson report
- Hussey, Marmaduke 1992 London health care 2010 : changing the future of services in the capital
- Hogg, Christine 1992 Centering excellence? : national and regional health services in London
- Tomlinson 1992 Inquiry into London's Health Service
- Jacobson 1992 Public health in inner London.
- Michaela Benzeval 1992 The health status of Londoners : a comparative perspective.
- Farrell, Christine 1993 Conflict and change : specialist care in London : a report of six meetings arranged to discuss the London Specialty Review reports
- Smith, Jane 1993 London after Tomlinson: reorganising big city medicine
- Martin, Paul 1993 The right treatment for London?: Health Rights' response to the Report of the inquiry into London's health service, medical education and research (the Tomlinson report)
- O'Keefe 1993 Divided London: towards a European public health approach
- Department of Health 1993 Making London Better
- Bush 1993 Health care in London: Playing with numbers
- Turner 1993 Health care in London: Political motives fuel assault on London
- B Jarman 1993 Is London Over bedded?
- Mays 1993 Health care in London. Other cities also over bedded.
- Nagpaul 1993 Health care in London. BMA slow to condemn Tomlinson.
- McEvoy, M.; Maguire, H. 1995 Tuberculosis in London: a review, and an account of the work of the London Consultants in Communicable Disease Control Group Working Party
- James 1995 Reforming the British Health Service: implementation problems in London
- David Towell 1997 London health care: rethinking development: a discussion paper prepared for the King's Fund London Commission
- The Kings Fund 1997 London Commission: Transforming Health in London
- Greenberg 1997 The 'Dreadful Visitation': Public health and public awareness in seventeenth-century London.
- Frank Prochaska 1997 Philanthropy and the Hospitals of London: The King's Fund, 1897-1990
- Murphy et al 1997 London's healthcare services—again

- London Health Partnership 1998 Primary health care in cities : a whole systems approach
- "Bardsley et al 1998 Health in the capital: a city-wide perspective
- P Bevan, 1998 The health of Londoners: a public health report for London
- Bardsley and Jacobson 1998 Who will grasp the public health nettle in London?
- Turnberg 1998 Health Services in London: A Strategic Review
- Harling, Richard 1999 London's health: a role for the new mayor
- Armstrong, Danila.London Health Strategy Steering Group 1999 W.H.O. Healthy Cities and the London Health Strategy
- Sally Hargreaves 1999 Child health in London : the health and social characteristics of London's children.
- Paul; Barker Hoggett, Ingrid; Razzaque, Konnie; Stewart, Murray 1999 Urban regeneration and mental health in London
- Anne Davies and Liz Kendall 1999 Health and the London Mayor.
- Kendall, Liz 2000 Health and the London Mayor : learning from other cities : a discussion paper prepared for a King's Fund workshop February 2000
- Davies, Anne; Kendall, Elizabeth 2000 Improving London's health : the role of the Greater London Authority
- Hull, S. A. 2000 Lessons from the London initiative zone educational incentives funding: associations between characteristics, funding, and courses undertaken
- London Health Strategy Steering Group 2000 The London health strategy : outline strategic framework : March 2000.
- Dorling 2000 The ghost of Christmas past: Health effects of poverty in London in 1896 and 1991.
- London Health Commission 2000 Making London a healthier city : London Health Commission : first meeting. (2000)
- Coote, Anna; Tennant, Ruth 2001 Health and London governance
- GLA 2002 Health in London : 2002 review of the London Health Strategy high-level indicators. (2002)
- Mayor of London 2002 Air Quality Strategy
- Levenson, Ros 2003 London's state of mind: King's Fund mental health inquiry 2003
- Davies, Helen 2004 Strategic action to improve health: London's experience
- Brown, June; Afuwape, Sarah A.; Downes-Grainger, Elin; Howells, Roger; Cole, Eleanor; Goldberg, Sir David 2004 Organising community mental health teams around GP practices: GPs' responses to the link worker model
- Bowen, C. 2007 Health impact assessments in London: assessing the London Mayoral strategies
- Patel, H.; Baeza, J.; Patel, M.; Greene, L.; Theobald, N. 2007 Improving sexual health services in the city: Can the NHS learn from clients and the service industry
- NHS London 2007 Healthcare for London: A Framework for Action
- Greater London Authority 2007 Reducing health inequalities : issues for London and priorities for action ⁴⁹⁴
- "Thorlby, R. Dixon, J. Dickson, N." 2007 Health for London: showing England the way?
- Van Gelder & Roeleveld 2007 Improvement of public health in London in the nineteenth century and the probably limited role of the new sewage system
- Berridge 2008 A Historical Perspective

- Kelly, F. J.; Kelly, J. 2009 London air quality: A real world experiment in progress
- Greenhalgh 2009 How do you modernize a health service? A realist evaluation of whole-scale transformation in London
- Gail Findlay 2009 London Health Commission: Prospectus 2009-2012
Galvanising leadership for health in London
- Wood, H. E.; Bremner, S.; Dundas, I.; Garg, N.; Grigg, J.; Hanifa, Y.; Kalsi, H.; Kelly, F.; Lee, T.; Mudway, I.; Nanzer, A.; Round, T.; Sheikh, A.; Tuaf-Toro, G.; Walton, R.; Griffiths, C. 2010 A cross-sectional analysis of children's respiratory health in london following the introduction of the low emission zone
- Greater London Authority 2010 Health inequalities strategy
- McCarthy et al 2010 Health impact assessment of the 2012 London Olympic transport plans.
- Mindell et al 2010 Institutionalizing health impact assessment in London as a public health tool for increasing synergy between policies in other areas.
- H. E.; Bremner Wood, S.; Dundas, I.; Garg, N.; Grigg, J.; Hanifa, Y.; Kalsi, H.; Kelly, F.; Lee, T.; Mudway, I.; Nanzer, A.; Round, T.; Sheikh, A.; Tuaf-Toro, G.; Walton, R.; Griffiths, C. 2010 A cross-sectional analysis of children's respiratory health in london following the introduction of the low emission zone
- Farthing 2010 Health, inequality and child poverty in london.
- Thomson, N.; Viridi, G.; Cohen, D. L. 2011 Hub and spoke care for stroke: Is it feasible to transport people in a timely way in a big city?
- Appleby et al 2011 Improving Health and Healthcare in London: Who will take the lead
- LHO 2011 Mind the gap! : a briefing on equity of health and healthcare in the capital. (2011)
- Hunter, R. M.; Davie, C.; Rudd, A.; Thompson, A.; Walker, H.; Thomson, N.; Mountford, J.; Schwamm, L.; Deanfield, J.; Thompson, K.; Dewan, B.; Mistry, M.; Quoraishi, S.; Morris, S. 2013 Impact on clinical and cost outcomes of a centralized approach to acute stroke care in London: a comparative effectiveness before and after model
- The Kings Fund 2013 Laeding Health Care in London: Time for a radical response
- Farrar, Finney, Griffiths, Kirkpatrick 2013 Healthcare for London. Reflections on leadership, lessons, and legacy.
- Caraher et al 2013 The planning system and fast food outlets in London: Lessons for health promotion practice.
- NHS England London Region, 2013 London - A Call to Action
- Kelly, F. 2014 London air quality: A real world experiment in progress
- Birns, J.; Jaye, P.; Roots, A.; Reedy, G.; Ross, A. 2014 Pan-London simulation training for hyperacute stroke
- Gilburt, Helen; Edwards, Nigel; Murray, Richard. 2014 Transforming mental health : a plan of action for London.
- Woodcock 2014 Health effects of the London bicycle sharing system: Health impact modelling study.
- People's Inquiry into London's NHS, 2014 Peoples Inquiry into London's NHS: Londons NHS at a Crossroads
- Ingrid Torjesen 2014 Inquiry into London NHS calls for new strategic health authority to plan and commission services.

- GLA 2015 London Health Inequalities strategy delivery Plan, 2015-2018: Convening and Collaborating for action
- GLA & Partners 2015 London Health and Care Collaboration Agreement.
- Darzi 2015 Better Health for London: The Report of the London Health Commission
- GLA 2015 Better Health for London: Next Steps
- GLA 2015 Better health for Londoners: one year on
- N. Freudenberg and S. Atkinson 2015 Getting food policy on the Mayoral table: a comparison of two election cycles in New York and London
- Darzi 2015 Where Manchester leads on control of health and social care budget London should follow.
- Gulland 2015 Five London areas to get devolved power over health.
- Rivett 2015 The Development of the London Hospital System 1823 - 2015
- NCT 2016 RCT of the Effectiveness of Big White Wall Compared to Other Online Support
- DeWitte et al 2016 Wealth, health and frailty in industrial-era London.
- Watt et al 2016 London Charter on Oral Health Inequalities.
- GLA 2017 Better health for all Londoners : consultation on the London Health Inequalities Strategy.
- GLA 2017 London health devolution agreement.
- GLA 2017 Health and care devolution : what it means for London.
- Jonathan William Minton and Gerry McCartney 2018 Is there a north-south mortality divide in England or is London the outlier?
- the kings fund 2018 the role of cities in improving population health: international insights
- GLA 2018 The London Health Inequalities Strategy
- A Mold 2018 Exhibiting Good Health: Public Health Exhibitions in London, 1948-71.
- Mudway et al 2019 Impact of the London low emission zone on children's respiratory health: A sequential yearly cross sectional study 2008-2014.
- Gareth Lacobucci 2019 Unhealthiest places to live are concentrated in London
- Ola Markiewicz, Mary Lavelle, Fabiana Lorencatto, Gaby Judah, Hutan Ashrafian and Ara Darzi 2019 Threats to safe transitions from hospital to home: a consensus study in North West London primary care
- Healthy London Partnership 2019 The London Health and Care Vision
- P Greaves 2020 Impact of diet on health and longevity in London 1850-1880.
- GLA 2021 Health Inequalities Strategy Implementation Plan 2021-24
- GLA 2021 Progress Report: London Health Inequalities Strategy
- S. E. Jackson, E. Beard, R. West and J. Brown 2021 Evaluation of the London Smoking Cessation Transformation Programme: a time-series analysis
- Chloe Thomas, Penny Breeze, Steven Cummins, Laura Cornelsen, Amy Yau and Alan Brennan 2022 The health, cost and equity impacts of restrictions on the advertisement of high fat, salt and sugar products across the transport for London network: a health economic modelling study
- Amy Yau, Nicolas Berger, Cherry Law, Laura Cornelsen, Robert Greener, Jean Adams, Emma J. Boyland, Thomas Burgoine, Frank de Vocht, Matt Egan, Vanessa Er, Amelia A. Lake, Karen Lock, Oliver Mytton, Mark Petticrew, Claire Thompson, Martin White and Steven Cummins 2022 Changes in household food and drink

purchases following restrictions on the advertisement of high fat, salt, and sugar products across the Transport for London network: A controlled interrupted time series analysis

10.7. Appendix Seven – Interview invitation letter

Sent via email

Email Heading: Request for your participation in research examining: Evaluating the impact of the London Mayoralty on the health of Londoners.

Dear [insert name],

We are writing to ask for your participating in research examining the impact the London Mayoralty has had on Londoners health. The London Mayoralty was created in 2000 with a promise of improving the health of all Londoners and a statutory duty to reduce inequalities in health outcomes. Now, 20 years later, nationally health inequalities are increasing and improvements in life expectancy have stalled - the first time in over 100 years⁶⁴⁵. In this context, the research question we are aiming to answer is: What impact has the London Mayoralty and each of the 3 London Mayors had on the health of Londoners ?

As part of the study, we are inviting people who have worked with the London Mayoralty during the last 20 years in respect of health and health equality. We would like to invite you to tell us your views in a one-off interview. I will carry out the interview which will likely last between 45 – 60 minutes (it will be capped at 60 minutes). Your responses to the questions will be kept confidential and anonymised to ensure confidentiality throughout.

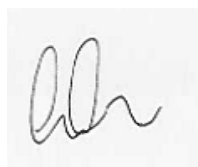
The current London Mayor, Sadiq Khan, and his Mayoral Health Advisor, Dr Tom Coffey, have given their support to this research and given full access to Greater London Authority documents related to any elements of health. This is the extent of their role in relation to this research. They have not input in the design, data collection, analysis, or reporting.

There is no compensation for participating in this study. However, your participation will be a valuable addition to our research and ultimately, we hope the findings will lead to improved health and equalities for Londoners.

If you are willing to participate please suggest a day and time that suits you and I will do my utmost to be available. If you have any questions about the study then please do contact me. My phone number is 0787 670 1349 and I will be happy to discuss with you any questions you may have.

Thank you very much for considering this opportunity.

Yours sincerely,



Shaun Danielli

Research supervisors: Dr Hutan Ashrafian and Professor The Lord Darzi of Denham (Imperial College London)

Participant information sheet

Evaluating the impact of the London Mayoralty on
the health of Londoners.

Semi-structured interviews to explore the impact of the London Mayoralty on
Londoners health.

Principle investigator:

Hutan Ashrafian

Co investigators:

Shaun Danielli

Professor The Lord Darzi of Denham

Introduction

The London Mayoralty was created in 2000 with a promise of improving the health of all Londoners and a statutory duty to reduce inequalities in health outcomes. Now, over 20 years later, health inequalities nationally are getting worse and improvements in life expectancy have stalled - the first time in over 100 years⁶⁴⁵.

Invitation

We invite you to take part in a research study. Before you decide, we would like you to understand why the research is being done and what it would involve for you. We are therefore providing you with the information in this 'participant information sheet'. When you have read the information provided, we would be grateful if you provided a response on your decision to participate – positive or negative – via email within seven days. If after one week we have not had a response from you, we will send 2 follow up emails and make attempts to speak to you directly via telephone. If after 3 weeks we still have not had a response we will assume you do not wish to be part of this study.

Please ask us if there is anything that is not clear or if you would like more information. Please take time to decide whether or not you wish to take part. Thank you for taking the time to read this information.

What is the purpose of the study

This is a study examining the impact the London Mayoralty and each of the London Mayors have had on Londoners health.

Why have I been invited ?

You have been identified as having an important role in relation to the London Mayoralty and their role in respect of health and health equality of Londoners.

Do I have to take part?

It is up to you to decide whether or not to take part. If you decide to take part you will be given this information sheet to keep and be asked to sign a consent form. You can withdraw and not continue with the interview process at any point. If you wish to withdraw from the study after the interview has been completed anonymised data may still be used for research purposes.

What will happen to me if I take part ?

If you agree to participate in this research you will be interviewed (semi structured interview) by one of the research team. The interview will last between 45 – 60 minutes (it will be capped at 60 unless you indicate you would like to continue).

The interviews will ideally be face-to-face. They will take place at a mutually agreeable location between yourself and the interviewer. Locations will be assessed to ensure they are Covid-19 secure. If a face-to-face interview is not possible, either because of Covid-19 restrictions or your preference, then they will be on-line (MS Teams or Zoom) or as a last resort by telephone.

All interviews will be audio recorded and transcribed. Your responses to the questions will be kept confidential. Each interview will be assigned a number code to help ensure that personal identifiers are not revealed during the analysis and write up of findings. The recording will be deleted after transcription and the documents stored securely with the other electronic records at Imperial College London.

There is no compensation for participating in this study.

What do I have to do?

Actively and honestly participating in the interviews. This is all we are asking you to do.

What are the possible disadvantages and risks of taking part ?

We do not anticipate any risks or disadvantages to you in participating in this research. In the unlikely event any sensitive issues or information come to light these will be treated confidentially and confidential expert advice sought.

What are the possible benefits of taking part ?

There is no direct benefit to yourself however your participation will greatly enhance the research. It is anticipated this research will contribute to improved health and equality for Londoners. The current London Mayor, Sadiq Khan, and his Mayoral Health Advisor, Dr Tom Coffey, have given their support to this research.

What if something goes wrong?

If you are harmed by taking part in this research project, there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for a legal action. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been treated during the course of this study then you should immediately inform the Investigator Hutan Ashrafian h.ashrafian@imperial.ac.uk. If you are still not satisfied with the response, you may contact the Imperial College Research Governance and Integrity Team (rgitcoordinator@imperial.ac.uk).

Confidentiality

Any information collected during the course of the study will be maintained on a confidential basis and access will be restricted to people conducting the study. Your name will not be disclosed, nor will details of your answers be given to anyone. With your permission, the interviews will be recorded and typed up as a written document or transcript. The transcripts will then be examined to ensure that all of the important information has been captured. The transcripts will not contain your name or any information about you that would allow you to be identified. The only people who will have access to the transcripts are the researchers. Some of your comments may be included in a report on the study, but these will be completely anonymous.

What will happen to the results of the research study?

The overall findings of the study may be published in a high quality scientific journal and may be used and disseminated to improve policy. Confidentiality will be maintained throughout.

Who is organising and funding for this research ?

Imperial College London will act as sponsor for this study and there is no funding associated with this research.

Who has designed and reviewed the study?

The study has been designed by the lead researcher; Shaun Danielli, in discussion with the research supervisors Dr Hutan Ashrafian and Professor Ara Darzi. The current London Mayor, Sadiq Khan, and his Mayoral Health Advisor, Dr Tom Coffey, have given their support to this research and given full access to Greater London Authority documents related to any elements of health. This is the extent of their role in relation to this research. They have no input in the design, data collection, analysis, or reporting.

This study was given ethical approval by Prof Ara Darzi, Head of Department and Research Governance Integrity Team (RGIT).

Transparency Notice**How will we use this information about you?**

Research Study Title: Evaluating the impact of the London Mayorality and each of the 3 London Mayors have had on the health of Londoners (ICREC number to be inserted)

Imperial College London is the sponsor for this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Imperial College London will keep your personal data for:

- 10 years after the study has finished in relation to data subject consent forms.
- 10 years after the study has completed in relation to primary research data.

We will need to use information from you for this research project.

This information will include your name and contact details. People will use this information to do the research or to check your records to make sure that the research is being done properly. People who do not need to know who you are will not be able to see your name or contact details. Your data will have a code number instead. We will keep all information about you safe and secure. Once we have finished the study, we will keep some of the data so we can check the results. We will write our reports in a way that no-one can work out that you took part in the study.

Legal Basis

As a university we use personally-identifiable information to conduct research to improve health, care and services. As a publicly funded organisation, we have to ensure that it is in the public interest when we use personally identifiable information from people who have agreed to take part in research. This means that when you agree to take part in a research study, we will use your data in the ways needed to conduct and analyse the research study.

Health and care research should serve the public interest, which means that we have to demonstrate that our research serves the interests of society as a whole. We do this by following the UK Policy Framework for Health and Social Care Research

International Transfers

There may be a requirement to transfer information to countries outside the European Economic Area (for example, to a research partner). Where this information contains your personal data, Imperial College London will ensure that it is transferred in accordance with data protection legislation. If the data is transferred to a country which is not subject to a European Commission (EC) adequacy decision in respect of its data protection standards, Imperial College London will enter into a data sharing agreement with the recipient organisation that incorporates EC approved standard contractual clauses that safeguard how your personal data is processed.

Sharing your information with others

For the purposes referred to in this privacy notice and relying on the bases for processing as set out above, we will share your personal data with certain third parties.

Other College employees, agents, contractors and service providers (for example, suppliers of printing and mailing services, email communication services or web services, or suppliers who help us carry out any of the activities described above). Our third party service providers are required to enter into data processing agreements with us. We only permit them to process your personal data for specified purposes and in accordance with our policies.

What are your choices about how your information is used?

You can stop being part of the study at any time, without giving a reason, but we will keep information about you that we already have. We need to manage your records in specific ways for the research to be reliable. This means that we won't be able to let you see or change the data we hold about you.

Where can you find out more about how your information is used?

