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Describing Team Development within a Novel GP-led Urgent Care Centre Model:

A Qualitative Study

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ABSTRACT

Objective: Urgent care centres (UCCs) co-located within an Emergency Department were developed to reduce the numbers of inappropriate emergency department admissions. Since then various UCC models have developed, including a novel general practitioner (GP)-led UCC that incorporates both GPs and Emergency Nurse Practitioners (ENPs). Traditionally these two groups do not work alongside each other within an emergency setting. Although good teamwork is crucial to better patient outcomes, there is little within the literature about the development of a team consisting of different healthcare professionals in a novel healthcare setting. Our aim was therefore to describe staff members' perspectives of team development within the GP-led UCC model.

Design: Open-ended semi-structured interviews, analysed using thematic content analysis.

Setting: GP-led urgent care centres in two academic teaching hospitals in London.

Participants: Fifteen UCC staff members including six GPs, four ENPs, two receptionists and three managers.

Results: Overall participants were positive about the inter-professional team that had developed and recognised that this process had taken time. Hierarchy within the UCC setting has diminished with time, although some residual hierarchical beliefs do appear to remain. Staff appreciated inter-disciplinary collaboration was likely to improve patient care. Eight key facilitating factors for the team were identified: appointment of leaders, perception of fair workload, education on roles/skill sets and development of these, shared professional understanding, inter-disciplinary working, ED collaboration, clinical guidelines and social interactions.

Conclusions: A strong inter-professional team has evolved within the GP-led UCCs over time, breaking down traditional professional divides. Future implementation of UCC models should pro-actively incorporate the eight facilitating factors identified from the outset, to enable effective teams to develop more quickly.

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ARTICLE SUMMARY

Strengths and Limitations of this Study:

Strengths:

- This study provides an insight into the forming of an inter-professional team within a novel GP-led UCC model that breaks down the traditional doctor-nurse hierarchy.
- The study incorporates opinions from various staff groups based on their experience of the development of the team over time.
- There is little in the literature about inter-professional team developments within such new UCC models to be able to learn from for future implementations.

Limitations:

- No patient or clinical outcome measures were used to see the effect of the team on direct patient care.
- Only the perspective from staff members within the urgent care centre were obtained and not from the wider hospital and community setting.

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INTRODUCTION

Within the National Health Service in England, Accident and Emergency attendances have increased dramatically over the past twenty years with the figure for 2014-15 reaching over 22 million.[1] Urgent care centres (UCCs) were first proposed in 1999 to reduce the numbers of inappropriate Emergency Department (ED) attendances by increasing primary care access.[2] General practitioner (GP)-led UCCs, often co-located with EDs, were developed from this with the aim of appropriately triaging patients. This model of care continues to be recommended by many professional bodies, including the Royal College of Physicians, the Royal College of Surgeons and the Royal College of Paediatrics.[3]

GPs and Emergency Nurse Practitioners (ENPs) are traditionally groups that do not work alongside each other within the ED. Within this new GP-led UCC model both ENPs and GPs are able to request investigations, initiate management and discharge patients, and collaborate together.[4] This breaks down the traditional assumption of doctors being the healthcare professional who diagnoses and discharges patients and shows the change in roles that have been made. One study found that the GPs working within an ED setting adjusted their role to fit the demands of both the patient and the wider healthcare system.[5] It is likely that this slight change in role will also occur within a GP-led UCC.

Teamwork within the healthcare system is essential for high quality, safe patient care.[6] One study found that surgical teams who exhibited less teamwork behaviours had a higher risk of death for their patients;[7] similar findings have been replicated in an intensive care setting.[8] It is not just patient safety that good teamwork improves but also patient satisfaction, staff retention and hospital costs.[9]

In many areas of healthcare the “physician vs nurse” culture remains and this can be disruptive to patient care.[10,11] However collaboration and collegiality between doctors and nurses is important for the team.[12,13] Indeed one study suggests that due to the encouraging results relating to patient outcomes when inter-disciplinary teamwork is utilised well, more healthcare models that promote collaboration between physicians and nursing staff should be implemented.[14]

Within a UCC setting very little is known about how the two professional groups (ENPs and GPs) work and develop as a team. Too often effective teamwork is presumed with no training or assessment of it when new models of care are introduced.[6] To the best of our knowledge, descriptive studies of teamwork have been done in the ED and in other hospital settings,[9,15] but not within an UCC model. Therefore, our study aims to describe the development of the team within the innovative new GP-led UCC model and to establish key facilitating factors from the UCC staff member’s perspectives.

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MATERIALS AND METHODS:

Setting

The same methodology was used for this study as in Greenfield et al. (2016).[16] A UCC was established at Charing Cross Hospital, London in 2009, alongside its sister site at Hammersmith Hospital.[4] A model was used to triage patients, with GPs at the forefront of the triaging for patients attending by an ambulatory ('walk in') pathway.[4] The patients are streamed based on this triage to the healthcare professional deemed most appropriate for their care including the ED. For example, patients with minor injuries are seen by the ENP in the "blue stream", patients with minor illnesses are seen in the "green stream" and can be seen by the GP or ENP and the "yellow stream" are considered GP priority and are seen by the GP only (See Appendix 1 for a more detailed description). The majority of participants work across both sites, although the interviews were conducted at Charing Cross.

Interview Design

A semi-structured, open-ended interview protocol was used to provide a systematic method of interviewing that still allowed the interviewers to delve further as the opportunity arose. The questions were developed by two of the authors (GG and AI) (Appendix 2). The interview focussed on various areas including teamwork within the UCC, alongside patients' motives for attending the UCC, the practicalities of working in the UCC and barriers to the model. [16] It was explained at the beginning by the interviewer that the data was being collected anonymously and interviewees were therefore encouraged to speak their own mind; the participants were informed that the data would be collated to produce research into the development of the GP-led UCC set up. The interviews were designed to be performed in 20-25 minutes due to being conducted in an intense urgent care work environment; no repeat interviews were performed due to time constraints, nor were transcripts returned for comment. The interview protocol was stabilised after the fourth interview.[16] The COREQ guidelines were followed for the design of this study – see Appendix 3.[17] As this is deemed part of a service evaluation, the study did not require ethical review by a NHS or Social Care Research Ethics Committee.[18]

Participants

Face-to-face interviews were conducted with 15 staff members at the Charing Cross UCC (6 GPs, 4 ENPs, 2 receptionists and 3 managers) in November and December 2012 by two authors experienced in gathering and analysing qualitative data (GG (male) and AI (female)). This was three years since the UCC was set-up in the GP-led format. The majority of the staff interviewed worked on both sites and were therefore able to reflect on their experience from both sites. Both the interviewers were at that time working in the Department of Primary Care and Public Health at Imperial College London; neither interviewer had previously met any of the participants. The interviews were performed in the consultation rooms to allow suitable privacy; the interviewer and participant alone were present. Out of 45 clinicians and receptionists, 15 were chosen to capture a wide range of perspectives and roles (i.e. purposive sampling).[19] Nobody declined to participate and no-one dropped out.

