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Secondary Care staff engagement in near real-time patient experience feedback: a diagnostic approach in prioritising and identifying opportunities for quality improvement

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3 **Secondary Care staff engagement in near real-time patient experience feedback: a**
4 **diagnostic approach in prioritising and identifying opportunities for Quality**
5 **Improvement**
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Abstract

Objectives

The aim of this study was to identify the factors that promote and limit the effective current use of The Friends and Family Test (FFT), commissioned by the National Health Service (NHS) in England to capture patient experience as a real-time feedback initiative for patient-centred quality improvement.

Setting

This study was conducted at a large London NHS Trust. Services include accident and emergency, inpatient, outpatient and maternity, which routinely collect FFT patient experience data.

Participants

Healthcare staff and key stakeholders involved in FFT.

Interventions

Semi-structured interviews were conducted on fifteen participants from a broad range of professional groups to evaluate their engagement with the FFT. Interview data were recorded, transcribed, and analysed for key themes selected from a digital maturity framework.

Primary outcome

The main outcome was to reveal staff engagement of FFT as a near real-time feedback initiative, demonstrated by the flow of FFT from collection, analysis and reporting.

Results

Concerns related to inefficiency in the flow of FFT data, lack of time to analyse FFT reports (with emphasis on high level reporting rather than QI), insufficient access to FFT reports and limited training provided to understand FFT reports for frontline staff. The sheer volume of data received was not amenable to manual thematic analysis resulting in inability to acquire insight from the free-text. This resulted in staff ambivalence towards FFT as a near real-time feedback initiative.

Conclusions

Healthcare providers should ensure that sufficient resources are allocated to train and support frontline staff in interpreting patient experience in near real-time such as the FFT. This can encourage staff ownership of the reports and in turn promote staff engagement.

Article summary

Strengths and limitations of this study

- We reveal how the Friends and Family Test (FFT), an English National Health Service (NHS) patient experience survey, flows within a secondary care setting, and demonstrate key stakeholder engagement of FFT from collection, analysis to dissemination.
- The process map exposes the repetitions and inefficiencies, resulting in staff ambivalence and modest engagement with FFT as a real-time feedback initiative.
- Our analysis considers four key factors obtained from a digital maturity framework that are critical for healthcare organisations in facilitating optimal use of FFT as a near real-time feedback initiative.
- This was a single site study, which may not be representative of the English NHS as a whole.

Background

Over the last decade there has been a steadily increasing focus on collecting patient experience data in real-time or near real-time, with the aim of using it to improve care delivery. A real-time approach to collecting data is anticipated to increase the chance of feedback being put to effective use as staff have a greater sense of ownership of the results; the data are more recent and have the potential to be more granular.(1, 2) In the English NHS, near real-time feedback is collected via a national policy directive, the Friends and Family Test (FFT) (3). In addition to the Likert scale response, there is also a free-text option. This enables organisations to identify the “why” behind responses, providing a richer, more nuanced picture of patient experience. A review conducted by NHS England (3) showed FFT’s capability for delivering real-time feedback was found to be a particular strength for its use in local service improvement. In response the FFT has gone through a development process with changes effective from April 2020. One area of focus is encouraging NHS providers and commissioners to actively generate insight from the free-text portion of FFT feedback and use it to drive changes locally and in near real-time.

Despite a growing emphasis on gathering feedback in near real-time, the effectiveness of this approach for driving service improvement remains largely under-researched.(2, 4) To address this and the recent national policy changes on FFT reporting, there are two aspects that need to be understood; firstly, how FFT as near real-time feedback initiative cascades in a secondary care setting, and secondly the level of engagement from key stakeholders, in particular frontline staff. This is because the success of any survey approach for generating improvements in patient experience requires staff engagement and their involvement in interpreting and using the results for quality improvement (QI).(1, 4-6). Therefore, the aim of this study was to identify the factors that currently promote and limit the effective use of FFT as a real-time feedback initiative for patient-centred QI in a secondary care setting. FFT is increasingly being collected through digital means thereby allowing timelier report generation. Using a modified version of an existing digital maturity framework (7), the objectives were to draw upon qualitative data to explore staff engagement of FFT as a near real-time initiative and to create a visual demonstrating in detail the flow of FFT from collection, analysis to dissemination.

Methods

Study Design

Semi-structured interviews were used, which suited the exploratory aims of the study. This study received ethical approval from North East – Tyne and Wear South Research Ethics Committee, 17/NE/0306.

Setting

This study was conducted at a large London NHS Trust. The Trust caters for a population of approximately 1,000,000 people across five sites. Services include accident and emergency, inpatient, outpatient and maternity, which routinely collect FFT patient experience data.

Sampling and Recruitment

Through purposive sampling we began by identifying staff within the patient experience team followed by lead nurses and junior staff in each of the four services. This strategy helped ensure that we included staff that were either directly or indirectly involved in patient care. A criterion required that the interviewees have a good overview of patient experience feedback including FFT and are currently using all or part of this service in their everyday activities.

Data Collection

An invitation letter and a participant information sheet were emailed and hand delivered to all participants. Informed consent was obtained prior to interview participation. As the mode of administration of FFT within the study site was largely digital, we utilised a framework (7) embedded within the literature that provides guidance on how digital programs should be evaluated to ensure they remain patient-centric. The interview guide therefore was modified from the existing framework which incorporated four key themes; capacity/resource, usage, interoperability and impact of FFT. Interviews conducted in the hospital premises took 30 to 60 minutes. As this was semi-structured interviews, other questions emerged from dialogue and these were followed up as an iterative process. For the purpose of open discussions, any information that the participant wanted to retract was deleted from the transcript. No demographic information was collected aside from the role of each participant.

The interviews were transcribed verbatim and double-checked for inaccuracies. To aid trustworthiness of data collection, the first author checked accuracy against interview audio-recordings, participants were asked to review the transcript for their interview and any sensitive comments were retracted prior to analysis.

Data Analysis

Transcripts were transferred to NVivo (QSR International) where they were analysed using applied thematic analysis.⁽⁸⁾ Thematic analysis of interview data was undertaken following the 'framework method' ⁽⁹⁾ and commenced after the first interview. Thematic analysis was chosen because of its ability to facilitate a rich and detailed exploration of data, in keeping with the study aim. The framework method was used for its advantage in managing and mapping interview data ⁽¹⁰⁾. Initially, a more inductive approach to analysis was taken by drawing out general themes grounded in participant data. Following this, a more deductive approach was used based on four themes in the interview guide to interpret and add meaning to the initial analysis. Coding was performed manually by the first author. Peer checking was employed to aid credibility and confirmability of data analysis, whereby two transcripts were open-coded by a second author (KF). Differences in coding or interpretation of the thematic framework were resolved by discussion between the authors.

Visualising the flow of FFT

We summarised data from the semi-structured interviews to create a visual that demonstrates in detail how FFT data cascades from the point of collection, analysis, to dissemination. The visual also depicts the interaction of stakeholders involved and how FFT reports are processed as a near real-time initiative. By creating a visual, we are better equipped to understand what happens to FFT, where the process and organisational problems are and identify areas for improvement.

Patient and Public Involvement

Working as a collaborative group enabled shared decision making, with patient and public involvement and engagement (PPIE) at key stages throughout the project moulded the project to be patient-centric. In addition to a lay representative who was part of the steering group, we presented our proposal to the Research Partners Group (RPG) at the Imperial Patient Safety Translation Research Centre. The RPG positively impacted our research project, we learned about PPI and the value of it and RPG members also benefited from their participation. Using this approach we noted that there was equality of legitimacy and value in inputs from all those involved, whether suggestions entail large- or small-scale changes. During the initial stages where our protocol was being refined, feedback from all individuals from the PPIE group was invaluable.

Results

Thirteen participants were interviewed initially and analysed. Once the data appeared to have reached close to thematic saturation, two further interviews were conducted and analysis confirmed thematic saturation had been reached (11). Mean interview time was 33 minutes (18 - 62). Table 1 indicates the characteristics of the participants, their professional background and the healthcare service division they represented.

Table 1. Characteristics of the staff interviewed (n=15)

Staff Characteristic	n (%)
<i>Division</i>	
Surgery and Cancer	3 (20%)
Medicine and Integrated Care	3 (20%)
Women's and Children, and Clinical Support	3 (20%)
Non-Clinical Service	6 (40%)
<i>Professional background</i>	
Nursing & Midwifery	6 (40%)
Allied Health	1 (7%)
Medical	2 (13%)
Non-clinical	6 (40%)
<i>Direct provision of patient care</i>	
Yes	9 (60%)
No	6 (40%)

Flow of FFT feedback as a real-time initiative

With the interview data we created a visual that demonstrates the complex nature of stakeholder interactions with FFT reports as it cascades from collection to dissemination (impact) (Figure 1). The diversity of stakeholders involved included information governance team, data outsourcing team, patient experience team, divisional managers and frontline staff.

