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## Participatory action research into implementing open access in musculoskeletal X-ray: Management and staff perspectives

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## **Participatory Action Research into Implementing an Open Access Service in Musculoskeletal X-Ray: Management and Radiographer Perspectives in the Baseline Evaluation phase**

### **Abstract**

#### **Introduction:**

Neighbouring Trusts have implemented open access (walk-in) services to shorten waiting times in x-ray. Despite this, staff perceptions of their effectiveness have not yet been studied. This study forms the initial baseline evaluation phase of wider participatory action research investigating the implementation of an open access service for general practitioner musculoskeletal x-ray referrals. Staff perceptions regarding effectiveness of the current service were gathered, including their opinions regarding the effectiveness of open access services.

#### **Methods:**

Qualitative data was obtained via three semi-structured interviews with radiology management and two (cross-site) staff focus groups over a 2 month period. Template analysis was used to interpret the data with the aid of NVIVO 11 to facilitate analysis.

#### **Results:**

Template analysis uncovered several drivers for changing the current service including waiting times, external pressures, patient choice and administrative delays. 'Flexibility' was the key theme to arise during discussion regarding the effectiveness of the current service. Potential for improved access was highlighted as a major benefit to the implementation of open access, however 'workload', 'staffing' and 'communication' were all identified as potential barriers to its implementation.

**Conclusion:**

Although several staff members were satisfied with current service several drivers for change were identified that need to be addressed in order to truly deliver a service that fulfils the patients' needs. Results will inform the wider participatory action research that will investigate the barriers to implementing an open access service and identify whether this is indeed a suitable method of addressing the drivers for change.

**Key words:**

Musculoskeletal; X-Ray; Radiographer; Perspectives; Open Access; Participatory Action Research.

## Highlights:

1. Gathers perceptions of current service effectiveness and potential for open access.
2. Themes of 'external pressure', 'waiting times', 'patient choice' and 'administrative delays' drive a need for service change.
3. 'Flexibility' was the key theme regarding the effectiveness of the current service.
4. Identified barriers to open access include, 'workload', 'communication' and 'staffing'.
5. Results will inform the next stage of the wider participatory action research.

## Participatory Action Research into Implementing Open Access in Musculoskeletal X-Ray: Management and Staff Perspectives

### Introduction

Several factors highlight a need to reduce waiting times in radiology within England. Several waiting time targets have been proposed by the government mandate of the NHS Constitution and the Independent Cancer Taskforce (ICT)<sup>1</sup>. These include a maximum 18-week wait from general practitioner (GP) referral to consultant-led non-emergency treatment, a maximum 6-week wait for any diagnostic test and a two week wait for any diagnostic test for patients highly suspected of having cancer<sup>1</sup>. Despite this recent NHS statistics from January 2017 highlight that 14,600 (1.7%) patients are still required to wait longer than 6 weeks<sup>2</sup> for their imaging, a figure above the operational standard of 1%<sup>2</sup>.

In addition to external targets, there appears to be a developing, 'no wait culture', amongst the public. The NHS Cancer Plan champions public awareness of cancer and has previously publicised and promoted the importance of a swift diagnosis to improve treatment outcomes<sup>3</sup>. In addition, further public health care promotion has been implemented and will continue in the coming years<sup>4</sup>. Resultantly, patients are expecting swift imaging services to facilitate their treatments. In response professional bodies in imaging have stressed the need to seek ways of facilitating timely access to imaging for all patients, regardless of background or illness<sup>5</sup>. Potential future solutions are suggested, including 'Open Access' (walk-in), services where patients may attend for their x-ray from primary care at any time within a defined period<sup>5</sup>.

Two neighbouring Trusts have implemented open access services for their primary care musculoskeletal (MSK) x-ray patients to reduce waiting times and increase patient choice of attendance times<sup>6</sup>. Through the new service patients may attend

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for their x-ray at any time between 8am and 5pm <sup>6</sup>. The service received positive feedback from patients with one stating; 'To be able to walk in and out on the same day as getting referred by my GP was fantastic I didn't have to wait about or worry' <sup>6</sup>. The concordant relationship between reduced waiting times and stress/anxiety complements findings of both English and Canadian studies examining the impact of waiting times on patient care in a variety of disciplines <sup>7,8,9</sup>.

