ELSEVIER
Journal of Medical Imaging and Radiation Sciences xxx (xxxx) xxx
Journal of Medical Imaging and Radiation Sciences
Journal de l'imagerie médicale et des sciences de la radiation
www.elsevier.com/locate/jmir

Research Article

Medical Image sharing: What do the public see when reviewing radiographs? A pilot study

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Available online xxx

ABSTRACT

Introduction: Policymakers wish to extend access to medical records, including medical imaging. Appreciating how patients might review radiographs could be key to establishing future training needs for healthcare professionals and how image sharing could be integrated into practice.

Method: A pilot study in the UK using a survey was distributed to adult participants via the online research platform Prolific. All subjects were without prior professional healthcare experience. Participants reviewed ten radiographs (single projection only) and were asked a two-stage question. Firstly, if the radiograph was 'normal' or 'abnormal' and secondly, if they had answered 'abnormal', to identify the abnormality from a pre-determined list featuring generic terms for pathologies.

Results: Fifty participants completed the survey. A mean of 65.8 % of participants were able to correctly identify if radiographs were normal or abnormal. Results in relation to the identification of a pathology were not as positive, but still notable with a mean of 46.4 % correctly identifying abnormalities. Qualitative data demonstrated that members of the public are enthralled with reviewing radiographs and intrigued to understand their performance in identifying abnormalities.

Conclusion: In the pilot, members of the public could identify if a radiograph is normal or abnormal to a reasonable standard. Further detailed interpretation of images requires supportive intervention. This pilot study suggests that patients can participate in image sharing as part of their care. Image sharing may be beneficial to the therapeutic relationship, aiding patient understanding and enhancing consultations between healthcare professional and patient. Further research is indicated.

RÉSUMÈ

Introduction: Les décideurs politiques souhaitent élargir l'accès aux dossiers médicaux, y compris à l'imagerie médicale. Comprendre comment les patients peuvent examiner les radiographies pourrait être essentiel pour déterminer les besoins futurs de formation des professionnels de la santé et la manière dont le partage des images pourrait être intégré dans la pratique.

Méthodologie: Une étude pilote menée au Royaume-Uni au moyen d'un sondage distribué à des participants adultes par l'intermédiaire de la plateforme de recherche en ligne Prolific. Aucun des sujets n'avait d'expérience professionnelle préalable dans le domaine des soins de santé. Les participants ont examiné dix radiographies (projection simple uniquement) et ont répondu à une question en deux étapes. Premièrement, ils devaient dire si la radiographie était « normale » ou « anormale »; deuxièmement, s'ils avaient répondu « anormale », ils devaient identifier l'anomalie à partir d'une liste prédéterminée comprenant des termes génériques pour les pathologies.

Résultats: Cinquante ont répondu au sondage. En moyenne, 65,8 % des participants ont été capables d'identifier correctement si les radiographies étaient normales ou anormales. Les résultats concernant l'identification d'une pathologie n'étaient pas aussi positifs, mais tout

Contributors: All authors contributed to the conception or design of the work, the acquisition, analysis, or interpretation of the data. All authors were involved in drafting and commenting on the paper and have approved the final version.
Competing Interests: All authors declare no conflict of interest.
Funding: A grant enabling the work was received from the College of Radiographers Industry Partnership Scheme ((CoRIPS), Award Reference SRA020).
Ethical approval: The pilot study was granted ethical approval by the University of Suffolk, School of Health and Sports Sciences, (Ref: SREC21011. A ge0).
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https://doi.org/10.1016/j.jmir.2024.04.016

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de même notables avec une moyenne de 46,4 % d'anomalies correctement identifiées. Les données qualitatives ont démontré que les membres du public sont captivés par l'examen des radiographies et intrigués de comprendre leurs performances en matière d'identification des anomalies.

Conclusion: Dans le cadre du projet pilote, les membres du public ont pu déterminer si une radiographie était normale ou anormale avec un niveau de qualité raisonnable. Une interprétation plus détaillée des images nécessite une intervention de soutien. Cette étude pilote suggère que les patients peuvent participer au partage d'images dans le cadre de leurs soins. Le partage d'images peut être bénéfique à la relation thérapeutique, en aidant à la compréhension du patient et en améliorant les consultations entre le professionnel de santé et le patient. Des recherches plus approfondies sont nécessaires.