We provide a descriptive summary of the flow of FFT data as depicted in Figure 1. Data from all four care settings is collated and sent to central business intelligence department where due diligence is carried by the information governance team. A mandatory report is then sent to NHS England at monthly intervals. This report is not sent out to frontline staff. Once the feedback is released by the information governance team, the raw data is then sent to an external provider who assists in analysis and building visualisations and reports. The reports

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3 are presented in a traffic light format based on the response to the FFT question, i.e., FFT
4 score. In addition, the number of responses and free-text data is available to view. No further
5 analysis on the free-text data is conducted. Any amber and red reports are flagged by the
6 patient experience team which triggers an action plan by the appropriate ward manager. The
7 reports in theory are accessible to all staff but access is not mandatory. At monthly intervals
8 each divisional lead gathers the data from the FFT reports to create another entirely separate
9 report for Trust board meetings. The patient experience team are tasked to assist with these
10 regular reports, and also ensure that any feedback is acted upon. This highlights the
11 unstructured route of FFT feedback, how ownership of the FFT reports changes at each
12 timepoint, and the delay in providing FFT reports to the frontline staff. Despite the flow not
13 being streamlined, all four care settings follow the same sequence of steps from collection to
14 dissemination (impact).
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24 Staff engagement

25 Thematic analysis mapped to the digital maturity framework reveals the engagement towards
26 FFT reporting from of all 15 members of staff within the organisation (Figure 2). We explore
27 the key concepts from each four digital maturity domains that affect staff engagement of FFT
28 as a near real-time feedback initiative.
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33 Capacity and resource

34 There was a lack of capacity and resource within the organisation to enable regular and
35 consistent FFT collection. Specifically, frontline staff described having very limited time
36 available to engage with the FFT collection, as they were usually too busy to remember to
37 collect FFT feedback. To address this, the patient experience team introduced designated
38 staff or 'champions' and volunteers. However this was done on an ad-hoc basis and prioritised
39 following a mandate by the medical directorate when response rates dropped below the
40 national average. There were also concerns about the use of digital tools used to collect FFT
41 data due to the lack of availability of devices and issues with connectivity. A portion of FFT
42 surveys were therefore being completed on paper and transferred onto a digital format.
43 Participants felt that improving the digital infrastructure could subsequently enable
44 redeployment of staff to improvement projects rather than spending time manually uploading
45 FFT data. One participant said, "It is not good use of their time, we should take that resource
46 and get them [staff] out on the wards doing some improvement work".
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57 Usage

58 Staff highlighted several factors which had an impact on the use of FFT reports. Firstly, FFT
59 data was held in various formats, i.e., unprocessed, formatted for NHS England, summarised
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3 for divisional reporting, analysed through outsourcing and presented via a visualisation tool.
4 The tool was only accessible with an individual log-in and once training had been completed.
5 The number of lead nurses who had access and training on the visualisation tool was higher
6 compared to frontline (junior) staff. We found that there was a lack of access to the
7 visualisation tool for frontline staff and this was exacerbated by the ad hoc training. There
8 were delays in creating FFT reports for frontline staff despite the near real-time capability, due
9 the number of stakeholders involved in handling the FFT data as depicted in Figure 1.
10 Additionally, participants felt that the use of FFT reports fell short because “they are no real
11 sanctions for FFT and patient experience”, and “some of them [staff] have so much to do”
12 therefore, “it’s something that gets forgotten”. Therefore, managers had to take initiative to
13 implement the FFT results, but this was not a priority as they spent their time preparing reports
14 for divisional and trust wide meetings, where “FFT data was very rarely looked at”.
15 Furthermore, the sheer volume of free-text data received at the end of the month was not
16 amenable to manual thematic analysis. We also found that the overall FFT score did not
17 change much per month, and “not subtle enough to pick on variations”. Only services or wards
18 highlighted as ‘red’ (traffic light rating scale) on their FFT question score were followed-up.
19 One participant expressed that the main FFT question should change, “maybe it’s not the right
20 question, but it’s the question we’ve got and we have to deal with”.

31 32 33 Interoperability

34 Despite the best attempt to ensure FFT data was interoperable, FFT data was loosely
35 triangulated with other quality and safety metrics that is presented as a report at the executive
36 quality committee. The biggest component of the report is the safety aspect, “we don’t spend
37 a lot of time on the FFT section as the month on month variation in the FFT score is negligible”.
38 The outsourced visualisation reporting tool lacked satisfactory user experience and quoted as
39 being “clumsy”. One participant explained, “if the FFT reports were presented in such a way
40 that services could learn from each other, we can pre-empt problems in other areas”. Of note,
41 other patient feedback reports were reviewed in more detail such as the National Inpatient
42 Survey as the results are presented in a way that is understandable. FFT reports were not
43 linked to other sources of patient feedback held within the organisation.

44 45 46 Impact

47 In the action planning process, staff found free-text comments written by patients more
48 meaningful compared with the FFT score. Seeing patients’ own comments brought the
49 experiences to life for frontline staff and added a “sense of urgency” to address them in
50 improvement efforts. However, due to the sheer volume there was a desperate need to
51 consider automation in the form of text classification and sentiment analysis in the hope that

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3 the insights from free-text are not neglected and continue to have impact. Staff called for more
4 flexibility in the timing of FFT collection as it was conducted mostly on discharge. One
5 participant mentioned that “patient experience shouldn’t start when they are being discharged,
6 it should start when they are being admitted”. Evaluations made from FFT reports were
7 primarily used for internal benchmarking and comparisons with other Trusts, but did not result
8 in local improvements. When the nursing directorate intervened, their experience and
9 expertise allowed for improvements to be made locally driven by frontline staff. It is importance
10 to note that most frontline staff lacked formal quality improvement training. Once trained in the
11 outsourced visualisation tool, frontline staff were independently able to identify areas that
12 required attention by understanding trends and utilising word clouds generated from the free-
13 text comments.
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Discussion

We demonstrated in detail the complexity involved in processing FFT data within the organisation and explored staff engagement using a digital maturity framework. The visual representation (Figure 1) highlighted the number of various stakeholders involved resulting in lack of ownership and the inconsistency in FFT reports hindering FFT-driven improvement efforts. Data from the qualitative interviews revealed several concerns highlighted by staff in four key areas; capacity and resource, usage, interoperability and impact of FFT as a near-real time initiative. We discuss why this can impede effective use of FFT as a near real-time feedback initiative and investigate the literature for strategies that healthcare providers could consider deploying to increase staff engagement and thereby improve patient experience.

Recent studies have emphasised the pre-conditions for highly engaged staff, which include meaningfulness of work,(12) sustainable workload,(12) accountability,(13) opportunities for learning and development,(13, 14) strong leadership,(13-15) involvement in decision-making,(14) and relatively flat hierarchies.(14) There is evidence (16) that suggests that staff struggle to translate data into action: 'perceived barriers included a lack of knowledge of effective interventions, and limited time and resources'. Frontline staff are focused on their current patients. This is in direct contrast to the focus of the hospital management who produced FFT reports based on the experience of previous patients who were cared for weeks before. At board level, the focus was on monitoring of FFT response rate and no accountability for lack of FFT-driven improvement. In fact, frontline nursing staff, of which majority lacked access to the visualisation software, were at the bottom of the hierarchy for viewing FFT reports. This disconnect offers some explanation for the lack of engagement of staff with FFT and was one of the main reasons that staff were ambivalent to FFT as a real-time feedback initiative. Sheard et al (17) identified that there is a lack of staff ownership of patient feedback and this most often pertains to staff flux or demoralisation with action plans failing to be initiated. They demonstrated that when staff sought to make improvements from patient feedback, changes to the structures or processes of the individual ward on which they worked, this often led to success.

A systematic review (18) noted that despite the FFT policy mandate, the particular expertise needed to be able to conduct effective and meaningful data collection, analysis and interpretation appears not to have been provided to any great extent. This can be seen from clinician and staff reports that, while often they believe patient experience reports are important in their organisations, they also state that they have neither the time nor the expertise to use these data to any great effect.(18) This barrier has been highlighted in our

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3 study as well as previous studies, (4, 16, 19, 20) calling for a need for staff training in data
4 analysis and statistics to facilitate full understanding and use of results particularly if data is
5 outsourced. Our findings revealed that frontline staff that were critical in championing and
6 implementing improvement work when given the right training and opportunity. For e.g., staff
7 recommended making the FFT reports printable by offering a static dashboard, summarising
8 progress and areas for improvement at-a-glance and in near real-time. These types of reports
9 were also included in ward accreditation programmes and used as part of revalidation.
10 However, any improvement programme introduced in other services could not be shared
11 widely, resulting in repetition and inefficiencies.
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19 There should be an organisational emphasis where patient experience data collected has the
20 ability to be meaningfully utilised by frontline staff. Sheard et al (21) made recommendations
21 to facilitate healthcare organisations to change the way patient feedback is used, by tackling
22 both macro-level structural/organisational factors and micro-level factors surrounding how
23 individuals interact with patient experience data. An organisational strategic focus that
24 prioritises utilisation over collection, and ensuring data is relayed to staff by patient experience
25 teams in an accessible, straightforward and engaging manner, coupled with staff training that
26 encompasses both quantitative and qualitative analytical techniques and quality improvement
27 (QI) methodologies.
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35 Transforming culture by embracing frontline staff