## **Literature Review**

A systematic literature search was conducted using a variety of databases (including Medline and CINAHL) in addition to searches of independent journals. Key words included; 'Radiographer', 'x-ray'; 'walk-in'; 'open access'; 'perspectives'; 'perceptions' and 'effectiveness'. Only one study was found to investigate the effectiveness of an open access service. This was a mixed-methods study of a new chest walk-in service in Corby, United Kingdom (UK), via use of patient questionnaire and clinical data <sup>10</sup>. This was a pure open access system where patients could present at x-ray without a referral from their GP. The radiographer was then responsible for vetting the referral in response to certain clinical justifications. Results yielded a dramatic increase of referrals by 63% however the difference in cancer detection level was not statistically significant <sup>10</sup>. This study was limited in its small scale nature and was only conducted over a period of one year.

Currently the impact of the service change on the radiology staff remains unexplored; indeed no studies could be found that examine radiographer perspectives of open access/walk-in services. One study by Martin et al <sup>11</sup> did however investigate staff perceptions with regards to the practicalities of an emergency department service. Patients that were kept waiting for considerable periods were more dissatisfied with their experience of the service and felt, 'as if my time was of no importance' <sup>11</sup>. Staff often felt increased stress in such circumstances <sup>11</sup>, a concept that has been mirrored in later studies investigating staff and patient well-being in relating to waiting times <sup>8</sup>.

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One study examined the effectiveness of a 'same day', appointments service in ultrasound <sup>12</sup>. Unlike in Open Access, patients were still required to book an appointment, however this could be done *immediately* following the patient's GP referral <sup>12</sup>. Patient waiting times from referral to appointment were significantly reduced following implementation of the new service with most choosing to attend within 3 days of referral <sup>12</sup>. Despite this waiting times within the department subsequently increased from 6.5 minutes to 22 minutes and patient satisfaction reduced concordantly <sup>12</sup>. 30% of patients were unhappy/very unhappy with departmental waiting times compared with 11% of patients using the appointment service <sup>12</sup>. This issue could also occur in Open Access as a large number of patients could potentially attend the department at the same time.

The above literature suggests that open access may provide a solution to current waiting time pressures, however there is a distinct lack of quantitative and qualitative literature investigating its effectiveness. Consequently, through undertaking Participatory Action Research (PAR) we aim to investigate the potential for open access locally, design and implement a new service, evaluate its effectiveness and repeat this process in a continuous cycle of research <sup>13</sup> (Appendix 1). Unlike other subsets of Action Research, PAR involves collaboration of the researcher with participants (staff and patients) <sup>14</sup>. This encourages participants to actively engage in the research process and have an equal say on the development of their service <sup>15</sup>. This paper presents the 'baseline evaluation phase' of the PAR and explores both radiography manager's perceptions regarding drivers for changing the current MSK x-ray appointments service and staff perceptions regarding the benefits and barriers to Open Access.

## **Methods**

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5 PAR is grounded on the best available conceptual evidence. This study therefore  
6 assumed a mixed-methods approach using semi-structured interviews and focus  
7 groups to ensure the maximum validity and trustworthiness of findings <sup>13,16,17</sup>.  
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### **Participants and Setting**

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19 This study was undertaken in a single NHS Trust with data collection across its three  
20 hospital sites. All staff practicing within the general radiology departments of the  
21 Trust were invited to participate in the focus groups via email and poster display. Key  
22 informants were identified and invited to participate in the interviews via email.  
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### **Manager Interviews**

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36 Interviews have been promoted in PAR as they provide a deep insight into  
37 participant thoughts and experiences <sup>14,18</sup>. Three face-face interviews with managers  
38 representing each of the three hospitals were conducted to uncover their lived  
39 experiences of the current primary care x-ray appointments service and their  
40 respective drivers for change. The interviews were semi-structured to ensure rigidity  
41 of topic but also allow sufficient freedom of expression regarding ideas for service  
42 development <sup>19</sup>. This method has been successfully deployed in other studies  
43 examining staff satisfaction in health care <sup>20,21,22</sup>. By varying data collection methods  
44 between management and staff, we hoped to avoid potential power struggles and  
45 extract the maximum amount of data. The following guide was used to provide  
46 structure (Fig 1), however further questions were added as each interview  
47 progressed and individual ideas proposed.  
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## Fig 1: Interview Guide

Welcome

Introduction to the study. Rights to withdraw/request exclusion of information at any time. How information will be used and dissemination of results.