Keywords: Image sharing; Image interpretation; Reporting; Abnormality detection; Patient Care

Introduction

Image interpretation, the process of making diagnoses and monitoring disease from medical imaging, is a field of radiographic practice requiring post-graduate training. Traditionally carried out by radiologists, the work of plain radiography image interpretation has now become routine for reporting radiographers [1,2]. Qualified diagnostic radiographers in the United Kingdom (UK) are expected to be able to highlight abnormalities and identify matters requiring urgent attention using Red Dot schemes [3] and preliminary clinical evaluation (PCE) [4,5], as part of their regulatory proficiency standards [6].

With the advent of direct digital radiography, demand for immediate results has been found to be present in almost 80 % of patients [7]. The process of giving results tends to be a verbal process in which the patient does not view their own imaging. 'Image sharing' (whether as part of result sharing or as an activity of enhancing patient care) is a relatively unexplored field in the radiography context. Patients and policymakers want medical records to be more accessible [8–11], and proposed changes in the UK will soon make diagnostic radiological images available to patients, granting patients and members of the public access to traditionally 'hidden' elements of the radiographer's work [12,13].

Given that 'results' (radiological images) will soon be available via mobile applications and online facilities, it is for Healthcare Professional(s) (HCPs) to consider if image sharing could or should form part of the process of giving results. Providing patients with visible evidence of their diagnosis in addition to giving results is arguably a simple addition to the current process. This visual evidence could be similarly supplied in cases of other pathologies such as osteoarthritis so that images and verbal information supplant the dynamic of the passive patient and the powerful practitioner [14,15].

Conventionally, the job of the diagnostic radiographer has not been to provide a diagnosis or treatment plan despite the job title, but to acquire the image which allows for diagnosis and treatment to be determined [2]. The researchers (who are all diagnostic radiographers and academics) consider that the expert in image acquisition and imaging technologies is the radiographer. It is feasible that if diagnostic images were to be made available to patients, the radiographer's work would be more open to critique and more widely shared. Moreover the 'expert patient' [16,17] may be more informed and thus may contribute more effectively as part of the healthcare team.

The role of the reporting radiographer is now well established, and with the increasing use of PCE the expertise of the radiographer is becoming more widely recognised. Patients are anecdotally known to ask radiographers if anything is visible immediately after the acquisition of an image. This suggests that patients are conscious of the skills a radiographer gains via their training and it may therefore be considered that 'diagnosis' is becoming a more prevalent part of the responsibilities the radiographer has [2,5,18,19].

Thus, if there is some possibility of patients reviewing images, it is important to establish what members of the public can understand of them in the absence of professional training. This could inform future training needs for numerous members of the multi-disciplinary team and establish any changes which might be required to the scope of practice of radiographers and other health professionals to aid in discussions, treatment, and ongoing care.

Health literacy

Defined as "the ability of an individual to obtain and translate knowledge and information in order to maintain and improve health in a way that is appropriate to the individual and system contexts" [20], HCPs' understanding of health literacy is continually developing.

Health literacy is important to publicly funded and private health systems alike. Public health systems are widely reported as suffering from budgetary deficits, falling bed spaces and staffing issues [21–27]. If patients are health-literate, they can understand and contribute to their healthcare. Patient experts (who have lived experience of conditions or examinations) are now well integrated into most specialties recognising the unique perspective the expert patient brings [16,17,28,29].

HCPs have learned from medical imaging for decades, and it is widely accepted that patients can understand information about medical matters with intervention by professionals. This pilot project has sought to establish what intrinsic information is available to a patient who views a radiographic image without any intervention from a HCP and thus the level of health literacy in the UK with respect to radiology.

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Professional context

Radiographers in the UK are highly skilled, degree educated individuals with a substantial grounding in anatomy, pathology, physiology, radiation physics, and imaging science. The scope of their role is wide ranging and is constantly evolving [30–32].

The gap of four decades between introduction of the red dot scheme [33] and the modern equivalent in PCE [4,5] is representative of the historical reluctance of the Royal College of Radiologists and others to see the role of the radiographer as anything other than the acquirer of images and operator of the equipment [34].

Given the shortage of radiologists and reporting radiographers in the UK [35,36], it is, in the view of the researchers, reasonable to begin to consider how radiological image sharing may become part of 'normal' healthcare and the implications of this for patients and HCPs.

Aim

This study aims to discern what intrinsic information is understood by a patient who views a radiographic image without any intervention from a HCP.