36 Organisations need to improve their understanding of how frontline staff can use FFT data for
37 quality improvement; what motivates them to get involved in improvement; what helps or
38 hinders; and what can be done to make FFT reports more convincing, credible and practically
39 useful. Senior leadership should give staff a voice and play an active role in supporting staff
40 in addressing system problems and delivering change through genuine sharing of
41 responsibility.(22)
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46 Ipsos-MORI raise three critical issues for real-time data driven service improvement, all of
47 which have a bearing on how effective real-time data is for key stakeholders, and all of which
48 would benefit from further research: practicality of implementation, quality of data collected
49 and organisations ability to translate data into action.(23) They also highlight key issues for
50 healthcare services to focus on: ensuring the patient experience data is as granular and real
51 time as possible, combining this with qualitative and other data sources, producing data
52 reports that are accessible and focus managers attention on areas of improvement,
53 implementing real-time data as an organisational rather than technical exercise, and actively
54 bringing staff on board to champion and use the data to improve patient experience. Explaining
55 the benefits of FFT to staff and dealing openly with issues of scepticism and resistance to
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3 change will increase the likelihood of success.(5, 6) Indovina et al. (24) showed that real-time
4 experience reporting, coupled with staff education and coaching, improved satisfaction of
5 inpatients. Similar findings were reported (25), augmenting the need to cultivate a culture that
6 promotes staff communication and engagement. Furthermore, evidence suggests there is a
7 relationship between staff wellbeing and (a) staff-reported patient care performance and (b)
8 patient-reported patient experience. So, where patient experience is low, so too is staff
9 wellbeing and vice versa.(26)
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15 16 Improving reporting by addressing clinical analytics

17 The need for advanced analytic capability in the NHS is growing and faces the same cost
18 pressures that impact all other realms of service development and QI. Recent literature (27)
19 reveals some of the barriers and facilitators associated with technology driven real-time data
20 collection. The main barriers were related to familiarity, connectivity and positioning, which
21 was similar to our findings. Another barrier noted in our study was the lack of awareness of
22 end users' individual values and needs. As a result these technologies either fail to
23 be utilised at all or adaptations are made to fit them into pre-existing workflows that were not
24 considered a priori. Therefore, assessing user insights and acceptance during the
25 development and testing phases, and delivering technical support and versatility to data
26 collection approach (27) is likely to improve the likelihood of meaningful implementation and
27 uptake.
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30 Analysis of free-text comments was challenging due to time and resource constraints, and
31 prone to delays which resulted in outdated information. A semi-automated process to rapidly
32 identify and categorise comments from free-text responses may overcome some of the
33 barriers encountered with manual extraction and long processing times. Patient experience
34 themes and sentiment can be extracted from free-text comments, highlighting areas of
35 concerns and providing the context and details required for staff to rapidly learn and act on
36 patient feedback (25), thereby addressing the FFT re-development programme requirements.
37 By investing resources in building the capacity to innovate and develop clinical analytics within
38 the organisation will not only improve services but also build a foundation of technical
39 knowledge in the organisation and create a culture that promotes innovation. Sheard et al (21)
40 state that "if patient experience feedback is to be valued, then it should stop being viewed as
41 the poor relation to patient safety and finance whilst simultaneously—and concertedly—
42 moved outside the remit of being badged as a problem for corporate and shop floor nursing
43 to solve".
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57 58 Limitations

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3 Participants in the study were directly involved in FFT reporting, however, a broader sample
4 of staff with little to no FFT involvement such as healthcare assistants, administrative staff,
5 and student nurses would have been valuable. They are in fact the coal face in delivering the
6 patient experience, so they need to be represented in order to understand how FFT can be
7 used as a real-time feedback initiative. Moreover, this was a single site study, which may not
8 be representative of the UK as a whole.
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14 **Conclusion**

15 The unstructured flow of FFT data from collection, analysis to dissemination failed to align with
16 real-time reporting aspirations and timely interventions. This was exacerbated by lack of
17 ownership and accountability, training and access to FFT reports, resulting in staff
18 ambivalence. In order to improve the use of FFT as per national policy directive, the next
19 pivotal step is for healthcare organisations to renew their efforts to strengthen staff
20 engagement and focus on developing analytical expertise to get the most out of free-text FFT
21 data, thereby cultivating a culture that promotes FFT-driven improvement in near real-time.
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28 **Contributors**

29 Conception and design of the work: MK, KS, EM. Data collection: MK and KF. Data analysis
30 and interpretation: MK, KF, SHW, EM. Critical revision of drafts for important intellectual
31 content: MK, KF, DM, SHW, RK, AD, EM. Final approval of the version to be published: MK,
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55 **Data sharing**

56 No additional data available
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3 **Competing interests**

4 None declared
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8 **Patient consent for publication**

9 Not required
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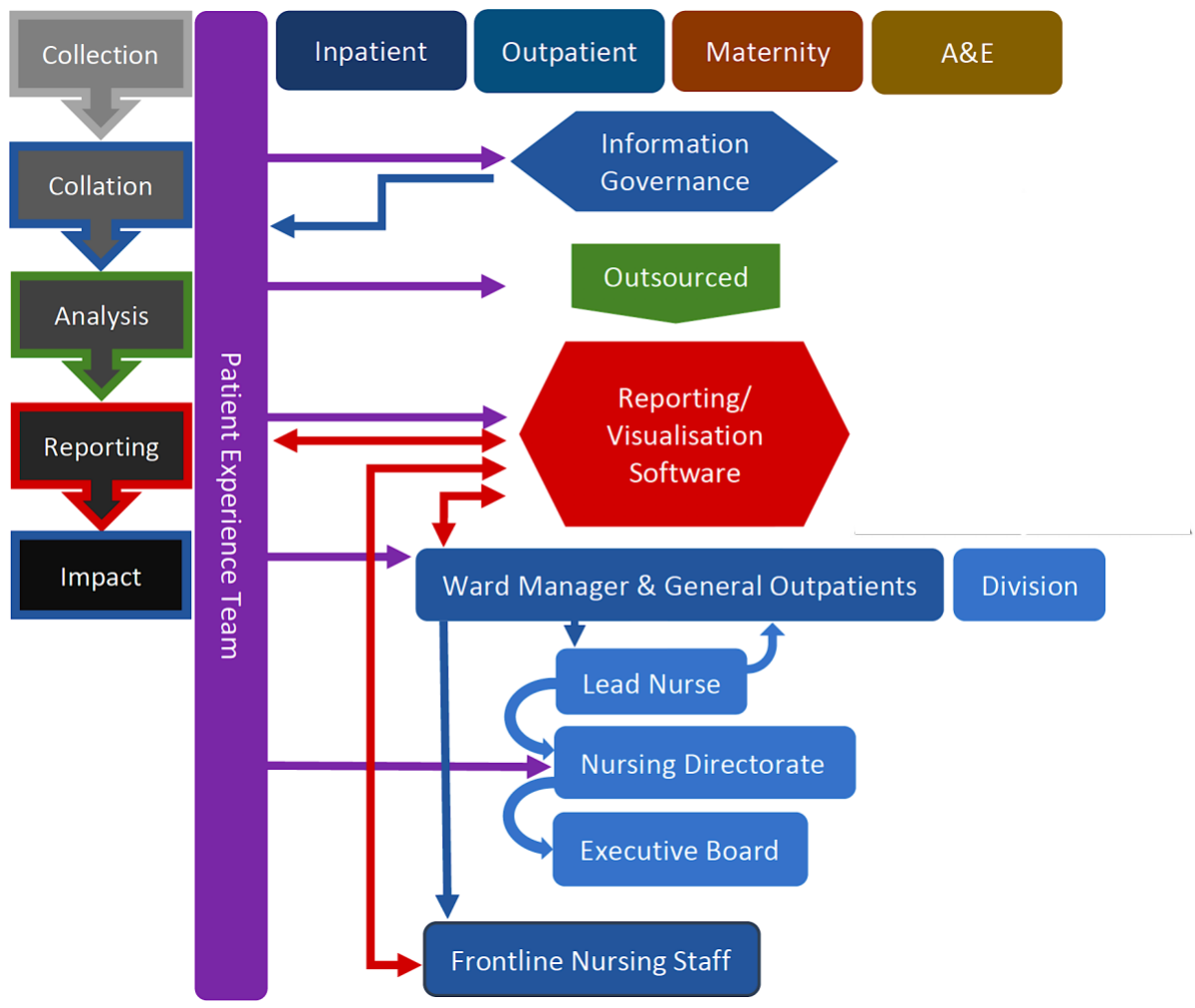
14 **Figure 1** This demonstrates the complex flow of FFT as a real-time feedback initiative and the
15 stakeholders involved as the feedback cascades down. The division comprises of Surgery
16 and Cancer, Medicine and Integrated Care, Women's and Children and Clinical Support and
17 Private Patients.
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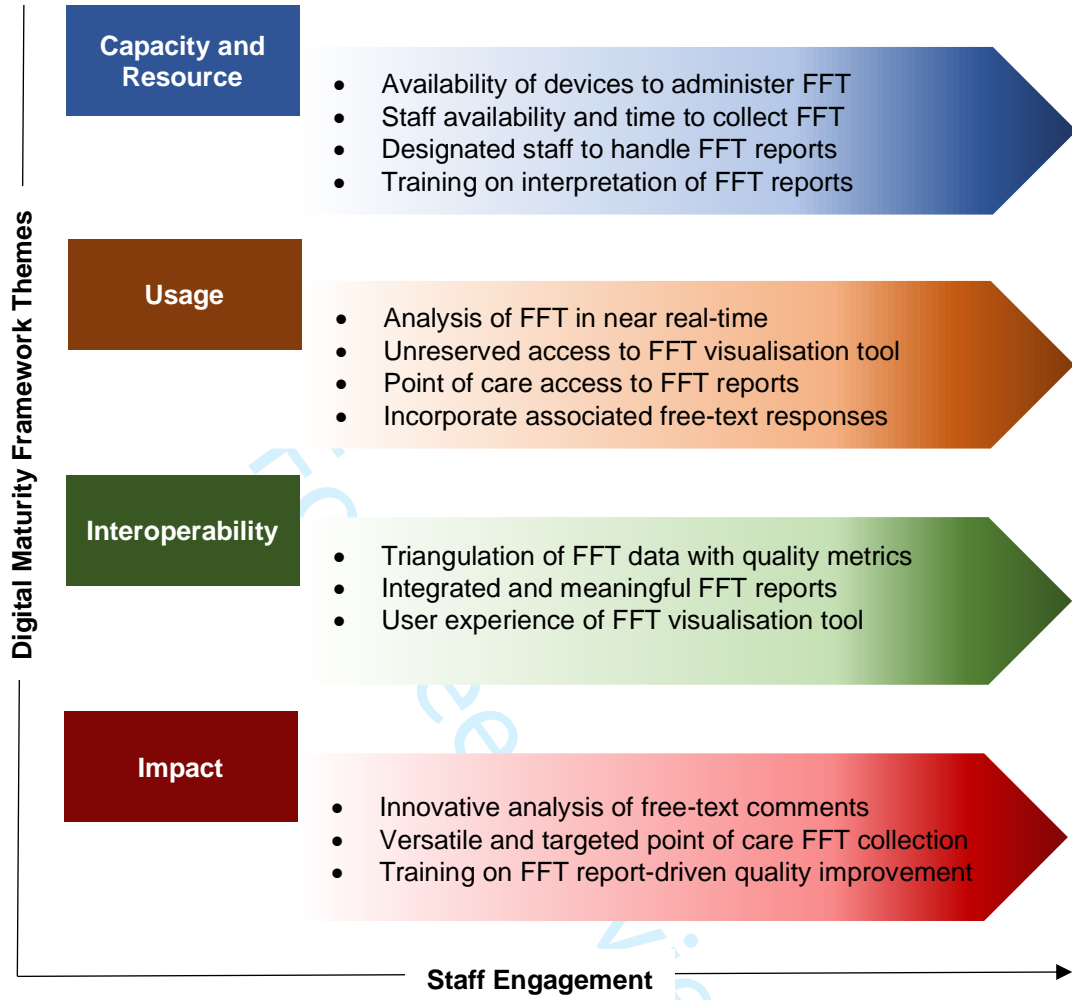
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22 **Figure 2** A summary of key concepts mapped to the digital maturity framework which facilitate
23 and encourage staff engagement with FFT as a near real-time feedback initiative.
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Real-time patient experience feedback in secondary care: a diagnostic approach in prioritising and identifying opportunities for Quality Improvement

