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Introduction

Patient experience is an integral part of high-quality care, equal to clinical effectiveness and safety(1). It is a factor that is considered as part of both healthcare regulation (Care Quality Commission - CQC)(2) and accreditation (Quality Standard in Imaging - QSI)(3) within the UK, due to clear evidence that patient experience directly impacts health outcomes(4). Health outcomes as applied to Magnetic Resonance Imaging (MRI) include whether patients manage to complete a scan or not; or where the scan is undertaken whether quality has been compromised due to movement or scan time reduction, which in turn affects accurate diagnosis and onward treatment(5–10).

The Beryl Institute defines patient experience as *'the sum of all interactions, shaped by an organisation's culture, that influence patient perceptions across the continuum of care'* (pg8)(11). Interpreting this for imaging can be taken to mean the provision of quality care to all services users, from referral to results, that is timely, informed and personal. This draws on what patients and the public consider to be of priority and importance in their interaction with health services in general(12), as well as some of the key principles behind person-centered care (PCC)(13).

From studies looking at wider service quality within radiology(14); reliability, assurance, tangibles, empathy and responsiveness have been identified as key dimensions that have an impact on the patient experience. Specifically for radiography; event interaction, perception of care, and control over environment, have recently been identified to support delivery of PCC(15). These all influence how a healthcare interaction may be perceived by the individual whilst highlighting what is likely to be important to consider on their behalf. Hence, to really understand the experience of patients it is important to understand what matters to them when interacting with services(16). Aspects of experience to consider are; the functional

(related to the process and environment), the relational (their interactions with a service)(17), but also the emotional (how it makes someone feel).

Within MRI, common functional aspects may include access, equipment design, and the imaging process itself, with these functional aspects tending to be the focus of practitioners(18). Relational aspects include how informed a patient is about the scan and the quality of communication with the imaging service providers. The emotional state most commonly relates to any perceived anxiety, which is *'an emotion characterised by feelings of tension, worried thoughts and physical changes like increased blood pressure'* (19).

This fear or anxiety in MRI most commonly presents, or is referred to, as claustrophobia(20) due to concerns over the enclosing nature of the scanning equipment. Other sources of anxiety may also be present, such as anticipation about results(21–24), or more recently concerns over life in a pandemic(25,26). Overall anxiety of patients attending for MRI has been reported to varying degrees(8,24,27), with failure to undergo a scan due to claustrophobia recently recorded at 0.76%(28). However, this is complex and multifactorial, with many different aspects influencing occurrence of claustrophobia; such as scanner type, prior experiences and the characteristics of the patient themselves.

Therefore, to align with the principles of a service evaluation(29), the overall intention was to explore the experience of patients undergoing MRI at the current time within an independent organization providing services across the UK. The evaluation was intended to provide an updated review of internal patient experience, building on earlier reported findings in the evidence base so that this could be used to inform improvements across the organization. Specifically, aims were:

1. To gain insight into the current journey of patients undergoing MRI within the organization to help identify which aspects of the scan procedure may cause most concern.
2. To find out what matters and is important to our patients when undergoing MRI.
3. To highlight any areas of patient interaction which could be improved upon.
4. To gather some understanding around which strategies are considered most beneficial by our patients to improve their emotional experience during MRI.

Method

Approval for this evaluation was granted by the institutions Clinical Quality Sub-Committee (June 2021) and deemed compliant with the principles of service evaluation. Being classified as an internal quality assurance activity, not being used for academic credits, providing no added risk to respondents, using no identifiable data, and participants being fully informed beforehand, external ethics approval was not required.

The key principle behind the evaluation was underpinned through a desire to engage with patients and ask them 'what matters to you' during their MRI experience, in order to gain deeper insights to inform person-centered approaches within the modality(30). Journey mapping was utilized as a tool that enables healthcare providers to better understand the interactions of patients with a service, from the patient perspective(31). It draws on approaches used in customer experience(31) and builds on conventional process mapping that is used more for streamlining processes and efficiencies(32). In this context, the key stages of the patient journey were already mapped out based on those highlighted in previous studies(33,34).

A 6-part survey comprising of open, closed and rating responses was developed for completion by patients (see supplementary information). Aspects of the survey were based

on previously used internal tools for capturing patient insights. Representatives from a Patient and Public Involvement (PPI) group also reviewed the survey for readability, comprehension and ease of completion.