Objectives

- To ascertain the accuracy of participants in determining if a radiograph is 'normal' or 'abnormal'.
- To establish if participants can identify pathologies.
- To analyse data and outline future research priorities for image sharing with patients.
- To consider whether patients find such activities interesting or useful.

Literature review

Patient desire to see images

The most prominent theme which emerges from existing research is that patients have a very strong desire to see their images with some suggesting that circa 85 % of patients wish to see their images or the reports accompanying them [37–39]. Despite the strength of feeling evidenced, the manner of sharing information as part of the 'results' does not appear to have altered [40,41]. This poses a dilemma for those that refer patients for imaging, for those that undertake imaging and for those who provide reports. Does access for patients present a problem or an opportunity? If patients have a desire for this information, there is an obligation on HCPs to consider whether established practice needs to change as a result of being contrary to patient expectation or simply being archaic.

Workload and professional issues

Sharing medical images may present a new challenge in health informatics, public health and health literacy. However, the integration of medical records into electronic applications makes this an inevitability rather than an option for HCPs. An additional concern for physicians is that sharing images will result in an increased workload, though it should be noted that much of the existing research suggests this concern is ill-founded [39]. Research has also found that actively sharing health data decreases malpractice litigation [39].

Technology and security concerns

Lee et al. (2015) [42] and Starcevic (2023) [43] among others have reported that there is apprehension about patients seeking information which may not come from trustworthy sources (colloquially referred to as seeking the assistance of 'Dr. Google') [42–45]. The reasons that people seek information about their own health relates back to the concept of 'health literacy' and it is understandable that there are professional concerns about the source of information. As an example, a search using www.google.com for 'Chest X-ray' was found by the researchers to produce over 291 million results. Of these, some feature images or descriptions of malignancies which would present a clear and obvious concern to any patient in the absence of more detailed and nuanced guidance and support.

Although confidentiality of patient data is naturally a concern for health professionals (particularly with increasing electronic data storage security worries) [46,47], existing research does not appear to support any theories of significant alarm on the part of patients when it comes to electronic health record sharing [48,49]. Many devices such as tablets and phones have high standards of integrated security, additionally software distributors often impose requirements on developers of applications to utilise the same security standards (biometrics and passwords) to ensure protection of personal data.

The relationship with the patient

Concerns in relation to how the physician-patient relationship may be impacted by increasing access have been explored in research with some finding that, the high-level of understanding that patients had impressed the physicians suggesting that it may enhance the doctor-patient relationship rather than detract from it or damage it [13,39,50]. Moreover, some researchers have considered how patients might want to receive results, in one study finding that patients had a strong desire to see their results and imaging even where results were abnormal [39].

It has been suggested that sharing images brings benefits to the patient and the HCPs charged with the patient's care. One such benefit is demonstrable evidence that patients' understanding of their diagnosis increases alongside their ability to more successfully recall information when shown 2D or 3D imaging (despite 3D imaging being particularly complex) [51].

The foregoing factors are reason enough to explore the viability of the idea that patients should have access to their images. Thus, an initial overview of the ability of patients to appre-

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Table 1
Participant Exclusion criteria.

Exclusion Criteria	Rationale
Participant under the age of 18 years	Under 18's require additional ethical approval considerations. For this stage of research this would be unnecessary.
Healthcare experience as a volunteer, student or professional	Having any experience in healthcare may have exposed the participant to radiology and associated skills.
Resident outside the United Kingdom (UK)	Unknown educational background outside the UK. Potential for language barrier. Other international practices differ and therefore image sharing may already occur and this study is in relation to UK practice.

ciate the nuances of pathological appearances on radiographic images is a first step towards establishing how image sharing might be implemented.

Method

The pilot study was granted ethical approval by the University of Suffolk, School of Health and Sports Sciences, Ref: SREC21011. A grant enabling the work was received from the College of Radiographers Industry Partnership Scheme ((CoRIPS), Award Reference SRA020).

In consideration of the nature of this study as a pilot, the researchers began by establishing a reasonable sample size. In consideration of this and the funding available, a sample of 50 members of the public was considered by the researchers as appropriate to provide initial data and an indicative response to the aims of the study.

It was agreed by the researchers that a larger sample size held a risk of becoming a full research study without a pilot study in support.

Participant exclusion criteria were applied as given in Table 1.