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3 **Real-time patient experience feedback in secondary care: a diagnostic approach in**
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49 Keywords:

50 Staff engagement, process mapping, patient experience, Friends and Family Test, real-time
51 feedback, quality improvement
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57 Word count 3497
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Abstract

Objectives

The Friends and Family Test (FFT) is commissioned by the National Health Service (NHS) in England to capture patient experience as a real-time feedback initiative for patient-centred quality improvement (QI). The aim of this study was to create a process map in order to identify the factors that promote and limit the effective use of FFT as a real-time feedback initiative for patient-centred QI.

Setting

This study was conducted at a large London NHS Trust. Services include accident and emergency, inpatient, outpatient and maternity, which routinely collect FFT patient experience data.

Participants

Healthcare staff and key stakeholders involved in FFT.

Interventions

Semi-structured interviews were conducted on fifteen participants from a broad range of professional groups to evaluate their engagement with the FFT. Interview data were recorded, transcribed, and analysed for using deductive thematic analysis.

Results

Concerns related to inefficiency in the flow of FFT data, lack of time to analyse FFT reports (with emphasis on high level reporting rather than QI), insufficient access to FFT reports and limited training provided to understand FFT reports for frontline staff. The sheer volume of data received was not amenable to manual thematic analysis resulting in inability to acquire insight from the free-text. This resulted in staff ambivalence towards FFT as a near real-time feedback initiative.

Conclusions

The results state that there is too much FFT free text for meaningful analysis, and the output is limited to the provision of sufficient capacity and resource to analyse the data, without consideration of other options, such as text analytics and amending the data collection tool.

Article summary

Strengths and limitations of this study

- We reveal how the Friends and Family Test (FFT), an English National Health Service (NHS) patient experience survey, flows within a secondary care setting, and demonstrate key stakeholder engagement of FFT from collection, analysis to dissemination.
- The factors that promote the effective use of FFT
 - Designate staff to handle and implement FFT data and outputs
 - Access to visualisation tools enabling enhancing interaction with FFT data
 - Creating incentives such as ward accreditation programmes based on FFT scores
- The factors that limit the effective use of FFT
 - Lack of availability of devices to collect FFT feedback, including lack of staff time and training to act on the data for improvement
 - Need for innovation to analyse free text FFT data with near real time reporting
 - Integration of FFT data with other quality metrics
- The process map exposes the repetitions and inefficiencies, resulting in staff ambivalence and modest engagement with FFT as a real-time feedback initiative.
- This was a single site study with a small sample size, which may not be representative of other hospitals in England.

Background

Over the last decade there has been a steadily increasing focus on collecting patient experience data in real-time or near real-time, with the aim of using it to improve care delivery. A real-time approach to collecting data is anticipated to increase the chance of feedback being put to effective use as staff have a greater sense of ownership of the results; the data are more recent and have the potential to be more granular.(1, 2) In the English NHS, near real-time feedback is collected via a national policy directive, the Friends and Family Test (FFT) (3). In addition to the Likert scale response, there is also a free-text option. This enables organisations to identify the “why” behind responses, providing a richer, more nuanced picture of patient experience. A review conducted by NHS England (3) showed FFT’s capability for delivering real-time feedback was found to be a particular strength for its use in local service improvement. In response the FFT has gone through a development process with changes effective from April 2020. One area of focus is encouraging NHS providers and commissioners to actively generate insight from the free-text portion of FFT feedback and use it to drive changes locally and in near real-time.

Despite a growing emphasis on gathering feedback in near real-time, the effectiveness of this approach for driving service improvement remains largely under-researched.(2, 4) Kasbauer et al (5) evaluated the barriers and facilitators of real-time feedback, relating to technology, volunteer and staff engagement. However, the study focused on older patients, specifically those aged 75 and above, and feedback was elicited using a bespoke survey. The present study is uniquely different from previous research in that it evaluates barriers and facilitators that are specific for FFT as a near real-time feedback initiative. To address this and the recent national policy changes on FFT reporting, there are two aspects that need to be understood; firstly, how FFT as near real-time feedback initiative cascades in a secondary care setting, and secondly the level of engagement from key stakeholders, in particular frontline staff. This is because the success of any survey approach for generating improvements in patient experience requires staff engagement and their involvement in interpreting and using the results for quality improvement (QI).(1, 4-7). Therefore, the aim of this study was to create a process map in order to identify the factors that promote and limit the effective use of FFT as a real-time feedback initiative for patient-centred QI. The objectives were to; explore staff engagement of FFT in a secondary care setting; and categorise the responses according to ‘factors that promote’ and ‘factors that limit’ effective use of FFT.

Methods

Study Design

Semi-structured interviews were used, which suited the exploratory aims of the study. This study received ethical approval from North East – Tyne and Wear South Research Ethics Committee, 17/NE/0306.

Setting

This study was conducted at a large London NHS Trust. The Trust caters for a population of approximately 1,000,000 people across five sites. Services include accident and emergency, inpatient, outpatient and maternity, which routinely collect FFT patient experience data. FFT data is collected via tablets, kiosks, short message service (SMS), and paper/cards. The outpatient department employ SMS, and inpatient employ tablets as the main mode of FFT administration.

Sampling and Recruitment

Through purposeful sampling we began by identifying staff within the patient experience team followed by lead nurses and junior staff in each of the four services. Purposeful sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources.(8) This involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest.(9) Participants who met the following criteria were identified; (i) direct or indirect involvement in patient care, (ii) satisfactory overview of patient experience feedback, (iii) current of previous engagement with patient feedback data including FFT.