Data Analysis

The methodological orientation underlying this study is considered to be a combination of ethogenics, looking at the roles and rules by which people choose to act, and symbolic interactionism, looking at the symbolic meanings of social interactions.[20] All of the interviews

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were recorded and later transcribed, with anonymity being ensured; there were no field notes used in the analysis of the data. The full transcripts were re-read by three of the authors (SM, AI and GG) and themes identified. From this, data categories were identified and open coding performed using Atlas Ti version 6.2. Each interview was analysed and constantly compared to the other interviews to allow the themes to develop. Data collection and coding continued until data saturation was reached and there was no further information to be added.

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RESULTS:

Within both UCCs, stages of team development were identified with eight key facilitating factors identified.

Team Development

Overall the interviewees were positive about the inter-professional team that had developed within the UCCs. For example:

> *"Oh, they're [describing the ENPs - SM] fantastic. Really good. I would say we have a very close working relationship." (GP 13)*

> *"I think the team works very well. We've got a group of GPs and… we do work very closely together. I think the GPs and the nurse practitioners have a very good relationship." (ENP 6)*

> *"The GPs who we didn't know much, they have become part of the family now." (ENP 3)*

> *"…clinically the teamwork has been really good" (ENP 4)*

> *"…it has worked so you feel like you're a part of a larger team, rather than just on your own in this room." (GP 7)*

It was recognised throughout that the process of team development took time and therefore time can be identified as an over-riding theme that is echoed in many of the quotes below. Staff particularly picked up on time diminishing the traditional physician vs nurse culture and hierarchy. However, as the last quote emphasises, some hierarchical principles do appear to remain embedded in the culture for certain individuals:

> *"As opposed to three years ago when I started, there was that mentality [describing hierarchy – SM]. Three years later there's only little remnants of that type of mentality if I'm to be honest." (Receptionist 12 – with some managerial responsibilities)*

> *"I would say, probably initially, in the first few months…There were cases where some people might say, that's more appropriate for GP, and the GP would say, no, that's more appropriate for the nurse." (ENP3)*

> *"The only reason I'm smiling and, sort of, laughing is that no [there is no hierarchy - SM], is the short answer…people talk about do nurse practitioners want to be mini-doctors…. I appreciate that nurses are taking on roles that were previously performed by doctors ….I'm happy to work up to my level of confidence and competence" (ENP 4)*

> *"Personally I wonder how cost effective [referring to ENPs - SM]. Obviously, they're [ENPs - SM] brilliant with all the dressings. Doctors just don't go anywhere near dressing in their suits…So a problem here is I don't have a nurse…I'd love to have a nurse assistant" (GP 15)*

The staff recognised that the inter-disciplinary collaboration resulted in a safe system for the patients:

> "*And they [staff] all manage the patients appropriately, investigate them safely, send them home." (GP 13)*

> *"In terms of clinically safe, clinically appropriate, good service for the patient, better than the previous service, yes it is." (Manager 1)*

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"…model is very safe and also patients are streamed… so each stream there's a professional dealing with that, whether they are ENP – Emergency Nurse Practitioner – or one of the GP as well." (Manager 2)

Eight key factors were identified that facilitated an effective team to develop: appointment of leaders, perception of fair workload, education on roles/skill sets and development of these, shared professional understanding, inter-disciplinary working, ED collaboration, clinical guidelines and social interactions. These are summarised in Table 1.

Table 1: Eight key facilitating factors

Facilitating Factor	Example Quote
Appointment of leaders	*"But within time, they got a lead nurse, we put a new nurse in charge, things got better, things were running more smoothly."(Receptionist 12)*
Perception of fair workload	*"The key to unlocking that is to give people data so you can see look, the doctor sees X%, the nurses see Y%, there is a fair sharing of the work" (Manager 1)*
Education on roles/skill sets and development of these	*"No one really took the time to explain… if this happens, this is what is expected from you….So that really hindered the model, but as soon as they started being educated more, and being given an opportunity to understand the model more, they understood what it is they were supposed to be doing so that they did buy into it." (Receptionist 12 – role in management)*
Shared professional understanding	*"Sometimes we need them [GPs] to do certain things, sometimes they come to us for advice, sometimes we go to them for advice." (ENP 3)*
Inter-disciplinary working	*"This is the benefit from working as a team. You know that you are supported by somebody else and you are not alone." (ENP 8)*
ED collaboration	*"It's very easy to get a senior opinion of one of the [ED] consultants if you're worried about a patient" (ENP 6)*
Clinical guidelines	*"It helped to have evidence-based guidelines which people couldn't challenge" (Manager 1)*
Social interactions	*"Very often you see staff parties" (Manager 2)*

Looking at these separately, firstly the appointment of appropriate leaders by the managers seems to have enabled a smoother running of the department:

"But within time, they got a lead nurse, we put a new nurse in charge, things got better, things were running more smoothly."(Receptionist 12)

"When she [referring to the lead nurse – SM] came in it made life easier, because that way we could integrate more. (Receptionist 12)

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Initially the triaging and streaming of patients appeared to be an area that caused tension and friction between the GPs and ENPs.

> *"We [ENPs] are meant to see the blues and the greens; GPs are meant to see the yellows and the green. Some of the GPs...they used to tend to stick on the yellow, and leave all the greens." (ENP 3)*

However the management recognised this potentially contentious point and helped to resolve this by ensuring the staff perceived there was a fair workload:

> *"The key to unlocking that is to give people data so you can see look, the doctor sees X%, the nurses see Y%, there is a fair sharing of the work" (Manager 1)*

Again, over time, the staff began to understand each other's roles and expertise, allowing respect between the separate healthcare professional groups to grow and inter-disciplinary working to occur. The GPs and ENPs acknowledged each other's expertise:

> *"Sometimes we need them [GPs] to do certain things, sometimes they come to us for advice, sometimes we go to them for advice." (ENP 3)*

> *"They [GPs] will often come and ask us [ENPs] can you have a look at this, what do you think, and the same; we would go to them if we were a bit worried about patient at all just to get an opinion and things like that so I think we work quite well together. (ENP 6)*

> *"This is the benefit from working as a team. You know that you are supported by somebody else and you are not alone." (ENP 8)*

The managers recognised that initially not understanding the skills of each other hindered the development of the collegiality.