- How happy do you think that GP MSK patients are with the current x-ray appointments service we provide?
  - What evidence is there to support this?
- What are the drivers for *reducing patient waiting times* in general x-ray?
- What are the drivers for promoting *patient choice* in general x-ray?
- What improvements (if any) do you think we could make to the current GP MSK x-ray appointments system?
  - Do we need appointments?
- Are there any potential risks of changing the current appointments service?
  - Staff?
  - GPs?
  - Busy Periods?
- Are there any potential benefits of changing the current appointments service?
  - Patients?
  - Staff
- Is there anything else you would like me to know?
- Thanks and close.

## Staff Focus Group Discussion

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5 Focus groups have proved valuable in uncovering the experiences and opinions of a  
6 group of participants in a single setting<sup>23</sup> and have been utilised in other PAR health  
7 care service improvement studies to good effect<sup>24,25</sup>. Focus groups were only held  
8 at two of the three hospitals due to time constraints. Staff were invited from a range  
9 of different roles and experiences including; appointments staff, reception staff,  
10 radiographers, assistant practitioner radiographers, advanced practitioner  
11 radiographers and team-leaders. After drop-outs, six participants were present at the  
12 site A group; including three radiographers, one senior radiographer, one advanced  
13 practitioner and one superintendent radiographer. Four participants were included  
14 within the site B group; including two radiographers, one senior radiographer and  
15 one superintendent radiographer. This was believed to appropriately represent the  
16 ratio of staff numbers to roles within each department. Career experience was wide-  
17 ranging within both groups from 1 to 30 years post-qualification.  
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32 The following topic guide was constructed with reference to themes previously raised  
33 in the management interviews. This was designed to provide structure but ultimately  
34 aid, rather than restrict discussion<sup>26</sup> (Fig 2). This was not shown to participants prior  
35 to discussion in order to enable spontaneous, unplanned responses that were best-  
36 representative of the staff's true feelings. Members who were less vocal were  
37 actively encouraged to contribute ideas, allowing full participation by each participant  
38 and preventing more vocal individuals from dominating the discussion.  
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## **Fig 2: Focus Group Guide**

- Describe a good appointments service
- Describe a bad appointments service
- The effectiveness of the current x-ray appointments service
- Variance of patient through-put
- Patient complains regarding waiting times
- Proposed improvements to the appointments service (if any).
- Impact of this research process on your CPD
- Missed anything?

To ensure effective data collection we enlisted the help of a co-facilitator to take notes of the discussions (including body language) to later assist with the analysis <sup>26</sup>.