You can find out more about how we use your information

- by asking one of the research team
- by sending an email to s.danielli15@imperial.ac.uk , or
- by ringing us on +44(0)20 3312 5145

Complaint

If you wish to raise a complaint on how we have handled your personal data, please contact Imperial College London's Data Protection Officer via email at dpo@imperial.ac.uk, via telephone on 020 7594 3502 and/or via post at Imperial College London, Data Protection Officer, Faculty Building Level 4, London SW7 2AZ.

If you are not satisfied with our response or believe we are processing your personal data in a way that is not lawful you can complain to the Information Commissioner's Office (ICO). The ICO does recommend that you seek to resolve matters with the data controller (us) first before involving the regulator.

Thank you for your time reading through this and taking part in this study. If you have any questions, please ask any members of the team.

10.9. Appendix Nine: Semi-structured interview questions

Evaluating the impact of the London Mayoralty on the health of Londoners.

Semi-structured interview questions to explore the impact of the London Mayoralty on Londoners health.

1) Introductions and House-keeping

- Welcome and thank the participant for sparing the time for this interview.
- Check they are comfortable and check the time still works for them
- Introduce myself, my background and the research
- Ask, before we proceed, are they still happy to proceed with the interview and is it okay if I record the interview.

START THE RECORDING

- Introduce myself and ask the same from the participant.
- Check the participant has read v.(final) of the Participant Information Sheet.
- Ask the participant if there are any potential conflicts of interest they would like to declare.
- Ask the participant if they are happy to proceed with the interview and that they understand they can stop it at any time or withdraw from the process at any time, without needing to give a reason why.

2) Establishing Rapport

Q1: This semi structured interview has 2 main component parts (the Mayoralty generally and then specific Mayors and their achievements) plus a general catch all Conclusions section. Before we get into these could you tell me about yourself, your career history / things you've done and anything you think pertinent to this research ?

Purpose of this questions is to relax the participant and allow them to talk about the things they are comfortable about. If the participant is already known then ask a variation on this question as appropriate.

Q2: If they haven't covered it ask them specifically about the period 2000 up to the present day.

Try to draw out an overview of the time period they knew or worked with the Mayor (to ensure we don't get bogged down on an early part and leave insufficient time for other parts. If they identify working with more than one Mayor this will also enable questions of comparison to be asked)

3) The Mayoralty generally (not Mayoral specific)

Q3: The London Mayoralty was created in 2000 with a promise of improving the health of all Londoners. Do you think it has achieved that aim ?

If they give a yes / no answer – ask them to explain

Q4: Have there been any other benefits of the London Mayoralty ?

This may lead them to identify things that have had a benefit to health (e.g. the 2012 Olympics, bike share, etc)

Q5: Do you think the Mayoral impact on Londoners health could be improved or strengthened – if so why and how ?

4) Specific London Mayors

Q6: Earlier you mentioned Ken / Boris / Sadiq ^{see footnote 10} can you explain a little more your role with Ken / Boris / Sadiq

Q7: Could you tell me about what Ken / Boris / Sadiq achieved in relation to health and health inequalities ?

This is a key question. Try to really unpack both what they did and how they did it ? What went well and what didn't ?

What were the key factors or ingredients ?

Q7a Repeat the above question if the participant worked with more than one Mayor.

Q8: How do you think this compares with the other London Mayors ?

5) Conclusion

Q9: Have my questions enabled you to give a fair picture of your perspective of the role of the London Mayoralty and each of the incumbents ?

Q9a: Is there anything you would like to add ?

Q9b: Is there anything you wish or think I should have asked ?

¹⁰ (as appropriate and repeat the question if more than one Mayor was mentioned)

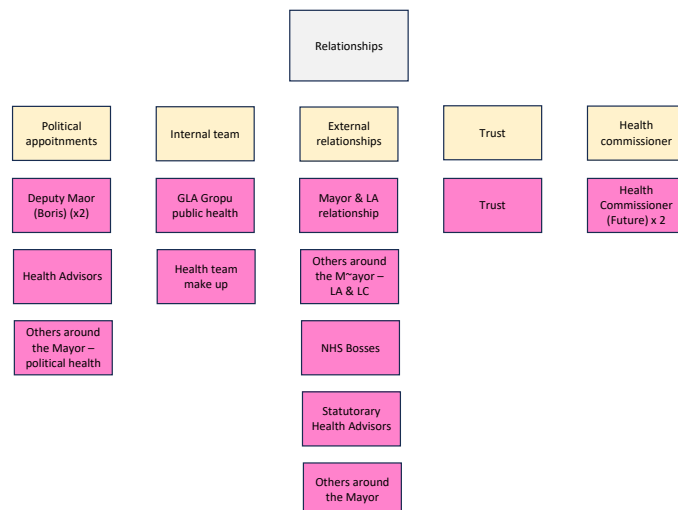
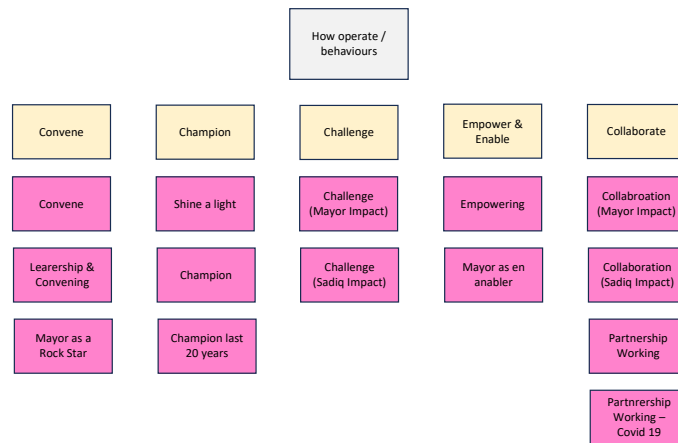
WRAP UP

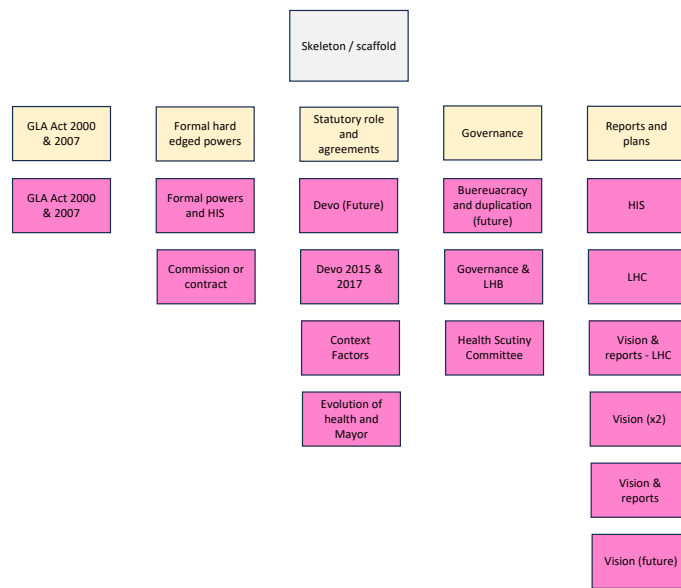
- Thank them for participating.
- Advise them of next steps (analysis and write up and timescales) and ask if they would like to be kept informed ?
- Ask them if they have any final questions or any concerns ?
- Ensure they have a copy of the Participant Information Sheet and my contact details

TURN RECORDING OFF

- Thank the participant again and conclude pleasantries.

10.10. Appendix Ten: Image of grouping of coding





References

1. Tudor Hart J. THE INVERSE CARE LAW. *The Lancet* 1971;297(7696):405-12. doi: [https://doi.org/10.1016/S0140-6736\(71\)92410-X](https://doi.org/10.1016/S0140-6736(71)92410-X)
2. Johnson JL, Adkins D, Chauvin S. A Review of the Quality Indicators of Rigor in Qualitative Research. *Am J Pharm Educ* 2020;84(1):7120. doi: 10.5688/ajpe7120 [published Online First: 2020/04/16]
3. Danielli S. Adopting lean manufacturing techniques in small and medium manufacturing enterprises. Cranfield University, 2011.
4. Darzi A. Healthcare for London: A Framework for Action. NHS London, 2007.
5. Beeharry MW, Moqem K. The London Major Trauma Network System: A Literature Review. *Cureus* 2020;12(12):e12000. doi: 10.7759/cureus.12000 [published Online First: 2020/12/17]
6. Moran CG, Lecky F, Bouamra O, et al. Changing the System - Major Trauma Patients and Their Outcomes in the NHS (England) 2008 - 17. *eClinicalMedicine* 2018;2:13-21. doi: 10.1016/j.eclinm.2018.07.001
7. NHS England. London Quality Standards for acute emergency and maternity services 2013 [Available from: <https://www.england.nhs.uk/london/our-work/quality-standards/> accessed 15 November 2023.
8. Creswell JW, Hanson WE, Clark Plano VL, et al. Qualitative Research Designs: Selection and Implementation. *The Counseling Psychologist* 2007;35(2):236-64. doi: 10.1177/0011000006287390
9. Creswell JW, Poth CN. Qualitative inquiry and research design: Choosing among five approaches: Sage publications 2016.
10. Creswell JW, Creswell JD. Research design : qualitative, quantitative & mixed methods approaches. 5th ed. ed. Los Angeles: SAGE 2018.
11. Denzin NK, Lincoln YS. The Sage handbook of qualitative research. Fifth edition ed. Los Angeles: Sage Los Angeles 2018:xx, 968 pages : illustrations ; 27 cm.
12. Bowling A. Research methods in health : investigating health and health services. 4th ed ed. Maidenhead: McGraw-Hill Education/Open University Press Maidenhead 2014.
13. Creswell J, Plano-Clark V. Designing and conducting mixed methods research Los Angeles, Calif: SAGE Publications 2011.
14. Saks M, Allsop J. Researching health : qualitative, quantitative and mixed methods. 2nd ed ed. London: SAGE London 2013:ix, 489 pages : illustrations ; 24 cm.
15. Mackenzie NM, Knipe S. Research dilemmas: Paradigms, methods and methodology. *Issues in Educational Research* 2006;16:193-205.
16. Lincoln YS, Lynham S, Denzin NK. Paradigmatic Controversies, Contradictions, and Emerging Confuences, Revisited. In The Sage handbook of qualitative research. Fifth edition ed. Los Angeles: Sage Los Angeles 2018:xx, 968 pages : illustrations ; 27 cm.
17. Braun V, Clarke V. Thematic Analysis: A Practical Guide. First ed. London: Sage 2021.
18. Madill A, Jordan A, Shirley C. Objectivity and reliability in qualitative analysis: realist, contextualist and radical constructionist epistemologies. *Br J Psychol* 2000;91 (Pt 1):1-20. doi: 10.1348/000712600161646 [published Online First: 2000/03/16]
19. Sebastian K. Distinguishing Between the Types of Grounded Theory: Classical, Interpretive and Constructivist. *Journal of Social Thought* 2019;3(1)
20. Jamshed S. Qualitative research method-interviewing and observation. *J Basic Clin Pharm* 2014;5(4):87-8. doi: 10.4103/0976-0105.141942
21. Buckley JW, Buckley MH, Chiang H-F. Research methodology & business decisions / prepared for the National Association of Accountants & the Society of Industrial

- Accountants of Canada by John W. Buckley, Marlene H. Buckley & Hung-Fu Chiang. New York: NAA 1976.
22. Crotty Ma. The foundations of social research : meaning and perspective in the research process: London ; Thousand Oaks, Calif. : Sage Publications, 2003. ©1998 2003.
 23. Noor KBM. Case Study: A Strategic Research Methodology. *American Journal of Applied Sciences* 2008;5(11) doi: 10.3844/ajassp.2008.1602.1604
 24. McNiff J, Whitehead J. Action Research: Principles and Practice: RoutledgeFalmer 2002.
 25. Mannion R, Davies H. Understanding organisational culture for healthcare quality improvement. *BMJ* 2018;363:k4907. doi: 10.1136/bmj.k4907
 26. Pope C, Ziebland S, Mays N. Qualitative research in health care. Analysing qualitative data. *Bmj* 2000;320(7227):114-6. doi: 10.1136/bmj.320.7227.114 [published Online First: 2000/01/22]
 27. Goertz G, Mahoney J. A Tale of Two Cultures: Contrasting Quantitative and Qualitative Research. *Political Analysis* 2006;14(3):227-49. doi: 10.1093/pan/mpj017 [published Online First: 2017/01/04]
 28. Broom A, Willis E. Competing paradigms and health research. In: Saks, M. & Allsop, J. (eds.) Research Health: Qualitative, Quantitative and Mixed Methods. Thousand Oaks, CA: Sage.2007.
 29. Maher C, Hadfield M, Hutchings M, et al. Ensuring Rigor in Qualitative Data Analysis:A Design Research Approach to Coding Combining NVivo With Traditional Material Methods. *International Journal of Qualitative Methods* 2018;17(1):1609406918786362. doi: 10.1177/1609406918786362
 30. Noble H, Smith J. Issues of validity and reliability in qualitative research. *Evid Based Nurs* 2015;18(2):34-5. doi: 10.1136/eb-2015-102054 [published Online First: 2015/02/06]
 31. Sandelowski M. The problem of rigor in qualitative research. *ANS Adv Nurs Sci* 1986;8(3):27-37. doi: 10.1097/00012272-198604000-00005 [published Online First: 1986/04/01]
 32. Rolfe G. Validity, trustworthiness and rigour: quality and the idea of qualitative research. *J Adv Nurs* 2006;53(3):304-10. doi: 10.1111/j.1365-2648.2006.03727.x [published Online First: 2006/01/31]
 33. Cohen DJ, Crabtree BF. Evaluative criteria for qualitative research in health care: controversies and recommendations. *Ann Fam Med* 2008;6(4):331-9. doi: 10.1370/afm.818 [published Online First: 2008/07/16]
 34. Gu D, Andreev K, Dupre ME. Major Trends in Population Growth Around the World. *China CDC Wkly* 2021;3(28):604-13. doi: 10.46234/ccdcw2021.160 [published Online First: 2021/10/02]
 35. Maja MM, Ayano SF. The Impact of Population Growth on Natural Resources and Farmers' Capacity to Adapt to Climate Change in Low-Income Countries. *Earth Systems and Environment* 2021;5(2):271-83. doi: 10.1007/s41748-021-00209-6
 36. Cheng X, Yang Y, Schwebel DC, et al. Population ageing and mortality during 1990–2017: A global decomposition analysis. *PLOS Medicine* 2020;17(6):e1003138. doi: 10.1371/journal.pmed.1003138
 37. Rudnicka E, Napierała P, Podfigurna A, et al. The World Health Organization (WHO) approach to healthy ageing. *Maturitas* 2020;139:6-11. doi: <https://doi.org/10.1016/j.maturitas.2020.05.018>
 38. Vos T, Lim SS, Abbafati C, et al. Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The lancet* 2020;396(10258):1204-22.

39. Fazal F, Saleem T, Ur Rehman ME, et al. The rising cost of healthcare and its contribution to the worsening disease burden in developing countries. *Ann Med Surg (Lond)* 2022;82:104683. doi: 10.1016/j.amsu.2022.104683 [published Online First: 2022/09/24]
40. Kaplan R, Porter M. The Big Idea: How to Solve the Cost Crisis in Health Care 2011 [Available from: <https://hbr.org/2011/09/how-to-solve-the-cost-crisis-in-health-care> accessed 29 January 2022.
41. GBD 2016 Healthcare Access and Quality Collaborators. Measuring performance on the Healthcare Access and Quality Index for 195 countries and territories and selected subnational locations: a systematic analysis from the Global Burden of Disease Study 2016. *Lancet* 2018;391(10136):2236-71. doi: 10.1016/s0140-6736(18)30994-2 [published Online First: 2018/06/13]
42. Lawrence D, Kisely S. Inequalities in healthcare provision for people with severe mental illness. *J Psychopharmacol* 2010;24(4 Suppl):61-8. doi: 10.1177/1359786810382058 [published Online First: 2010/10/15]
43. Tangcharoensathien V, Lekagul A, Teo YY. Global health inequities: more challenges, some solutions. *Bull World Health Organ* 2024;102(2):86-86a. doi: 10.2471/blt.24.291326 [published Online First: 2024/02/05]
44. Britnell M. Human: Solving the global workforce crisis in healthcare. Oxford: OUP 2019.
45. Reeve BA, M.; Farias, R.; Gostin, L. State and municipal innovations in obesity policy: Why localities remain a necessary laboratory for innovation. *American Journal of Public Health* 2015;105(3):442-50. doi: 10.2105/AJPH.2014.302337
46. Meier P, Katikireddi SV, Smith K. Bold action is needed to strengthen primary prevention. *BMJ* 2023;380:p595. doi: 10.1136/bmj.p595
47. The L. Health as a foundation for society. *The Lancet* 2021;397(10268):1. doi: [https://doi.org/10.1016/S0140-6736\(20\)32751-3](https://doi.org/10.1016/S0140-6736(20)32751-3)
48. Bloom D, Canning D. Population Health and Economic Growth. Commission on Growth and Development Working Paper;No. 24. . Washington DC: World Bank, 2008.
49. Bloom DE, Canning D, Seville J, et al. Economic growth and the demographic transition. Cambridge, MA.: National Bureau of Economic Research 2001.
50. WHO. Macroeconomics and Health: Investing in Health for Economic Development 2001.
51. Rimmer A. Physician vacancies are at highest level in almost a decade, colleges find. *BMJ* 2021;375:n2810. doi: 10.1136/bmj.n2810
52. Henderson K. Recognising how big a problem we currently have in the NHS is the beginning of trying to solve it. *BMJ* 2022;376:o103. doi: 10.1136/bmj.o103
53. Hiam L, Dorling D. A return to austerity is not inevitable, it is a political choice. *BMJ* 2022;379:o2784. doi: 10.1136/bmj.o2784
54. Elwell-Sutton T, Finch D, Bibby J. The nation's health Priorities for the next government, 2019.
55. Filken G. A Covenant for Health 2023 [Available from: <https://medium.com/@Covenantforhealth/report-990529772639> accessed 14 November 2023.
56. McKee M, Dunnell K, Anderson M, et al. The changing health needs of the UK population. *The Lancet* 2021;397(10288):1979-91. doi: 10.1016/S0140-6736(21)00229-4
57. McKee M. Boris Johnson and health: unfulfilled promises. *BMJ* 2022;378:o1707. doi: 10.1136/bmj.o1707

58. Catherall R. The economic cost of ill health among the working-age population 2023 [Available from: <https://www.oxera.com/insights/reports/the-economic-cost-of-ill-health-among-the-working-age-population/> accessed 21 June 2024.
59. Health Foundation. What makes us healthy? 2018 [Available from: <https://www.health.org.uk/what-we-do/a-healthier-uk-population/what-makes-us-healthy> accessed 21 July 2022.
60. van Schalkwyk MCI, Zenone M, Maani N, et al. Back to our roots or sowing new seeds: thinking anew on the paradigms of health, harm and disease. *Journal of Public Health* 2022;44(Supplement_1):i28-i33. doi: 10.1093/pubmed/fdac093
61. Lantz PM, Goldberg DS, Gollust SE. The Perils of Medicalization for Population Health and Health Equity. *The Milbank Quarterly* 2023;101(S1):61-82. doi: <https://doi.org/10.1111/1468-0009.12619>
62. Healthier Societies for Healthy Populations G. Healthier societies for healthy populations. *The Lancet* 2020;395(10239):1747-49. doi: 10.1016/S0140-6736(20)31039-4
63. Health Foundation. Addressing the leading risk factors for ill health 2022 [Available from: <https://www.health.org.uk/publications/reports/addressing-the-leading-risk-factors-for-ill-health> accessed 29 September 2023.
64. Iacobucci G. Politicians should back more radical action on primary prevention, says England's CMO. *BMJ* 2023;380:p428. doi: 10.1136/bmj.p428
65. Health Foundation. Public perceptions of health and social care 2022 [Available from: <https://www.health.org.uk/publications/public-perceptions-of-health-and-social-care-november-2022> accessed 7 November 2023.
66. Nations U. What is a city ? 2020 [Available from: https://unhabitat.org/sites/default/files/2020/06/city_definition_what_is_a_city.pdf accessed 15 February 2023.
67. Sorensen A, Labbé D. Chapter 1: Megacities, megacity-regions, and the endgame of urbanization
Handbook of Megacities and Megacity-Regions. Cheltenham, UK: Edward Elgar Publishing 2020.
68. Sassen S. The global city: Introducing a concept. *Brown J World Aff* 2004;11:27.
69. HM Government. Rural Urban Classifications 2011 [Available from: <https://www.gov.uk/government/collections/rural-urban-classification> accessed 14 May 2021.
70. UK Parliament. What makes a city? 2022 [Available from: <https://commonslibrary.parliament.uk/what-makes-a-city/> accessed 21 March 2024.
71. O'Dowd L. Contested states, frontiers and cities. *A companion to border studies* 2012:158-76.
72. Schwab K. The fourth industrial revolution: Crown Currency 2017.
73. Satterthwaite D. Will most people live in cities? *BMJ (Clinical research ed)* 2000;321(7269):1143-45. doi: 10.1136/bmj.321.7269.1143
74. Morris EA. Are “desirable” cities really so desirable? City characteristics and subjective well-being in the U.S. *Wellbeing, Space and Society* 2023;4:100135. doi: <https://doi.org/10.1016/j.wss.2023.100135>
75. United Nations. 2018 Revision of World Urbanization Prospects 2018 [Available from: <https://www.un.org/development/desa/publications/2018-revision-of-world-urbanization-prospects.html> accessed 12 January 2020.
76. United Nations. Department of Economic and Social Affairs, Population Division (2018). The World's Cities in 2018—Data Booklet (ST/ESA/SER.A/417). 2018.
77. Hawkins A. The grey wall of China: inside the world's concrete superpower. *The Guardian* 2019 28 February 2019.