> *"No one really took the time to explain… if this happens, this is what is expected from you….So that really hindered the model, but as soon as they started being educated more, and being given an opportunity to understand the model more, they understood what it is they were supposed to be doing so that they did buy into it." (Receptionist 12 – role in management)*

The GPs also recognised that their role had changed slightly to facilitate working in an urgent care setting, rather than a general practice setting, and they had to adjust their skill sets based upon this:

> *"…there's more of the trauma stuff than you would see in general practice, and there's more of the acutely unwell patients…" (GP 13)*

> *"I think because the group of patients here, perhaps, is slightly different to what you'd see in your average general practice I think its's very good for refreshing your acute medicine skills." (GP 14)*

The inter-disciplinary working extended beyond the UCC as the UCC staff felt that the support of the ED management and staff enabled them to function better as a team within the UCC. The staff members in the UCC also valued the guidelines that had been put in place in collaboration with the consultants in the ED, to therefore allow them to refer from a strong position. The presence of the ED, and wider hospital staff, meant that advice and referrals could be made quickly, without inconveniencing other members of the UCC team:

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"It's very easy to get a senior opinion of one of the [ED] consultants if you're worried about a patient" (ENP 6)

"If I need the surgeon or the physician or the orthopaedic I know to call" (GP 10)

There was perhaps a suggestion that not all members of the ED however embraced the UCC and its role within the hospital:

"*…because, certainly, for the more junior doctors, it's good for them to see a whole spectrum of illness and injuries and they've [describing junior doctors – SM] had a significant number of patients who they used to manage, [who] they no longer see." (Manager 5)*

Finally over time the team generated in the workplace has extended beyond this into a social setting, with combined social activities after work:

"Very often you see staff parties" (Manager 2)

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DISCUSSION

What have we learnt in this study?

The inter-professional team within this novel GP-led UCC model have adapted and developed from its initial set up to form a cohesive team that values each other. Eight key factors have been identified that appeared to have facilitated the development of this team: appointment of leaders, perception of fair workload, education on roles/skill sets and development of these, shared professional understanding, inter-disciplinary working, ED collaboration, clinical guidelines and social. Looking at the eight key factors identified as potential facilitators for this process many of them are already recognised within the literature as being important in team development. The initial difficulties, and occasional feelings of hierarchy, have decreased over time, although some remain, and the healthcare professionals appear to be happy with their roles and responsibilities.

Comparison to the Literature

Overall, the UCC team appeared settled and interacted well together. With the introduction of the new GP-led UCC model, the staff members appear to have followed Tuckman's stage of group development: forming (as the team learnt about each other and what their clinical experience was), storming (whereby differences between the clinicians were emphasised and disagreements occurred but from which lessons were learnt and guidelines updated), norming (all team members took responsibility for their own actions and their own role) and performing.[21] The storming phase encompasses adaptability and the willingness to take each other's ideas and perspectives, both of which are recognised in the literature as key to effective teams.[22] They learnt about each other and improved collegiality amongst themselves by organising social events, developing guidelines together and in many ways solving their own problems, some of the ways Kiser believes medical professionals can connect.[23] All of this took time and it would appear that if the time taken for the "forming" and "storming" phases could be limited in a new healthcare model it would be optimal for patient's care. It may be that learning from the experiences observed here will help to minimise the time spent on these first two stages in the future.

Looking at the eight key factors identified as potential facilitators for this process many of them are already recognised within the literature as being important in team development. They also represent many of the TeamSTEPPS instructional framework components, a system developed in the USA for integrating teamwork into the healthcare system.[24] For example, the appointment of the lead nurse was recognised by staff as helpful in the smooth running of the team, alongside the support from managers to resolve potential tension over workload and it is well recognised in the literature that a good leader is crucial to the development of an effective team.[25,26] The leader is expected to provide a clear direction for the team, whilst also supporting the team members and creating a positive environment.[22,26] More holistically, good leadership has been shown to improve patient satisfaction and reduce patient adverse events and complications.[27] It is also one of the four key components to the TeamSTEPPS model, which also includes communication, mutual support and situation monitoring.[24]

The UCC team appears to encompass the different professional backgrounds well to make use of each member's different expertise.[25] The team members were aware of their roles and their boundaries enabling them to maximise the team's capabilities, an area recognised to improve teamwork.[15] The GPs respected the training and skill set of the ENPs in the majority, highlighted as important in the literature.[28] This finding of mutual respect is also reflected in other clinical settings, for example when nurse practitioners were used in a primary care setting.[29] It also

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reflects the "mutual support" component of the TeamSTEPPS model.[24] The GPs also recognised the need for a slight change in their skill set and role; they found there was greater need for acute medical skills within the UCC setting compared to general practice. Studies have previously shown that when GPs work within an ED setting they can be effective in terms of both satisfaction and cost-effectiveness.[30-32] This is likely to be the case within the GP-led UCC and the GPs, along with the ENPs, may well have developed their role to fit the demands of the patient population attending, as has been shown previously.[5] It may be however that managers should be aware that the GPs may require additional training and support to ensure their acute skills are to the standard necessary within an urgent care setting.

Initially the team experienced difficulties and some discord in triaging patients but it appears that as the key facilitating factors were implemented the team began to work more smoothly together. Now the UCC team exhibits many of the key behaviour skills for good teamwork: delegating the workload optimally (i.e. triaging patients fairly), using all available resources (i.e. the expertise within the ED) and calling for help when needed (i.e. the ENPs and GPs interacting together).[33] The tightening of clinical guidelines, initially intended for clinical reasons only, may reflect that embedding tools within a healthcare setting can improve teamwork and therefore enhance patient safety.[6]

Again with time, the feeling of hierarchy has decreased as the inter-disciplinary working has improved. Hierarchy is recognised as one area that can impede effective teamwork; hierarchies can lead to a stressful environment that is not conducive to a positive experience for staff or patients.[6,9,10] However we know that when nurses and doctors work together there are numerous advantages, including jointly advocating for the patient.[34] However, the embedded "physician vs nurse" culture does appear to remain, at least for certain individuals exemplified by *"Doctors just don't go anywhere near dressing in their suits".* It is interesting that this GP also stated that he worried about the cost effectiveness of ENPs. Automatic thoughts like this will create barriers and are likely to undermine effective teamwork and ultimately influence patient care.[10]

Aside from this example, the overall concern in previously published studies about "doctors being trained to be a doctor" and "a nurse being trained to be a nurse" and this boundary blurring, was not echoed.[35] Instead the staff members appeared to embrace the inter-disciplinary working. More junior doctors would, perhaps, feel more threatened by the role of the ENP as they themselves feel they have much to learn and would potentially be competing for that learning. This was hinted at by the manager who suggested junior doctors are now no longer seeing all the minor injuries and illnesses that they used to and so are not receiving the opportunity to improve their skills in these areas. However, as this is a unique GP-led set up this feeling of competition is not present within the UCC itself. Also, previous justifications in the literature regarding hierarchy from doctors, such as someone needing to be ultimately responsible for a patient's care, is in some way removed as ENPs can act autonomously to treat and discharge.[11] It is important for improving patient care that the collaboration between nurses and doctors are maximised and that both perspectives are valued.[36]

Strengths and Limitations

This study gives us an insight into the team that has developed within this new UCC model. The perceptions of various staff groups within the UCC were obtained, allowing a greater understanding of the team's development. This study is a snapshot in time in a dynamic system, therefore as team members and leadership roles change, the perceptions portrayed may change. However, we do get an insight at the three year time point, which may accurately reflect the new culture of the team and also allows us to demonstrate the changes that have occurred over that time period.