Following their scan, patients were invited to participate in the survey before leaving departments, with a brief explanation behind the survey provided in order to obtain informed, verbal consent. This information was captured in line with other patient feedback processes regularly used by the MRI service provider, namely use of the NHS Friends and Family Test (FFT) which is handed to patients on completion of their scan. Written consent was not deemed necessary with no identifiable patient data captured, meaning there were no data protection or privacy issues of concern, and not participating had no impact on the patient's care. This was reinforced by only asking patients to complete the form after their procedure. Surveys were completed in English using paper forms and returned to a member of staff before the patient left the MRI department. Criteria for patient involvement are outlined in table 1.

Table 1: Criteria for patient participation

Patients were asked to rate each stage of their journey on a visual scale to reflect their perceived emotional response. This approach is used for existing internal experience audits and so was deemed appropriate for this context. It is based on combined principles of the visual analogue and semantic differential scales as opposed to numbered Likert scales(35,36). This was so that respondents were not influenced by a scoring system. On either end of the scale, examples of negative and positive emotional responses were provided. An overall subjective measure (SUD) of how anxious a patient was about their experience of the MRI scan was obtained as a score between 0-100(37,38). The questionnaire also provided free text options to gather insight into what respondents felt

was important and mattered to them when having their MRI, along with aspects of their experience that might be improved. Respondents were then asked to rank the top three aspects that most contributes to any anxiety experienced, and to rank the top five coping and support strategies considered most beneficial when undergoing a scan.

The survey also required staff to collect non-identifiable demographic data, including location of scan, funding route, type of scanner, scan area, orientation within scanner, patient age and sex. This was intended to be used to map and compare responses between different groups.

MRI Service Leads across the organization were invited to acquire data from patients attending their service(s) over a 2-week period; each static based department (n=30) was asked to obtain 5 surveys per scanner (N=150), each mobile region (n=6) was asked to obtain 15 surveys across their area (N=90), and each UpRight scanning location (n=3) was asked to obtain 10 survey responses (N=30). This totals 270 surveys. Therefore, sampling was convenient and purposive, with the rationale for the suggested numbers being pragmatic; it was intended to ensure that data acquisition was not overly burdensome or adding additional delays to patient flow, whilst still capturing insights nationally. No reminder or follow up was sent once the introductory request and survey had been sent to managers for distribution among their teams.

In terms of data analysis, subjective ratings on emotional response to the stages of the patient's experience were to be averaged using the mean, with interquartile range and use of box and whisker plots to show the variation in responses. Open responses underwent content analysis of the text to identify themes and the frequency of their occurrence(39). This involved manual coding of responses by the lead author, followed by grouping these into collective themes, which were subsequently reviewed by co-authors. The rating

responses were to be broken down by percentage of responses rated as 1st-3rd or 1st-5th for the relevant question.

Results

Out of an intended sample size of 270, 121 survey responses were collected (45% response rate). The vast majority of these responses were received from static based departments (94%) with conventional horizontal bore systems (both 60cm and 70cm bore diameters with a ratio of 1:3 respectively). 6% of responses were received from mobile services, and 12% from specialist UpRight service users. Two variations observed in the responses that impacted on data analysis were; a) some patients did not fully respond to the rating questions or failed to rate responses, and b) some staff failed to fully complete the additional demographic information. Therefore, whilst all responses were still used, it was not possible to provide a comprehensive breakdown of the patient demographics or compare responses between different service models.

Considering first those patient demographics that were obtained for the survey sample, full patient information was obtained in 62% of responses and relevant aspects of this are summarised in table 2.

Table 2: Patient demographics and scan information

When asked to rank how anxious they were about the scan, with 0 being not at all and 100 extremely anxious, the mean score from all responses was 45.8 (SD36.7); with 36% (n=43) scoring 70 or above and 38% (n=46) 30 or below (see figure 1). Where additional demographic data was available a further breakdown of anxiety scores is outlined in table 3. This shows anxiety to be greater in those attending for UpRight MRI, and little difference between scanner entry or sex in those responding.

Figure 1: Overall anxiety scores

Table 3: Breakdown of mean perceived anxiety score

Figure 2 provides an overview of patient self-reported emotional state as respondents progressed through the MRI appointment. This figure shows the respondents visual scores translated into a number rating from 1-10, with lower scores representing a more negative emotional state.

Wide variation is noted in the self-reported measures (as shown by the box and whisker plots), with emotional state considered positive by many patients at each stage of the journey. The overall experience is reported as being extremely positive, albeit with fluctuation throughout the patient journey. The trend to the fluctuations is such that emotional state can be lowest when arriving for a scan and during the wait, improve during the screening and preparation phase, reduce on entering the scan room, rise slightly whilst being positioned for the scan, drop again during the scan, then improve markedly once the scan is completed.

Figure 2: Perceived emotional journey

When asked 'what matters' and 'what is important' to them when having an MRI scan, 72 patients responded (60%). With regards to suggested areas for improvement, only 21 patients responded (17%). All responses underwent content analysis, as summarised in table 4.