78. Ellis LD, Badel AF, Chiang ML, et al. Toward electrochemical synthesis of cement—An electrolyzer-based process for decarbonating CaCO₃ while producing useful gas streams. *Proceedings of the National Academy of Sciences* 2020;117(23):12584-91. doi: 10.1073/pnas.1821673116
79. The Lancet. A Commission on climate change. *The Lancet* 2009;373(9676):1659. doi: 10.1016/S0140-6736(09)60922-3
80. Wight J, Middleton J. Climate change: the greatest public health threat of the century. *BMJ* 2019;365:l2371. doi: 10.1136/bmj.l2371
81. Watts N, Adger WN, Agnolucci P, et al. Health and climate change: policy responses to protect public health. *The Lancet* 2015;386(10006):1861-914. doi: 10.1016/S0140-6736(15)60854-6
82. Watts N, Amann M, Arnell N, et al. The 2019 report of The Lancet Countdown on health and climate change: ensuring that the health of a child born today is not defined by a changing climate. *The Lancet* 2019 doi: [https://doi.org/10.1016/S0140-6736\(19\)32596-6](https://doi.org/10.1016/S0140-6736(19)32596-6)
83. Vlahov DG, E.; Freudenberg, N.; Galea, S. Cities and health: History, approaches, and key questions. *Academic Medicine* 2004;79(12):1133-38. doi: <http://dx.doi.org/10.1097/00001888-200412000-00003>
84. Brändström A, Tedebrand L-G. Society, health and population during the demographic transition: Almqvist and Wiksell. 1988.
85. Neiderud C-J. How urbanization affects the epidemiology of emerging infectious diseases. *Infection ecology & epidemiology* 2015;5(1):27060.
86. Gruebner O, Rapp MA, Adli M, et al. Cities and mental health. *Deutsches Ärzteblatt International* 2017;114(8):121.
87. Galea S, Freudenberg N, Vlahov D. Cities and population health. *Social Science & Medicine* 2005;60(5):1017-33. doi: <https://doi.org/10.1016/j.socscimed.2004.06.036>
88. Kuddus MA, Tynan E, McBryde E. Urbanization: A problem for the rich and the poor? *Public Health Reviews* 2020;41(1) doi: 10.1186/s40985-019-0116-0
89. Hou B, Nazroo J, Banks J, et al. Are cities good for health? A study of the impacts of planned urbanization in China. *International Journal of Epidemiology* 2019;48(4):1083-90. doi: 10.1093/ije/dyz031
90. Leon DA. Cities, urbanization and health. *International Journal of Epidemiology* 2008;37(1):4-8. doi: 10.1093/ije/dym271
91. Pineo H, Rydin Y. Cities, health and well-being. UCL, 2018.
92. Cairney P, Oliver K. Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy? *Health Research Policy and Systems* 2017;15(1):35. doi: 10.1186/s12961-017-0192-x
93. Macintyre S, Chalmers I, Horton R, et al. Using evidence to inform health policy: case study. *BMJ (Clinical research ed)* 2001;322(7280):222-25. doi: 10.1136/bmj.322.7280.222
94. Orton L, Lloyd-Williams F, Taylor-Robinson D, et al. The use of research evidence in public health decision making processes: systematic review. *PLoS One* 2011;6(7):e21704. doi: 10.1371/journal.pone.0021704 [published Online First: 2011/08/06]
95. Reicher S. COVID-19 has sparked new relationships between academia and policymakers – we must maintain them 2021 [Available from: https://theconversation.com/covid-19-has-sparked-new-relationships-between-academia-and-policymakers-we-must-maintain-them-156143?utm_medium=email&utm_campaign=Latest%20from%20The%20Conversation%20for%20March%201%202021%20-

https://www.lancet.com/2020/03/02/201876318302&utm_content=Latest%20from%20The%20Conversation%20for%200March%201%202021%20-%201876318302+CID_ca933089e36990e6c2900dbdbecbe12e&utm_source=campaign_monitor_uk&utm_term=maintain%20new%20links%20between%20academia%20and%20policymakers accessed 23 June 2021.

96. Graeden E, Carlson C, Katz R. Answering the right questions for policymakers on COVID-19. *The Lancet Global Health* 2020;8(6):e768-e69. doi: 10.1016/S2214-109X(20)30191-1
97. Oliver K, Innvar S, Lorenc T, et al. A systematic review of barriers to and facilitators of the use of evidence by policymakers. *BMC Health Services Research* 2014;14(1):2. doi: 10.1186/1472-6963-14-2
98. Elliott H, Popay J. How are policy makers using evidence? Models of research utilisation and local NHS policy making. *Journal of Epidemiology and Community Health* 2000;54(6):461-68. doi: 10.1136/jech.54.6.461
99. HUGHES CE. Evidence-based policy or policy-based evidence? The role of evidence in the development and implementation of the Illicit Drug Diversion Initiative. *Drug and Alcohol Review* 2007;26(4):363-68. doi: <https://doi.org/10.1080/09595230701373859>
100. Innvaer S, Vist G, Trommald M, et al. Health policy-makers' perceptions of their use of evidence: a systematic review. *J Health Serv Res Policy* 2002;7(4):239-44. doi: 10.1258/135581902320432778 [published Online First: 2002/11/12]
101. Lavis J, Davies H, Oxman A, et al. Towards systematic reviews that inform health care management and policy-making. *J Health Serv Res Policy* 2005;10 Suppl 1:35-48. doi: 10.1258/1355819054308549 [published Online First: 2005/08/02]
102. Jessani NS, Valmeekanathan A, Babcock C, et al. Exploring the evolution of engagement between academic public health researchers and decision-makers: from initiation to dissolution. *Health Research Policy and Systems* 2020;18(1):15. doi: 10.1186/s12961-019-0516-0
103. Cairney P. How can policy theory have an impact on policymaking? The role of theory-led academic–practitioner discussions. *Teaching Public Administration* 2015;33(1):22-39. doi: 10.1177/0144739414532284
104. Nutbeam D. Getting evidence into policy and practice to address health inequalities. *Health Promotion International* 2004;19(2):137-40. doi: 10.1093/heapro/dah201
105. Monaghan M, Ingold JO. Policy Practitioners' Accounts of Evidence-Based Policy Making: The Case of Universal Credit. *Journal of Social Policy* 2019;48(2):351-68. doi: 10.1017/S004727941800051X [published Online First: 2018/07/17]
106. Yingling D, Mallinson D. Explaining variation in evidence-based policy making in the American states. *Evidence & Policy: A Journal of Research, Debate and Practice* 2020;16 doi: 10.1332/174426419X15752577942927
107. Henson RM, McGinty M, Juliano C, et al. Big City Health Officials' Conceptualizations of Health Equity. *Journal of Public Health Management and Practice* 2019;25(4):332-41. doi: 10.1097/phh.0000000000000866
108. Stansfield J, South J, Mapplethorpe T. What are the elements of a whole system approach to community-centred public health? A qualitative study with public health leaders in England's local authority areas. *BMJ Open* 2020;10(8):e036044. doi: 10.1136/bmjopen-2019-036044
109. Vos T, Lim SS, Abbafati C, et al. Global burden of 369 diseases and injuries in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet* 2020;396(10258):1204-22. doi: 10.1016/S0140-6736(20)30925-9

110. Mays N, Pope C, Popay J. Systematically reviewing qualitative and quantitative evidence to inform management and policy-making in the health field. *J Health Serv Res Policy* 2005;10 Suppl 1:6-20. doi: 10.1258/1355819054308576 [published Online First: 2005/08/02]
111. Higgins J, Green S. Cochrane Handbook for Systematic Reviews of Interventions 2011 [version 5.1:[Available from: <https://handbook-5-1.cochrane.org/> accessed 15 January 2016.
112. Greenhalgh T, Robert G, Macfarlane F, et al. Diffusion of innovations in service organizations: systematic review and recommendations. *The Milbank quarterly* 2004;82(4):581-629. doi: 10.1111/j.0887-378X.2004.00325.x
113. Moher D, Liberati A, Tetzlaff J, et al. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *PLoS medicine* 2009;6(7):e1000097-e97. doi: 10.1371/journal.pmed.1000097 [published Online First: 2009/07/21]
114. Mak S, Thomas A. An Introduction to Scoping Reviews. *J Grad Med Educ* 2022;14(5):561-64. doi: 10.4300/jgme-d-22-00620.1 [published Online First: 2022/10/25]
115. Peters MD, Marnie C, Tricco AC, et al. Updated methodological guidance for the conduct of scoping reviews. *JB I evidence synthesis* 2020;18(10):2119-26.
116. Peters M, Godfrey C, McInerney P, et al. Chapter 11: Scoping reviews. JBI Manual for Evidence Synthesis [Internet]. 2020 [Available from: <https://jbi-global-wiki.refined.site/space/MANUAL> accessed 14 September 2022.
117. Tricco AC, Lillie E, Zarin W, et al. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Ann Intern Med* 2018;169(7):467-73. doi: 10.7326/m18-0850 [published Online First: 2018/09/05]
118. World Statistics Organisation. Population of Localities 2018 [Available from: <https://world-statistics.org/index-pop.php>.
119. Feyerherm L, Tibbits M, Wang H, et al. Partners for a healthy city: implementing policies and environmental changes within organizations to promote health. *American journal of public health* 2014;104(7):1165-68. doi: <http://dx.doi.org/10.2105/AJPH.2014.301875>
120. Sacks RY, S.; Nonas, Cathy. FRAMING HEALTH MATTERS. Increasing Access to Fruits and Vegetables: Perspectives From the New York City Experience. *American Journal of Public Health* 2015;105(5):e29-NaN.
121. Duncan BR. New healthcare model: Citywide care management. *Otolaryngology - Head and Neck Surgery (United States)* 2012;147:P125. doi: <http://dx.doi.org/10.1177/0194599812451426a1>
122. Coady MHJ, J.; Davis, K.; Kerker, B.; Kilgore, E. A.; Perl, S. B. Changes in smoking prevalence and number of cigarettes smoked per day following the implementation of a comprehensive tobacco control plan in New York City. *Journal of urban health : bulletin of the New York Academy of Medicine* 2012;89(5):802-08.
123. Weinstein I. Eighty years of public health in New York City. *Bulletin of the New York Academy of Medicine* 1947;23(4):221-37.
124. De Salazar L. Linking public health surveillance systems to program effectiveness evaluation. *Colombia Medica* 2011;42(3):342-51.
125. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology* 2006;3(2):77-101. doi: 10.1191/1478088706qp063oa
126. Danielli S, Ashrafian H, Darzi A. Healthy city: global systematic scoping review of city initiatives to improve health with policy recommendations. *BMC Public Health* 2023;23(1):1277. doi: 10.1186/s12889-023-15908-0

127. Danielli S, Coffey T, Ashrafi H, et al. Systematic review into city interventions to address obesity. *EClinicalMedicine* 2021;32 doi: 10.1016/j.eclinm.2020.100710
128. Strech D, Tilburt J. Value judgments in the analysis and synthesis of evidence. *J Clin Epidemiol* 2008;61(6):521-4. doi: 10.1016/j.jclinepi.2008.01.001 [published Online First: 2008/05/13]
129. Peñalvo JLS-P, M.; Santos-Beneit, G.; Pocock, S.; Redondo, J.; Fuster, V. The Program SI! intervention for enhancing a healthy lifestyle in preschoolers: First results from a cluster randomized trial. *BMC Public Health* 2013;13(1) doi: 10.1186/1471-2458-13-1208
130. Tsung-Mei. Explaining Shanghai's Health Care Reforms, Successes, And Challenges. *Health Affairs* 2013;32(12):2199-205.
131. Sturm RC, A. Zoning For Health? The Year-Old Ban On New Fast-Food Restaurants In South LA. *Health Affairs* 2009;28:w1088-NaN.
132. Whitelaw NW, G.; Wenzler, M. R. Current efforts toward implementation of an urban health strategy: The Henry Ford Health System. *Journal of Urban Health* 1998;75(2):356-66. doi: <http://dx.doi.org/10.1007/BF02345103>
133. Yen MYW, T. S. J.; Chiu, A. W. H.; Wong, W. W.; Wang, P. E.; Chan, T. C.; King, C. C. Taipei's use of a multi-channel mass risk communication program to rapidly reverse an epidemic of highly communicable disease. *PLoS ONE* 2009;4 (11) (no pagination)(e7962) doi: <http://dx.doi.org/10.1371/journal.pone.0007962>
134. Tran AD. Addressing eating habits through food label education in Stevenson, WA. *Journal of Investigative Medicine* 2010;58 (1):204. doi: <http://dx.doi.org/10.231/JIM.0b013e3181c87db3>
135. House of Lords. Third report of the select committee of the house of lords on metropolitan hospitals. *The Lancet* 1892;140(3592):49-52. doi: [https://doi.org/10.1016/S0140-6736\(01\)97445-8](https://doi.org/10.1016/S0140-6736(01)97445-8)
136. Kickbusch I, Allen L, Franz C. The commercial determinants of health. *The Lancet Global Health* 2016;4(12):e895-e96. doi: 10.1016/S2214-109X(16)30217-0
137. Wainwright NWJ, Surtees PG, Welch AA, et al. Healthy lifestyle choices: could sense of coherence aid health promotion? *Journal of Epidemiology and Community Health* 2007;61(10):871-76. doi: 10.1136/jech.2006.056275
138. Nana-Goar Pogosova NE, A.; Ausheva, A. Evaluation of the efficacy of cardiovascular prevention in the framework of the World Heart Day. *European Journal of Preventive Cardiology* 2015;1):S115. doi: <http://dx.doi.org/10.1177/2047487315586743>
139. Taing D, McKay K. Better Strength, Better Balance! Partnering to deliver a fall prevention program for older adults. *Can J Public Health* 2017;108(3):e314-e19. doi: 10.17269/cjph.108.5901 [published Online First: 2017/09/15]
140. Wagner C, Carmeli C, Jackisch J, et al. Life course epidemiology and public health. *The Lancet Public Health* 2024;9(4):e261-e69. doi: 10.1016/S2468-2667(24)00018-5
141. Page RLS, J. F.; Libby, A. M. A citywide smoking ban reduced maternal smoking and risk for preterm births: A colorado natural experiment. *Journal of Women's Health* 2012;21(6):621-27. doi: <http://dx.doi.org/10.1089/jwh.2011.3305>
142. Cesaroni GF, F.; Agabiti, N.; Valente, P.; Zuccaro, P.; Perucci, C. A. Effect of the Italian smoking ban on population rates of acute coronary events. *Circulation* 2008;117(9):1183-88. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.107.729889>
143. Bartecchi CA, R. N.; Nevin-Woods, C.; Thomas, W. M.; Estacio, R. O.; Bartelson, B. B.; Krantz, M. J. Reduction in the incidence of acute myocardial infarction associated with a citywide smoking ordinance. *Circulation* 2006;114(14):1490-96. doi: <http://dx.doi.org/10.1161/CIRCULATIONAHA.106.615245>

144. Economos CDH, R. R.; Must, A.; Goldberg, J. P.; Kuder, J.; Naumova, E. N.; Collins, J. J.; Nelson, M. E. Shape Up Somerville two-year results: A community-based environmental change intervention sustains weight reduction in children. *Preventive medicine* 2013; 57(4).
<http://onlinelibrary.wiley.com/o/cochrane/clcentral/articles/426/CN-00910426/frame.html>; http://ac.els-cdn.com/S009174351300193X/1-s2.0-S009174351300193X-main.pdf?_tid=b201df18-cfe8-11e5-9735-00000aabb0f6c&acdnat=1455103583_2cfe0f0018bc97c80ed35598a603b6cf.
145. Sekhobo J, Edmunds L, Dalenius K, et al. Neighborhood Disparities in Prevalence of Childhood Obesity Among Low-Income Children Before and After Implementation of New York City Child Care Regulations. *Preventing chronic disease* 2014;11:E181. doi: 10.5888/pcd11.140152
146. Huitema BEVH, R.; Manal, H. Time-series intervention analysis of pedestrian countdown timer effects. *Accident Analysis & Prevention* 2014;72:23-31.
147. Muennig PAE, M.; Li, G.; DiMaggio, C. The cost-effectiveness of New York City's Safe Routes to School Program. *American Journal of Public Health* 2014;104(7):1294-9.
148. Rojas-Rueda DdN, Audrey; Tainio, Marko; Nieuwenhuijsen, Mark J. The health risks and benefits of cycling in urban environments compared with car use: health impact assessment study. *BMJ: British Medical Journal* 2011;343(7819):1-8.
149. Tapia V, Carbajal L, Vásquez V, et al. [Traffic regulation and environmental pollution by particulate material (2.5 and 10), sulfur dioxide, and nitrogen dioxide in Metropolitan Lima, Peru]. *Rev Peru Med Exp Salud Publica* 2018;35(2):190-97. doi: 10.17843/rpmesp.2018.352.3250. [published Online First: 2018/09/06]
150. Nieuwenhuijsen MJ, Khreis H. Car free cities: Pathway to healthy urban living. *Environ Int* 2016;94:251-62. doi: 10.1016/j.envint.2016.05.032 [published Online First: 2016/06/09]
151. Miller NF, Thomas R.; Liu, Sze Yan; Matte, Thomas D.; Mastashari, Farzad; Deitcher, Deborah R.; Cummings, K.; Chang, Christina; Bauer, Ursula; Bassett, Mary T. Effectiveness of a large-scale distribution programme of free nicotine patches: A prospective evaluation. *The Lancet* 2005;365(9474):1849-54. doi: <http://dx.doi.org/10.1016/S0140-6736%2805%2966615-9>
152. Rea RL, J.; Gregory, S.; Prescott, D.; Gray, T.; Warren, A.; Hannah, J.; Langeland, L.; Dhindsa, P.; Tan, G. First diabetes: A successful integrated healthcare partnership for diabetes patients in Derby. *Diabetic Medicine* 2012;29:94. doi: http://dx.doi.org/10.1111/j.1464-5491.2011.03555_2.x
153. Tanaka M. Medical care networks for dementia patients. *Japan Medical Association Journal* 2013;56(4):240-45.
154. Marcolino MB, L. C. C.; De Guimaraes, A. J.; Nascimento, B. R.; Castro, L. R. A.; Martins, P.; Lodi-Junqueira, L.; Ribeiro, A. L. The implementation of the myocardial infarction system of care in a large city in Brazil. *Global Heart* 2014;1):e193. doi: <http://dx.doi.org/10.1016/j.gheart.2014.03.1918>
155. Hunter RMD, C.; Rudd, A.; Thompson, A.; Walker, H.; Thomson, N.; Mountford, J.; Schwamm, L.; Deanfield, J.; Thompson, K.; Dewan, B.; Mistry, M.; Quoraishi, S.; Morris, S. Impact on clinical and cost outcomes of a centralized approach to acute stroke care in London: a comparative effectiveness before and after model. *PLoS ONE [Electronic Resource]* 2013;8(8):e70420.
156. Ong PL, G.; Demmer, R. Evaluating the influence of bloomberg era policy on New York city cardiovascular disease mortality rates. *Circulation Conference: American Heart Association's Epidemiology and Prevention/Lifestyle and Cardiometabolic Health* 2015;131(no pagination)