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Interviews, by their very nature, may direct participants towards giving the answers they believe the interviewers want to hear. To minimise the risk of this, the interviewees (GG and AI) emphasised to participants that everything said was not attributable to them. What is also important to note is that this study is simply looking at the UCC staff members' perspective. It does not gain any insight into other healthcare professionals working within the hospitals opinions' regarding the UCC. It was hinted at by a manager that certain staff groups within the ED, such as junior doctors, may not feel the UCC is beneficial to their learning experience due to loss of injuries and illnesses to the UCC that they used to manage. Future research in this area would therefore allow an interesting comparison to be made.

We also acknowledge that no patient outcome measures were assessed in this study and although we can assume that the good teamwork demonstrated is likely to be beneficial to patient safety and care, it is only an assumption.6 Further work is therefore required to establish whether this assumption is correct and whether the GP-led UCC team has a positive impact on patient's outcomes.

Potential Implications of these Findings

Eight key facilitating factors have been identified that, for future implementation of similar novel healthcare models, we suggest are emphasised and pro-actively incorporated from the very beginning. Also, as one receptionist stated, there is a lot that can be learnt from direct observation of the current model to ensure *"they get the right people they need… they can run more smoothly, and maybe hit the ground running" (Receptionist 12)*. Future research could include qualitative data regarding the opinions of other members of the hospital team in regards to the UCC, particularly the emergency department. The perception of the UCC from a community general practice perspective would also provide an interesting insight and this may allow policy makers to understand more about the role of the UCC in the wider setting.

CONCLUSION

A strong team has evolved within the GP-led UCC model, although this process took time. The team members feel valued and all have a clear understanding of their role and responsibilities. Therefore, it is likely that this enables patient care to be delivered effectively and safely, although research into the team's impact on patient outcomes is required. However, implementation was not perfect and lessons can be learnt for the future with eight key factors identified that, we believe, were integral in allowing the UCC team to fulfil its potential. These eight factors are likely to be key to informing future policy and workforce planning when developing similar healthcare models.

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CONFLICTS OF INTEREST:

AI, SG, AM, and GG are (or were at the time of data collection) employed by Imperial College London, which received funding to help evaluate the new model of care.

AUTHOR'S CONTRIBUTIONS:

SM analysed the data and drafted and revised the manuscript. GG conducted the interviews, analysed the data and helped to draft and revise the manuscript. AI conducted the interviews, analysed the data and helped to revise the manuscript. SG helped to draft the manuscript and revise the manuscript. AM initiated the study and helped to revise the manuscript. All authors read and approved the final manuscript.

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Describing Team Development within a Novel GP-led Urgent Care Centre Model:

A Qualitative Study

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ABSTRACT

Objective: Urgent care centres (UCCs) co-located within an Emergency Department were developed to reduce the numbers of inappropriate emergency department admissions. Since then various UCC models have developed, including a novel general practitioner (GP)-led UCC that incorporates both GPs and Emergency Nurse Practitioners (ENPs). Traditionally these two groups do not work alongside each other within an emergency setting. Although good teamwork is crucial to better patient outcomes, there is little within the literature about the development of a team consisting of different healthcare professionals in a novel healthcare setting. Our aim was therefore to describe staff members' perspectives of team development within the GP-led UCC model.

Design: Open-ended semi-structured interviews, analysed using thematic content analysis.

Setting: GP-led urgent care centres in two academic teaching hospitals in London.

Participants: Fifteen UCC staff members including six GPs, four ENPs, two receptionists and three managers.

Results: Overall participants were positive about the inter-professional team that had developed and recognised that this process had taken time. Hierarchy within the UCC setting has diminished with time, although some residual hierarchical beliefs do appear to remain. Staff appreciated inter-disciplinary collaboration was likely to improve patient care. Eight key facilitating factors for the team were identified: appointment of leaders, perception of fair workload, education on roles/skill sets and development of these, shared professional understanding, inter-disciplinary working, ED collaboration, clinical guidelines and social interactions.

Conclusions: A strong inter-professional team has evolved within the GP-led UCCs over time, breaking down traditional professional divides. Future implementation of UCC models should pro-actively incorporate the eight facilitating factors identified from the outset, to enable effective teams to develop more quickly.

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ARTICLE SUMMARY

Strengths and Limitations of this Study:

Strengths:

- This study provides an insight into the forming of an inter-professional team within a novel GP-led UCC model that breaks down the traditional doctor-nurse hierarchy.
- The study incorporates opinions from various staff groups based on their experience of the development of the team over time.
- There is little in the literature about inter-professional team developments within such new UCC models to be able to learn from for future implementations.

Limitations:

- No patient or clinical outcome measures were used to see the effect of the team on direct patient care.
- Only the perspective from staff members within the urgent care centre were obtained and not from the wider hospital and community setting.

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INTRODUCTION

Within the National Health Service in England, Accident and Emergency attendances have increased dramatically over the past twenty years with the figure for 2014-15 reaching over 22 million.[1] Urgent care centres (UCCs) were first proposed in 1999 to reduce the numbers of inappropriate Emergency Department (ED) attendances by increasing primary care access.[2] General practitioner (GP)-led UCCs, often co-located with EDs, were developed from this with the aim of appropriately triaging patients. This model of care continues to be recommended by many professional bodies, including the Royal College of Physicians, the Royal College of Surgeons and the Royal College of Paediatrics.[3]

GPs and Emergency Nurse Practitioners (ENPs) are traditionally groups that do not work alongside each other within the ED. Within this new GP-led UCC model both ENPs and GPs are able to request investigations, initiate management and discharge patients, and collaborate together.[4] This breaks down the traditional assumption of doctors being the healthcare professional who diagnoses and discharges patients and shows the change in roles that have been made. One study found that the GPs working within an ED setting adjusted their role to fit the demands of both the patient and the wider healthcare system.[5] It is likely that this slight change in role will also occur within a GP-led UCC.