There was clear consensus in terms of the themes most important to patients; specifically, interaction with staff and having the experience personalised (n=43); being treated with respect, having needs responded to, and being given reassurance. These themes were followed by the need to be suitably informed (n=24) and aspects relating to the physical nature of undergoing a scan (n=21). With regards to areas for improvement, there was no

clear consensus although comments about the physical nature of the scanner were the most frequent (n=9).

Table 4: Content analysis of open responses (frequency in brackets)

Table 5 summarises the frequency of elements being reported as contributing to any anxiety experienced during their scan. It was not possible to assess how these elements were rated comparatively. But it can be seen that by far the most frequent factor appears to be the noise from the scanner, followed by having to lie still, being in the scanner, being positioned head first, and on entering the scan room itself.

Table 5: Contributory factors affecting anxiety

With regards to what respondents reported as the most effective coping and support strategies (table 6), the two most frequently identified approaches are related to support provided by staff; through wider conversation on the day and regular contact over the intercom throughout the scan. Music or radio over headphones was considered an important coping mechanism, as was preparatory information beforehand via leaflets.

Table 6: Effective coping and support strategies

Discussion

The lower than anticipated number of responses for this service evaluation highlight the challenges of data collection by survey, particularly within the mobile scanner setting where there is lack of space and time post scan to acquire feedback compared with static counterparts. The lack of response from some service areas may also suggest differences in understanding the importance of the patient experience and the benefits of service evaluation to inform improvement.

Nevertheless, these data offer insight into the current experience of patients attending for MRI scans across this particular organization. Those patient demographics obtained are

representative for both age and sex when compared with National Health Service (NHS) reported data(40). The greater proportion (76%) of those having been scanned on wide bore conventional systems are representative of the install base surveyed, but higher than previously reported at a wider national level within the NHS(41). This is of potential relevance for the context of the evaluation as advancement in scanner design has in time been predicted to remove the need to consider claustrophobia in MRI(42).

Overall Anxiety

The mean score for overall anxiety reported by respondents is below 50, which, on the scale used, can be considered the point of moderate anxiety(38). A notable proportion of responses were 30 or less, representing no to mild anxiety and an ability to cope. However a third of respondents did report an anxiety level of 70 and over, representing severe anxiety with the potential for affecting compliance and therefore adverse impacts on scan outcomes(38). These data are similar to previous studies that have shown some amount of raised anxiety in 56% of patients(24) with around a third experiencing higher anxiety(27,43). MRI scan-related anxiety is normally seen more in females than males, and for head first examinations compared with those performed feet first(6,7,28,44,45). However, this was not the case shown, with mean scores being approximately the same in both cases. For those UpRight patients surveyed, reported anxiety was much higher, reflecting the fact that these patients may have already experienced difficulty undergoing or completing a conventional scan, therefore having known anxiety around the procedure, such as claustrophobia.

What influences anxiety

When looking at which aspects of the experience might induce anxiety, the patient journey can be considered under three stages from beginning to end (figure 3). Each has a role in

the anxiety perceived and different aspects that may influence this. This also highlights two important effects; recency and primacy(46,47), the bookends of experience. Primacy is around the age old saying, 'first impressions count', and relates to the initial interaction's patients may have with a service or individual. Recency refers to their final interactions, the lasting impression. All three stages are important, but provided the procedure itself is satisfactory, then either the beginning or end of someone's experience most influences their perception and recall of it. To what degree this occurs varies but this does mean these stages are as important as the scan procedure itself when seeking to improve patient experience.

From the data collected, the 'Fond Farewell' appears to be evaluated positively by respondents in general; this is then potentially also reflected in the overall score recounted. Nevertheless with negative emotions reported early on in the patient journey, patient mood early on can impact their perceived experience overall(48). That said, it has been suggested that negative experiences early on can be corrected and improved through the remaining journey compared to if this was to occur at the end(46).

The concept of the patient journey will now be discussed in relation to existing literature as a way of providing context for the service evaluation data.

Figure 3: The patient journey through MRI

Warm Welcome

The 'Warm Welcome' encompasses the beginning of a patient's MRI journey, from receipt of their appointment through to being in the department waiting for their scan. This may be an emotional low for many, with other studies suggesting a heightened state of anxiety beforehand(10,22,34), with two aspects to consider.

Firstly, waiting; for an appointment, at arrival, before being screened and before being shown to the scan room(49) can, for some, enhance anticipation over what is to come, either inducing or enhancing anxiety which can be further exacerbated if too long or delayed(10,22,49,50). Delays occurring earlier on within the journey can also exacerbate negative feelings towards the experience(47). Along with these, patient mood is also influenced by the waiting environment, which in turn impacts how quickly time is considered to pass(51,52). Issues over the waiting environment have been highlighted by patients and service managers where addressing this could improve delivery of PCC(15).