157. Foulkes C. Lessons from healthy together geelong: Delivering systems change at scale across two levels of government. *Obesity Research and Clinical Practice* 2014;8:33. doi: <http://dx.doi.org/10.1016/j.orcp.2014.10.060>
158. Roset-Elias MAC-F, E.; Puigdueta-Lucas, I.; Obea-Maso, M. What a city council can do to improve the quality of life in the elderly? *Annals of Nutrition and Metabolism* 2013;63:1846. doi: <http://dx.doi.org/10.1159/000354245>
159. Yu LH. Cancer prevention and therapy in Taipei city. *International Journal of Urology* 2010;17:A17-A18. doi: <http://dx.doi.org/10.1111/j.1442-2042.2010.02646.x>
160. Alanqoudi Z, Alhinai S. Nizwa healthy lifestyle project evaluation report 2010, 2010.
161. Cecchini M, Sassi F, Lauer JA, et al. Tackling of unhealthy diets, physical inactivity, and obesity: health effects and cost-effectiveness. *The Lancet* 2010;376(9754):1775-84. doi: 10.1016/S0140-6736(10)61514-0
162. Key TJ, Bradbury KE, Perez-Cornago A, et al. Diet, nutrition, and cancer risk: what do we know and what is the way forward? *BMJ* 2020;368:m511. doi: 10.1136/bmj.m511
163. Afshin A, Sur PJ, Fay KA, et al. Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet* 2019;393(10184):1958-72. doi: 10.1016/S0140-6736(19)30041-8
164. The Lancet. The link between cancer and obesity. *The Lancet* 2017;390(10104):1716. doi: 10.1016/S0140-6736(17)32659-4
165. Carbone S, Canada JM, Billingsley HE, et al. Obesity paradox in cardiovascular disease: where do we stand? *Vascular health and risk management* 2019;15:89-100. doi: 10.2147/VHRM.S168946
166. Sarwer DB, Polonsky HM. The Psychosocial Burden of Obesity. *Endocrinology and metabolism clinics of North America* 2016;45(3):677-88. doi: 10.1016/j.ecl.2016.04.016
167. Kivimäki M, Lawlor DA, Singh-Manoux A, et al. Common mental disorder and obesity: insight from four repeat measures over 19 years: prospective Whitehall II cohort study. *BMJ* 2009;339:b3765. doi: 10.1136/bmj.b3765
168. World Health Organization. Preventing chronic diseases : a vital investment : WHO global report. Geneva: World Health Organization, 2005.
169. Sheffield PE, Herrera M, Kinnee EJ, et al. Not so little differences: Variation in hot weather risk to young children in New York City. *Public Health* 2018;161:119-26. doi: <http://dx.doi.org/10.1016/j.puhe.2018.06.004>
170. Sewe MO, Bunker A, Ingole V, et al. Estimated effect of temperature on years of life lost: A retrospective time-series study of low-, middle-, and high-income regions. *Environmental Health Perspectives* 2018;126(1) doi: 10.1289/EHP1745
171. Frumkin H, Haines A. Global Environmental Change and Noncommunicable Disease Risks. *Annual Review of Public Health* 2019;40(1):261-82. doi: 10.1146/annurev-publhealth-040218-043706
172. Rosenthal JK, Sclar ED, Kinney PL, et al. Links between the built environment, climate and population health: interdisciplinary environmental change research in New York City. *Ann Acad Med Singap* 2007;36(10):834-46. [published Online First: 2007/11/08]
173. Xiong X, Zhang L, Hao Y, et al. Urban dietary changes and linked carbon footprint in China: A case study of Beijing. *Journal of Environmental Management* 2020;255:109877. doi: <https://doi.org/10.1016/j.jenvman.2019.109877>
174. Swinburn BA, Kraak VI, Allender S, et al. The Global Syndemic of Obesity, Undernutrition, and Climate Change: The Lancet Commission report. *Lancet* 2019;393(10173):791-846. doi: 10.1016/s0140-6736(18)32822-8 [published Online First: 2019/02/01]

175. Willett W, Rockström J, Loken B, et al. Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet* 2019;393(10170):447-92. doi: 10.1016/S0140-6736(18)31788-4
176. Macdonald L, Olsen JR, Shortt NK, et al. Do ‘environmental bads’ such as alcohol, fast food, tobacco, and gambling outlets cluster and co-locate in more deprived areas in Glasgow City, Scotland? *Health & Place* 2018;51:224-31. doi: <https://doi.org/10.1016/j.healthplace.2018.04.008>
177. Stuckler D, McKee M, Ebrahim S, et al. Manufacturing Epidemics: The Role of Global Producers in Increased Consumption of Unhealthy Commodities Including Processed Foods, Alcohol, and Tobacco. *PLOS Medicine* 2012;9(6):e1001235. doi: 10.1371/journal.pmed.1001235
178. Hruby A, Hu FB. The Epidemiology of Obesity: A Big Picture. *Pharmacoeconomics* 2015;33(7):673-89. doi: 10.1007/s40273-014-0243-x
179. Zylke JW, Bauchner H. The Unrelenting Challenge of Obesity. *JAMA* 2016;315(21):2277-78. doi: 10.1001/jama.2016.6190
180. Anderer S. One in 8 People Worldwide Are Obese. *JAMA* 2024;331(14):1172-72. doi: 10.1001/jama.2024.2073
181. Korkodilos M. Childhood obesity: London's super-sized challenge. In: England PH, ed., 2018.
182. Shah R, Hagell A, Cheung R. International comparisons of health and wellbeing in adolescence and early adulthood 2019.
183. Thomas F, Thomas C, Hooper L, et al. Area deprivation, screen time and consumption of food and drink high in fat salt and sugar (HFSS) in young people: results from a cross-sectional study in the UK. *BMJ Open* 2019;9(6):e027333. doi: 10.1136/bmjopen-2018-027333
184. Kauh TJ, Dawkins-Lyn N, Dooyema C, et al. Childhood Obesity Declines Project: An Effort of the National Collaborative on Childhood Obesity Research to Explore Progress in Four Communities. *Childhood Obesity* 2018;14:S1-S4. doi: 10.1089/chi.2018.0018
185. Iguacel I, Fernández-Alvira JM, Ahrens W, et al. Prospective associations between social vulnerabilities and children's weight status. Results from the IDEFICS study. *International Journal of Obesity* 2018;42(10):1691-703. doi: 10.1038/s41366-018-0199-6
186. OECD. The Heavy Burden of Obesity 2019.
187. ADPH. The Association of Directors of Public Health Consultation Response Food, Diet and Obesity Inquiry, 2024.
188. WHO. Obesity and Overweight Fact Sheet 2020 [Available from: <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight> accessed 17 April 2020 2020.
189. Freudenberg N, Atkinson S. Getting food policy on the Mayoral table: a comparison of two election cycles in New York and London. *Public Health* 2015;129(4):295-302. doi: <https://doi.org/10.1016/j.puhe.2015.02.018>
190. McMichael AJ. Will considerations of environmental sustainability revitalise the policy links between the urban environment and health? *N S W Public Health Bull* 2007;18(3-4):41-5. [published Online First: 2007/07/03]
191. von Elm E, Altman DG, Egger M, et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *The Lancet* 2007;370(9596):1453-57. doi: 10.1016/S0140-6736(07)61602-X
192. GLA. The London Health Inequalities Strategy. London, 2018.

193. Llargues EF, R.; Recasens, A.; Nadal, A.; Vila, M.; Perez, M. J.; Manresa, J. M.; Recasens, I.; Salvador, G.; Serra, J.; Roure, E.; Castells, C. Assessment of a school-based intervention in eating habits and physical activity in school children: The AVall study. *Journal of Epidemiology and Community Health* 2011;65(10):896-901. doi: <http://dx.doi.org/10.1136/jech.2009.102319>
194. Safdie ML, L.; González-Casanova, I.; Salvo, D.; Islas, A.; Hernández-Cordero, S.; Bonvecchio, A.; Rivera, J. A. Promoting healthful diet and physical activity in the Mexican school system for the prevention of obesity in children. *Salud pública de México* 2013; 55 Suppl 3. <http://onlinelibrary.wiley.com/o/cochrane/clcentral/articles/364/CN-01124364/frame.html>; <http://www.scielo.org/pdf/spm/v55s3/v55s3a3.pdf>.
195. Kanan MS. Childhood obesity prevention intervention and policy in the Mexican school system. *Dissertation Abstracts International Section C: Worldwide* 2018;75(1-C):No Pagination Specified.
196. Vilchis-Gil J, Klünder-Klünder M, Duque X, et al. Decreased Body Mass Index in Schoolchildren After Yearlong Information Sessions With Parents Reinforced With Web and Mobile Phone Resources: community Trial. *Journal of medical Internet research* 2016;18(6):e174. doi: 10.2196/jmir.5584
197. Kain JL, B.; Cerda, R.; Vio, F.; Uauy, R. Two-year controlled effectiveness trial of a school-based intervention to prevent obesity in Chilean children. *Public health nutrition* 2009; 12(9). <http://onlinelibrary.wiley.com/o/cochrane/clcentral/articles/366/CN-00754366/frame.html>; http://journals.cambridge.org/download.php?file=%2FPHN%2FPHN12_09%2FS136898000800428Xa.pdf&code=2a761c2290413d204579326df0a7aa58.
198. Kain JU, R.; Leyton, B.; Cerda, R.; Olivares, S.; Vio, F. DO NOT USE - NOT IN ENGLISH SEE 16608 [Effectiveness of a dietary and physical activity intervention to prevent obesity in school age children]. *Revista médica de Chile* 2008; 136(1). <http://onlinelibrary.wiley.com/o/cochrane/clcentral/articles/902/CN-00665902/frame.html>; <http://www.scielo.cl/pdf/rmc/v136n1/art03.pdf>.
199. A. M Desilva-Sanigorski, A Colin Bell, Peter Kremer, et al. Reducing obesity in early childhood: results from Romp & Chomp, an Australian community-wide intervention program. *American Journal of Clinical Nutrition* 2010;91(4):831-41.
200. Thibault HB, S.; Carriere, C.; Ruello, M.; Atchoarena, S.; Delmas, C.; Baratchart, B. A.; Tison, S. M. Prevention and treatment of childhood obesity in the Aquitaine region (France). *International Journal of Pediatric Obesity* 2010;5:39-40. doi: <http://dx.doi.org/10.3109/17477160903387715>
201. National League of Cities. Community wellness: comprehensive city-school strategies to reduce childhood obesity: a report on the city and school leaders collaborating on local wellness policies project. 2010
202. Ravelo JL. Cities and NCDs: The growing threat of childhood obesity in Quito 2018 [Available from: <https://www.devex.com/news/cities-and-ncds-the-growing-threat-of-childhood-obesity-in-quito-92510> accessed 24 May 2019.
203. Williams DW, Verlyn. Get Fit Kids: A Feasibility Study of a Pedometer-Based Walking Program. *Bariatric Nursing & Surgical Patient Care* 2011;6(3):139-44.
204. Xu F, Ware RS, Leslie E, et al. Effectiveness of a randomized controlled lifestyle intervention to prevent obesity among Chinese primary school students: click-obesity study. *Plos one* 2015;10(10) (no pagination // (NIH) *National Institutes of Health*) doi: 10.1371/journal.pone.0141421

205. Hawkes: C, Russell: S, Isaacs: A, et al. Obesity Policy Research Unit (OPRU): Rapid response briefing paper, 2017.
206. T W, B P, C H, et al. Training community practitioners to work more effectively with parents to prevent childhood obesity: The impact of HENRY upon children's centres and their staff. *Journal of Human Nutrition and Dietetics* 2012;25(5):460-68. doi: <http://dx.doi.org/10.1111/j.1365-277X.2012.01247.x>
207. Fu YCA, To KC, Tao WY, et al. School accreditation scheme reduces childhood obesity in Hong Kong. *Global Health Promotion* 2018;1757975918764318. doi: 10.1177/1757975918764318
208. Koch PA, Contento IR, Gray HL, et al. Food, Health, & Choices: Curriculum and Wellness Interventions to Decrease Childhood Obesity in Fifth-Graders. *Journal of Nutrition Education and Behavior* 2019 doi: 10.1016/j.jneb.2018.12.001
209. Mayor of London. Mayor cracks down on opening of new hot-food takeaways around schools 2017 [Available from: <https://www.london.gov.uk/press-releases/mayoral/mayor-cracks-down-on-new-takeaways-near-schools> accessed 17 May 2019.
210. Korea Consumer Agency. Concerns are also raised about 53 food products with increased side effects due to using compound colors 2013 [Available from: http://english.kca.go.kr/brd/m_11/view.do?seq=232 accessed 18 June 2019.
211. Colquhoun DP, J. Effective school meal interventions: Lessons learned from Eat Well Do Well in Hull, England. *Childhood Obesity Prevention: International Research, Controversies and Interventions*: Oxford University Press 2011.
212. Perlman EN, Cathy; Lindstrom, L.; Choe-Castillo, Julia; McKie, Herman; Alberti, M. A Menu for Health: Changes to New York City School Food, 2001 to 2011* A Menu for Health: Changes to New York City School Food, 2001 to 2011. *Journal of School Health* 2012;82(10):484-92.
213. Nonas CS, L. D.; Kettel Khan, L.; Leviton, L. Rationale for New York City's regulations on nutrition, physical activity, and screen time in early child care centers. *Preventing chronic disease* 2014;11:E182. doi: <http://dx.doi.org/10.5888/pcd11.130435>
214. Sekhobo JPE, L. S.; Dalenius, K.; Jernigan, J.; Davis, C. F.; Giddings, M.; Lesesne, C.; Kettel Khan, L. Neighborhood disparities in prevalence of childhood obesity among low-income children before and after implementation of New York City child care regulations. *Preventing chronic disease* 2014;11:E181. doi: <http://dx.doi.org/10.5888/pcd11.140152>
215. Centers for Disease CP. Effects of switching from whole to low-fat/fat-free milk in public schools - New York city, 2004-2009. *MMWR - Morbidity & Mortality Weekly Report* 2010;59(3):70-3.
216. Boss-Bicak S. Schools winning the food fight. *Crain's New York Business* 2004;20(31):18-18.
217. Spake A. THE WORLD OF CHEF JORGE. *US News & World Report* 2005;138(17):64-67.
218. Lessard LL, C.; Kakietek, J.; Breck, A.; Jernigan, J.; Dunn, L.; Nonas, C.; O'Dell, S. A.; Stephens, R. L.; Xu, Y.; Khan, L. K. Measurement of compliance with New York City's regulations on beverages, physical activity, and screen time in early child care centers. *Preventing Chronic Disease* 2014;11(10) doi: 10.5888/pcd11.130433
219. Alberti P, Perlman S, Nonas C, et al. Effects of switching from whole to low-fat/fat-free milk in public schools - New York city, 2004-2009. *Mmwr* 2010;Morbidity and mortality weekly report. 59(3):70-73.
220. Foo LL, Vijaya K, Sloan RA, et al. Obesity prevention and management: Singapore's experience. *Obesity Reviews* 2013;14(S2):106-13. doi: 10.1111/obr.12092

221. Gupta N, Kai Chin M, Yang J, et al. Obesity prevention in Singapore: collaborative efforts among government, health professionals and the community 2010.
222. BBC News. London transport network junk food advert ban starts 2019 [Available from: <https://www.bbc.co.uk/news/uk-england-london-47318803> accessed 25 February 2019.
223. Elbel B. Consumer estimation of recommended and actual calories at fast food restaurants. *Obesity* 2011;19(10):1971-78. doi: <http://dx.doi.org/10.1038/oby.2011.214>
224. Elbel B, Mijanovich TD, L. B.; Abrams, C.; Weitzman, B.; Kersh, R.; Auchincloss, A. H.; Ogedegbe, G. Calorie labeling, fast food purchasing and restaurant visits. *Obesity (Silver Spring, Md)* 2013;21(11):2172-79. doi: <http://dx.doi.org/10.1002/oby.20550>
225. Gittelsohn JAS, E.; Mui, Y.; Kharmats, A. Y.; Hopkins, L. C.; Dennis, D. B'More Healthy Communities for Kids: design of a multi-level intervention for obesity prevention for low-income African American children. *BMC public health* 2014;14:942. doi: <http://dx.doi.org/10.1186/1471-2458-14-942>
226. Truiett-Theodorson RT, S.; Bowie, J. V.; Summers, A. C.; Kelber-Kaye, J. Building effective partnerships to improve birth outcomes by reducing obesity: The B'more Fit for healthy babies coalition of Baltimore. *Evaluation and Program Planning* 2015;51:53-58. doi: 10.1016/j.evalprogplan.2014.12.007
227. Trude A, Steeves EA, Shipley C, et al. Impact of a multi-level multi-component food environment/behavioral intervention on youth leaders. *FASEB Journal Conference: Experimental Biology* 2017;31(1 Supplement 1)
228. Trude ACB, Surkan PJ, Anderson Steeves E, et al. The impact of a multilevel childhood obesity prevention intervention on healthful food acquisition, preparation, and fruit and vegetable consumption on African-American adult caregivers. *Public Health Nutrition* 2018 doi: 10.1017/S1368980018003038
229. Ruggiero CF, Poirier L, Trude ACB, et al. Implementation of B'More Healthy Communities for Kids: process evaluation of a multi-level, multi-component obesity prevention intervention. *Health education research* 2018;33(6):458-72. doi: <http://dx.doi.org/10.1093/her/cyy031>
230. NYC. NYC Food Standards 2017 [Available from: <https://www1.nyc.gov/site/doh/health/health-topics/nyc-food-standards.page> accessed 24 November 2018.
231. Pofeldt E. Child obesity epidemic weighs heavily on NYC. *Crain's New York Business* 2008;24(34):18-18.
232. Leggat M, Kerker B, Nonas C, et al. Pushing produce: the New York City Green Carts initiative. *Journal of urban health : bulletin of the New York Academy of Medicine* 2012;89(6):937-38. doi: 10.1007/s11524-012-9688-4
233. NYC FRESH. FRESH Fact Sheet [Available from: http://www.nyc.gov/html/misc/pdf/fresh_fact_sheet_eng.pdf accessed 17 August 2018.
234. Payne GHW, H.; Olsho, L.; Jernigan, J.; Farris, R.; Walker, D. K. Implementing a farmers' market incentive program: perspectives on the New York City Health Bucks Program. *Preventing chronic disease* 2013;10:E145.
235. Narain K, Mata A, Flores J. Nutrition Policy Decreases Sugar-Sweetened Beverages in Municipal Parks: Lessons Learned From Carson, California. *Journal of public health management and practice : JPHMP* 2016;22(4):392-94. doi: <http://dx.doi.org/10.1097/PHH.0000000000000301>
236. Donnelly P. London Health and Care Strategic Partnership Board Focus Areas, 2018.