The researchers considered whether an observational study would be suitable in order to meet the aim of the research, however it was felt this may result in complexities and restrictions which are more suited to a full study and unnecessary for a preliminary test.

The researchers considered the best approach to meet the aim and objectives in light of this being a pilot study. A survey was considered the most appropriate method to establish the ability of the participants. Researchers decided that to establish if members of the public could interpret radiographs, the approach should be similar to that used in the education of student radiographers, a two-stage process where the participants are asked:

1. When considering the presenting complaint and age of the patient if, in their opinion, the acquired radiograph is 'normal' or 'abnormal'.
2. If they believed the radiograph to be abnormal, participants were asked to identify the abnormality.

When a participant identified an 'abnormal appearance' the researchers were keen to ensure consistency throughout the survey. Hence, the subjects were asked to identify abnormalities from a pre-determined (and linguistically simplified) list prepared and agreed by the researchers and presented in the following order:

- Fracture
- Cancer
- Dislocation
- Arthritis
- Foreign Body (Something that should not be there such as a piece of glass or metal)
- Other (Please specify).

At the end of the survey, two qualitative questions were asked, initially to uncover the opinion of the participant regarding image sharing and secondly to obtain information about participating in the survey.

Traditional printed surveys are controversial, largely due to perceived poor response rates [52]. To ensure the desired sample size was achieved, the researchers decided to proceed with an electronic survey. They considered that a participant would need to use a computer and thus an additional exclusion criterion was added to reflect that a participant must be using a computer to complete the survey (and not a device such as a phone or tablet).

The primary investigator generated a survey to meet the above criteria. This was produced using the Qualtrics software (version August 2022, Qualtrics, Copyright 2022, Utah, USA). To allow for electronic distribution, the researchers used the website Prolific [53] which has established itself as a trustworthy platform for researchers internationally. The Prolific website has a pool of hundreds of thousands of participants to promote surveys to and integrates with the Qualtrics software. The researchers specified the inclusion and exclusion criteria and the first 50 participants from the pool who met the criteria given were able to take part in the survey. Each participant was allocated a computer-generated random participant identifier by the software.

To establish if the survey was user-friendly and would generate the data as expected, the principal investigator distributed the survey to three diagnostic radiographer peers for user testing. The peers were asked to time their participation, seek to create intentional errors, and ensure the survey functioned as expected. The feedback confirmed participation would take 30 to 40 min. Other feedback from the peers included some minor grammatical and spelling errors. It was recognised that some bias would exist in this peer testing since the peers had knowledge which the anticipated participants would not. However, the intent was to ensure the functionality of the survey rather than test potential outcomes.

Participants were presented with digital information sheets prior to commencing the study and digitally agreed to participate, in addition they were free to withdraw at any stage. The

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Table 2
List of radiographs.

Question Number	Projection	Pathology/Abnormality	Source ID
1	Antero-Posterior (AP) Elbow	Undisplaced radial head fracture	Assoc Prof Frank Gaillard, Radiopaedia.org, rID: 24158
2	AP Shoulder	Anterior dislocation of the humeral head	Dr Jeremy Jones, Radiopaedia.org, rID: 6265
3	Lateral cervical spine	Foreign body within the lower oesophagus.	Dr Jan Frank Gerstenmaier, Radiopaedia.org, rID: 36966
4	Dorsi-Plantar Foot	Normal (no abnormality detected)	Dr Dai Roberts, Radiopaedia.org, rID: 80409
5	Postero-Anterior (PA) Chest	Moderate left sided pneumothorax	Dr Derek Smith, Radiopaedia.org, rID: 37132
6	Bilateral weightbearing AP Knee	Well progressed osteoarthritis bilaterally	Dr Vivek Pai, Radiopaedia.org, rID: 27042
7	Lateral thumb	Normal (no abnormality detected)	Andrew Murphy, Radiopaedia.org, rID: 48082
8	Lateral ankle	Normal (no abnormality detected)	Andrew Murphy, Radiopaedia.org, rID: 48079
9	PA Wrist	Transverse fracture of the waist of scaphoid	Dr Mohammad Osama Hussein Yonso, Radiopaedia.org, rID: 98726
10	Lateral knee	Multiple widespread lytic-sclerotic permeative lesions of the tibia with a wide zone of transition (Lymphoma)	Dr Yasser Asiri, Radiopaedia.org, rID: 65128

software restricted access to participants taking part via a computer rather than on other devices such as by phone or tablet. This was to ensure consistency in presentation and to avoid potential technical issues. Those completing the survey were paid 6.50 GBP from the grant funds enabling the study.