The second related component is that of being or feeling informed prior to arrival or whilst waiting, primarily in terms of what to expect from the scan but also how long the wait may be. The desire to be informed was raised by respondents both as an aspect which mattered to them but also as an area for improvement. Other studies have shown how provision of information reduces anxiety(53–57) but there is variation in how patient information is provided, with heterogeneity in their effects(58). In some cases as little as 14% of patients report being informed on what to expect when undergoing their imaging procedure(59).

The most common approaches are through either written materials and/or verbal explanation, both of which were rated highly in effectiveness by patients. Verbal information has been shown to reduce anxiety(53,54), and is often preferable because it can be tailored to the individual to ensure sufficient understanding(21) and provides the necessary opportunity to provide any emotional support(59). Comparatively, written information has been shown to have little to no effect(53,60) with a sense of indifference over other forms(10). The use of audio-visual media more realistically represents what is involved in a scan, including the sounds associated with it. The sensory component is an important preparatory aspect to support coping(61,62). Use of video information has been

shown to reduce experienced anxiety(53,55,63) as well as help patients better manage their experience(55,61). Indeed, whilst Yakar(63) showed both written and visual information to reduce pre-procedural scan anxiety, visual information was found to be more effective. By its nature, audio-visual information helps with familiarisation of the environment in advance, which reduces anxiety through better understanding what to expect(56) whereas written information can potentially be less representative and therefore misunderstood(62). Staff interactions in preparing patients and alleviating fears is also important, and further limits what can be gained from information leaflets alone(64).

Ultimately it is the provision of suitable information appropriate to an individual's needs that is essential(53), which also needs to be relevant and easy to understand(10,21,65).

Those with higher anxiety may benefit from more information and engagement to support their experience(66). This is where a range of information options might be beneficial, allowing patients to access media that best suits their preference and need.

Positive Procedure

The 'Positive Procedure' refers to the scan itself and the main interaction with clinical staff. The data suggest key triggers are perhaps related to the physicality of imaging equipment; with a drop in emotional state noted when respondents entered the scan room and on being in the scanner. Entering the scanner room brings into sight the scanner and imaging environment which can appear alien and daunting(67) and is a known trigger for claustrophobia(33). Being in the scanner and actually undergoing the scan was considered by respondents to contribute to their anxiety, as well as being an area that could be improved. Such aspects related to the nature of the imaging process itself (noise, lying still and being in the scanner) are well documented as causing negative responses(20,22,65,67). Regardless of how patients may be informed and prepared for this, it continues to present a

challenge in how best to support patients at this point in their appointment(10).

Improvements in the physical nature of equipment, including less noise, has also been raised previously in other studies(68,69).

Loneliness is a highly rated response to having MRI(70) with the feeling of needing a companion in the scan room being a predictor of anxiety(71). In many cases, the need to be left alone within the scanner and scan room during the procedure may not always be apparent(59). Anxiety has been shown to reduce in those individuals who feel they would benefit from company, particularly whilst waiting for their scan(43). Unfortunately, this is an aspect that has been challenging during the COVID-19 pandemic where patients have needed to attend alone, likely contributing to any experienced anxiety(72).

It has been suggested that being set up on the table and movement into the scanner is a source of anxiety(21,33,34). However, this was not demonstrated, suggesting a relationship with the level of staff engagement, linking back to making the experience personal and reaffirming the importance of relational aspects that comprise a positive patient experience(12). It is during these interactions along their journey that enable patients to not feel as alone and to feel supported, whilst enabling the health care practitioner to adapt to the patient's needs, all the while helping patients feel more secure(21).

Increasingly effective communication and interaction is acknowledged as an essential component to providing PCC(15,65) with numerous studies demonstrating the effectiveness of related training(73–77). Radiographers may underestimate their power to influence and make a difference for patients if there is too great a focus on 'getting the job done' which risks losing sight of the patient at the centre. Importance and effectiveness of verbally informing patients about their scan can be difficult to assess but is cited as important by patients(21,64,67) and radiographers(72,78,79).

Another key element in the positive procedure is supporting patients to cope, with approaches adapted to ensure their comfort and meet their individual needs. With feelings often being related to a loss of control(21,67,80), being able to give back a sense of control to a patient is key. This can most effectively be through providing choice where practicable; such as whether they want to change into a gown or can remain in their clothes if safe to do so, what music or radio they can listen to, whether they want to enter the scan head first or feet first if an option, or through the use of a blindfold if desired.