Teamwork within the healthcare system is essential for high quality, safe patient care.[6] One study found that surgical teams who exhibited less teamwork behaviours had a higher risk of death for their patients;[7] similar findings have been replicated in an intensive care setting.[8] It is not just patient safety that good teamwork improves but also patient satisfaction, staff retention and hospital costs.[9]

In many areas of healthcare the “physician vs nurse” culture remains and this can be disruptive to patient care.[10,11] However collaboration and collegiality between doctors and nurses is important for the team.[12,13] Indeed one study suggests that due to the encouraging results relating to patient outcomes when inter-disciplinary teamwork is utilised well, more healthcare models that promote collaboration between physicians and nursing staff should be implemented.[14]

Within a UCC setting very little is known about how the two professional groups (ENPs and GPs) work and develop as a team. Too often effective teamwork is presumed with no training or assessment of it when new models of care are introduced.[6] To the best of our knowledge, descriptive studies of teamwork have been done in the ED and in other hospital settings,[9,15] but not within an UCC model. Therefore, our study aims to describe the development of the team within the innovative new GP-led UCC model and to establish key facilitating factors from the UCC staff member’s perspectives.

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MATERIALS AND METHODS:

Setting

The same methodology was used for this study as in Greenfield et al. (2016).[16] A UCC was established at Charing Cross Hospital, London in 2009, alongside its sister site at Hammersmith Hospital.[4] A model was used to triage patients, with GPs at the forefront of the triaging for patients attending by an ambulatory ('walk in') pathway.[4] The patients are streamed based on this triage to the healthcare professional deemed most appropriate for their care including the ED. For example, patients with minor injuries are seen by the ENP in the "blue stream", patients with minor illnesses are seen in the "green stream" and can be seen by the GP or ENP and the "yellow stream" are considered GP priority and are seen by the GP only (See Appendix 1 for a more detailed description). The majority of participants work across both sites, although the interviews were conducted at Charing Cross.

Interview Design

A semi-structured, open-ended interview protocol was used to provide a systematic method of interviewing that still allowed the interviewers to delve further as the opportunity arose. The questions were developed by two of the authors (GG and AI) (Appendix 2). The interview focussed on various areas including teamwork within the UCC, alongside patients' motives for attending the UCC, the practicalities of working in the UCC and barriers to the model. [16] It was explained at the beginning by the interviewer that the data was being collected anonymously and interviewees were therefore encouraged to speak their own mind; the participants were informed that the data would be collated to produce research into the development of the GP-led UCC set up. The interviews were designed to be performed in 20-25 minutes due to being conducted in an intense urgent care work environment; no repeat interviews were performed due to time constraints, nor were transcripts returned for comment. The interview protocol was stabilised after the fourth interview.[16] The COREQ guidelines were followed for the design of this study – see Appendix 3.[17] As this is deemed part of a service evaluation, the study did not require ethical review by a NHS or Social Care Research Ethics Committee.[18]

Participants

Face-to-face interviews were conducted with 15 staff members at the Charing Cross UCC (6 GPs, 4 ENPs, 2 receptionists and 3 managers) in November and December 2012 by two authors experienced in gathering and analysing qualitative data (GG (male) and AI (female)). This was three years since the UCC was set-up in the GP-led format. The majority of the staff interviewed worked on both sites and were therefore able to reflect on their experience from both sites. Both the interviewers were at that time working in the Department of Primary Care and Public Health at Imperial College London; neither interviewer had previously met any of the participants. The interviews were performed in the consultation rooms to allow suitable privacy; the interviewer and participant alone were present. Out of 45 clinicians and receptionists, 15 were chosen to capture a wide range of perspectives and roles (i.e. purposive sampling).[19] Nobody declined to participate and no-one dropped out.

Data Analysis

The methodological orientation underlying this study is considered to be a combination of ethogenics, looking at the roles and rules by which people choose to act, and symbolic interactionism, looking at the symbolic meanings of social interactions.[20] All of the interviews

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were recorded and later transcribed, with anonymity being ensured; there were no field notes used in the analysis of the data. The full transcripts were re-read by three of the authors (SM, AI and GG) and themes identified. From this, data categories were identified and open coding performed using Atlas Ti version 6.2. Each interview was analysed and constantly compared to the other interviews to allow the themes to develop. Data collection and coding continued until data saturation was reached and there was no further information to be added.

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RESULTS:

Within both UCCs, stages of team development were identified with eight key facilitating factors identified.

Team Development

Overall the interviewees were positive about the inter-professional team that had developed within the UCCs. For example:

> *"Oh, they're [describing the ENPs - SM] fantastic. Really good. I would say we have a very close working relationship." (GP 13)*

> *"I think the team works very well. We've got a group of GPs and… we do work very closely together. I think the GPs and the nurse practitioners have a very good relationship." (ENP 6)*

> *"The GPs who we didn't know much, they have become part of the family now." (ENP 3)*

> *"…clinically the teamwork has been really good" (ENP 4)*

> *"…it has worked so you feel like you're a part of a larger team, rather than just on your own in this room." (GP 7)*

It was recognised throughout that the process of team development took time and therefore time can be identified as an over-riding theme that is echoed in many of the quotes below. Staff particularly picked up on time diminishing the traditional physician vs nurse culture and hierarchy. However, as the last quote emphasises, some hierarchical principles do appear to remain embedded in the culture for certain individuals:

> *"As opposed to three years ago when I started, there was that mentality [describing hierarchy – SM]. Three years later there's only little remnants of that type of mentality if I'm to be honest." (Receptionist 12 – with some managerial responsibilities)*

> *"I would say, probably initially, in the first few months…There were cases where some people might say, that's more appropriate for GP, and the GP would say, no, that's more appropriate for the nurse." (ENP3)*

> *"The only reason I'm smiling and, sort of, laughing is that no [there is no hierarchy - SM], is the short answer…people talk about do nurse practitioners want to be mini-doctors…. I appreciate that nurses are taking on roles that were previously performed by doctors ….I'm happy to work up to my level of confidence and competence" (ENP 4)*

> *"Personally I wonder how cost effective [referring to ENPs - SM]. Obviously, they're [ENPs - SM] brilliant with all the dressings. Doctors just don't go anywhere near dressing in their suits…So a problem here is I don't have a nurse…I'd love to have a nurse assistant" (GP 15)*

The staff recognised that the inter-disciplinary collaboration resulted in a safe system for the patients:

> "*And they [staff] all manage the patients appropriately, investigate them safely, send them home." (GP 13)*

> *"In terms of clinically safe, clinically appropriate, good service for the patient, better than the previous service, yes it is." (Manager 1)*

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"…model is very safe and also patients are streamed… so each stream there's a professional dealing with that, whether they are ENP – Emergency Nurse Practitioner – or one of the GP as well." (Manager 2)

Eight key factors were identified that facilitated an effective team to develop: appointment of leaders, perception of fair workload, education on roles/skill sets and development of these, shared professional understanding, inter-disciplinary working, ED collaboration, clinical guidelines and social interactions. These are summarised in Table 1.