Participants were only given one projection rather than the two which might be expected in typical UK practice for most extremities. This was intentional to ensure that the participants did not encounter any confusion or difficulty with understanding changes in the appearance of anatomical features. Including additional projections would have potentially increased the amount of time requested of the participants.

Radiographs for the survey were taken from the website Radiopaedia.org under the terms of the Creative Commons Attribution-Non-Commercial-Share Alike 3.0 licence and were presented to the participant in the order of Table 2. The lead author and second author checked each radiograph, the stated Radiopaedia diagnostic certainty level and case discussion (where available) to ensure the participants were not misled. The authors feel satisfied that the diagnosis given for each radiograph is reliable based on appearances and the information available.

Table 3
Normal vs Abnormal Results.

Question	Answer from pre-determined list given to participants (& Pathology)	Correct	Incorrect
1	Fracture (Radial head, undisplaced)	52 % ($n = 26$)	48 % ($n = 24$)
2	Dislocation (Humeral head, anterior dislocation)	86 % ($n = 43$)	14 % ($n = 7$)
3	Foreign Body (located in lower oesophagus)	56 % ($n = 28$)	44 % ($n = 22$)
4	Normal	62 % ($n = 31$)	38 % ($n = 19$)
5	Other (Pneumothorax)	80 % ($n = 40$)	20 % ($n = 10$)
6	Arthritis (Osteoarthritis bilaterally)	90 % ($n = 45$)	10 % ($n = 5$)
7	Normal	46 % ($n = 23$)	54 % ($n = 27$)
8	Normal	78 % ($n = 39$)	22 % ($n = 11$)
9	Fracture (Waist of Scaphoid, Transverse)	50 % ($n = 25$)	50 % ($n = 25$)
10	Cancer (Lymphoma)	58 % ($n = 29$)	42 % ($n = 21$)
	Mean:	65.8 %	34.2 %

Results

Fifty participants completed the survey in full. Five additional participants did not complete the survey fully and have been excluded from these results. When a participant withdraws, Prolific re-opens the survey to its participant pool to ensure researchers obtain their desired sample.

The first stage for each radiograph was to establish if the participant considered the image normal or abnormal. Results for each question are shown in Table 3.

The second question was to identify abnormalities based on the pre-defined list. Where a participant selected 'abnormal' to question 1, the range of subsequent responses to question two are given in Fig. 1.

For those participants who correctly identified an abnormality in stage 1, the identified cause was accurately identified according to Table 4.

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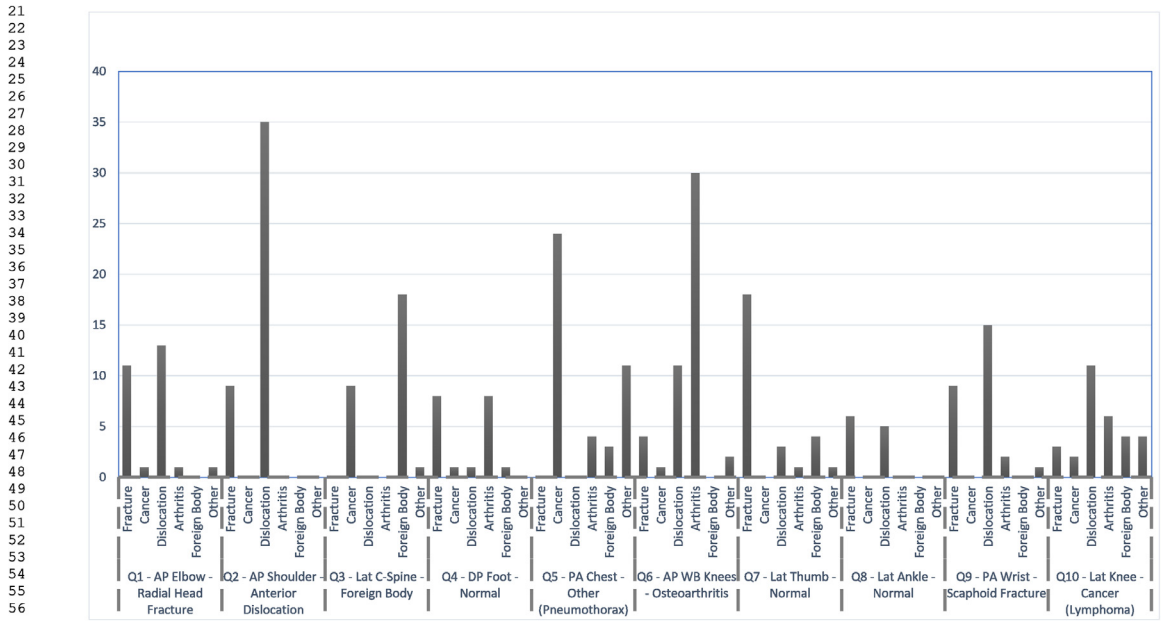