As well as the previously mentioned discussion about quality interactions with staff, other highly rated strategies in this evaluation were around music, shortened scan times and other approaches to providing information and contact beforehand. Use of music not only provides distraction and relaxation(81) but is a simple way of offering choice and personalisation of their experience, which gives back some element of control over it. It is common strategy used by radiographers(72,78,82) and a relatively simple and effective means of providing distraction.

Interestingly for respondents, being shown around the scanner or being able to practice entry were considered less effective. Whereas earlier studies have shown the most frequently requested means of support by patients has not only be around taking the time to sufficiently explain what is involved, but also having the opportunity to familiarise themselves by being shown the scanner beforehand(64). Conversely, radiographers themselves note this to be effective but underused(83), which is perhaps indicative of existing time constraints and operational pressures, meaning patients are not offered this choice as much nowadays, thereby not considering it effective themselves.

Similarly, lower on the list of considered effectiveness compared to radiographers(72,84), was the effectiveness of oral anxiolytics. This suggests a possible preference for non-

pharmacological approaches which could indicate support and acceptance of emerging interventions, such as virtual reality tools. Whereas for radiographers(72,78,82), defaulting to the use of anxiolytics is higher, potentially as it may be seen as an easier, quicker fix. However, whilst anxiolytics have been shown to be effective(85), they do come with their own risks which are important considerations behind their limited use.

Fond Farewell

The final stage of the journey is the 'Fond Farewell'; finishing the contact in a positive way whilst ensuring the patient is aware of what happens next. Finishing the contact positively is typically achieved through some means of praise for the patient's cooperation (86) with the higher scores noted at this stage likely reflecting a sense of relief that the scan is over. The higher score for overall emotional experience further demonstrates this enhanced positivity on reflection once everything is over, even if parts of the process were challenging at some points.

The final aspect does contain an element relating back to being informed, specifically at this stage around what happens next (knowing they can change and leave the department, and when and how they will receive their results). Anticipation over results is a known source of concern and stress for patients(21–24,27,87), therefore knowing how and when these should be expected is important(88). Only a quarter of respondents raised this as a source of anxiety whilst others have reported it at almost 93%(87). This may vary depending on the reason and urgency behind the scan. Whilst radiographers may perceive a source of tension by not being able to provide results instantaneously to patients, leaving a sense of brushing patients off and rushing them out to avoid confrontation(86), explaining how and when patients will get results is an important factor on how care is perceived(15).

Limitations

This service evaluation provides cross-sectional data pertaining to one national organization operating within the UK, and therefore limits its potential generalisability. Limitations in available demographic information prevents any specific patient group sub-analyses to be made; this could form an aspect of a future research project for example to explore the context and understanding between different groups and services.

In terms of bias, staff may have subconsciously or otherwise adjusted their behaviors towards those patients who were then asked to participate. Likewise, selection bias may have meant patients who were more anxious not being asked or not wanting to participate. Similarly, once asked, patients may have been more positive in their responses having an effect on their recall. Being asked to retrospectively review their experience adds an element of recall bias influenced by recency effect, compared with being asked at that point along their journey.

Finally, variation in responses received from different service models prevents reliable comparisons, and inclusion of the responses from the UpRight service may have skewed the data. Although these numbers were low and so this is considered minimal. With the variation noted in responses, more formal research with known anxious or claustrophobic groups would provide more specific insights to their needs compared to those generally obtained where the majority of patients are fine with undergoing MRI.

Conclusion

Exploring the patient experience through their journey in MRI has brought attention to aspects that could combine to form an overall negative experience. This service evaluation has brought to the fore the importance of staff interactions with patients and the associated emotional impact. Therefore, as an important component of PCC, imaging staff should

consider how their interactions may be perceived by patients, and what adaptations they can provide to help support patients through their experience. Whilst focus is often predominantly placed on radiographers, the role of the supporting workforce cannot be ignored. Particularly as they are most commonly associated with the start and end of a patient's journey, and undertake more aspects of patient care that may have traditionally been performed by radiographers(89).

As well as the quality of staff-patient interactions, ensuring patients are sufficiently informed about the procedure remains important; the more realistic and representative this can be the better. This is particularly key when the physical nature of the scan experience continues to be a source of anxiety, and patient preference (and safety and prescribing considerations) limits the use of pharmacological interventions. This is where use of innovative means of preparing patients, such as through the use of virtual reality environments, could have a part to play.

Figure 4 outlines a summary of internal recommendations implemented to support the patients journey to the centre of the bore, reflecting aspects previously reported for improving patient experience(15,72,90). Through better understanding the patient journey and their experience through MRI, the organization has also co-created a series of always and never statements for use by staff. These are intended to set the standards and act as an aide memoire on how the stages of the journey can be optimised for the patient (see supplementary data).