237. Crixell SHF, B. J.; Fisher, D. T.; Biediger-Friedman, L. Improving children's menus in community restaurants: Best food for families, infants, and toddlers (Best food fits) intervention, South Central Texas, 2010-2014. *Preventing Chronic Disease* 2014;11(12) doi: 10.5888/pcd11.140361
238. Lee SH. Changing the food environment in Baltimore city: Impact of an intervention to improve carry-outs in low-income neighborhoods. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2014;74(11-B(E)):No Pagination Specified.
239. Song H-J. Development, implementation and evaluation of an urban food store intervention for Korean corner stores in Baltimore city. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2008;69(4-B):2277.
240. Berg J. Why New York City's attempt to ban soda fizzled. *Obesity Research and Clinical Practice* 2014;8:7. doi: <http://dx.doi.org/org/10.1016/j.orcp.2014.10.014>
241. Diller A. The Illusion of Autonomy in "Food" Litigation. *American Journal of Law & Medicine* 2015;41(2/3):274-84.
242. Lemstra M. The healthy weights initiative. *Circulation Conference: American Heart Association's* 2015;132(no pagination)
243. Lemstra M, Rogers MR. The importance of community consultation and social support in adhering to an obesity reduction program: Results from the Healthy Weights Initiative. *Patient Preference and Adherence* 2015;9:1473-80. doi: <http://dx.doi.org/10.2147/PPA.S91912>
244. Gottschalk LBS, D. L.; Jensen, A.; Beyrouthy, M.; Skursky, N.; Murphy, J.; Schwartz, M.; Sherman, S. The fit kid & fit teen coaching program: Addressing obesity with the added support of health coaches. *Journal of Adolescent Health* 2015;1):S104-S05. doi: <http://dx.doi.org/10.1016/j.jadohealth.2014.10.209>
245. Wang HEL, M.; Hart, A.; Summers, A. C.; Anderson Steeves, E.; Gittelsohn, J. Process evaluation of Healthy Bodies, Healthy Souls: a church-based health intervention program in Baltimore City. *Health education research* 2013;28(3):392-404. doi: <http://dx.doi.org/10.1093/her/cyt049>
246. Charles Perkin Centre. How mobile phones could save us from obesity 2015 [Available from: <https://sydney.edu.au/news-opinion/news/2015/08/13/how-mobile-phones-could-save-us-from-obesity.html> accessed 17 February 2019.
247. Ahn SN, Lee J, Bartlett-Prescott J, et al. Evaluation of a Behavioral Intervention With Multiple Components Among Low-Income and Uninsured Adults With Obesity and Diabetes. *American Journal of Health Promotion* 2018;32(2):409-22. doi: 10.1177/0890117117696250
248. Nair R. Improving physical activity among Hispanic women by identifying barriers. *Dissertation Abstracts International: Section B: The Sciences and Engineering* 2019;80(4-B(E)):No Pagination Specified.
249. Rudez ML, K. ActiveSmart physical activity behaviour change program. *Journal of Science and Medicine in Sport* 2014;18:e66. doi: <http://dx.doi.org/10.1016/j.jsams.2014.11.294>
250. Staff M. 'Which way is your child growing?' asks Singapore anti-obesity ad 2017 [Available from: <https://www.mumbrella.asia/2017/08/way-child-growing-asks-singapore-anti-obesity-ad> accessed 29 June 2019.
251. Kansagra SM, Kennelly MO, Nonas CA, et al. Reducing sugary drink consumption: New York City's approach. *American journal of public health* 2015;105(4):e61-e64. doi: 10.2105/AJPH.2014.302497 [published Online First: 2015/02/25]

252. Jordan AP, J. T.; Bleakley, A.; Mallya, G. Developing media interventions to reduce household sugar-sweetened beverage consumption. *Annals of the American Academy of Political and Social Science* 2012;640(1):118-35. doi: 10.1177/0002716211425656
253. Thomas J. Using social marketing to address obesity: The ongoing 'Liverpool's Challenge' social marketing programme. *Journal of Communication in Healthcare* 2009;2(3):216-28.
254. Huberty JLD, T.; Peterson, K.; Balluff, M. Activate Omaha: The journey to an active living environment. *American Journal of Preventive Medicine* 2009;37(6 SUPPL. 2):S428-S35. doi: 10.1016/j.amepre.2009.09.024
255. Fransen GAJK, M.; Molleman, G. R. M. Towards an integrated community approach of overweight prevention: The experiences of practitioners and policymakers. *Family Practice* 2012;29(SUPPL. 1):i104-i09. doi: <http://dx.doi.org/10.1093/fampra/cmr123>
256. Van Wechem SNVA, P.; Brug, J.; Kistemaker, C.; Riedstra, M.; Hardeman, W.; Löwik, M. R. H. Results of a community-based campaign to reduce fat intake. *Nutrition and Health* 1997;11(3):207-18.
257. Irwin CI, R.; Richey, P.; Miller, M.; Boddie, J.; Dickerson, T. Get fit with the Grizzlies: A community-school-home initiative to fight childhood obesity led by a professional sports organization. *Studies in Health Technology and Informatics* 2012;172:163-67. doi: <http://dx.doi.org/10.3233/978-1-61499-088-8-163>
258. Irwin CC, Irwin RL, Miller ME, et al. Get fit with the grizzlies: A community-school-home initiative to fight childhood obesity. *Journal of School Health* 2010;80(7):333-39. doi: <http://dx.doi.org/10.1111/j.1746-1561.2010.00510.x>
259. The Health Foundation. A recipe for action: using wider evidence for a healthier UK 2018 [Available from: <https://www.health.org.uk/publications/a-recipe-for-action-using-wider-evidence-for-a-healthier-uk> accessed Accessed: 15 November 2019.
260. Economos CDH, R. R.; Must, A.; Goldberg, J. P.; Kuder, J.; Naumova, E. N.; Collins, J. J.; Nelson, M. E. DO NOT USE DUPLICATE RECORD WITH 16257 Shape Up Somerville two-year results: A community-based environmental change intervention sustains weight reduction in children. *Preventive Medicine* 2013;57(4):322-27. doi: <http://dx.doi.org/10.1016/j.ypmed.2013.06.001>
261. Economos D. A community intervention reduces BMI z-score in children: Shape Up Somerville first year results. *Obesity* 2007
262. Economos CDC, Joseph A. Shaping up Somerville: A community initiative in Massachusetts. *Preventive Medicine: An International Journal Devoted to Practice and Theory* 2010;50(Suppl):S97-S98. doi: <http://dx.doi.org/10.1016/j.ypmed.2009.10.017>
263. Burney D, Farley T, Sadik-Khan J, et al. Active Design Guidelines Promoting Physical Activity and Health in Design, 2010.
264. McGill N. Weight-loss challenges unifying communities around health. *Nation's Health* 2013;43(3):1-3.
265. Green CGK, G. Promoting Active Transportation as a Partnership Between Urban Planning and Public Health: The Columbus Healthy Places Program. *Public Health Reports* 2011;126:41-50.
266. Carter K. Mexico's latest way to beat the obesity epidemic: make commuters do squats for free subway tickets 2015 [Available from: <https://www.theguardian.com/society/shortcuts/2015/jan/27/mexico-beat-obesity-make-commuters-do-squats-for-free-subway-tickets> accessed 26 June 2019.
267. Wewatt. Bike Powered Furniture [Available from: <https://wewatt.com/> accessed Accessed 19th Novemer 2019 2019.

268. Bouch P, Milkovich L, Lamy J, et al. Health Basics: Investing in a Three-Wave Community-Based Approach to Promote Health and Reduce Obesity 2011.
269. A-COAN; Alexandria Childhood Obesity Action Network (A-COAN) 2006 [Available from: <http://healthieralexandria.org/content.aspx?id=29854> accessed 23 April 2019.
270. Healthier Auckland Together Plan. The Healthier Auckland Together Plan 2015-2020. 2015
271. AAGG Website. Amsterdam Healthy Weight Programme 2019 [Available from: <https://www.amsterdam.nl/sociaaldomein/blijven-wij-gezond/amsterdam-healthy/>.
272. City of Amsterdam. Amsterdam will become the Healthiest City for Children! 2017 [Available from: https://health.ec.europa.eu/document/download/18084dea-45db-4bd1-9cef-f90fb84d458b_en?filename=hepp_case-studies_07_en.pdf accessed 17 February 2023.
273. Willocks S, Reddy K. Signs of Progress in Childhood Obesity Declines Site Summary Report Anchorage, Alaska 2015, 2015.
274. Chomitz VRM, R. J.; Wendel, J. M.; Williams, S. A.; Cabral, H. J.; King, S. E.; Olcott, D. B.; Cappello, M.; Breen, S.; Hacker, K. A. Healthy living cambridge kids: A community-based participatory effort to promote healthy weight and fitness. *Obesity* 2010;18(SUPPL. 1):S45-S53. doi: <http://dx.doi.org/10.1038/oby.2009.431>
275. ICF Macro. Signs of Progress in Childhood Obesity Declines Site Summary Report Philadelphia, PA 2015. 2015
276. Robbins JM, Mallya G, Wagner A, et al. Prevalence, Disparities, and Trends in Obesity and Severe Obesity Among Students in the School District of Philadelphia, Pennsylvania, 2006-2013. *Prev Chronic Dis* 2015;12:E134. doi: 10.5888/pcd12.150185 [published Online First: 2015/08/21]
277. City of Seinäjoki. City of Seinäjoki, Overcoming Obesity Programme 2013–2020 2012 [Available from: https://www.seinajoki.fi/material/attachments/seinajokifi/sosiaalijaterveys/terveyspalvelut/asiakas-japotilasiasiakirjat/Fnp1Zw3JF/OVERCOMING_OBESITY_PROGRAMME_2013-2020.pdf accessed 16 May 2019.
278. WHO. Finland curbs childhood obesity by integrating health in all policies 2015 [Available from: <https://www.who.int/features/2015/finland-health-in-all-policies/en/june> 2015.
279. Kelly PM, Davies A, Greig AJM, et al. Obesity Prevention in a City State: Lessons from New York City during the Bloomberg Administration. *Frontiers in Public Health* 2016;4 doi: 10.3389/fpubh.2016.00060
280. Ottley; P, Willocks; S. Signs of Progress in Childhood Obesity Declines: Site Summary Report. New York, NY., 2015.
281. Woo Baidal JA, Locks LM, Cheng ER, et al. Risk Factors for Childhood Obesity in the First 1,000 Days: A Systematic Review. *American Journal of Preventive Medicine* 2016;50(6):761-79. doi: 10.1016/j.amepre.2015.11.012
282. Mameli C, Mazzantini S, Zuccotti GV. Nutrition in the First 1000 Days: The Origin of Childhood Obesity. *International journal of environmental research and public health* 2016;13(9):838. doi: 10.3390/ijerph13090838
283. Black RE, Victora CG, Walker SP, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. *The Lancet* 2013;382(9890):427-51. doi: 10.1016/S0140-6736(13)60937-X
284. Public Health England. Using the planning system to promote healthy weight environments Guidance and supplementary planning document template for local authority public health and planning teams, 2020.

285. Wang YCV, S. M. Caloric effect of a 16-ounce (473-mL) portion-size cap on sugar-sweetened beverages served in restaurants. *American Journal of Clinical Nutrition* 2013;98(2):430-5.
286. Allcott H, Diamond R, Dub'e J-P, et al. Food Deserts and the Causes of Nutritional Inequality. 2019
287. Kovalskys I, Indart Rougier P, Luciana L, et al. Mini salten: A case study on learnings from Argentina on outcomes and challenges. *Annals of Nutrition and Metabolism* 2017;71 (Supplement 2):96-97. doi: <http://dx.doi.org/10.1159/000480486>
288. Aveyard P, Lewis A, Tearne S, et al. Screening and brief intervention for obesity in primary care: a parallel, two-arm, randomised trial. *The Lancet* 2016;388(10059):2492-500. doi: 10.1016/S0140-6736(16)31893-1
289. Jackson SE, Wardle J, Johnson F, et al. The impact of a health professional recommendation on weight loss attempts in overweight and obese British adults: a cross-sectional analysis. *BMJ Open* 2013;3(11):e003693. doi: 10.1136/bmjopen-2013-003693
290. Maddock J. Evaluation of community-based physical activity programs. *Evaluation and Program Planning* 2006;29(3):240-41. doi: 10.1016/j.evalprogplan.2005.10.005
291. Longfield A. Playing Out A Children's Commissioner's report on the importance to children of play and physical activity 2018.
292. De Henauw SVA, J.; Reynaert, H. Childhood obesity prevention: In need of urban governance? The case of childhood obesity prevention in two Flemish cities. *Obesity Reviews* 2010;11:458. doi: <http://dx.doi.org/10.1111/j.1467-789X.2010.00763-7.x>
293. Farley T, Dowell D. Preventing childhood obesity: what are we doing right? *American Journal of Public Health* 2014;104(9):1579-83.
294. T. Farley, Van-Wye G. Reversing the obesity epidemic: The importance of policy and policy research. *American Journal of Preventive Medicine* 2012;43(3, Suppl 2):S93-S94. doi: <http://dx.doi.org/10.1016/j.amepre.2012.06.003>
295. Sisnowski J, Street JM, Braunack-Mayer A. Targeting population nutrition through municipal health and food policy: Implications of New York City's experiences in regulatory obesity prevention. *Food Policy* 2016;58:24-34. doi: <https://doi.org/10.1016/j.foodpol.2015.10.007>
296. Nonas CS, L. D.; Kettel Khan, L. Insights and implications for health departments from the evaluation of New York City's regulations on nutrition, physical activity, and screen time in child care centers. *Preventing chronic disease* 2014;11:E178. doi: <http://dx.doi.org/10.5888/pcd11.130429>
297. Borys JM, Le Bodo Y, Jebb SA, et al. EPODE approach for childhood obesity prevention: methods, progress and international development. *Obes Rev* 2012;13(4):299-315. doi: 10.1111/j.1467-789X.2011.00950.x [published Online First: 2011/11/24]
298. Swinburn BA, Sacks G, Hall KD, et al. The global obesity pandemic: shaped by global drivers and local environments. *Lancet* 2011;378(9793):804-14. doi: 10.1016/s0140-6736(11)60813-1 [published Online First: 2011/08/30]
299. Friel S, Marmot M, McMichael AJ, et al. Global health equity and climate stabilisation: a common agenda. *The Lancet* 2008;372(9650):1677-83. doi: 10.1016/S0140-6736(08)61692-X
300. Davies M, Færch L, Jeppesen OK, et al. Semaglutide 2·4 mg once a week in adults with overweight or obesity, and type 2 diabetes (STEP 2): a randomised, double-blind, double-dummy, placebo-controlled, phase 3 trial. *The Lancet* 2021;397(10278):971-84. doi: 10.1016/S0140-6736(21)00213-0

301. Lee IM, Shiroma EJ, Lobelo F, et al. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet* 2012;380(9838):219-29. doi: 10.1016/S0140-6736(12)61031-9 [published Online First: 2012/07/24]
302. World Health Organisation. WHO Factsheet - Physical Activity 2018 [Available from: <https://www.who.int/en/news-room/fact-sheets/detail/physical-activity>.
303. Hallal PC, Pratt M. Physical activity: moving from words to action. *The Lancet Global Health* 2020;8(7):e867-e68. doi: [https://doi.org/10.1016/S2214-109X\(20\)30256-4](https://doi.org/10.1016/S2214-109X(20)30256-4)
304. Ding D, Lawson KD, Kolbe-Alexander TL, et al. The economic burden of physical inactivity: a global analysis of major non-communicable diseases. *The Lancet* 2016;388(10051):1311-24. doi: 10.1016/S0140-6736(16)30383-X
305. Ronca F, Burgess PW, Savage P, et al. Decreasing Sedentary Time during Lessons Reduces Obesity in Primary School Children: The Active Movement Study. *Obesity Facts* 2024;17(3):243-54. doi: 10.1159/000536665
306. Cleven L, Syrjanen JA, Geda YE, et al. Association between physical activity and longitudinal change in body mass index in middle-aged and older adults. *BMC Public Health* 2023;23(1):202. doi: 10.1186/s12889-023-15119-7
307. Noetel M, Sanders T, Gallardo-Gómez D, et al. Effect of exercise for depression: systematic review and network meta-analysis of randomised controlled trials. *BMJ* 2024;384:e075847. doi: 10.1136/bmj-2023-075847
308. Xie W, Zhang L, Cheng J, et al. Physical activity during pregnancy and the risk of gestational diabetes mellitus: a systematic review and dose-response meta-analysis. *BMC Public Health* 2024;24(1):594. doi: 10.1186/s12889-024-18131-7
309. Lee IM, Shiroma EJ, Lobelo F, et al. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *The Lancet* 2012;380(9838):219-29. doi: 10.1016/S0140-6736(12)61031-9
310. Garcia L, Pearce M, Abbas A, et al. Non-occupational physical activity and risk of cardiovascular disease, cancer and mortality outcomes: a dose-response meta-analysis of large prospective studies. *British Journal of Sports Medicine* 2023;bjsports-2022-105669. doi: 10.1136/bjsports-2022-105669
311. Harris E. Meta-Analysis: Most Effective Exercises for Reducing Blood Pressure. *JAMA* 2023 doi: 10.1001/jama.2023.13616
312. Iso-Markku P, Aaltonen S, Kujala UM, et al. Physical Activity and Cognitive Decline Among Older Adults: A Systematic Review and Meta-Analysis. *JAMA Network Open* 2024;7(2):e2354285-e85. doi: 10.1001/jamanetworkopen.2023.54285
313. Naci H, Ioannidis JPA. Comparative effectiveness of exercise and drug interventions on mortality outcomes: metaepidemiological study. *BMJ : British Medical Journal* 2013;347:f5577. doi: 10.1136/bmj.f5577
314. Viegas R, Barbosa A, Mendes R, et al. Pharmacists' involvement in physical activity promotion in community pharmacy: a systematic review. *European Journal of Public Health* 2024;34(2):299-308. doi: 10.1093/eurpub/ckae015
315. London Sport. Social and economic value of community sport and physical activity 2016 [Available from: <https://london sport.org/our-research-and-insight/social-return-on-investment/#:~:text=Our%20research%20shows%20that%20for,generated%20for%20individuals%20and%20society>. accessed 6 September 2020.
316. Scotter K. The patients inspired to take up parkrun by their GPs 2020 [Available from: <https://www.bbc.co.uk/news/uk-england-50935035> accessed 21 June 2023.