Fig. 1. Identification of abnormality results.

Table 4
Identification of pathology - accuracy results.

Question	Expected pathology from pre-determined list.	Participants correctly identifying cause (from those who selected 'abnormal')
1	Fracture	42.31 % ($n = 11$)
2	Dislocation	81.40 % ($n = 35$)
3	Foreign Body	64.29 % ($n = 18$)
4	Normal	
5	Other (Pneumothorax)	27.50 % ($n = 11$)
6	Arthritis	66.67 % ($n = 30$)
7	Normal	
8	Normal	
9	Fracture	36.00 % ($n = 9$)
10	Cancer	6.89 % ($n = 2$)
	Mean	46.44 %

Qualitative data were collected at the end of the survey by seeking participant opinion on image sharing, and the survey itself. 84 % ($n = 42$) respondents expressed that they found the opportunity to review radiographs "interesting" or "very interesting" and in most cases used words indicating an element of enjoyment.

> "This was a really interesting study – I hadn't seen a real X-ray before so this was both exciting and intriguing.
>
> It was difficult looking at them and trying to determine whether they were normal, having had nothing to base this decision off. However, the strategy I tended to use was to think about my bones (sometimes look at them physically – e.g., my arm/wrist) and how they might appear, and then consider how the X-ray compared. I found the task difficult, and in particular identifying things like cancer and arthritis was particularly challenging as I imagine there are indicators of these (which I have no prior knowledge of). Overall, a really unusual and interesting study to participate in - many thanks!"
>
> *Participant 8d70aea*

68 % ($n = 34$) of respondents confirmed some desire to know how 'well' they had performed and 88 % ($n = 44$) agreed it would be desirable for patients to review their own imaging when it is undertaken. Of these 88 % ($n = 44$), half said any HCP could discuss their imaging with them (i.e. there was no preference for a physician).

A small number of comments ($n = 3$) referred to having no specific desire to see their images given that there was an implicit trust the HCPs would deliver results to them.

Discussion

Patient desire to view diagnostic images

Best expressed by the quote from participant 8d70aea, reviewing medical information is "really interesting". Much of the work of radiographers is hidden from the participants [54], sharing diagnostic imaging exposes and demystifies the findings of medical imaging. Thus it is not surprising that exposition of the secrets is of interest to patients and as suggested by Murphy (2009) it is incumbent on imaging professionals to be aware of both 'backstage' and 'front of house' in interacting with patients [55]. Collecting the results of imaging is still part of the 'performance' of radiography. Enhancing that performance assists in removing the fourth wall between the patient as a passive spectator and the HCPs as qualified experts. The qualitative

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responses strongly suggest that patients find radiographs fascinating, and a point of interest in their care [56].

Since image sharing has also been shown to improve health literacy [51], HCPs should consider how this desire to see radiological images might be addressed to aid rehabilitation and contribute to public health initiatives. It should be considered that during the pilot study, participants were shown the imaging of other (anonymous) patients. Reactions and results could have been different had patients been shown imaging of their own body. This could be relevant for future study as the impact may be different when patients approach the task from a more informed position such as understanding the mechanism of injury or previous diagnostic test results.

Since radiological imaging is, in time, to be made more accessible to UK patients, this project appears to give credence to a more in-depth study.

Patient understanding

Radiological imaging can be complex, particularly in cross-sectional imaging or in novel modalities. However, with no intervention or training, members of the public demonstrated an admirable ability to determine the presence of abnormalities, though they were unable to specify the nature of the abnormality with the same level of accuracy. Nevertheless, the overall performance was still notable when considering that the participants were not trained. This may suggest that patients have a greater understanding of imaging data than HCPs currently appreciate.