Data Collection

An invitation letter and a participant information sheet were emailed and hand delivered to all participants. Informed consent was obtained prior to interview participation. The interview guide and topic list were designed based on the Work Engagement Model. (10) Topics included perceived resource and capacity, perceived usage, interoperability and the perceived impact of FFT. Interviews conducted in the hospital premises took 30 to 60 minutes. Due to the semi-structured nature of the interviews, other questions emerged from dialogue and these were followed up as an iterative process. For the purpose of open discussions, any information that the participant wanted to retract was deleted from the transcript. No demographic information was collected aside from the role of each participant. The interviews were transcribed verbatim and double-checked for inaccuracies. To aid trustworthiness of data

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3 collection, the first author checked accuracy against interview audio-recordings, participants
4 were asked to review the transcript for their interview and any sensitive comments were
5 retracted prior to analysis.
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8 9 Data Analysis

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11 Transcripts were transferred to NVivo (QSR International) where they were analysed using
12 applied thematic analysis.⁽¹¹⁾ Thematic analysis of interview data was undertaken following
13 the 'framework method' (12) and commenced after the first interview. Framework method is a
14 transparent and iterative process of analysing qualitative data. It allows the researcher to
15 incorporate both deductive and inductive codes which was appropriate for this study where
16 specific questions in relation to effectiveness were identified a priori, but experiential aspects
17 were not. It involved five iterative stages of analysis: familiarisation, identifying thematic
18 framework, labelling, charting and mapping and interpretation.
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25 During familiarisation with data, the transcripts were read several times and both initial
26 deductive and inductive codes were identified. Deductive codes originated from questions
27 related to the topic guide. The conceptual framework was developed and discussed with the
28 co-author prior to the next phase of analysis. Associated keywords, e.g., for resource could
29 indicate positive emotions or expressions such as "easier to understand", associated
30 keywords for a demand could indicate negative emotions or expressions such as "there is no
31 time". We also made notes if such comments were made in relation to one role or if these
32 affected other roles. An open-coding strategy was used whereby descriptive codes were
33 attached to participant quotations, staying close to participant wording. One quotation could
34 contain multiple codes. Coding was performed manually by the first author. Peer checking
35 was employed to aid credibility and confirmability of data analysis, whereby two transcripts
36 were open-coded by a second author (KF). Differences in coding or interpretation of the
37 thematic framework were resolved by discussion between the authors.
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47 During the labelling phase, the thematic conceptual framework was applied to the entire data
48 set to ensure total coverage and further developed through the iterative process if new areas
49 were identified. Charting is a process for summarising and synthesising the data to facilitate
50 identification of thematic links and was conducted using a thematic matrix. The final phase is
51 mapping and interpretation in which the final categories and their relationships and
52 interactions are described. This process was facilitated through diagrammatical
53 representations of the themes and critical discussion with the research team (MK, KF, DM,
54 SHW and EM) to ensure themes were comprehensive and enhance the depth of analysis.
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Disagreements were resolved through peer debriefing until clarity and consensus were obtained.

Process mapping - visualising the flow of FFT

We summarised data from the semi-structured interviews to create a process map that demonstrates in detail how FFT data cascades from the point of collection, analysis, to dissemination. The process map also depicts the interaction of stakeholders involved and how FFT reports are processed as a near real-time initiative. By creating a process map, we are better equipped to understand what happens to FFT, where the process and organisational problems are and identify areas for improvement.

Patient and Public Involvement

Working as a collaborative group enabled shared decision making, with patient and public involvement and engagement (PPIE) at key stages throughout the project moulded the project to be patient-centric. In addition to a lay representative who was part of the steering group, we presented our proposal to the Research Partners Group (RPG) at the Imperial Patient Safety Translation Research Centre. The RPG positively impacted our research project, we learned about PPI and the value of it and RPG members also benefited from their participation. Using this approach we noted that there was equality of legitimacy and value in inputs from all those involved, whether suggestions entail large- or small-scale changes. During the initial stages where our protocol was being refined, feedback from all individuals from the PPIE group was invaluable.

Results

Thirteen participants were interviewed initially and analysed. Once the data appeared to have reached close to thematic saturation, two further interviews were conducted and analysis confirmed thematic saturation had been reached (13). Mean interview time was 33 minutes (18 - 62). Table 1 indicates the characteristics of the participants, their professional background and the healthcare service division they represented.

Table 1. Characteristics of the staff interviewed (n=15)

Staff Characteristic	n (%)
<i>Division</i>	
Surgery and Cancer	3 (20%)
Medicine and Integrated Care	3 (20%)

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3	Women's and Children, and Clinical Support	3 (20%)
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5	Non-Clinical Service	6 (40%)
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7	<i>Professional background</i>	
8	Nursing & Midwifery	6 (40%)
9	Allied Health	1 (7%)
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11	Medical	2 (13%)
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13	Non-clinical	6 (40%)
14		
15	<i>Direct provision of patient care</i>	
16	Yes	9 (60%)
17	No	6 (40%)
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Process map of FFT feedback as a real-time initiative

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24 With the interview data we created a process map that demonstrates the complex nature of
25 stakeholder interactions with FFT reports as it cascades from collection to dissemination
26 (impact) (Figure 1). The diversity of stakeholders involved included information governance
27 team, data outsourcing team, patient experience team, divisional managers and frontline staff.
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31 We provide a descriptive summary of the process map of FFT data as depicted in Figure 1.
32 Data from all four care settings is collated and sent to central business intelligence department
33 where due diligence is carried by the information governance team. A mandatory report is
34 then sent to NHS England at monthly intervals. This report is not sent out to frontline staff.
35 Once the feedback is released by the information governance team, the raw data is then sent
36 to an external provider who assists in analysis and building visualisations and reports. The
37 reports are presented in a traffic light format based on the response to the FFT question, i.e.,
38 FFT score. In addition, the number of responses and free-text data is available to view. No
39 further analysis on the free-text data is conducted. Any amber and red reports are flagged by
40 the patient experience team which triggers an action plan by the appropriate ward manager.
41 The reports in theory are accessible to all staff but access is not mandatory. At monthly
42 intervals each divisional lead gathers the data from the FFT reports to create another entirely
43 separate report for Trust board meetings. The patient experience team are tasked to assist
44 with these regular reports, and also ensure that any feedback is acted upon. This highlights
45 the unstructured route of FFT feedback, how ownership of the FFT reports changes at each
46 timepoint, and the delay in providing FFT reports to the frontline staff. Despite the flow not
47 being streamlined, all four care settings follow the same sequence of steps from collection to
48 dissemination (impact).
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Identified themes

During the interviews, the participants were very clear about what they perceive as factors that promote and limit the effective use of FFT as a near real time feedback initiative. They were generally able to elaborate clearly and consciously on the causes and effects of these factors. Subsequently, many separate barriers and facilitators were categorised in four main themes (figure 2) as described below.

Capacity and resource

There was a lack of capacity and resource within the organisation to enable regular and consistent FFT collection. Specifically, frontline staff described having very limited time available to engage with the FFT collection, as they were usually too busy to remember to collect FFT feedback. To address this, the patient experience team introduced designated staff or 'champions' and volunteers. However this was done on an ad-hoc basis and prioritised following a mandate by the medical directorate when response rates dropped below the national average. There were also concerns about the use of digital tools used to collect FFT data due to the lack of availability of devices and issues with connectivity. A portion of FFT surveys were therefore being completed on paper and transferred onto a digital format. Participants felt that improving the digital infrastructure could subsequently enable redeployment of staff to improvement projects rather than spending time manually uploading FFT data. One participant said, "It is not good use of their time, we should take that resource and get them [staff] out on the wards doing some improvement work'.

Usage

Staff highlighted several factors which had an impact on the use of FFT reports. Firstly, FFT data was held in various formats, i.e., unprocessed, formatted for NHS England, summarised for divisional reporting, analysed through outsourcing and presented via a visualisation tool. The tool was only accessible with an individual log-in and once training had been completed. The number of lead nurses who had access and training on the visualisation tool was higher compared to frontline (junior) staff. We found that there was a lack of access to the visualisation tool for frontline staff and this was exacerbated by the ad hoc training. There were delays in creating FFT reports for frontline staff despite the near real-time capability, due the number of stakeholders involved in handling the FFT data as depicted in Figure 1. Additionally, participants felt that the use of FFT reports fell short because "there are no real sanctions for FFT and patient experience", and "some of them [staff] have so much to do" therefore, "it's something that gets forgotten". Therefore, managers had to take initiative to implement the FFT results, but this was not a priority as they spent their time preparing reports for divisional and trust wide meetings, where "FFT data was very rarely looked at".

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3 Furthermore, the sheer volume of free-text data received at the end of the month was not
4 amenable to manual thematic analysis. We also found that the overall FFT score did not
5 change much per month, and “not subtle enough to pick on variations”. Only services or wards
6 highlighted as ‘red’ (traffic light rating scale) on their FFT question score were followed-up.
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8 One participant expressed that the main FFT question should change, “maybe it’s not the right
9 question, but it’s the question we’ve got and we have to deal with”.
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13 14 Interoperability

15 Despite the best attempt to ensure FFT data was interoperable, FFT data was loosely
16 triangulated with other quality and safety metrics that is presented as a report at the executive
17 quality committee. The biggest component of the report is the safety aspect, “we don’t spend
18 a lot of time on the FFT section as the month on month variation in the FFT score is negligible”.
19 The outsourced visualisation reporting tool lacked satisfactory user experience and quoted as
20 being “clumsy”. One participant explained, “if the FFT reports were presented in such a way
21 that services could learn from each other, we can pre-empt problems in other areas”. Of note,
22 other patient feedback reports were reviewed in more detail such as the Adult Inpatient Survey
23 (14) as the results are presented in a way that is understandable. FFT reports were not linked
24 to other sources of patient feedback held within the organisation.
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26 However, ward managers printed FFT reports by offering a static dashboard, summarising
27 progress and areas for improvement at-a-glance. These types of reports were also included
28 in ward accreditation programmes and used as part of revalidation.
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38 Impact

39 In the action planning process, staff found free-text comments written by patients more
40 meaningful compared with the FFT score. Seeing patients’ own comments brought the
41 experiences to life for frontline staff and added a “sense of urgency” to address them in
42 improvement efforts. However, due to the sheer volume there was a desperate need to
43 consider automation in the form of text classification and sentiment analysis in the hope that
44 the insights from free-text are not neglected and continue to have impact. Staff called for more
45 flexibility in the timing of FFT collection as it was conducted mostly on discharge. One
46 participant mentioned that “patient experience shouldn’t start when they are being discharged,
47 it should start when they are being admitted”. Evaluations made from FFT reports were
48 primarily used for internal benchmarking and comparisons with other Trusts, but did not result
49 in local improvements. When the nursing directorate intervened, their experience and
50 expertise allowed for improvements to be made locally driven by frontline staff. It is important
51 to note that most frontline staff lacked formal quality improvement training. Once trained in the
52 outsourced visualisation tool, frontline staff were independently able to identify areas that
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3 required attention by understanding trends and utilising word clouds generated from the free-
4 text comments.
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For peer review only

Discussion

We highlighted the factors that promote and limit the effectiveness of FFT as a near real time feedback initiative and demonstrated in detail the complexity involved in processing FFT data within the organisation (Figure 2). The process map (Figure 1) highlighted the number of various stakeholders involved resulting in lack of ownership and the inconsistency in FFT reports hindering FFT-driven improvement efforts. Data from the qualitative interviews revealed several concerns highlighted by staff based on four themes; capacity and resource, usage, interoperability and impact of FFT. We discuss why this can impede effective use of FFT as a near real-time feedback initiative and investigate the literature for strategies that healthcare providers could consider deploying to increase staff engagement and thereby improve patient experience.