### **Ethical Considerations**

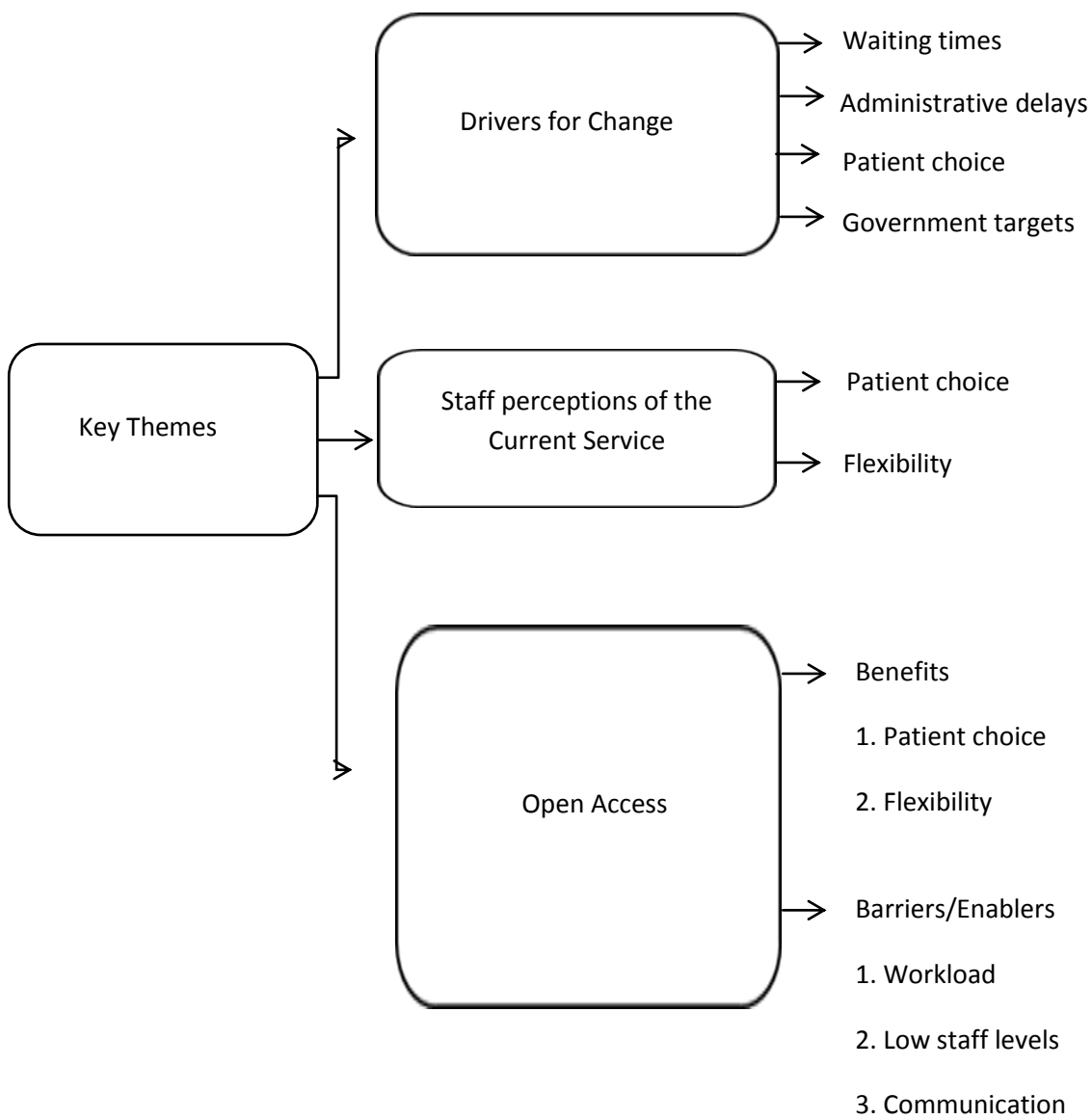
This study is a service evaluation and so National Research Ethics Service and Integrated Research Application System approval was not required. Radiology department approval was obtained prior to the study in line with local Trust Research and Development guidelines.

### **Analysis**

Data was analysed via Template Analysis with the aid of NVIVO 11 <sup>27</sup>. Through this method, predetermined (a-priori) codes were identified from the interview questions to initiate the analysis <sup>27</sup>. We then examined an initial transcript from the staff interviews, coded the transcript using the a-priori template, identified any new codes/themes and produced a subsequent 'initial template' <sup>27</sup>. This was then used to

code all transcripts with codes altered to suit the emerging themes. This produced a 'final template' which was then used to re-code the transcripts. After this third coding all relevant themes were deemed to have been uncovered and a suitable saturation point reached <sup>27</sup>. The key themes arising from the analysis are summarised below in Fig 3.

**Fig 3: Key themes to emerge from the Template Analysis**



## Results

The key areas of discussion included drivers for change, staff perception of the current service and Open Access.

### Drivers for Change

'Waiting times' was regularly highlighted during interviews as a driver for change. The need to reduce waits was seen as a key issue within radiology:

***“Reducing the waiting times is a big thing across the whole of radiology at the moment “***

- ***Interview participant 2.***

The managerial roles of interviewees appeared to be reflected in their focus on the strategic issue surrounding drivers for change. Government targets for instance were often referred in the need to reduce waits:

***“The 6-week target where again a patient is put on a pathway from first referral, through to seeing a specialist...and obviously within that timeframe we need to include any diagnostics. Generally, it's all about improving your waiting times”.***

- ***Interview participant 2.***

This suggests that external influences, such as government targets, are significantly impacting on management drive to reduce patient waiting times.