It is worthy of reflection that many doctors do not feel adequately prepared to interpret imaging results following their training [57,58] and fostering a more informed relationship which encourages some autonomy on the part of the patient may reduce the burden on HCPs [16,17].

A need for supporting information

Whilst patients demonstrate a commendable performance in interpretation of radiographs, the performance is not infallible and the researchers have in mind that any medical information must be supported by trained, qualified and regulated professionals to ensure patient safety. Additionally, as participants detailed a requirement to understand their performance, it could be hypothesised that some anxiety will exist if the professional support of qualified interpretation were removed entirely.

Although literature confirms clinician workload does not increase [39] by providing patient access to medical imaging, there is likely to be some apprehension if the sharing of radiological imaging is provided without careful consideration and research as to how HCPs might support those patients who understandably have queries [37].

Performance varied in giving the cause of an abnormality. This could have been due to the nature of some of the pathologies and projections selected by the researchers such as the scaphoid fracture which are difficult to appreciate even by HCPs and are frequently subject to repeat or multimodality imaging [59]. Furthermore, second/complementary projections were not provided which may have enhanced confidence in participant interpretation but equally may have posed more conflict for them in determining the nature of abnormalities.

The pre-determined list of pathologies was simplified to ensure information was accessible, for example stating 'cancer' rather than specifying types of abnormalities which may appear malignant whilst being benign such as a non-ossifying fibroma. Participants were not tested on their knowledge of pathology thus with a more complex list, results may have differed reflecting the level of health literacy as suggested in the discussion in Williams, Moeller and Willis (2018) [60].

Limitations

Seeking greater validity of the results may be helpful. The results of this pilot are not reliable in terms of generalising them externally.

Participants were only provided single projections (views) despite standard protocols in projection radiography practice generally calling for two projections of the anatomy in most cases. This practice supports the diagnostic value of any determination made by the reporting professional. The absence of a second projection may have impacted interpretation by the participants and in any future study consideration given to including standard projections. Moreover, the fact the participants were not reviewing their own imaging as described in the discussion section should be considered a limitation.

Participants were not supervised during completion of the survey, if repeating the study, consideration should be given to monitoring participants to ensure fair testing to ensure that participants do not cheat by using internet or other resources.

The intent of the authors was to consider if there was scope to change procedures and processes. There must be some thought and research about the challenges such changes might bring such as whether radiographers are or should be equipped or trained to deliver 'bad news' to patients. This has not been explored in this study.

Since participants were not asked to specifically identify the abnormality they were referring to in the radiograph, it is possible that some misidentification could have occurred. Participants had no education as part of this pilot study, as such it was not possible to undertake a null hypothesis.

Conclusion

Members of the public may be able to provide a basic interpretation of radiographs. Further study and research is warranted to confirm this conclusion. Sharing images with patients should be considered as a method by which patient understanding of their condition and treatment can be enhanced. Image interpretation appears to be relatively limited until and unless aided by some intervention thus using patient images can be

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a useful adjunct to developing treatment plans and managing ongoing care.

Radiographers need to begin to consider how their work might be reviewed by patients. In addition, enhancing how the radiography profession can engage with patients beyond the examination room might be of value and may lead to new advanced practice roles.

Participants reporting enthralment with this opportunity to review radiographs indicates a potential route for recruitment and improving patient care by further exposition of the work done by radiographers. Further research should be undertaken to explore medical image sharing in more detail.

The intent of this project as a pilot suggests that further research is required into the use of radiographs in health literacy and more widely, image sharing by HCPs.

Recommendations

A full experiment or trial is desirable to find more conclusive evidence and test patient image interpretation and to determine the limitations of any future development in image sharing. Additionally, the information that radiographs generate such interest should be considered a route to recruitment to radiography.

Acknowledgements

The authors would like to acknowledge the College of Radiographers Industry Partnership Scheme (CoRIPS) for a grant enabling the study to take place. The authors would like to thank Amy Giddings, Shannon Terris and Natalie McIntyre for their assistance in reviewing the survey prior to distribution.

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Please cite this article as: S. Preston, R.M. Strudwick and W.A.S. Cox, Medical Image sharing: What do the public see when reviewing radiographs? A pilot study, Journal of Medical Imaging and Radiation Sciences, https://doi.org/10.1016/j.jmir.2024.04.016

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