Recent studies have emphasised the pre-conditions for highly engaged staff, which include meaningfulness of work,(15) sustainable workload,(15) accountability,(16) opportunities for learning and development,(16, 17) strong leadership,(16-18) involvement in decision-making,(17) and relatively flat hierarchies.(17) There is evidence (19) that suggests that staff struggle to translate data into action: 'perceived barriers included a lack of knowledge of effective interventions, and limited time and resources'. Frontline staff are focused on their current patients. This is in direct contrast to the focus of the hospital management who produced FFT reports based on the experience of previous patients who were cared for weeks before. At board level, the focus was on monitoring of FFT response rate and no accountability for lack of FFT-driven improvement. In fact, frontline nursing staff, of which majority lacked access to the visualisation software, were at the bottom of the hierarchy for viewing FFT reports. This disconnect offers some explanation for the lack of engagement of staff with FFT and was one of the main reasons that staff were ambivalent to FFT as a real-time feedback initiative. Sheard et al (20) identified that there is a lack of staff ownership of patient feedback and this most often pertains to staff flux or demoralisation with action plans failing to be initiated. They demonstrated that when staff sought to make improvements from patient feedback, changes to the structures or processes of the individual ward on which they worked, this often led to success.

A systematic review (21) noted that despite the FFT policy mandate, the particular expertise needed to be able to conduct effective and meaningful data collection, analysis and interpretation appears not to have been provided to any great extent. This can be seen from clinician and staff reports that, while often they believe patient experience reports are important in their organisations, they also state that they have neither the time nor the

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3 expertise to use these data to any great effect.(21) This barrier has been highlighted in our
4 study as well as previous studies, (4, 19, 22, 23) calling for a need for staff training in data
5 analysis and statistics to facilitate full understanding and use of results particularly if data is
6 outsourced. Our findings revealed that frontline staff that were critical in championing and
7 implementing improvement work when given the right training and opportunity. For e.g., staff
8 recommended making the FFT reports printable by offering a static dashboard, summarising
9 progress and areas for improvement at-a-glance and in near real-time. However, any
10 improvement programme introduced in other services could not be shared widely, resulting in
11 repetition and inefficiencies.
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19 There should be an organisational emphasis where patient experience data collected has the
20 ability to be meaningfully utilised by frontline staff. Sheard et al (24) made recommendations
21 to facilitate healthcare organisations to change the way patient feedback is used, by tackling
22 both macro-level structural/organisational factors and micro-level factors surrounding how
23 individuals interact with patient experience data. An organisational strategic focus that
24 prioritises utilisation over collection, and ensuring data is relayed to staff by patient experience
25 teams in an accessible, straightforward and engaging manner, coupled with staff training that
26 encompasses both quantitative and qualitative analytical techniques and quality improvement
27 (QI) methodologies.
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34 35 Transforming culture by embracing frontline staff

36 Organisations need to improve their understanding of how frontline staff can use FFT data for
37 quality improvement; what motivates them to get involved in improvement; what helps or
38 hinders; and what can be done to make FFT reports more convincing, credible and practically
39 useful. Senior leadership should give staff a voice and play an active role in supporting staff
40 in addressing system problems and delivering change through genuine sharing of
41 responsibility.(25)
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46 Ipsos-MORI raise three critical issues for real-time data driven service improvement, all of
47 which have a bearing on how effective real-time data is for key stakeholders, and all of which
48 would benefit from further research: practicality of implementation, quality of data collected
49 and organisations ability to translate data into action.(26) They also highlight key issues for
50 healthcare services to focus on: ensuring the patient experience data is as granular and real
51 time as possible, combining this with qualitative and other data sources, producing data
52 reports that are accessible and focus managers attention on areas of improvement,
53 implementing real-time data as an organisational rather than technical exercise, and actively
54 bringing staff on board to champion and use the data to improve patient experience. Explaining
55 the benefits of FFT to staff and dealing openly with issues of scepticism and resistance to
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3 change will increase the likelihood of success.(6, 7) Indovina et al. (27) showed that real-time
4 experience reporting, coupled with staff education and coaching, improved satisfaction of
5 inpatients. Similar findings were reported (28), augmenting the need to cultivate a culture that
6 promotes staff communication and engagement. Furthermore, evidence suggests there is a
7 relationship between staff wellbeing and (a) staff-reported patient care performance and (b)
8 patient-reported patient experience. So, where patient experience is low, so too is staff
9 wellbeing and vice versa.(29)
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14 15 16 Improving reporting by addressing clinical analytics

17 The need for advanced analytic capability in the NHS is growing and faces the same cost
18 pressures that impact all other realms of service development and QI. Recent literature (5)
19 reveals some of the barriers and facilitators associated with technology driven real-time data
20 collection. The main barriers were related to familiarity, connectivity and positioning, which
21 was similar to our findings. Another barrier noted in our study was the lack of awareness of
22 end users' individual values and needs. As a result these technologies either fail to
23 be utilised at all or adaptations are made to fit them into pre-existing workflows that were not
24 considered a priori. Therefore, assessing user insights and acceptance during the
25 development and testing phases, and delivering technical support and versatility to data
26 collection approach (5) is likely to improve the likelihood of meaningful implementation and
27 uptake.
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30 Analysis of free-text comments was challenging due to time and resource constraints, and
31 prone to delays which resulted in outdated information. A semi-automated process to rapidly
32 identify and categorise comments from free-text responses may overcome some of the
33 barriers encountered with manual extraction and long processing times. Patient experience
34 themes and sentiment can be extracted from free-text comments, highlighting areas of
35 concerns and providing the context and details required for staff to rapidly learn and act on
36 patient feedback (28), thereby addressing the FFT re-development programme requirements.
37 By investing resources in building the capacity to innovate and develop clinical analytics within
38 the organisation will not only improve services but also build a foundation of technical
39 knowledge in the organisation and create a culture that promotes innovation. Sheard et al (24)
40 state that "if patient experience feedback is to be valued, then it should stop being viewed as
41 the poor relation to patient safety and finance whilst simultaneously—and concertedly—
42 moved outside the remit of being badged as a problem for corporate and shop floor nursing
43 to solve".
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57 58 Limitations 59 60

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3 Participants in the study were directly involved in FFT reporting, however, a broader sample
4 of staff with little to no FFT involvement such as healthcare assistants, administrative staff,
5 and student nurses would have been valuable. They are in fact the coal face in delivering the
6 patient experience, so they need to be represented in order to understand how FFT can be
7 used as a real-time feedback initiative. Moreover, this was a single site study with a small
8 sample size, which may not be representative of the UK as a whole.
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13 14 **Conclusion**

15 The use of staff 'FFT champions', supplementary free-text, visualisation tool, and enhancing
16 ward accreditation using FFT reports promoted the use of FFT in some care settings.
17 However, the unstructured flow of FFT data from collection, analysis to dissemination failed
18 to align with real-time reporting aspirations and timely interventions. This was exacerbated by
19 lack of ownership and accountability, training and access to FFT reports, resulting in staff
20 ambivalence. The results also demonstrate that there is too much FFT free text for meaningful
21 analysis, and the output is limited to the provision of sufficient capacity and resource to analyse
22 the data, without consideration of other options, such as implementing text analytics on free
23 text FFT data and developing versatile and targeted point of care FFT collection.
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31 **Contributors**

32 Conception and design of the work: MK, KF, EM. Data collection: MK and KF. Data analysis
33 and interpretation: MK, KF, SHW, EM. Critical revision of drafts for important intellectual
34 content: MK, KF, DM, SHW, RK, AD, EM. Final approval of the version to be published: MK,
35 KF, DM, SHW, RK, AD, EM.
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58 **Data sharing**

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3 Recruitment began before 1st January 2019, therefore no data sharing plan is included.
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6 **Competing interests**

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8 None declared
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11 **Patient consent for publication**