317. Kettle VE, Madigan CD, Coombe A, et al. Effectiveness of physical activity interventions delivered or prompted by health professionals in primary care settings: systematic review and meta-analysis of randomised controlled trials. *BMJ* 2022;376:e068465. doi: 10.1136/bmj-2021-068465
318. Saito Y, Tanaka A, Tajima T, et al. A community-wide intervention to promote physical activity: A five-year quasi-experimental study. *Prev Med* 2021;150:106708. doi: 10.1016/j.ypmed.2021.106708 [published Online First: 2021/07/02]
319. Nobles J, Fox C, Inman-Ward A, et al. Navigating the river(s) of systems change: a multi-methods, qualitative evaluation exploring the implementation of a systems approach to physical activity in Gloucestershire, England. *BMJ Open* 2022;12(8):e063638. doi: 10.1136/bmjopen-2022-063638
320. Mabry R, Siyabi HA, Kannan M, et al. Move for health: addressing the built environment and physical activity in Oman. *East Mediterr Health J.* 2019;25(12):923–927. <https://doi.org/10.26719/2019.25.12.923>, 2019.
321. Mehta N, Pandit A. Concurrence of big data analytics and healthcare: A systematic review. *International Journal of Medical Informatics* 2018;114:57-65. doi: <https://doi.org/10.1016/j.ijmedinf.2018.03.013>
322. Nadkarni PM, Ohno-Machado L, Chapman WW. Natural language processing: an introduction. *Journal of the American Medical Informatics Association* 2011;18(5):544-51. doi: 10.1136/amiajnl-2011-000464
323. Thematic analysis: a critical review of its process and evaluation. WEI international European academic conference proceedings, Zagreb, Croatia; 2012. Citeseer.
324. Krahn GL, Walker DK, Correa-De-Araujo R. Persons With Disabilities as an Unrecognized Health Disparity Population. *American Journal of Public Health* 2015;105(S2):S198-S206. doi: 10.2105/ajph.2014.302182
325. Strain T, Sharp SJ, Spiers A, et al. Population level physical activity before and during the first national COVID-19 lockdown: A nationally representative repeat cross-sectional study of 5 years of Active Lives data in England. *The Lancet Regional Health – Europe* 2022;12 doi: 10.1016/j.lanepe.2021.100265
326. Xu L, Li T, He W, et al. Prevalence of sufficient physical activity among general adult population and sub-populations with chronic conditions or disability in the USA. *European Journal of Public Health* 2023;33(5):891-96. doi: 10.1093/eurpub/ckad132
327. Naylor C, Buck D. The role of cities in improving population health: international insights: Kings Fund; 2018 [Available from: https://www.kingsfund.org.uk/sites/default/files/2018-06/Role_cities_population_health_Kings_Fund_June_2018_0.pdf.
328. Davies SC. Annual Report of the Chief Medical Officer 2019 [Available from: <https://www.gov.uk/government/publications/chief-medical-officer-annual-report-2019-partnering-for-progress>.
329. Barber B. If Mayors Ruled the World. New Haven: Yale University Press; Reprint edition (September 30, 2014) 2014.
330. Theis D, White M. Is Obesity Policy in England Fit for Purpose? Analysis of Government Strategies and Policies, 1992–2020. *The Milbank Quarterly* 2021;99(1):126-70. doi: <https://doi.org/10.1111/1468-0009.12498>
331. UN. 68% of the world population projected to live in urban areas by 2050, says UN 2018 [Available from: <https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html> accessed 18 November 2020 2020.

332. United Nations. Policy Brief: COVID-19 in an Urban World 2020 [Available from: https://www.un.org/sites/un2.un.org/files/sg_policy_brief_covid_urban_world_july_2020.pdf].
333. Liu M, Wronski L. Examining Completion Rates in Web Surveys via Over 25,000 Real-World Surveys. *Social Science Computer Review* 2018;36(1):116-24. doi: 10.1177/0894439317695581
334. Wang H, Paulson KR, Pease SA, et al. Estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality, 2020–21. *The Lancet* 2022;399(10334):1513-36. doi: 10.1016/S0140-6736(21)02796-3
335. Jannot A-S, Countouris H, Van Straaten A, et al. Low-income neighbourhood was a key determinant of severe COVID-19 incidence during the first wave of the epidemic in Paris. *Journal of Epidemiology and Community Health* 2021;75(12):1143-46. doi: 10.1136/jech-2020-216068
336. Roehr B. Covid-19: Pandemic has harmed cancer outcomes and widened inequalities, report finds. *BMJ* 2022;376:o375. doi: 10.1136/bmj.o375
337. Iacobucci G. Covid-19: NHS trusts declare “critical incidents” because of staff shortages. *BMJ* 2022;376:o3. doi: 10.1136/bmj.o3
338. Wells CR, Galvani AP. Impact of the COVID-19 pandemic on cancer incidence and mortality. *Lancet Public Health* 2022;7(6):e490-e91. doi: 10.1016/s2468-2667(22)00111-6 [published Online First: 2022/06/07]
339. Nour TY, Altintaş KH. Effect of the COVID-19 pandemic on obesity and its risk factors: a systematic review. *BMC Public Health* 2023;23(1):1018. doi: 10.1186/s12889-023-15833-2
340. Manthey J, Kilian C, Schäfer I, et al. Changes in the alcohol-specific disease burden during the COVID-19 pandemic in Germany: interrupted time series analyses. *European Journal of Public Health* 2023;33(4):645-52. doi: 10.1093/eurpub/ckad103
341. Partnership for Healthy Cities. Covid-19 responses that are changing cities for good 2022 [Available from: <https://www.theguardian.com/bloomberg-philanthropies/ng-interactive/2022/oct/11/covid-responses-improving-cities> accessed 13 December 2023].
342. Singh S, McNab C, Olson RM, et al. How an outbreak became a pandemic: a chronological analysis of crucial junctures and international obligations in the early months of the COVID-19 pandemic. *The Lancet* 2021;398(10316):2109-24. doi: 10.1016/S0140-6736(21)01897-3
343. WHO. WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020 2020 [Available from: <https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020> accessed 15 September 2022].
344. Danielli S, Patria R, Donnelly P, et al. Economic interventions to ameliorate the impact of COVID-19 on the economy and health: an international comparison. *Journal of Public Health* 2020 doi: 10.1093/pubmed/fdaa104
345. Bai X, Nagendra H, Shi P, et al. Cities: build networks and share plans to emerge stronger from COVID-19. *Nature* 2020;Nature 584, 517-520 (2020) doi: <https://doi.org/10.1038/d41586-020-02459-2>
346. Berwick DM. Choices for the “New Normal”. *JAMA* 2020 doi: 10.1001/jama.2020.6949
347. McGuirk P, Dowling R, Maalsen S, et al. Urban governance innovation and COVID-19. *Geographical Research* 2021;59(2):188-95. doi: <https://doi.org/10.1111/1745-5871.12456>
348. Hopkinson NS. Smoking and lung cancer—70 long years on. *BMJ* 2024;384:q443. doi: 10.1136/bmj.q443

349. Doll R, Hill AB. Smoking and carcinoma of the lung; preliminary report. *Br Med J* 1950;2(4682):739-48. doi: 10.1136/bmj.2.4682.739 [published Online First: 1950/09/30]
350. WHO. Tobacco 2023 [Available from: <https://www.who.int/news-room/fact-sheets/detail/tobacco> accessed 15 January 2024.
351. Wong C. Smoking bans are coming: what does the evidence say? *Nature* 2024 doi: doi: <https://doi.org/10.1038/d41586-024-00472-3>
352. Olsen MH, Angell SY, Asma S, et al. A call to action and a lifecourse strategy to address the global burden of raised blood pressure on current and future generations: the Lancet Commission on hypertension. *The Lancet* 2016;388(10060):2665-712.
353. Murray CJL, Aravkin AY, Zheng P, et al. Global burden of 87 risk factors in 204 countries and territories, 1990–2019: a systematic analysis for the Global Burden of Disease Study 2019. *The Lancet* 2020;396(10258):1223-49. doi: 10.1016/S0140-6736(20)30752-2
354. Pickering G. Hypertension. Definitions, natural histories and consequences. *Am J Med* 1972;52(5):570-83. doi: 10.1016/0002-9343(72)90049-6 [published Online First: 1972/05/01]
355. Kazi DS, Ogedegbe O, Bibbins-Domingo K. Addressing the Last-Mile Problem in Blood Pressure Control—Scaling Up Community-Based Interventions. *JAMA Health Forum* 2021;2(6):e212022-e22. doi: 10.1001/jamahealthforum.2021.2022
356. Victor RG, Lynch K, Li N, et al. A Cluster-Randomized Trial of Blood-Pressure Reduction in Black Barbershops. *New England Journal of Medicine* 2018;378(14):1291-301. doi: doi:10.1056/NEJMoa1717250
357. Mahase E. Hypertension: 76 million deaths could be averted by 2050 if treatment coverage improves, says WHO. *BMJ* 2023;382:p2154. doi: 10.1136/bmj.p2154
358. Huangfu P, Pearson F, Abu-Hijleh FM, et al. Impact of price reductions, subsidies, or financial incentives on healthy food purchases and consumption: a systematic review and meta-analysis. *The Lancet Planetary Health* 2024;8(3):e197-e212. doi: 10.1016/S2542-5196(24)00004-4
359. Afshin A, Sur PJ, Fay KA, et al. Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017. *The Lancet* 2019 doi: 10.1016/S0140-6736(19)30041-8
360. WHO. WHO global report on sodium intake reduction 2023 [Available from: <https://www.who.int/publications/i/item/9789240069985> accessed 27 January 2024.
361. Lane MM, Gamage E, Du S, et al. Ultra-processed food exposure and adverse health outcomes: umbrella review of epidemiological meta-analyses. *BMJ* 2024;384:e077310. doi: 10.1136/bmj-2023-077310
362. Monteiro CA, Martínez-Steele E, Cannon G. Reasons to avoid ultra-processed foods. *BMJ* 2024;384:q439. doi: 10.1136/bmj.q439
363. Bonaccio M, Di Castelnuovo A, Ruggiero E, et al. Joint association of food nutritional profile by Nutri-Score front-of-pack label and ultra-processed food intake with mortality: Moli-sani prospective cohort study. *BMJ* 2022;378:e070688. doi: 10.1136/bmj-2022-070688
364. Wang L, Du M, Wang K, et al. Association of ultra-processed food consumption with colorectal cancer risk among men and women: results from three prospective US cohort studies. *BMJ* 2022;378:e068921. doi: 10.1136/bmj-2021-068921
365. Parnham JC, Chang K, Rauber F, et al. The ultra-processed food content of school meals and packed lunches in the United Kingdom. *Nutrients* 2022;14(14):2961.

366. Manthey J, Shield KD, Rylett M, et al. Global alcohol exposure between 1990 and 2017 and forecasts until 2030: a modelling study. *The Lancet* 2019;393(10190):2493-502. doi: [https://doi.org/10.1016/S0140-6736\(18\)32744-2](https://doi.org/10.1016/S0140-6736(18)32744-2)
367. The Lancet Public H. Failing to address the burden of alcohol. *The Lancet Public Health* 2020;5(6):e297. doi: [https://doi.org/10.1016/S2468-2667\(20\)30123-7](https://doi.org/10.1016/S2468-2667(20)30123-7)
368. Yaseen W, Mong J, Zipursky J. Sobering Perspectives on the Treatment of Alcohol Use Disorder. *JAMA Network Open* 2024;7(3):e243340-e40. doi: 10.1001/jamanetworkopen.2024.3340
369. World Heart Federation. The impact of alcohol on cardiovascular health 2022 [Available from: <https://world-heart-federation.org/news/no-amount-of-alcohol-is-good-for-the-heart-says-world-heart-federation/> accessed 15 February 2024.
370. Puska P. Health related taxes in focus: a win-win. *European Journal of Public Health* 2024 doi: 10.1093/eurpub/ckae043
371. Sureda X, Villalbí JR, Espelt A, et al. Living under the influence: normalisation of alcohol consumption in our cities. *Gac Sanit* 2017;31(1):66-68. doi: 10.1016/j.gaceta.2016.07.018 [published Online First: 2016/10/23]
372. Wyper GMA, Giles L, Beeston C, et al. Recent estimates of alcohol specific deaths support alcohol minimum unit pricing. *BMJ* 2024;384:q765. doi: 10.1136/bmj.q765
373. Connor JP, Stjepanović D, Le Foll B, et al. Cannabis use and cannabis use disorder. *Nature Reviews Disease Primers* 2021;7(1):16.
374. Peacock A, Leung J, Larney S, et al. Global statistics on alcohol, tobacco and illicit drug use: 2017 status report. *Addiction* 2018;113(10):1905-26.
375. Solmi M, De Toffol M, Kim JY, et al. Balancing risks and benefits of cannabis use: umbrella review of meta-analyses of randomised controlled trials and observational studies. *BMJ* 2023;382:e072348. doi: 10.1136/bmj-2022-072348
376. Levensgood TW, Yoon GH, Davoust MJ, et al. Supervised Injection Facilities as Harm Reduction: A Systematic Review. *Am J Prev Med* 2021;61(5):738-49. doi: 10.1016/j.amepre.2021.04.017 [published Online First: 2021/07/06]
377. Addiction EMCfDaD. Latest wastewater data reveal drug-taking habits in 75 European cities in a record 25 countries — increases in detections of most drugs studied 2022 [Available from: https://www.emcdda.europa.eu/news/2022/2/latest-wastewater-data-reveal-drug-taking-habits-75-european-cities_en accessed 15 February 2024.
378. Centre AA. Highest Drug Use By City 2024 [Available from: <https://americanaddictioncenters.org/blog/substance-abuse-by-city> accessed 25 April 2024.
379. WHO. Every move counts towards better health – says WHO 2020 [Available from: <https://www.who.int/news/item/25-11-2020-every-move-counts-towards-better-health-says-who> accessed 14 December 1023.
380. Donnelly S, Penny K, Kynn M. The effectiveness of physical activity interventions in improving higher education students' mental health: A systematic review. *Health Promotion International* 2024;39(2) doi: 10.1093/heapro/daae027
381. Phelps NH, Singleton RK, Zhou B, et al. Worldwide trends in underweight and obesity from 1990 to 2022: a pooled analysis of 3663 population-representative studies with 222 million children, adolescents, and adults. *The Lancet* 2024;403(10431):1027-50. doi: 10.1016/S0140-6736(23)02750-2
382. Gortmaker SL, Bleich SN, Williams DR. Childhood Obesity Prevention — Focusing on Population-Level Interventions and Equity. *New England Journal of Medicine* 2024;390(8):681-83. doi: 10.1056/NEJMp2313666

383. Stewart-Evans J, Koksai C, Chang M. Can the implementation of net gain requirements in England's planning system be applied to health? *The Lancet Planetary Health* 2024;8(3):e188-e96. doi: 10.1016/S2542-5196(24)00001-9
384. Cunningham RM, Walton MA, Carter PM. The Major Causes of Death in Children and Adolescents in the United States. *New England Journal of Medicine* 2018;379(25):2468-75. doi: doi:10.1056/NEJMSr1804754
385. Kyu HH, Stein CE, Boschi Pinto C, et al. Causes of death among children aged 5–14 years in the WHO European Region: a systematic analysis for the Global Burden of Disease Study 2016. *The Lancet Child & Adolescent Health* 2018;2(5):321-37. doi: 10.1016/S2352-4642(18)30095-6
386. Buysse C, Miller J. TRANSPORT COULD BURN UP THE EU'S ENTIRE CARBON BUDGET 2021 [Available from: <https://theicct.org/transport-could-burn-up-the-eus-entire-carbon-budget/> accessed 13 November 2023].
387. McNally S. Scarlett McNally: Enabling active travel can improve the UK's health. *BMJ* 2024;384:q522. doi: 10.1136/bmj.q522
388. Black D, Pilkington P, Williams B, et al. Overcoming Systemic Barriers Preventing Healthy Urban Development in the UK: Main Findings from Interviewing Senior Decision-Makers During a 3-Year Planetary Health Pilot. *Journal of Urban Health* 2021;98(3):415-27. doi: 10.1007/s11524-021-00537-y
389. The Lancet Global H. Mental health matters. *Lancet Glob Health* 2020;8(11):e1352. doi: 10.1016/s2214-109x(20)30432-0 [published Online First: 2020/10/19]
390. WHO. HIV 2023 [Available from: <https://www.who.int/data/gho/data/themes/hiv-aids#:~:text=Global%20situation%20and%20trends%3A,at%20the%20end%20of%202022>. accessed 22 March 2024].
391. Wise J. Ending AIDS by 2030 is a political choice, says UN agency. *BMJ* 2023;382:p1667. doi: 10.1136/bmj.p1667
392. RSPH. MOVING THE NEEDLE Promoting vaccination uptake across the life course, 2019.
393. Bedford H, Skirrow H. Action to maximise childhood vaccination is urgently needed. *BMJ* 2023;383:p2426. doi: 10.1136/bmj.p2426
394. Marmot MG, Stansfeld S, Patel C, et al. Health inequalities among British civil servants: the Whitehall II study. *The Lancet* 1991;337(8754):1387-93. doi: 10.1016/0140-6736(91)93068-K
395. Finch D. Supporting health can help to boost employment. *BMJ* 2024;384:q734. doi: 10.1136/bmj.q734
396. Fazel S, Geddes JR, Kushel M. The health of homeless people in high-income countries: descriptive epidemiology, health consequences, and clinical and policy recommendations. *The Lancet* 2014;384(9953):1529-40. doi: 10.1016/S0140-6736(14)61132-6
397. Sleet DA, Francescutti LH. Homelessness and public health: A focus on strategies and solutions: MDPI, 2021:11660.
398. Watson MC, Neil KE. Our leaders must urgently implement comprehensive policies to reduce harm caused by homelessness. *BMJ* 2024;384:q651. doi: 10.1136/bmj.q651
399. Romanello M, Napoli Cd, Green C, et al. The 2023 report of the Lancet Countdown on health and climate change: the imperative for a health-centred response in a world facing irreversible harms. *The Lancet* 2023;402(10419):2346-94. doi: 10.1016/S0140-6736(23)01859-7
400. Atwoli L, Baqui AH, Benfield T, et al. Call for emergency action to limit global temperature increases, restore biodiversity, and protect health. *The Lancet* 2021;398(10304):939-41. doi: 10.1016/S0140-6736(21)01915-2