Whilst the intention of this project was to identify any common themes that may help understanding and guide service improvement across the organization, it is important to remember the individuality of patients. Each individual will have their own perception of

their experience, and it is important that imaging staff do their best to understand this and adapt their approach to support each patient the best they can. It is important to acknowledge that there can be tension in practice between being able to provide this within the time constraints available(72) and there is a balancing act between providing services that meet patient needs but in a timely manner which supports efficiency and throughput.

Figure 4: Recommendations for improving the patient journey

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Figure 1: Overall anxiety scores

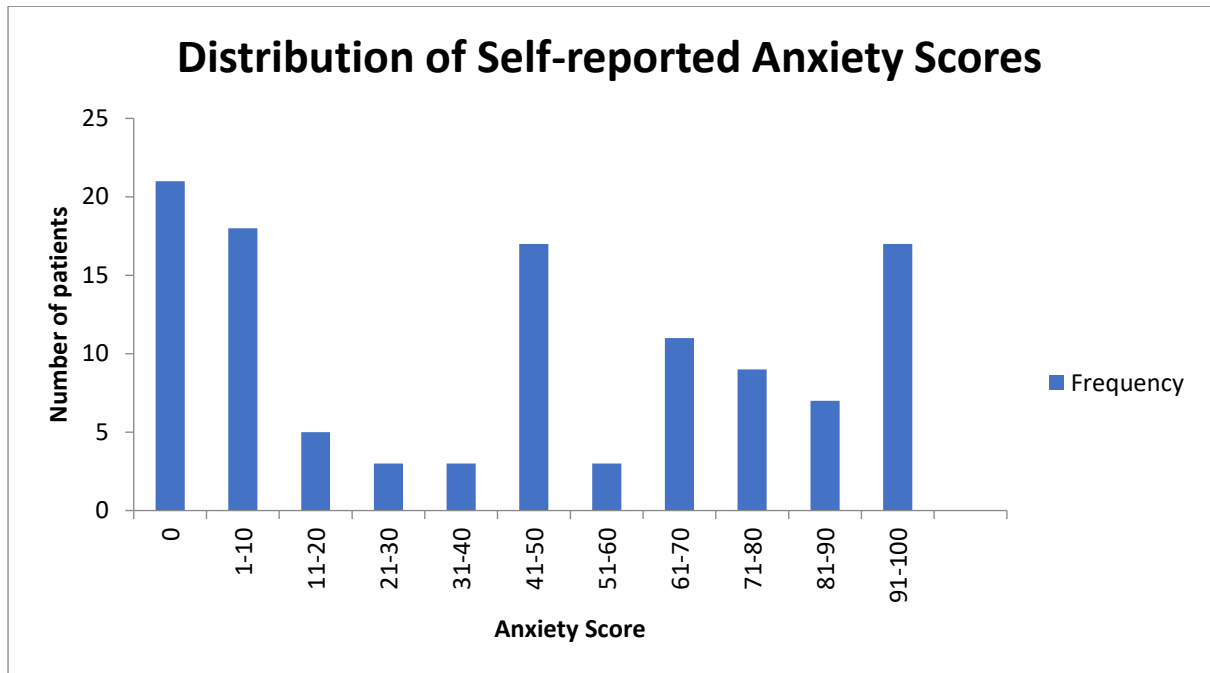


Figure 2: Perceived emotional journey

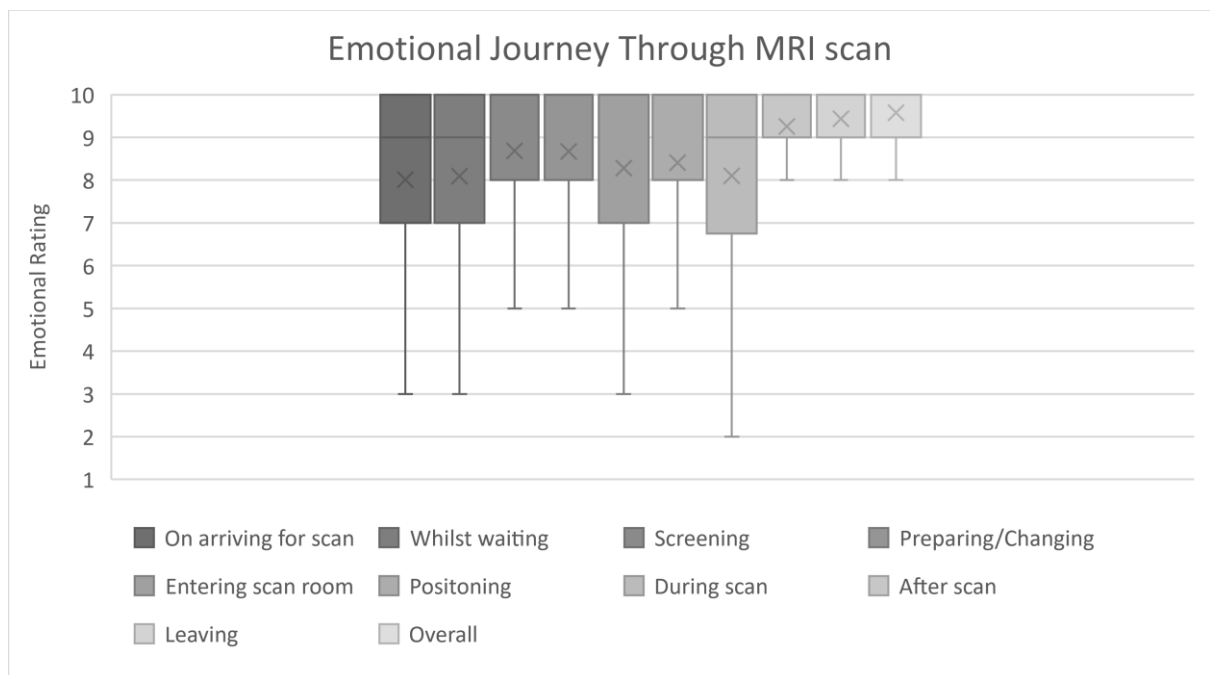


Figure 3: The patient journey through MRI

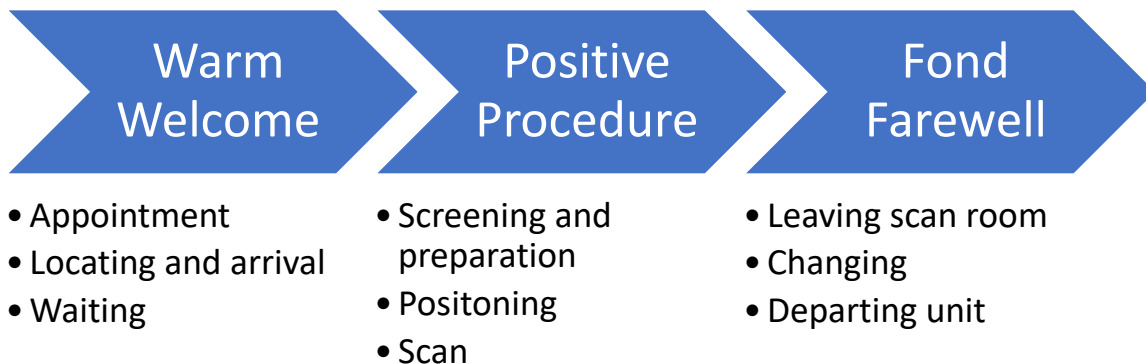


Figure 4: Recommendations for improving the patient journey

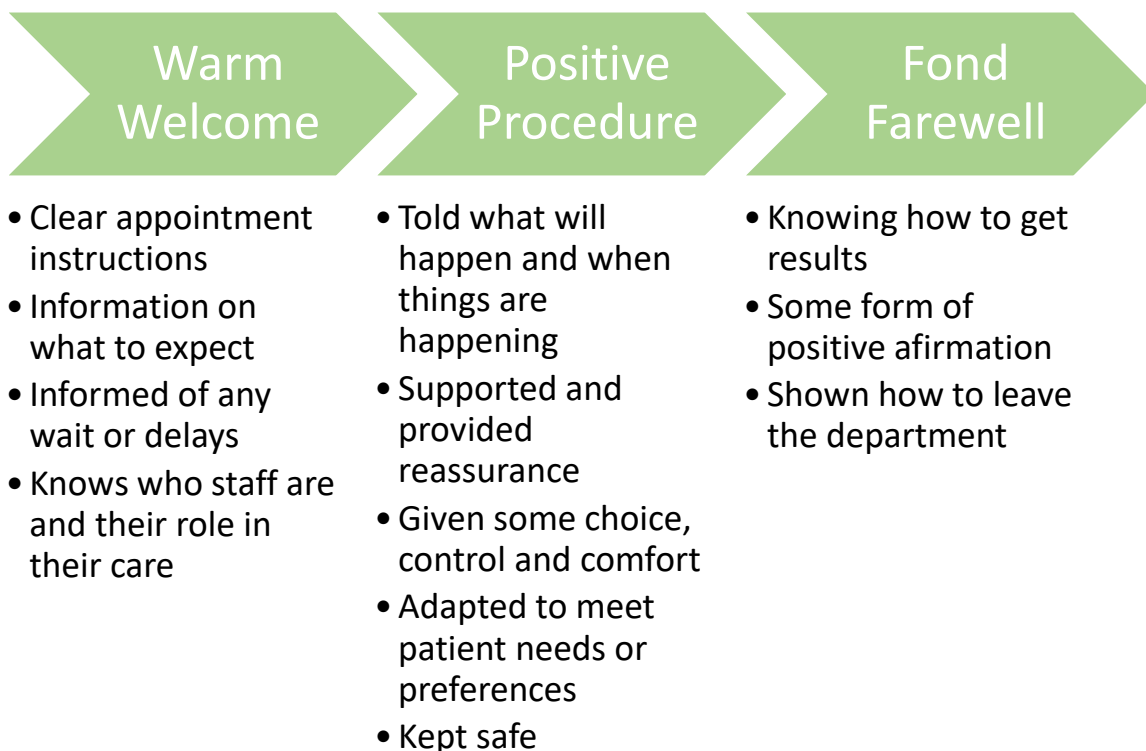


Table 1: Criteria for patient participation

Inclusion	Exclusion
<ul style="list-style-type: none"> • Attendance for MRI scan • Aged 18 years and over • Out-patient • Able to read and write in English 	<ul style="list-style-type: none"> • Aged under 18 years of age • Inability to read or write in English • Impairment preventing completion of paper survey • Lack of capacity