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Additionally, a recurring concept of 'administrative delays' was encountered. Inherent delays in the vetting process were identified which resultantly were negatively impacting on patient waiting times:

***"We have to wait for that referral to come through to us, we then have to look at that referral, we then have to ring the patient up... so all that delays the time for the patient to come for the test".***

***- Interview participant 2.***

The concept of 'DNA rates' was also highlighted in the discussions although contrasting views were identified. One interview participant suggested DNA rates would be reduced if the flexibility of services increased:

***"I do wonder whether you gave people the choice and you said, 'you can come on the day that suits you', whether actually therefore we'd see people turning up"***

***- Interview participant 3.***

However, when this issue was brought to the focus groups, staff believed that certain patients would not attend regardless of changes to the service:

***"I think if someone wants their x-ray they're gunna come...if they're not bothered they probably won't "***

***- Site A focus group participant 1.***

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Such variance in viewpoints may be attributed to respective career roles in that a greater interaction with patients may have shaped staff outlook on patient behaviour. DNA rates will be recorded during the wider PAR study to identify any differences pre and post intervention.

### Staff Perceptions of the Current Service

In the interpretivist stance there is no true answer to what makes an x-ray appointment service effective<sup>28</sup>. We were therefore keen to explore this concept within the focus groups. When asked, 'What makes a good appointments service?', there was little variance in opinion within the groups. One participant outlined the need for choice and flexibility:

***“Choice of time.. date and place”.***

***- Site A focus group participant 2.***

Whereas another participant stated that a bad appointments service would be inflexible with little choice:

***“No flexibility. ‘This is the only appointment we’ve got, take it or leave it”***

***-Site B Focus Group participant 2.***

Staff appeared happy with the current GP MSK x-ray appointments service and believed this was adequately effective. One interview participant did outline concerns regarding flexibility of the current service:

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2 ***“I think that some of them might like a little bit more flexibility in the service  
3 and to come when they actually want to”***

4 - ***Interview participant 1.***  
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10 However the staff believed that the service offeres sufficient flexibility, with out-of-  
11 hours appointments available:  
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17 ***“There’s evening appointments here, we’ve just started doing evenings”.***  
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19 - ***Focus group A participant 3.***  
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25 These findings suggest staff perhaps hold a more modest view on what makes a  
26 service flexible in comparison with management. Despite the presence of evening  
27 appointments, it appears management still believe that more flexibility is needed to  
28 truly satisfy patients.  
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## 32 33 34 35 36 Open Access 37

## 38 39 40 41 The Benefits 42

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46 Several benefits of open access were explored within the interviews through  
47 enabling better access and patient choice, whilst reducing inherent delays within the  
48 current system:  
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***“It gives them a better experience, it gives them better access within the department”***

- ***Interview participant 1.***

During this discussion we observed increased hand gesturing and prolonged length of response, suggesting strong beliefs regarding the benefits of open access and a desire to implement it locally. Similar benefits were also identified within the focus groups:

***“As a patient I’d be, ‘fantastic, that’s great’, you know. I can go tomorrow, I can go later today, I can go in next day... it would be absolutely fantastic”.***

- ***Site B focus group participant 2.***

Despite this we noted a hint of reservation in staff responses; whilst there was a willingness to accept the potential benefits of open access there seemed an undertone of distain which we were keen to explore further.

### **Barrier 1: Workload**

The theme of ‘workload’ as a barrier to open access was a commonly recurring concept. Feelings of negativity and worry towards open access were expressed within the focus groups:

***“I think they’d be worried”.***

- ***Site A focus group participant 1.***

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Up to this point, the tone of conversation had remained constant, calm and reserved. However, when the potential implementation of open access was proposed both tone and hand gesturing by each member of the group became exaggerated. Such behaviour suggests strong negativity towards the implementation of open access by staff.