401. Stancliffe R, Eling J, Barker J. Climate change is a clear and present danger to health, says UKHSA. *BMJ* 2024;384:q66. doi: 10.1136/bmj.q66
402. Academy of Medical Societies and Royal Society. A healthy future: tackling climate change mitigation and human health together 2021.
403. C40. Ahead of COP26, Six Additional Cities Pledge to Divest From Fossil Fuel Companies and Invest in Climate Solutions 2021 [Available from: <https://www.c40.org/news/cop26-cities-divest-fossil-fuels-invest-solutions/> accessed 14 January 2024.
404. Pataki DE, Alberti M, Cadenasso ML, et al. The Benefits and Limits of Urban Tree Planting for Environmental and Human Health. *Frontiers in Ecology and Evolution* 2021;9 doi: 10.3389/fevo.2021.603757
405. Abbasi K. Folic acid supplementation and the complexities of blame. *BMJ* 2022;376:o144. doi: 10.1136/bmj.o144
406. The Lancet Public H. Gambling: a neglected public health issue. *The Lancet Public Health* 2021;6(1):e1. doi: [https://doi.org/10.1016/S2468-2667\(20\)30290-5](https://doi.org/10.1016/S2468-2667(20)30290-5)
407. Blank L, Baxter S, Woods HB, et al. Interventions to reduce the public health burden of gambling-related harms: a mapping review. *The Lancet Public Health* 2021;6(1):e50-e63. doi: [https://doi.org/10.1016/S2468-2667\(20\)30230-9](https://doi.org/10.1016/S2468-2667(20)30230-9)
408. McMahon N, Thomson K, Kaner E, et al. Effects of prevention and harm reduction interventions on gambling behaviours and gambling related harm: An umbrella review. *Addict Behav* 2019;90:380-88. doi: 10.1016/j.addbeh.2018.11.048 [published Online First: 2018/12/12]
409. Thomas S, Cowlshaw S, Francis J, et al. Global public health action is needed to counter the commercial gambling industry. *Health Promotion International* 2023;38(5) doi: 10.1093/heapro/daad110
410. Lauber K, Rutter H, Gilmore AB. Big food and the World Health Organization: a qualitative study of industry attempts to influence global-level non-communicable disease policy. *BMJ Global Health* 2021;6(6):e005216. doi: 10.1136/bmjgh-2021-005216
411. Maani N, van Schalkwyk MCI, Filippidis FT, et al. Manufacturing doubt: Assessing the effects of independent vs industry-sponsored messaging about the harms of fossil fuels, smoking, alcohol, and sugar sweetened beverages. *SSM - Population Health* 2022;17:101009. doi: <https://doi.org/10.1016/j.ssmph.2021.101009>
412. Lacy-Vawdon Cd, Vandenberg B, Livingstone CH. Recognising the elephant in the room: the commercial determinants of health. *BMJ Global Health* 2022;7(2):e007156. doi: 10.1136/bmjgh-2021-007156
413. Salisbury H. Helen Salisbury: The commercial determinants of health. *BMJ* 2022;378:o1704. doi: 10.1136/bmj.o1704
414. Ghebreyesus TA. Achieving health for all requires action on the economic and commercial determinants of health. *The Lancet* doi: 10.1016/S0140-6736(23)00574-3
415. Lavis JN, Ross SE, Hurley JE, et al. Examining the role of health services research in public policymaking. *Milbank Q* 2002;80(1):125-54. doi: 10.1111/1468-0009.00005 [published Online First: 2002/04/06]
416. Campbell DM, Redman S, Jorm L, et al. Increasing the use of evidence in health policy: practice and views of policy makers and researchers. *Aust New Zealand Health Policy* 2009;6:21. doi: 10.1186/1743-8462-6-21 [published Online First: 2009/08/25]
417. Brenner PS, DeLamater J. Lies, Damned Lies, and Survey Self-Reports? Identity as a Cause of Measurement Bias. *Soc Psychol Q* 2016;79(4):333-54. doi: 10.1177/0190272516628298 [published Online First: 2017/10/19]

418. Green J, Thorogood N. Qualitative methods for health research. 4th edition ed. London: SAGE 2018:xviii, 420 pages : illustrations ; 25 cm.
419. Sheard L. Telling a story or reporting the facts? Interpretation and description in the qualitative analysis of applied health research data: A documentary analysis of peer review reports. *SSM - Qualitative Research in Health* 2022:100166. doi: <https://doi.org/10.1016/j.ssmqr.2022.100166>
420. Whittemore R, Knafl K. The integrative review: updated methodology. *J Adv Nurs* 2005;52(5):546-53. doi: 10.1111/j.1365-2648.2005.03621.x [published Online First: 2005/11/05]
421. Souza MTd, Silva MDd, Carvalho Rd. Integrative review: what is it? How to do it? *einstein (São Paulo)* 2010;8
422. Wellcome Trust. The Health of London: 1805 - 1974 2021 [updated Page last updated: 24 February 2021. Available from: <https://wellcomelibrary.org/moh/timeline/#35033> accessed 2 August 2022.
423. City of Westminster Archives. Cholera and the Thames 2020 [Available from: <http://www.choleraandthethames.co.uk/> accessed 3 August 2020.
424. Halliday S. Sir Joseph Bazalgette and the Main Drainage of London, 1997.
425. UK Parliament. 1842 Report on the Sanitary Condition of the Labouring Population of Great Britain, 1842.
426. Morley I. City chaos, contagion, Chadwick, and social justice. *Yale J Biol Med* 2007;80(2):61-72. [published Online First: 2007/12/28]
427. Tulchinsky TH, Varavikova EA. A History of Public Health: The New Public Health. 2014:1-42. doi: 10.1016/B978-0-12-415766-8.00001-X. Epub 2014 Oct 10.
428. UK Parliament. The 1848 Public Health Act, 1848.
429. The National Archives. Metropolitan Commission of Sewers 1848 [Available from: <https://discovery.nationalarchives.gov.uk/details/r/6cd47612-3a72-465c-a68b-eab8e927362f> accessed 21 October 2024.
430. Wolfe RM, Sharp LK. Anti-vaccinationists past and present. *Bmj* 2002;325(7361):430-2. doi: 10.1136/bmj.325.7361.430 [published Online First: 2002/08/24]
431. Hardy A. Water and the search for public health in London in the eighteenth and nineteenth centuries. *Med Hist* 1984;28(3):250-82. doi: 10.1017/s0025727300035936 [published Online First: 1984/07/01]
432. Johnson S. The Ghost Map: A street and epidemic and the hidden power of urban networksS: Penguin 2006.
433. HM Government. Sanitary Act 1866, 1866.
434. Hansard. Metropolitan Poor Act (1867) Bill 53 1869 [Available from: [https://hansard.parliament.uk/Commons/1869-06-07/debates/f53d2a23-8373-4c88-8b19-e6e85164446c/MetropolitanPoorAct\(1867\)AmendmentBill](https://hansard.parliament.uk/Commons/1869-06-07/debates/f53d2a23-8373-4c88-8b19-e6e85164446c/MetropolitanPoorAct(1867)AmendmentBill) accessed 3 February 2022.
435. Health Foundation. Metropolitan Poor Act 2024 [Available from: <https://navigator.health.org.uk/theme/metropolitan-poor-act> accessed 14 January 2024.
436. Wellcome Trust Library. England's first state hospitals and the Metropolitan Asylums Board, 1867-1930 1971 [Available from: <https://archive.org/details/b20457170> accessed 9 July 2023.
437. Sandhurst VWM. Report from the Select Committee of the House of Lords on Metropolitan Hospitals, &c. : together with the Proceedings of the Committee, minutes of evidence, and appendix. House of Lords, 1890.
438. House of Lords. SECOND REPORT OF THE SELECT COMMITTEE OF THE HOUSE OF LORDS ON METROPOLITAN HOSPITALS. 1891(3592)

439. Carrier J, Kendall I. Health and the National Health Service (Conflict & Change in Britain - A New Audit): Athlone Press 1998.
440. Rivett G. The Development of the London Hospital System 1823 - 2015, 2015.
441. Dauntton MJ. Health and housing in Victorian London. *Med Hist Suppl* 1991(11):126-44. doi: 10.1017/s0025727300071143 [published Online First: 1991/01/01]
442. BMJ. British Medical Association. Hospitals Committee. King Edward's Hospital Fund For London. Report Of The Committee Appointed To Inquire Into The System Prevailing In The London Hospitals With Regard To The Admission Of Out-Patients. *The British Medical Journal* 1913;1(2721):169-96.
443. Harari YN. Homo Deus: A Brief History of Tomorrow Yuval Noah Harari : Harvill Secker 2016.
444. HM Government. Local Government Act 1929, 1929.
445. Black J. A Brief History of London: Robinson 2022.
446. Timmins N. The Five Giants: A biography of the welfare state. Version 2017.10.10 ed2017.
447. NHS Blood & Transplant. A history of donation, transfusion and transplantation 2023 [Available from: <https://www.nhsbt.nhs.uk/who-we-are/a-history-of-donation-transfusion-and-transplantation/> accessed 19 February 2023.
448. Nuttgens P. The Home Front: Housing the People, 1850-1990 1989:Page 67.
449. Goodenough W. MEDICAL SCHOOLS THE GOODENOUGH REPORT. *The Lancet* 1944;244(6308):119-22. doi: [https://doi.org/10.1016/S0140-6736\(00\)42869-2](https://doi.org/10.1016/S0140-6736(00)42869-2)
450. Graham-Little E. The Goodenough Report. *British Medical Journal* 1945;2(4414):199-99.
451. Gray MH, Topping A. The hospital services of London and the surrounding area. London, I-IMSO, 1945. Ministry of Health hospital surveys volume 1, 1945.
452. Daley A. THE PUBLIC HEALTH SERVICES OF LONDON DURING THE PAST ONE HUNDRED YEARS. *The Journal of the Royal Institute of Public Health and Hygiene* 1947;10(1):24-32.
453. Britnell M. In Search of the Perfect Health System: Bloomsbury 2015.
454. Balarajan R. Talking Point: On The State Of Health In Inner London. *British Medical Journal (Clinical Research Edition)* 1986;292(6524):911-14.
455. Stamp AR. The health plan for London. *NAPT Bull* 1948;10(2):37-40. [published Online First: 1948/04/01]
456. Holland WW. Organisation of Health Services in London. *The Lancet* 1972;299(7756):908. doi: [https://doi.org/10.1016/S0140-6736\(72\)90786-6](https://doi.org/10.1016/S0140-6736(72)90786-6)
457. Black D. The Working Group on Inequalities Report (the Black Report) 1980.
458. Rhodes G, Prashar U, Young K. Primary health care in the inner cities after Acheson, 1986.
459. Gray AM. Inequalities in Health. The Black Report: A Summary and Comment. *International Journal of Health Services* 1982;12(3):349-80. doi: 10.2190/XXMM-JMQU-2A7Y-HX1E
460. Charlton J. The robustness of the London Health Planning Consortium model. *Br Med J (Clin Res Ed)* 1981;282(6267):920-1. doi: 10.1136/bmj.282.6267.920 [published Online First: 1981/03/14]
461. Jones FA. "CHRONIC AND CRITICAL": A Commentary on Health Care in London. *The Lancet* 1981;317(8210):33-35. doi: [https://doi.org/10.1016/S0140-6736\(81\)90130-6](https://doi.org/10.1016/S0140-6736(81)90130-6)
462. Habakkuk J. The Development of health services in London (London Advisory Group), 1981.

463. Merrison. Royal Commission on the National Health Service (Merrison Commission): Records 1972 [Available from: <https://discovery.nationalarchives.gov.uk/details/r/C3022> accessed 7 April 2020.
464. Davidson N. London health planning. Who speaks for the capital? *Health Soc Serv J* 1983;93(4862):1050-2. [published Online First: 1983/08/09]
465. Jarman BB, N. Primary health care in London--changes since the Acheson report. *BMJ* 1992;305(6862):1130-3.
466. Kings Fund. Planned health services for inner London : back to back planning : report on the regional plans for Inner London's health authorities, 1987.
467. Martin G. Capital Carve Up: The Future Pattern of Health Authorities in Greater London: London Health Emergency, 1991.
468. Benzeval M, Judge K, New B. Health and health care in London. *Public Money And Management* 1991;11
469. Hussey M. London health care 2010 : changing the future of services in the capital. 1992
470. Hogg C. Centering excellence? : national and regional health services in London. 1992
471. Tomlinson B. Report of the inquiry into London's health service, medical education and research presented to the Secretaries of State for Health and Education. London: HMSO 1992.
472. Bush MF. Health care in London. Playing with numbers. *Bmj* 1993;307(6900):388. doi: 10.1136/bmj.307.6900.388-a [published Online First: 1993/08/07]
473. Turner TH. Health care in London. Political motives fuel assault on London. *Bmj* 1993;307(6900):388. doi: 10.1136/bmj.307.6900.388 [published Online First: 1993/08/07]
474. Jarman B. Is London Overbedded? *BMJ: British Medical Journal* 1993;306(6883):979-82.
475. Mays N. Health care in London. Other cities also overbedded. *Bmj* 1993;306(6890):1474. doi: 10.1136/bmj.306.6890.1474 [published Online First: 1993/05/29]
476. Jacobson B. Public health in inner London. *Bmj* 1992;305(6865):1344-7. doi: 10.1136/bmj.305.6865.1344 [published Online First: 1992/11/28]
477. Farrell C. Conflict and change : specialist care in London : a report of six meetings arranged to discuss the London Specialty Review reports. 1993
478. Martin P. The right treatment for London?: Health Rights' response to the Report of the inquiry into London's health service, medical education and research (the Tomlinson report). 1993
479. Department of Health. Making London better., 1993.
480. Nagpaul C. Health care in London. BMA slow to condemn Tomlinson. *Bmj* 1993;306(6890):1474. doi: 10.1136/bmj.306.6890.1474-a [published Online First: 1993/05/29]
481. Hull SA. Lessons from the London initiative zone educational incentives funding: associations between characteristics, funding, and courses undertaken. *British Journal of General Practice* 2000;50(452)
482. Gusmano M, Rodwin V, Weisz D. Health Care in World Cities: New York, Paris, and London 2010.
483. Darzi A. Better Health for London 2015 [Available from: <https://www.healthylondon.org/wp-content/uploads/2018/01/Better-Health-for-London.pdf> accessed 27 January 2021.
484. Benzeval M, Solomon M, Judge K. The health status of Londoners : a comparative perspective, 1992.

485. O'Keefe. Divided London: towards a European public health approach. London: University of North London 1993:94.
486. Towell D, Best G, Pashley S. London health care: rethinking development: a discussion paper prepared for the King's Fund London Commission. 1997
487. London Commission (King's Fund). Transforming health in London 1997.
488. Turnberg L. Health Services in London: A strategic Review, 1998.
489. Appleby J, Ham C, Imison C, et al. Improving health and health care in London : who will take the lead?, 2011.
490. Farrar H, Finney A, Griffiths D, et al. Healthcare for London. Reflections on leadership, lessons, and legacy. 2013 [Available from: https://www.hsj.co.uk/Uploads/2013/04/17/i/u/t/Healthcare-for-London_Reflections-on-leadership-lessons-and-legacy.pdf accessed 19 March 2020.
491. Strategy LH. The London health strategy : outline strategic framework : March 2000., 2000.
492. Declaration for health in the millennium : priorities for the Mayor and GLA : draft. 2000
493. Findlay G. London Health Commission: Prospectus 2009-2012 Galvanising leadership for health in London, 2009.
494. GLA. Reducing health inequalities : issues for London and priorities for action, 2007.
495. Bowen C. Health impact assessments in London: assessing the London Mayoral strategies. *New South Wales public health bulletin* 2007;18(9-10):185-87.
496. Mindell J, Bowen C, Herriot N, et al. Institutionalizing health impact assessment in London as a public health tool for increasing synergy between policies in other areas. *Public Health* 2010;124(2):107-14. doi: 10.1016/j.puhe.2010.01.007 [published Online First: 2010/03/02]
497. Levenson R. London's state of mind: King's Fund mental health inquiry 2003. 2003
498. Department of Health. Commissioning a patient led NHS 2005 [Available from: https://webarchive.nationalarchives.gov.uk/ukgwa/20091106065608/http://dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4116717.pdf accessed 28 February 2020.
499. Berridge V. An historical perspective. *London J Prim Care (Abingdon)* 2008;1(1):35-7. doi: 10.1080/17571472.2008.11493196 [published Online First: 2008/01/01]
500. Thomson NV, G.; Cohen, D. L. Hub and spoke care for stroke: Is it feasible to transport people in a timely way in a big city? *International Journal of Stroke* 2011;6:35. doi: <http://dx.doi.org/10.1111/j.1747-4949.2011.00684.x>
501. Darzi A. Where Manchester leads on control of health and social care budget London should follow. *BMJ : British Medical Journal* 2015;350:h1572. doi: 10.1136/bmj.h1572
502. Thorlby R, Dixon J, Dickson N. Health for London: showing England the way? *Bmj* 2007;335(7611):108-9. doi: 10.1136/bmj.39276.699954.47 [published Online First: 2007/07/21]
503. Briefing LNC. Healthcare for London : a framework for action. London NHS Confederation Briefing, 2007.
504. GLA. The London Health Inequalities Strategy, 2010.
505. Conservative Party. Conservative Election Manifesto 2010, 2010.
506. Oliver D. David Oliver: Let's end our fixation with structural reorganisation. *BMJ* 2019;364:l422. doi: 10.1136/bmj.l422
507. NHS England London Region. London - A Call to Action, 2013.
508. Ham C. Leading Health Care in London: Time for a Radical Response (Kings Fund) (2013), 2013.

509. Gilbert H, Edwards N, Richard Murray. Transforming mental health : a plan of action for London. 2014
510. People's Inquiry into London's NHS. Peoples Inquiry into London's NHS: Londons NHS at a Crossroads, 2014.
511. Torjesen I. Inquiry into London NHS calls for new strategic health authority to plan and commission services. *BMJ : British Medical Journal* 2014;348:g2315. doi: 10.1136/bmj.g2315
512. GLA. Better Health for London: Next Steps, 2015.
513. GLA. London Health and Care Collaboration Agreement., 2015.
514. Gulland A. Five London areas to get devolved power over health. *BMJ* 2015;351:h6836. doi: 10.1136/bmj.h6836
515. GLA. London health devolution agreement., 2017.
516. GLA. London Health Inequalities Strategy Delivery Plan, 2015-2018: Convening and Collaborating for Action 2015.
517. GLA. Better health for all Londoners : consultation on the London Health Inequalities Strategy., 2017.
518. GLA. Health Inequalities Strategy Implementation Plan 2021-24, 2021.
519. GLA. Progress Report: London Health Inequalities Strategy. 2021
520. Healthy London Partnership. Our Vision for London, 2019.
521. Gamesby R. UIC - London - Growth 2015 [Available from: https://www.coolgeography.co.uk/gcsen/London_Growth.php#:~:text=London accessed 3 July 2023 2023.
522. Institute of Health Equity. A snapshot of health inequalities in London 2021 [Available from: <https://www.instituteofhealthequity.org/resources-reports/a-snapshot-of-health-inequalities-in-london> accessed 9 March 2023.
523. Walker A, Sinfield A, Walker C. Fighting poverty, inequality and injustice A manifesto inspired by Peter Townsend. 1 ed: Bristol University Press 2011.
524. London Health Planning Consortium. Towards a Balance: a framework for acute hospital services in London reconciling service with teaching needs., 1980.
525. BMJ. Tomlinson report recommends London closures and mergers. *British Medical Journal* 1992;305(6861):1045-50. doi: 10.1136/bmj.305.6861.1045
526. Birns JJ, P.; Roots, A.; Reedy, G.; Ross, A. Pan-London simulation training for hyperacute stroke. *Stroke Conference* 2014;45(no pagination)
527. NAO. Planning for the Better Care Fund, 2013.
528. Dawson B. Interim Report on the Future Provision of Medical and Allied Services 1920 (Lord Dawson of Penn), 1920.
529. London Planning Consortium. London Health Planning Consortium.Primary health care in inner London:report of a study group (Chair Donald Acheson). 1982.
530. James JH. Reforming the British National Health Service: implementation problems in London. *J Health Polit Policy Law* 1995;20(1):191-210. doi: 10.1215/03616878-20-1-191 [published Online First: 1995/01/01]
531. Iacobucci G. Are Darzi-style clinics set to make a comeback? *Bmj* 2013;346:f343. doi: 10.1136/bmj.f343 [published Online First: 2013/01/23]
532. Bambra C, Garthwaite K. Austerity, welfare reform and the English health divide. *Area* 2015;47(3):341-43. doi: 10.1111/area.12191
533. Bambra C, Smith KE, Garthwaite K, et al. A labour of Sisyphus? Public policy and health inequalities research from the Black and Acheson Reports to the Marmot Review. *J Epidemiol Community Health* 2011;65(5):399-406. doi: 10.1136/jech.2010.111195 [published Online First: 2010/11/06]