Table 2: Patient demographics and scan information

PATIENT DEMOGRAPHICS		
Patient Sex (N=75)	Male 45% (n=34)	Female 55% (n=41)
Mean patient age (N=75)	Male 48.69 years (24-80)	Female 48.35 years (17-97)
SCAN INFORMATION		
Scanner entry (N=70)* <i>*Remaining were on UpRight scanner</i>	Head first 53% (n=40)	Feet first 40% (n=30)
Bore size (N=92)	60cm 24% (n=22)	70cm 6% (n=70)
Patient funding (N=64)	NHS 69% (n=44)	Non-NHS 32% (n=20)

Table 3: Breakdown of mean perceived anxiety score

	Male	Female	Overall
Head First	41.37 (n=19)	42.55 (n=21)	42.55 (n=40)
Feet First	42.30 (n=13)	41.74 (n=17)	43 (n=30)
UpRight	70.33 (n=2)	69.90 (n=3)	69.90 (n=5)
Overall	43.41 (n=34)	42.72 (n=41)	N=75

Table 4: Content analysis of open responses (frequency in brackets)

What Matters	Areas to Improve
Make it personal (43) <ul style="list-style-type: none"> - Reassurance - Communication - Understanding - Respect - Friendly - Unrushed - Caring - Welcoming 	Physical nature (9) <ul style="list-style-type: none"> - Space - Bore size - Cold - Noise
Informed (24) <ul style="list-style-type: none"> - Explanation - Talked to throughout - How long 	During scan (8) <ul style="list-style-type: none"> - Music - Distraction