Conversely, mixed views regarding the barriers of open access were portrayed within the interviews. One participant suggested that the flow of patients during open access may be relatively constant and compared it to an open access service already established for chest patients within the Trust:

***“You don’t see that now with the chest x-rays... that there’s masses coming at the same times”***

- ***Interview participant 1.***

Another interviewee however was keen to convey their negative experiences of MSK open access when working at another Trust:

***“There were times where it was a complete disaster...The worst day for open access was on a Tuesday morning after a bank holiday weekend...and there was a huge influx of patients.”***

- ***Interview participant 2.***

These concerns were mirrored in the focus groups, with staff keen to emphasise the potential for uncontrollable workload in open access. When asked their biggest concerns, one participant suggested that:

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***“One day you could have nothing next day you could have over 100 patients in one day and its over run”***

- ***Site A focus group participant 5.***

Restricting operating times during busy periods was suggested as an enabler. Such concept of ‘restriction’ was particularly prevalent within the data, the idea of limiting times of open access, thus creating a sense of control was of great importance to the staff:

***“I would also look at limiting the time of the open access – probably not offering it in the morning”.***

- ***Site A focus group participant 6.***

Both management and staff also unanimously agreed that there would be a need to maintain appointments for certain groups of patients from a safety perspective:

***“A 90 year old lady who’s got really poor mobility, who’s been brought by an ambulance, for.. pelvis, hip, lumber spine, c-spine and there’s only 2 radiographers on duty, you don’t want a patient like that just turning up at 7 o’clock at night”***

- ***Interview participant 2.***

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## Barrier 2: Staffing Levels

The issue of 'staffing levels' emerged at several points during the focus group discussion. It was initially raised during interviews in response to concerns regarding implementing open access outside normal working hours:

***“We don’t want clinically complex patients coming when we have skeleton staff in the department”***

- ***Interview participant 2.***

This was expanded on by one focus group participant, raising concerns that although we have the facilities to support open access, staffing during normal working hours is also restricted and this could be a potential barrier to implementation:

***“The physical rooms are there but at the minute we don’t tend to have enough people to staff those rooms.. we’d need to put more staff on”***

- ***Site B focus group participant 2.***

The participant appeared to feel passionately that staffing is a key issue needing to be resolved, not only to enable open access but also to maintain current services:

## Barrier 3: Communication

A particularly prevalent barrier to be identified was that of 'communication'. Both management and staff agreed effective communication was key to enabling open access. GP's were identified as the main barrier to effective communication. When

1 asked whether staff could trust GPs to relay information correctly the tone was of  
2 ironic joviality; a clear exhibition of distrust and annoyance towards them was  
3 observed. Such distrust was reflected in the discussion with participants keen to  
4 point out the inability of GPs to relay information correctly:  
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10 ***“You can’t trust any Dr to give that information cos they don’t know what  
11 they’re talking about in most cases “***  
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14 - ***Site A focus group participant 2.***  
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20 From this it appears that the staff believe GPs will not abide by any restrictions to an  
21 open access service and this could potentially disrupt workflow.  
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28 Both management and staff agreed that differing methods of communication would  
29 be beneficial to ensure patients fully understand the workings of open access. The  
30 idea of using posters was proposed, although there was an undertone of negativity  
31 towards their utilisation by GPs:  
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39 ***“We could have posters in GP surgeries, whether they’d display them I don’t  
40 know”***  
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43 - ***Site A focus group participant 1.***  
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49 Such discussion outlines the importance of effective patient communication to  
50 enable open access, however a lack of staff trust towards GPs is abundant.  
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56 A summary of the beliefs of management and staff with regards to key areas of  
57 discussion is provided below (Fig 4).  
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**Fig 4: Summary of Discussion**

Key Areas of Discussion	Management	Staff
Drivers for Change	Need to reduce waits Will reduce DNA rates	Won't reduce DNA rates
Perceptions of Current Service	Need more flexibility	Adequate flexibility
<p>Open Access</p> <p>Potential benefits</p> <p>Potential barriers</p> <p>1. Workload</p> <p>2. Staffing</p> <p>3. Communication</p>	<p>Better patient experience</p> <p>No change in workload</p> <p>Need to keep appointments for certain patients</p> <p>Lack of sufficient staff</p> <p>Need for communication aids for patients</p>	<p>Better patient experience</p> <p>Unpredictable workload</p> <p>Need to keep appointments for certain patients</p> <p>Lack of sufficient staff</p> <p>Need for communication aids for patients</p> <p>Need to ensure GP understanding</p>