534. NAO. Tackling inequalities in life expectancy in areas with the worst health and deprivation, 2010.
535. Marmot M. We know what we need to do to improve health and reduce inequalities, now we need politicians to act. *BMJ* 2024;384:q93. doi: 10.1136/bmj.q93
536. Acheson D. Independent Inquiry into Inequalities in Health Report, 1998.
537. Marmot M. The health gap : the challenge of an unequal world. Paperback edition. ed. London: Bloomsbury 2016.
538. Shawar YR, Shiffman J, Spiegel DA. Generation of political priority for global surgery: a qualitative policy analysis. *The Lancet Global Health* 2015;3(8):e487-e95. doi: 10.1016/S2214-109X(15)00098-4
539. Shiffman J, Smith S. Generation of political priority for global health initiatives: a framework and case study of maternal mortality. *Lancet* 2007;370(9595):1370-9. doi: 10.1016/s0140-6736(07)61579-7 [published Online First: 2007/10/16]
540. Liu Q, Luo D, Haase JE, et al. The experiences of health-care providers during the COVID-19 crisis in China: a qualitative study. *The Lancet Global Health* 2020;8(6):e790-e98. doi: 10.1016/S2214-109X(20)30204-7
541. Colaizzi PF. Psychological research as the phenomenologist views it. In: Valle RS, King M, eds. *Existential-Phenomenological Alternatives for Psychology*: Oxford University Press 1978:6.
542. Glaser BG, Strauss AL. *The Discovery of Grounded Theory: Strategies for Qualitative Research*: Aldine Transaction 1967.
543. Rieger KL. Discriminating among grounded theory approaches. *Nurs Inq* 2019;26(1):e12261. doi: 10.1111/nin.12261 [published Online First: 2018/08/21]
544. Glaser B. *Basis of grounded theory analysis: emergence vs forcing*. Calif.: Sociology Press 1992.
545. Locke K. *Grounded Theory in Management Research*, 2003.
546. Willig C. *Introducing Qualitative Research in Psychology*, 3rd edition: Open University Press 2013.
547. Braun V, Clarke V. Can I use TA? Should I use TA? Should I not use TA? Comparing reflexive thematic analysis and other pattern-based qualitative analytic approaches. *Counselling and Psychotherapy Research* 2021;21(1):37-47. doi: <https://doi.org/10.1002/capr.12360>
548. Charmaz K. *Constructing grounded theory*. London 2006.
549. Charmaz K. *Constructing grounded theory*. Second edition ed. London: SAGE Publications London 2014:xxi, 388 pages : illustrations ; 25 cm.
550. Kleinheksel AJ, Rockich-Winston N, Tawfik H, et al. Demystifying Content Analysis. *American Journal of Pharmaceutical Education* 2020;84(1) doi: 10.5688/ajpe7113
551. Dickey-Bloom B, Crabtree BF. The qualitative research interview. *Med Educ* 2006;40(4):314-21. doi: 10.1111/j.1365-2929.2006.02418.x
552. Richards HM, Schwartz LJ. Ethics of qualitative research: are there special issues for health services research? *Fam Pract* 2002;19(2):135-9. doi: 10.1093/fampra/19.2.135 [published Online First: 2002/03/22]
553. Jamshed S. Qualitative research method-interviewing and observation. *Journal of basic and clinical pharmacy* 2014;5(4):87.
554. Britten N. Qualitative Research: Qualitative interviews in medical research. *BMJ* 1995;311(6999):251-53. doi: 10.1136/bmj.311.6999.251
555. Kallio H, Pietilä AM, Johnson M, et al. Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *J Adv Nurs* 2016;72(12):2954-65. doi: 10.1111/jan.13031 [published Online First: 2016/05/26]

556. Daigneault P-M, HJ Rubin & IS Rubin (2011). Qualitative Interviewing: The Art of Hearing Data (3ième éd.). Thousand Oaks, CA: Sage, 360 pages. *Canadian Journal of Program Evaluation* 2012;27(2):109-12.
557. Ritchie J, Spencer L. Qualitative Data Analysis for Applied Policy Research. In: Bryman, A. and Burgess, R., Eds., *Anal. Qual. Data*, Routledge, London, 173-194.1994.
558. Corbin J, Strauss A. Basics of Qualitative Research (3rd ed.). Third ed: SAGE Publications 2008.
559. Malmqvist J, Hellberg K, Möllås G, et al. Conducting the Pilot Study: A Neglected Part of the Research Process? Methodological Findings Supporting the Importance of Piloting in Qualitative Research Studies. *International Journal of Qualitative Methods* 2019;18:1609406919878341. doi: 10.1177/1609406919878341
560. Smith JA, Osborn M. Interpretative phenomenological analysis. Qualitative psychology: A practical guide to research methods. Thousand Oaks, CA, US: Sage Publications, Inc 2003:51-80.
561. Knott E, Rao AH, Summers K, et al. Interviews in the social sciences. *Nature Reviews Methods Primers* 2022;2(1):73. doi: 10.1038/s43586-022-00150-6
562. Palinkas LA, Horwitz SM, Green CA, et al. Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Adm Policy Ment Health* 2015;42(5):533-44. doi: 10.1007/s10488-013-0528-y [published Online First: 2013/11/07]
563. Nursing Research: The Application of Qualitative Approaches; 1985.
564. Nederhof AJ. Methods of coping with social desirability bias: A review. *European Journal of Social Psychology* 1985;15(3):263-80. doi: <https://doi.org/10.1002/ejsp.2420150303>
565. Collins M, Shattell M, Thomas SP. Problematic Interviewee Behaviors in Qualitative Research. *Western Journal of Nursing Research* 2005;27(2):188-99. doi: 10.1177/0193945904268068
566. Malterud K, Siersma VD, Guassora AD. Sample Size in Qualitative Interview Studies: Guided by Information Power. *Qual Health Res* 2016;26(13):1753-60. doi: 10.1177/1049732315617444 [published Online First: 2015/11/29]
567. Vasileiou K, Barnett J, Thorpe S, et al. Characterising and justifying sample size sufficiency in interview-based studies: systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology* 2018;18(1):148. doi: 10.1186/s12874-018-0594-7
568. Mason M. Sample Size and Saturation in PhD Studies Using Qualitative Interviews. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research* 2010;11
569. Carlsen B, Glenton C. What about N? A methodological study of sample-size reporting in focus group studies. *BMC Medical Research Methodology* 2011;11(1):26. doi: 10.1186/1471-2288-11-26
570. Collada Ali LC. Profile: An interview with Blanca Mayor Serrano on the state-of-the-art of health literacy in Spain. *Medical Writing* 2013;22(3):202-03. doi: 10.1179/2047480613Z.000000000132
571. Guest G, Bunce A, Johnson L. How Many Interviews Are Enough?:An Experiment with Data Saturation and Variability. *Field Methods* 2006;18(1):59-82. doi: 10.1177/1525822x05279903
572. Barbour RS. Checklists for improving rigour in qualitative research: a case of the tail wagging the dog? *Bmj* 2001;322(7294):1115-7. doi: 10.1136/bmj.322.7294.1115 [published Online First: 2001/05/05]

573. Walker D, Myrick F. Grounded Theory: An Exploration of Process and Procedure. *Qualitative Health Research* 2006;16(4):547-59. doi: 10.1177/1049732305285972
574. Clarke V, Braun V. Thematic analysis. *The journal of positive psychology* 2017;12(3):297-98.
575. Strauss AL, Corbin JM. Basics of qualitative research : techniques and procedures for developing grounded theory. Calif.: Sage Publications 1998.
576. Cooney A. Rigour and grounded theory. *Nurse Res* 2011;18(4):17-22. doi: 10.7748/nr2011.07.18.4.17.c8631 [published Online First: 2011/08/23]
577. Bryman A, Burgess B. Analyzing qualitative data: Routledge 2002.
578. Tracy SJ. Qualitative Quality: Eight “Big-Tent” Criteria for Excellent Qualitative Research. *Qualitative Inquiry* 2010;16(10):837-51. doi: 10.1177/1077800410383121
579. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care* 2007;19(6):349-57. doi: 10.1093/intqhc/mzm042
580. Moser A, Korstjens I. Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *European Journal of General Practice* 2018;24(1):9-18. doi: 10.1080/13814788.2017.1375091
581. NHS England. Guidance on developing the joint forward plan 2022 [Available from: <https://www.england.nhs.uk/publication/joint-forward-plan/> accessed 14 June 2023.
582. NHS England. Core20PLUS5 (adults) – an approach to reducing healthcare inequalities 2021 [Available from: <https://www.england.nhs.uk/about/equality/equality-hub/national-healthcare-inequalities-improvement-programme/core20plus5/> accessed 8 March 2024.
583. NHS England. ICBs and NHS Trusts in London, 2024.
584. Thomas C, Breeze P, Cummins S, et al. The health, cost and equity impacts of restrictions on the advertisement of high fat, salt and sugar products across the transport for London network: a health economic modelling study. *International Journal of Behavioral Nutrition and Physical Activity* 2022;19(1):93. doi: 10.1186/s12966-022-01331-y
585. Travers T. London's Boroughs at 50. London: Biteback Publishing 2015.
586. Gough B, Madill A. Subjectivity in psychological science: From problem to prospect. *Psychological Methods* 2012;17(3):374-84. doi: 10.1037/a0029313
587. Bardach E, Patashnik EM. A practical guide for policy analysis: The eightfold path to more effective problem solving: CQ press 2023.
588. Dalglish SL, Khalid H, McMahon SA. Document analysis in health policy research: the READ approach. *Health Policy and Planning* 2020;35(10):1424-31. doi: 10.1093/heapol/czaa064
589. Bowen GA. Document Analysis as a Qualitative Research Method. *Qualitative Research Journal* 2009;9(2):27-40. doi: 10.3316/QRJ0902027
590. HM Government. Greater London Authority Act 1999, 1999.
591. Burnham A. Andy Burnham Interview. *The Times* 2022.
592. Harling R. London's health: a role for the new mayor. *The mayor could have more influence on London's health than its hospitals* 1999;318(7182):478-79. doi: 10.1136/bmj.318.7182.478
593. Waugh P, Grice A. Ken reclaims the capital. *The Independent* 2000.
594. TfL. Oyster hailed an environmental pearl 2005 [Available from: <https://tfl.gov.uk/info-for/media/press-releases/2005/january/oyster-hailed-an-environmental-pearl> accessed 4 April 2020.
595. Will Walden (Mayor Director of Communications). The Rise and Fall of Boris Johnson. Episode One, 2024:54.16.

596. Statista. Percentage of households with mobile phones in the United Kingdom (UK) from 1996 to 2022 2024 [Available from: <https://www.statista.com/statistics/289167/mobile-phone-penetration-in-the-uk/> accessed 17 February 2024.
597. Thakor AV. The Financial Crisis of 2007–2009: Why Did It Happen and What Did We Learn? *The Review of Corporate Finance Studies* 2015;4(2):155-205. doi: 10.1093/rcfs/cfv001
598. United Nations. All hands on deck to fight a once-in-a-lifetime pandemic 2023 [Available from: <https://www.un.org/en/un-coronavirus-communications-team/all-hands-deck-fight-once-lifetime-pandemic> accessed 24 February 2024.
599. Fahy N, Hervey T, Greer S, et al. How will Brexit affect health services in the UK? An updated evaluation. *The Lancet* 2019;393(10174):949-58. doi: 10.1016/S0140-6736(19)30425-8
600. Ghosh A, Nundy S, Ghosh S, et al. Study of COVID-19 pandemic in London (UK) from urban context. *Cities* 2020;106:102928. doi: 10.1016/j.cities.2020.102928 [published Online First: 2020/09/15]
601. GLA. New data shows Mayor's ULEZ expansion is working better than expected, bringing cleaner air to five million more Londoners 2024 [Available from: <https://www.london.gov.uk/media-centre/mayors-press-releases/new-data-shows-mayors-ulez-expansion-working-better-expected-bringing-cleaner-air-five-million-more> accessed 24 July 2024.
602. City Monitor. London congestion charge has been a huge success. It's time to change it. 2018 [Available from: <https://citymonitor.ai/transport/london-congestion-charge-has-been-huge-success-it-s-time-change-it-3751> accessed 15 April 2021.
603. C40. 2022 [Available from: <https://www.c40.org/about-c40/our-history/#:~:text=2005%20%E2%80%93%20C40%20is%20founded, and%20created%20the%20'C20'> accessed 17 January 2023.
604. Brown J, Travers T, Brown R. London's Mayor at 20: Biteback Publishing 2020.
605. Danielli S, Donnelly P, Coffey T, et al. Perspectives Measuring more than just economic growth to improve well-being. *Journal of Public Health* 2020 doi: 10.1093/pubmed/fdaa203
606. Shafik M. What we owe each other: A new social contract for a better society: Princeton University Press 2021.
607. Milliband E. GO BIG: How To Fix Our World: Random House 2021.
608. Goldratt E. The Goal: A Process of Ongoing Improvement: Gower Publishing 1984.
609. National Geographic. 25 years after returning to Yellowstone, wolves have helped stabilize the ecosystem 2020 [Available from: <https://www.nationalgeographic.com/animals/article/yellowstone-wolves-reintroduction-helped-stabilize-ecosystem> accessed 17 July 2024.
610. Ripple WJ, Beschta RL. Trophic cascades in Yellowstone: The first 15years after wolf reintroduction. *Biological Conservation* 2012;145(1):205-13. doi: <https://doi.org/10.1016/j.biocon.2011.11.005>
611. Dudek-Burlikowska M, Szewieczek D. The Poka-Yoke method as an improving quality tool of operations in the process. *Journal of achievements in materials and manufacturing engineering* 2009;36(1):95-102.
612. Marmot M, Allen J, Goldblatt P, et al. Build Back Fairer: The COVID-19 Marmot Review. The Pandemic, Socioeconomic and Health Inequalities in England: London: Institute of Health Equity., 2020.
613. Nickerson RS. Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology* 1998;2(2):175-220. doi: 10.1037/1089-2680.2.2.175

614. FitzGerald C, Hurst S. Implicit bias in healthcare professionals: a systematic review. *BMC Medical Ethics* 2017;18(1):19. doi: 10.1186/s12910-017-0179-8
615. Krippendorff K. Content analysis: An introduction to its methodology: Sage publications 2018.
616. Kayesa NK, Shung-King M. The role of document analysis in health policy analysis studies in low and middle-income countries: Lessons for HPA researchers from a qualitative systematic review. *Health Policy OPEN* 2021;2:100024. doi: <https://doi.org/10.1016/j.hpopen.2020.100024>
617. Morgan H. Conducting a qualitative document analysis. *The Qualitative Report* 2022;27(1):64-77.
618. Robson C. Real world research : a resource for social scientists and practitioner-researchers. 2nd ed ed. Oxford, UK: Blackwell Publishers Oxford, UK 2002.
619. King N. Using Templates in the Thematic Analysis of Text 2004:257-70.
620. Gilbert GN, Mulkay M. Opening Pandora's box: A sociological analysis of scientists' discourse: CUP Archive 1984.
621. Potter J, Wetherell M. Discourse and Social Psychology: Beyond Attitudes and Behaviour. London: Sage Publications 1987.
622. Potter J, Wetherell M. Analyzing discourse. Analyzing qualitative data: Routledge 2002:47-66.
623. Arribas-Ayllon M, Walkerdine V. Foucauldian discourse analysis. *The Sage handbook of qualitative research in psychology* 2008;2:91-108.
624. Smith JA. Interpretative phenomenological analysis: Getting at lived experience. *The Journal of Positive Psychology* 2017;12(3):303-04. doi: 10.1080/17439760.2016.1262622
625. Langdrige D. Phenomenological Psychology: Theory, Research and Method: Pearson Education 2007.
626. Schegloff EA, Jefferson G, Sacks H. The Preference for Self-Correction in the Organization of Repair in Conversation. *Language* 1977;53(2):361-82. doi: 10.2307/413107
627. Yeomans M, Boland FK, Collins HK, et al. A Practical Guide to Conversation Research: How to Study What People Say to Each Other. *Advances in Methods and Practices in Psychological Science* 2023;6(4):25152459231183919. doi: 10.1177/25152459231183919
628. Miake-Lye IM, Hempel S, Shanman R, et al. What is an evidence map? A systematic review of published evidence maps and their definitions, methods, and products. *Systematic Reviews* 2016;5(1):28. doi: 10.1186/s13643-016-0204-x
629. Bragge P, Clavisi O, Turner T, et al. The Global Evidence Mapping Initiative: Scoping research in broad topic areas. *BMC Medical Research Methodology* 2011;11(1):92. doi: 10.1186/1471-2288-11-92
630. Alahdab F, Murad MH. Evidence maps: a tool to guide research agenda setting. *BMJ Evidence-Based Medicine* 2019;24(6):209-11. doi: 10.1136/bmjebm-2018-111137
631. O'Leary BC, Woodcock P, Kaiser MJ, et al. Evidence maps and evidence gaps: evidence review mapping as a method for collating and appraising evidence reviews to inform research and policy. *Environmental Evidence* 2017;6(1):19. doi: 10.1186/s13750-017-0096-9
632. Chowdhary KR. Natural Language Processing. In: Chowdhary KR, ed. Fundamentals of Artificial Intelligence. New Delhi: Springer India 2020:603-49.
633. Baclic O, Tunis M, Young K, et al. Challenges and opportunities for public health made possible by advances in natural language processing. *Can Commun Dis Rep*

- 2020;46(6):161-68. doi: 10.14745/ccdr.v46i06a02 [published Online First: 2020/07/17]
634. Pons E, Braun LM, Hunink MG, et al. Natural Language Processing in Radiology: A Systematic Review. *Radiology* 2016;279(2):329-43. doi: 10.1148/radiol.16142770 [published Online First: 2016/04/19]
 635. Yim W-w, Yetisgen M, Harris WP, et al. Natural Language Processing in Oncology: A Review. *JAMA Oncology* 2016;2(6):797-804. doi: 10.1001/jamaoncol.2016.0213
 636. Lagu T, Goff SL, Hannon NS, et al. A mixed-methods analysis of patient reviews of hospital care in England: implications for public reporting of health care quality data in the United States. *Jt Comm J Qual Patient Saf* 2013;39(1):7-15. doi: 10.1016/s1553-7250(13)39003-5 [published Online First: 2013/02/02]
 637. Gale NK, Heath G, Cameron E, et al. Using the framework method for the analysis of qualitative data in multi-disciplinary health research. *BMC Medical Research Methodology* 2013;13(1):117. doi: 10.1186/1471-2288-13-117
 638. Carter H, Weston D, Greenberg N, et al. Experiences of supported isolation in returning travellers during the early COVID-19 response: a qualitative interview study. *BMJ Open* 2021;11(7):e050405. doi: 10.1136/bmjopen-2021-050405
 639. Brooks J, McCluskey S, Turley E, et al. The Utility of Template Analysis in Qualitative Psychology Research. *Qual Res Psychol* 2015;12(2):202-22. doi: 10.1080/14780887.2014.955224 [published Online First: 2015/04/03]
 640. King. Doing Template Analysis. In Symon, G., & Cassell, C., *Qualitative Organizational Research* (pp 426-450). Sage 2012.
 641. Montgomery C. *Happy City: Transforming Our Lives Through Urban Design* Kindle Edition. New York: Penguin 2013.
 642. Vlahov DF, N.; Proietti, F.; Ompad, D.; Quinn, A.; Nandi, V.; Galea, S. Urban as a determinant of health. *Journal of Urban Health* 2007;84(SUPPL. 1):i16-i26. doi: <http://dx.doi.org/10.1007/s11524-007-9169-3>
 643. Diller P. Why Do Cities Innovate in Public Health? Implications of Scale and Structure 2014 [Available from: https://openscholarship.wustl.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=6092&context=law_lawreview.
 644. Hoornweg D, Pope K. Population predictions for the world's largest cities in the 21st century. *Environment and Urbanization* 2016;29(1):195-216. doi: 10.1177/0956247816663557
 645. Marmot M, Allen J, Boyce T, et al. *Health Equity in England: The Marmot Review 10 Years on 2020*