Table 1: Eight key facilitating factors

Facilitating Factor	Example Quote
Appointment of leaders	*"But within time, they got a lead nurse, we put a new nurse in charge, things got better, things were running more smoothly."(Receptionist 12)*
Perception of fair workload	*"The key to unlocking that is to give people data so you can see look, the doctor sees X%, the nurses see Y%, there is a fair sharing of the work" (Manager 1)*
Education on roles/skill sets and development of these	*"No one really took the time to explain… if this happens, this is what is expected from you….So that really hindered the model, but as soon as they started being educated more, and being given an opportunity to understand the model more, they understood what it is they were supposed to be doing so that they did buy into it." (Receptionist 12 – role in management)*
Shared professional understanding	*"Sometimes we need them [GPs] to do certain things, sometimes they come to us for advice, sometimes we go to them for advice." (ENP 3)*
Inter-disciplinary working	*"This is the benefit from working as a team. You know that you are supported by somebody else and you are not alone." (ENP 8)*
ED collaboration	*"It's very easy to get a senior opinion of one of the [ED] consultants if you're worried about a patient" (ENP 6)*
Clinical guidelines	*"It helped to have evidence-based guidelines which people couldn't challenge" (Manager 1)*
Social interactions	*"Very often you see staff parties" (Manager 2)*

Looking at these separately, firstly the appointment of appropriate leaders by the managers seems to have enabled a smoother running of the department:

"But within time, they got a lead nurse, we put a new nurse in charge, things got better, things were running more smoothly."(Receptionist 12)

"When she [referring to the lead nurse – SM] came in it made life easier, because that way we could integrate more. (Receptionist 12)

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Initially the triaging and streaming of patients appeared to be an area that caused tension and friction between the GPs and ENPs.

> *"We [ENPs] are meant to see the blues and the greens; GPs are meant to see the yellows and the green. Some of the GPs...they used to tend to stick on the yellow, and leave all the greens." (ENP 3)*

However the management recognised this potentially contentious point and helped to resolve this by ensuring the staff perceived there was a fair workload:

> *"The key to unlocking that is to give people data so you can see look, the doctor sees X%, the nurses see Y%, there is a fair sharing of the work" (Manager 1)*

Again, over time, the staff began to understand each other's roles and expertise, allowing respect between the separate healthcare professional groups to grow and inter-disciplinary working to occur. The GPs and ENPs acknowledged each other's expertise:

> *"Sometimes we need them [GPs] to do certain things, sometimes they come to us for advice, sometimes we go to them for advice." (ENP 3)*

> *"They [GPs] will often come and ask us [ENPs] can you have a look at this, what do you think, and the same; we would go to them if we were a bit worried about patient at all just to get an opinion and things like that so I think we work quite well together. (ENP 6)*

> *"This is the benefit from working as a team. You know that you are supported by somebody else and you are not alone." (ENP 8)*

The managers recognised that initially not understanding the skills of each other hindered the development of the collegiality.

> *"No one really took the time to explain… if this happens, this is what is expected from you….So that really hindered the model, but as soon as they started being educated more, and being given an opportunity to understand the model more, they understood what it is they were supposed to be doing so that they did buy into it." (Receptionist 12 – role in management)*

The GPs also recognised that their role had changed slightly to facilitate working in an urgent care setting, rather than a general practice setting, and they had to adjust their skill sets based upon this:

> *"…there's more of the trauma stuff than you would see in general practice, and there's more of the acutely unwell patients…" (GP 13)*

> *"I think because the group of patients here, perhaps, is slightly different to what you'd see in your average general practice I think its's very good for refreshing your acute medicine skills." (GP 14)*

The inter-disciplinary working extended beyond the UCC as the UCC staff felt that the support of the ED management and staff enabled them to function better as a team within the UCC. The staff members in the UCC also valued the guidelines that had been put in place in collaboration with the consultants in the ED, to therefore allow them to refer from a strong position. The presence of the ED, and wider hospital staff, meant that advice and referrals could be made quickly, without inconveniencing other members of the UCC team:

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"It's very easy to get a senior opinion of one of the [ED] consultants if you're worried about a patient" (ENP 6)

"If I need the surgeon or the physician or the orthopaedic I know to call" (GP 10)

There was perhaps a suggestion that not all members of the ED however embraced the UCC and its role within the hospital:

"*…because, certainly, for the more junior doctors, it's good for them to see a whole spectrum of illness and injuries and they've [describing junior doctors – SM] had a significant number of patients who they used to manage, [who] they no longer see." (Manager 5)*

Finally over time the team generated in the workplace has extended beyond this into a social setting, with combined social activities after work:

"Very often you see staff parties" (Manager 2)

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DISCUSSION

What have we learnt in this study?

The inter-professional team within this novel GP-led UCC model have adapted and developed from its initial set up to form a cohesive team that values each other. Eight key factors have been identified that appeared to have facilitated the development of this team: appointment of leaders, perception of fair workload, education on roles/skill sets and development of these, shared professional understanding, inter-disciplinary working, ED collaboration, clinical guidelines and social. Looking at the eight key factors identified as potential facilitators for this process many of them are already recognised within the literature as being important in team development. The initial difficulties, and occasional feelings of hierarchy, have decreased over time, although some remain, and the healthcare professionals appear to be happy with their roles and responsibilities.

Comparison to the Literature

Overall, the UCC team appeared settled and interacted well together. With the introduction of the new GP-led UCC model, the staff members appear to have followed Tuckman's stage of group development: forming (as the team learnt about each other and what their clinical experience was), storming (whereby differences between the clinicians were emphasised and disagreements occurred but from which lessons were learnt and guidelines updated), norming (all team members took responsibility for their own actions and their own role) and performing.[21] The storming phase encompasses adaptability and the willingness to take each other's ideas and perspectives, both of which are recognised in the literature as key to effective teams.[22] They learnt about each other and improved collegiality amongst themselves by organising social events, developing guidelines together and in many ways solving their own problems, some of the ways Kiser believes medical professionals can connect.[23] All of this took time and it would appear that if the time taken for the "forming" and "storming" phases could be limited in a new healthcare model it would be optimal for patient's care. It may be that learning from the experiences observed here will help to minimise the time spent on these first two stages in the future.