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## Discussion

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5 In addition to a need to reduce waiting times, several drivers for changing the current  
6 primary care MSK x-ray appointments service were identified by both management  
7 and staff. These included administrative delays and government targets. The  
8 majority of drivers were proposed in the interviews, possibly due to management's  
9 strategic desire for service change. The emerging NHS ethos of patient choice and  
10 the NHS Cancer Plan were previously identified in the literature review <sup>1,2</sup> and the  
11 emergence of these concepts within the findings supports their influence on local  
12 managerial drive for change. The topic of 'administrative delays' was a new concept,  
13 not previously identified within the literature. This was likely due to the issues raised  
14 relating to local problems with the referral vetting process. Given the evidence it  
15 would appear that waiting times, patient choice and government targets are drivers  
16 for change both nationally and locally, with administrative delays providing a purely  
17 local driver.  
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32 National publications have championed the need for a more patient-centred  
33 approach to care <sup>29,30</sup>, with relevant professional bodies specifying a need for  
34 radiology to put patients first <sup>5</sup>. This complements staff beliefs that a good service  
35 should offer sufficient flexibility and patient choice of appointment time. Despite staff  
36 highlighting the presence of evening appointments in the current service, one  
37 management member was dissatisfied with the current level of flexibility afforded to  
38 patients. Such conflict possibly stems from roles and the contrasting modest views of  
39 staff versus managements strategic drive for improvement. Nonetheless we  
40 gathered a sense of pride amongst the staff regarding the service they are providing  
41 and a belief that this is currently effective and efficient.  
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54 No previous studies were found to explore staff perspectives of open access, in  
55 terms of its effectiveness. Findings from this study highlight benefits of 'efficiency',  
56 'greater access' and 'flexibility', complementing the positive patient feedback  
57 documented by Care UK <sup>6</sup>. Despite this several barriers/risks were identified by both  
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1 staff and management; including 'workload', 'staffing levels' and communication'.  
2 Tone of response and body language of the staff suggests heightened anxiety and  
3 worry, particularly in those with previous experience working in open access  
4 services. Particular anxiety was expressed towards the unpredictability of workload  
5 in open access, leading to a lack of control. This concept is mirrored by Martin et al  
6 <sup>11</sup>, who identified increased staff stress during peaks in workflow in emergency x-ray.  
7 A potential solution was proposed however through provision of booked  
8 appointments for certain patients. These concerns will be addressed in the next  
9 phase of the PAR, including identification of the desired outcomes of the participants  
10 with regards to the new service (with particular focus on efficiency, flexibility and  
11 patient access).  
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23 It was essential to gather staff perceptions regarding potential barriers to open  
24 access so that these may be addressed in the subsequent design phase of the PAR  
25 (Appendix 1). One staff member was particularly passionate regarding the need to  
26 increase staffing levels to enable open access, however no literature was found  
27 detailing the effects of low staffing on open access services. In terms of  
28 communication, the inability of GPs to communicate adequately with patients  
29 regarding the service was a recurring concept. The joviality of responses suggested  
30 this belief was almost common knowledge, although this cannot be validated.  
31 Although the importance of communication in open access has not been  
32 documented in previous studies, patient dissatisfaction with long departmental waits  
33 in same-day services is well-founded <sup>12,8</sup>. Effective communication is seen as  
34 paramount by both management and staff in ensuring patients fully understand what  
35 open access entails and communication aids, such as posters, were proposed to  
36 support this.  
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## **Limitations**

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5 Through the nature of the study's methodology, our interpretation of the thoughts  
6 and beliefs expressed in this study are not definite. Indeed, results are only gathered  
7 from a single hospital Trust within a defined time period. The aim is not to provide a  
8 definitive 'truth', rather open the door to further discussion and debate <sup>27</sup>. Such  
9 philosophy fits neatly with the cyclical nature of PAR <sup>13</sup>.  
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15 Focus groups included superintendent radiographers and may have led to power  
16 struggle. Although this did not appear to unsettle participants this may have  
17 subconsciously affected their ability to express their true feelings. Additionally, focus  
18 groups were only conducted at two of the three hospital sites.  
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23 Despite a vested interest in open access, trustworthiness was assured to the  
24 greatest degree through justification of robust data collection tools and analysis  
25 framework.  
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## **Recommendations**