Physicality (21) <ul style="list-style-type: none"> - Comfort - Control - Space - Music - Air flow - People with me 	Informed (8) <ul style="list-style-type: none"> - Knowing what is happening - How long things will be
Hygiene factors (15) <ul style="list-style-type: none"> - Report / diagnosis - Efficient - Safe clean - Confident staff 	

Table 5: Contributory factors affecting anxiety

Factor	Number	Percentage
Scanner noise	52	42.98
Having to lie still	39	32.23
Being in scanner	38	31.40
Movement head first	36	29.75
Entry to scan room	33	27.27
Being left alone	31	25.62
Anticipation of results	30	24.79
Placement of coils	24	19.83
Laying on scan table	17	14.05
Prior experience	17	14.05
Movement feet first	15	12.40
Having to change or remove clothing	9	7.44

Table 6: Effective coping and support strategies

Strategy	Number	Percentage
Regular contact over intercom	66	54.55
On the day conversation with staff	61	50.41
Choice of music/radio	54	44.63
Information leaflets	45	37.19
Shortened scan times	44	36.36
Eye mask/closing eyes	39	32.23
Someone in the room with you	37	30.58
Breathing exercises	33	27.27
Video of what to expect	31	25.62
Phone call beforehand	31	25.62
Prisma glasses/mirror to see out	28	23.14
Being shown around scanner	21	17.36
Practicing entry and exit into scanner	16	13.22
Oral medication	15	12.40
Scent within the scan room	11	9.10
Visualisation exercises	11	9.10
Scan lying face down if possible	10	8.26
Visit beforehand	9	7.44