Looking at the eight key factors identified as potential facilitators for this process many of them are already recognised within the literature as being important in team development. They also represent many of the TeamSTEPPS instructional framework components, a system developed in the USA for integrating teamwork into the healthcare system.[24] For example, the appointment of the lead nurse was recognised by staff as helpful in the smooth running of the team, alongside the support from managers to resolve potential tension over workload and it is well recognised in the literature that a good leader is crucial to the development of an effective team.[25,26] The leader is expected to provide a clear direction for the team, whilst also supporting the team members and creating a positive environment.[22,26] More holistically, good leadership has been shown to improve patient satisfaction and reduce patient adverse events and complications.[27] It is also one of the four key components to the TeamSTEPPS model, which also includes communication, mutual support and situation monitoring.[24]

The UCC team appears to encompass the different professional backgrounds well to make use of each member's different expertise.[25] The team members were aware of their roles and their boundaries enabling them to maximise the team's capabilities, an area recognised to improve teamwork.[15] The GPs respected the training and skill set of the ENPs in the majority, highlighted as important in the literature.[28] This finding of mutual respect is also reflected in other clinical settings, for example when nurse practitioners were used in a primary care setting.[29] It also

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reflects the "mutual support" component of the TeamSTEPPS model.[24] The GPs also recognised the need for a slight change in their skill set and role; they found there was greater need for acute medical skills within the UCC setting compared to general practice. Studies have previously shown that when GPs work within an ED setting they can be effective in terms of both satisfaction and cost-effectiveness.[30-32] This is likely to be the case within the GP-led UCC and the GPs, along with the ENPs, may well have developed their role to fit the demands of the patient population attending, as has been shown previously.[5] It may be however that managers should be aware that the GPs may require additional training and support to ensure their acute skills are to the standard necessary within an urgent care setting.

Initially the team experienced difficulties and some discord in triaging patients but it appears that as the key facilitating factors were implemented the team began to work more smoothly together. Now the UCC team exhibits many of the key behaviour skills for good teamwork: delegating the workload optimally (i.e. triaging patients fairly), using all available resources (i.e. the expertise within the ED) and calling for help when needed (i.e. the ENPs and GPs interacting together).[33] The tightening of clinical guidelines, initially intended for clinical reasons only, may reflect that embedding tools within a healthcare setting can improve teamwork and therefore enhance patient safety.[6]

Again with time, the feeling of hierarchy has decreased as the inter-disciplinary working has improved. Hierarchy is recognised as one area that can impede effective teamwork; hierarchies can lead to a stressful environment that is not conducive to a positive experience for staff or patients.[6,9,10] However we know that when nurses and doctors work together there are numerous advantages, including jointly advocating for the patient.[34] However, the embedded "physician vs nurse" culture does appear to remain, at least for certain individuals exemplified by *"Doctors just don't go anywhere near dressing in their suits".* It is interesting that this GP also stated that he worried about the cost effectiveness of ENPs. Automatic thoughts like this will create barriers and are likely to undermine effective teamwork and ultimately influence patient care.[10]

Aside from this example, the overall concern in previously published studies about "doctors being trained to be a doctor" and "a nurse being trained to be a nurse" and this boundary blurring, was not echoed.[35] Instead the staff members appeared to embrace the inter-disciplinary working. More junior doctors would, perhaps, feel more threatened by the role of the ENP as they themselves feel they have much to learn and would potentially be competing for that learning. This was hinted at by the manager who suggested junior doctors are now no longer seeing all the minor injuries and illnesses that they used to and so are not receiving the opportunity to improve their skills in these areas. However, as this is a unique GP-led set up this feeling of competition is not present within the UCC itself. Also, previous justifications in the literature regarding hierarchy from doctors, such as someone needing to be ultimately responsible for a patient's care, is in some way removed as ENPs can act autonomously to treat and discharge.[11] It is important for improving patient care that the collaboration between nurses and doctors are maximised and that both perspectives are valued.[36]

Strengths and Limitations

This study gives us an insight into the team that has developed within this new UCC model. The perceptions of various staff groups within the UCC were obtained, allowing a greater understanding of the team's development. This study is a snapshot in time in a dynamic system, therefore as team members and leadership roles change, the perceptions portrayed may change. However, we do get an insight at the three year time point, which may accurately reflect the new culture of the team and also allows us to demonstrate the changes that have occurred over that time period.

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Interviews, by their very nature, may direct participants towards giving the answers they believe the interviewers want to hear. To minimise the risk of this, the interviewees (GG and AI) emphasised to participants that everything said was not attributable to them. What is also important to note is that this study is simply looking at the UCC staff members' perspective. It does not gain any insight into other healthcare professionals working within the hospitals opinions' regarding the UCC. It was hinted at by a manager that certain staff groups within the ED, such as junior doctors, may not feel the UCC is beneficial to their learning experience due to loss of injuries and illnesses to the UCC that they used to manage. Future research in this area would therefore allow an interesting comparison to be made.

We also acknowledge that no patient outcome measures were assessed in this study and although we can assume that the good teamwork demonstrated is likely to be beneficial to patient safety and care, it is only an assumption.6 Further work is therefore required to establish whether this assumption is correct and whether the GP-led UCC team has a positive impact on patient's outcomes.

Potential Implications of these Findings

Eight key facilitating factors have been identified that, for future implementation of similar novel healthcare models, we suggest are emphasised and pro-actively incorporated from the very beginning. Also, as one receptionist stated, there is a lot that can be learnt from direct observation of the current model to ensure *"they get the right people they need… they can run more smoothly, and maybe hit the ground running" (Receptionist 12)*. Future research could include qualitative data regarding the opinions of other members of the hospital team in regards to the UCC, particularly the emergency department. The perception of the UCC from a community general practice perspective would also provide an interesting insight and this may allow policy makers to understand more about the role of the UCC in the wider setting.

CONCLUSION

A strong team has evolved within the GP-led UCC model, although this process took time. The team members feel valued and all have a clear understanding of their role and responsibilities. Therefore, it is likely that this enables patient care to be delivered effectively and safely, although research into the team's impact on patient outcomes is required. However, implementation was not perfect and lessons can be learnt for the future with eight key factors identified that, we believe, were integral in allowing the UCC team to fulfil its potential. These eight factors are likely to be key to informing future policy and workforce planning when developing similar healthcare models.

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CONFLICTS OF INTEREST:

AI, SG, AM, and GG are (or were at the time of data collection) employed by Imperial College London, which received funding to help evaluate the new model of care.

AUTHOR'S CONTRIBUTIONS:

SM analysed the data and drafted and revised the manuscript. GG conducted the interviews, analysed the data and helped to draft and revise the manuscript. AI conducted the interviews, analysed the data and helped to revise the manuscript. SG helped to draft the manuscript and revise the manuscript. AM initiated the study and helped to revise the manuscript. All authors read and approved the final manuscript.