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38 The following recommendations are proposed for the next phases of the PAR:  
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- 43 1. Further focus group discussion regarding the barriers and enablers identified.  
44 Groups will not include superintendent radiographers to remove potential for  
45 power struggles and will be undertaken at each of the three hospitals.  
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- 49 2. To identify the desires of each participant regarding the future x-ray  
50 appointments service.  
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- 54 3. To design a new service with inclusion/exclusion criteria.  
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## **Conclusion**

Several drivers for changing the local primary care MSK x-ray appointments service were identified; including a need to reduce waits, provide more flexibility and remove inherent delays in the administration process. Workload, staffing and communication were seen as barriers to open access implementation however potential enablers were uncovered including staff recruitment, communication aids and restricting the service to certain times/types of patients. These will be investigated in the next (planning) phase of the PAR.

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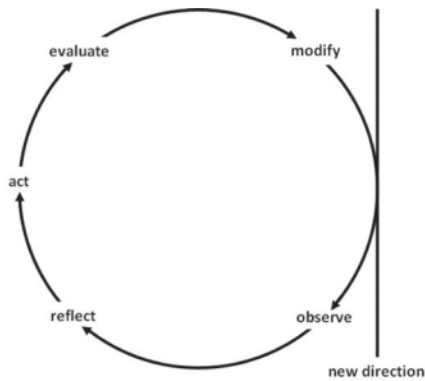
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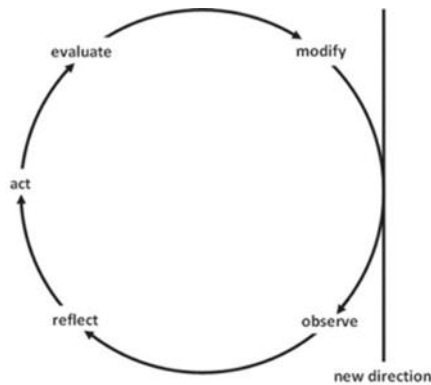
## Appendix 1



### Baseline evaluation:

**Key questions:** Does the current service facilitate adequate referral to report times? Are patients happy with the current service? Are staff satisfied with the current service they provide? Where can we improve?

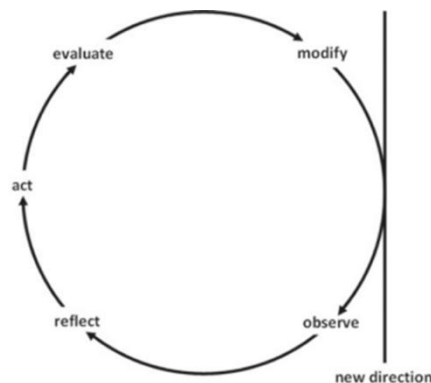
**Study design:** Quantitative/Qualitative – Patient/staff semi-structured surveys, observational study. Local waiting time statistics; baseline/pilot evaluation.



### Phase 1: Action planning:

**Key questions:** What are the current barriers and facilitators to implementing the intervention (staff/time etc)? How can these be overcome? Do we need a pilot?

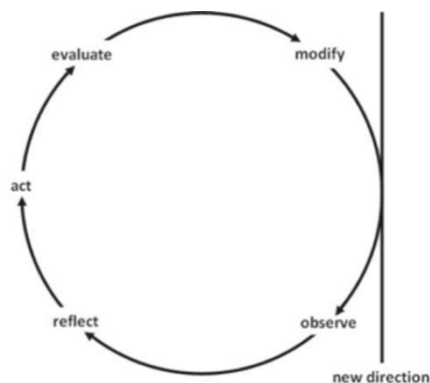
**Study design:** Qualitative – focus group discussion, interviews with team leaders/staff.



### Phase 2: Diagnose:

**Key questions:** What are the desired outcomes of each group member – patients/staff/managers (outcomes grid). Where and when are open access services used – are there restrictions (specific days/times?). Have they proved useful?

**Study design:** Qualitative – interviews with team leaders, focus group discussion.



### Phase 3: Evaluation of changes to clinical practice:

**Key questions:** Did the use of an open access MSK x-ray service improve patient, staff, and manager outcomes? Are there any potential outliers? How may this service be further improved upon? Did PAR help improve staff morale?

**Study design:** Quantitative/Qualitative before and after comparative study – surveys/interviews/statistical analysis of waiting times.