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13 Not required
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17 **Figure 1** This demonstrates the complex flow of FFT as a real-time feedback initiative and the
18 stakeholders involved as the feedback cascades down. The division comprises of Surgery
19 and Cancer, Medicine and Integrated Care, Women's and Children and Clinical Support and
20 Private Patients.
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25 **Figure 2** A summary of key factors that promoted and limit the effectiveness of FFT as a near
26 real-time feedback initiative based on four key themes.
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3 **Ethics statement**
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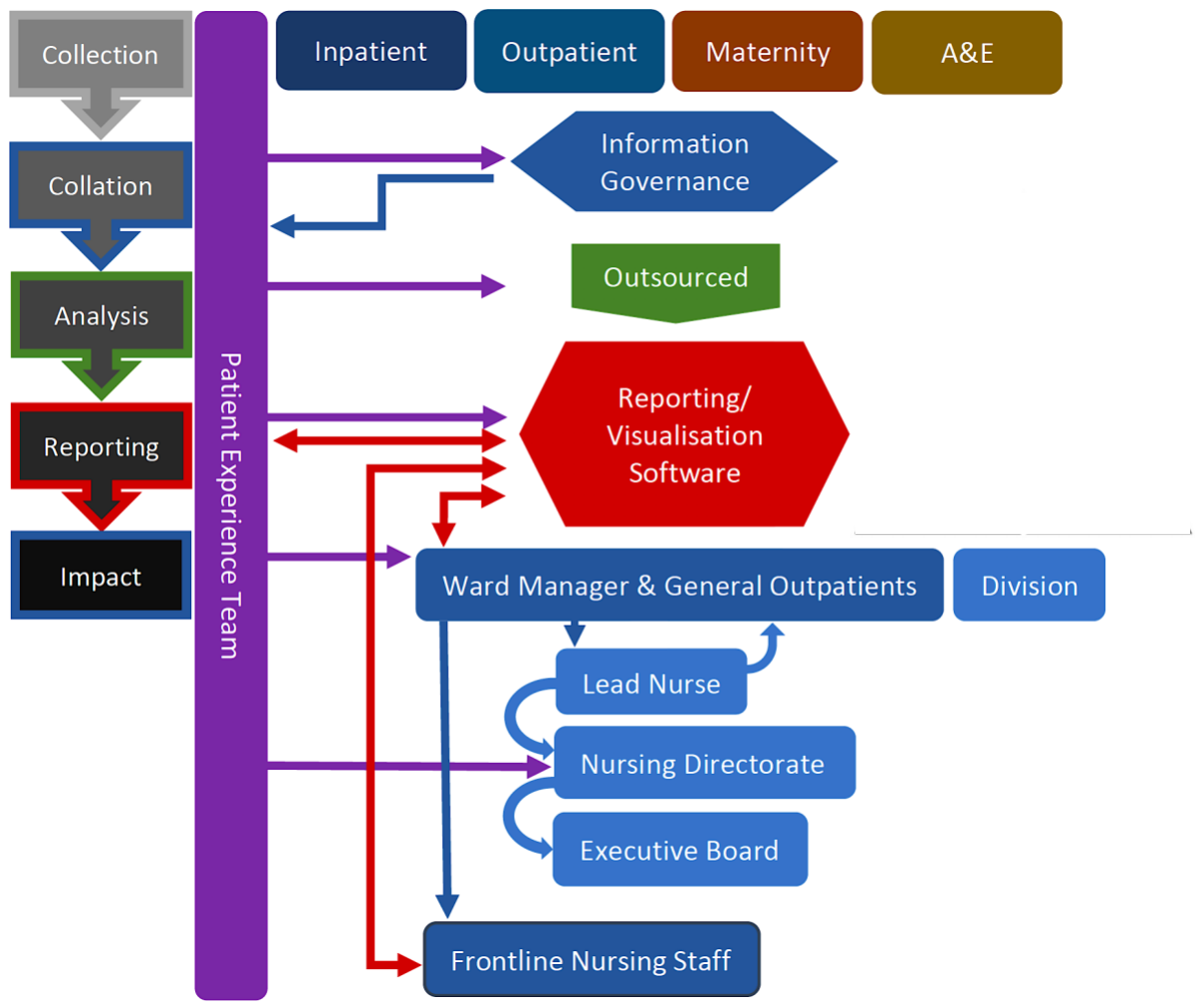
6 This study received ethical approval from North East – Tyne and Wear South Research Ethics
7 Committee, 17/NE/0306.
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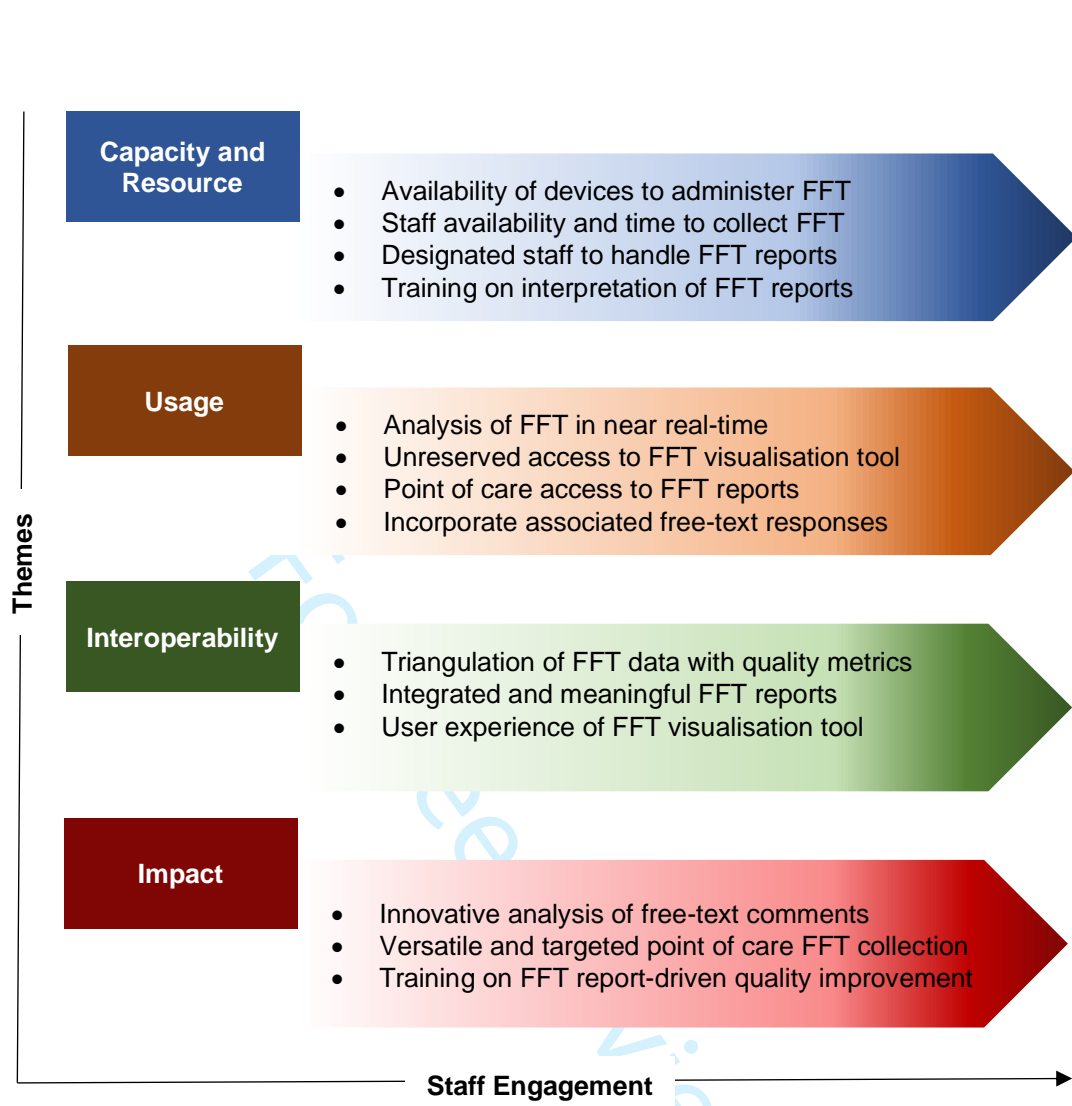
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Identifying factors that promote and limit the effective use of real-time patient experience feedback: a mixed-methods study in secondary care

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3 **Identifying factors that promote and limit the effective use of real-time patient**
4 **experience feedback: a mixed-methods study in secondary care**
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51
52 Keywords:

53 Staff engagement, process mapping, patient experience, Friends and Family Test, real-time
54 feedback, quality improvement
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60 Word count 3497

Abstract

Objectives

The Friends and Family Test (FFT) is commissioned by the National Health Service (NHS) in England to capture patient experience as a real-time feedback initiative for patient-centred quality improvement (QI). The aim of this study was to create a process map in order to identify the factors that promote and limit the effective use of FFT as a real-time feedback initiative for patient-centred QI.

Setting

This study was conducted at a large London NHS Trust. Services include accident and emergency, inpatient, outpatient and maternity, which routinely collect FFT patient experience data.

Participants

Healthcare staff and key stakeholders involved in FFT.

Interventions

Semi-structured interviews were conducted on fifteen participants from a broad range of professional groups to evaluate their engagement with the FFT. Interview data were recorded, transcribed, and analysed for using deductive thematic analysis.

Results

Concerns related to inefficiency in the flow of FFT data, lack of time to analyse FFT reports (with emphasis on high level reporting rather than QI), insufficient access to FFT reports and limited training provided to understand FFT reports for frontline staff. The sheer volume of data received was not amenable to manual thematic analysis resulting in inability to acquire insight from the free-text. This resulted in staff ambivalence towards FFT as a near real-time feedback initiative.

Conclusions

The results state that there is too much FFT free text for meaningful analysis, and the output is limited to the provision of sufficient capacity and resource to analyse the data, without consideration of other options, such as text analytics and amending the data collection tool.