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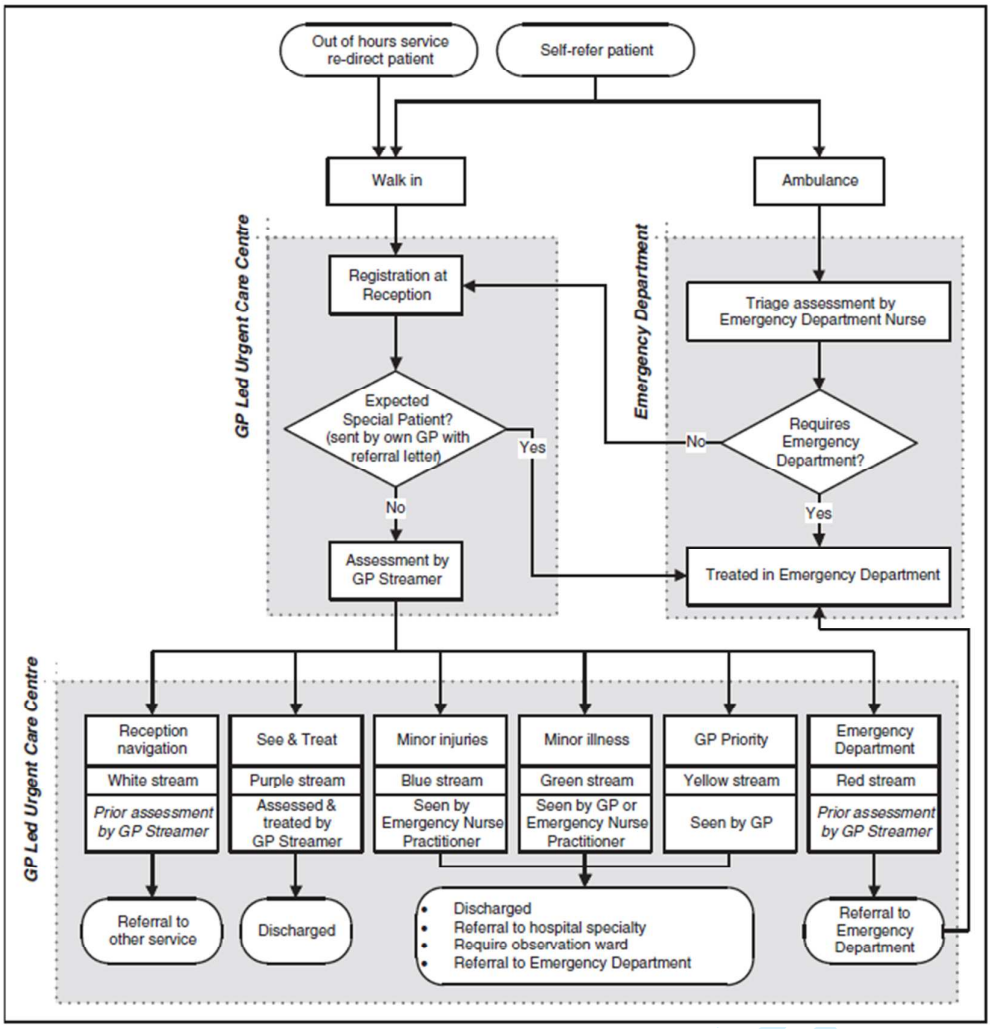
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Appendix 1: Patient Pathway at the UCC at Charing Cross Hospital, reproduced from Gnani et al. (2013)[4]



Appendix 2 – Interview Protocol

- Can you please tell me a bit about your role in the UCC?
- Can you please tell me a bit about the patients who come to the UCC? Why do they come here?
- How do you feel/relate about these motives?
- In your perception, to what extent are patients satisfied with the service they get here?
- Can you please describe a usual day in the UCC? What's happening?
- Can you please tell me a bit about your communication with the patients who come here?
- Can you give me some examples of things that helped the model to achieve its goals, and some examples of things hindered the model from achieving its goals?
- Can you please tell me a bit about how working here is related to you professional development as a clinician?
- Can you please tell me a bit about how is it for you to work in the team?
- Can you please tell me a bit about how is it for you to work with the UCC team?
- Can you please tell me a bit about how you think that the community GPs feel about the UCC?
- Do you think the model should be embedded in other hospitals? Is there something that you would change or do differently in the future?

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Appendix 3 – COREQ guidelines[17]

No. Item	Guide questions/description	Reported on Page #
Domain 1: Research team and reflexivity		
Personal Characteristics		
1. Inter viewer/facilitator	Which author/s conducted the interview or focus group?	5
2. Credentials	What were the researcher's credentials? E.g. PhD, MD	5
3. Occupation	What was their occupation at the time of the study?	5
4. Gender	Was the researcher male or female?	5
5. Experience and training	What experience or training did the researcher have?	5
Relationship with participants		
6. Relationship established	Was a relationship established prior to study commencement?	5
7. Participant knowledge of the interviewer	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	5
8. Interviewer characteristics	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	5
Domain 2: study design		
Theoretical framework		
9. Methodological orientation and Theory	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	5
Participant selection		
10. Sampling	How were participants selected? e.g. purposive, convenience, consecutive, snowball	5
11. Method of approach	How were participants approached? e.g. face-to-face, telephone, mail, email	5
12. Sample size	How many participants were in the study?	5
13. Non-participation	How many people refused to participate or dropped out? Reasons?	5
Setting		
14. Setting of data collection	Where was the data collected? e.g. home, clinic, workplace	5
15. Presence of non-participants	Was anyone else present besides the participants and researchers?	5

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16. Description of sample	What are the important characteristics of the sample? e.g. demographic data, date	5
Data collection		
17. Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	5
18. Repeat interviews	Were repeat interviews carried out? If yes, how many?	5
19. Audio/visual recording	Did the research use audio or visual recording to collect the data?	5
20. Field notes	Were field notes made during and/or after the interview or focus group?	5
21. Duration	What was the duration of the inter views or focus group?	5
22. Data saturation	Was data saturation discussed?	6
23. Transcripts returned	Were transcripts returned to participants for comment and/or correction?	5
Domain 3: analysis and findings		
Data analysis		
24. Number of data coders	How many data coders coded the data?	5
25. Description of the coding tree	Did authors provide a description of the coding tree?	N/A
26. Derivation of themes	Were themes identified in advance or derived from the data?	5
27. Software	What software, if applicable, was used to manage the data?	5
28. Participant checking	Did participants provide feedback on the findings?	5
Reporting		
29. Quotations presented	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	7-10
30. Data and findings consistent	Was there consistency between the data presented and the findings?	7-10
31. Clarity of major themes	Were major themes clearly presented in the findings?	7-8
32. Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	7-10

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