Article summary

Strengths and limitations of this study

- This study reveals for the first time the complex stakeholder interaction involved to process the Friends and Family Test (FFT).
- Stakeholder interviews strengthened the value of using associated free text data and applying innovative approaches for real-time application.
- This was a single site study with a small sample size, which may not be representative of other hospitals in England.
- Opinions from staff such as healthcare assistants, administrative staff, and student nurses would have been valuable.

Background

Over the last decade there has been a steadily increasing focus on collecting patient experience data in real-time or near real-time, with the aim of using it to improve care delivery. A real-time approach to collecting data is anticipated to increase the chance of feedback being put to effective use as staff have a greater sense of ownership of the results; the data are more recent and have the potential to be more granular.(1, 2) In the English NHS, near real-time feedback is collected via a national policy directive, the Friends and Family Test (FFT) (3). In addition to the Likert scale response, there is also a free-text option. This enables organisations to identify the “why” behind responses, providing a richer, more nuanced picture of patient experience. A review conducted by NHS England (3) showed FFT’s capability for delivering real-time feedback was found to be a particular strength for its use in local service improvement. In response the FFT has gone through a development process with changes effective from April 2020. One area of focus is encouraging NHS providers and commissioners to actively generate insight from the free-text portion of FFT feedback and use it to drive changes locally and in near real-time.

Despite a growing emphasis on gathering feedback in near real-time, the effectiveness of this approach for driving service improvement remains largely under-researched.(2, 4) Kasbauer et al (5) evaluated the barriers and facilitators of real-time feedback, relating to technology, volunteer and staff engagement. However, the study focused on older patients, specifically those aged 75 and above, and feedback was elicited using a bespoke survey. The present study is uniquely different from previous research in that it evaluates barriers and facilitators that are specific for FFT as a near real-time feedback initiative. To address this and the recent national policy changes on FFT reporting, there are two aspects that need to be understood; firstly, how FFT as near real-time feedback initiative cascades in a secondary care setting, and secondly the level of engagement from key stakeholders, in particular frontline staff. This is because the success of any survey approach for generating improvements in patient experience requires staff engagement and their involvement in interpreting and using the results for quality improvement (QI).(1, 4-7). Therefore, the aim of this study was to create a process map in order to identify the factors that promote and limit the effective use of FFT as a real-time feedback initiative for patient-centred QI. The objectives were to; explore staff engagement of FFT in a secondary care setting; and categorise the responses according to ‘factors that promote’ and ‘factors that limit’ effective use of FFT.

Methods

Study Design

Semi-structured interviews were used, which suited the exploratory aims of the study. This study received ethical approval from North East – Tyne and Wear South Research Ethics Committee, 17/NE/0306.

Setting

This study was conducted at a large London NHS Trust. The Trust caters for a population of approximately 1,000,000 people across five sites. Services include accident and emergency, inpatient, outpatient and maternity, which routinely collect FFT patient experience data. FFT data is collected via tablets, kiosks, short message service (SMS), and paper/cards. The outpatient department employ SMS, and inpatient employ tablets as the main mode of FFT administration.

Sampling and Recruitment

Through purposeful sampling we began by identifying staff within the patient experience team followed by lead nurses and junior staff in each of the four services. Purposeful sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources.(8) This involves identifying and selecting individuals or groups of individuals that are especially knowledgeable about or experienced with a phenomenon of interest.(9) Participants who met the following criteria were identified; (i) direct or indirect involvement in patient care, (ii) satisfactory overview of patient experience feedback, (iii) current or previous engagement with patient feedback data including FFT.

Data Collection

An invitation letter and a participant information sheet were emailed and hand delivered to all participants. Written informed consent was obtained prior to interview participation. The interview guide and topic list were designed based on the Work Engagement Model. (10) Topics included perceived resource and capacity, perceived usage, interoperability and the perceived impact of FFT. Interviews conducted in the hospital premises took 30 to 60 minutes. Due to the semi-structured nature of the interviews, other questions emerged from dialogue and these were followed up as an iterative process. For the purpose of open discussions, any information that the participant wanted to retract was deleted from the transcript. No demographic information was collected aside from the role of each participant. The interviews were transcribed verbatim and double-checked for inaccuracies. To aid trustworthiness of data

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3 collection, the first author checked accuracy against interview audio-recordings, participants
4 were asked to review the transcript for their interview and any sensitive comments were
5 retracted prior to analysis.
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8 9 Data Analysis

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11 Transcripts were transferred to NVivo (QSR International) where they were analysed using
12 applied thematic analysis.⁽¹¹⁾ Thematic analysis of interview data was undertaken following
13 the 'framework method' (12) and commenced after the first interview. Framework method is a
14 transparent and iterative process of analysing qualitative data. It allows the researcher to
15 incorporate both deductive and inductive codes which was appropriate for this study where
16 specific questions in relation to effectiveness were identified a priori, but experiential aspects
17 were not. It involved five iterative stages of analysis: familiarisation, identifying thematic
18 framework, labelling, charting and mapping and interpretation.
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25 During familiarisation with data, the transcripts were read several times and both initial
26 deductive and inductive codes were identified. Deductive codes originated from questions
27 related to the topic guide. The conceptual framework was developed and discussed with the
28 co-author prior to the next phase of analysis. Associated keywords, e.g., for resource could
29 indicate positive emotions or expressions such as "easier to understand", associated
30 keywords for a demand could indicate negative emotions or expressions such as "there is no
31 time". We also made notes if such comments were made in relation to one role or if these
32 affected other roles. An open-coding strategy was used whereby descriptive codes were
33 attached to participant quotations, staying close to participant wording. One quotation could
34 contain multiple codes. Coding was performed manually by the first author. Peer checking
35 was employed to aid credibility and confirmability of data analysis, whereby two transcripts
36 were open-coded by a second author (KF). Differences in coding or interpretation of the
37 thematic framework were resolved by discussion between the authors.
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48 During the labelling phase, the thematic conceptual framework was applied to the entire data
49 set to ensure total coverage and further developed through the iterative process if new areas
50 were identified. Charting is a process for summarising and synthesising the data to facilitate
51 identification of thematic links and was conducted using a thematic matrix. The final phase is
52 mapping and interpretation in which the final categories and their relationships and
53 interactions are described. This process was facilitated through diagrammatical
54 representations of the themes and critical discussion with the research team (MK, KF, DM,
55 SHW and EM) to ensure themes were comprehensive and enhance the depth of analysis.
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Disagreements were resolved through peer debriefing until clarity and consensus were obtained.

Process mapping - visualising the flow of FFT

We summarised data from the semi-structured interviews to create a process map that demonstrates in detail how FFT data cascades from the point of collection, analysis, to dissemination. The process map also depicts the interaction of stakeholders involved and how FFT reports are processed as a near real-time initiative. By creating a process map, we are better equipped to understand what happens to FFT, where the process and organisational problems are and identify areas for improvement.

Patient and Public Involvement

Working as a collaborative group enabled shared decision making, with patient and public involvement and engagement (PPIE) at key stages throughout the project moulded the project to be patient-centric. In addition to a lay representative who was part of the steering group, we presented our proposal to the Research Partners Group (RPG) at the Imperial Patient Safety Translation Research Centre. The RPG positively impacted our research project, we learned about PPI and the value of it and RPG members also benefited from their participation. Using this approach we noted that there was equality of legitimacy and value in inputs from all those involved, whether suggestions entail large- or small-scale changes. During the initial stages where our protocol was being refined, feedback from all individuals from the PPIE group was invaluable.

Results

Thirteen participants were interviewed initially and analysed. Once the data appeared to have reached close to thematic saturation, two further interviews were conducted and analysis confirmed thematic saturation had been reached (13). Mean interview time was 33 minutes (18 - 62). Table 1 indicates the characteristics of the participants, their professional background and the healthcare service division they represented.

Table 1. Characteristics of the staff interviewed (n=15)

Staff Characteristic	n (%)
<i>Division</i>	
Surgery and Cancer	3 (20%)
Medicine and Integrated Care	3 (20%)

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3	Women's and Children, and Clinical Support	3 (20%)
4		
5	Non-Clinical Service	6 (40%)
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7	<i>Professional background</i>	
8	Nursing & Midwifery	6 (40%)
9	Allied Health	1 (7%)
10		
11	Medical	2 (13%)
12		
13	Non-clinical	6 (40%)
14		
15	<i>Direct provision of patient care</i>	
16	Yes	9 (60%)
17	No	6 (40%)
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Process map of FFT feedback as a real-time initiative

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24 With the interview data we created a process map that demonstrates the complex nature of
25 stakeholder interactions with FFT reports as it cascades from collection to dissemination
26 (impact) (Figure 1). The diversity of stakeholders involved included information governance
27 team, data outsourcing team, patient experience team, divisional managers and frontline staff.
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31 We provide a descriptive summary of the process map of FFT data as depicted in Figure 1.
32 Data from all four care settings is collated and sent to central business intelligence department
33 where due diligence is carried by the information governance team. A mandatory report is
34 then sent to NHS England at monthly intervals. This report is not sent out to frontline staff.
35 Once the feedback is released by the information governance team, the raw data is then sent
36 to an external provider who assists in analysis and building visualisations and reports. The
37 reports are presented in a traffic light format based on the response to the FFT question, i.e.,
38 FFT score. In addition, the number of responses and free-text data is available to view. No
39 further analysis on the free-text data is conducted. Any amber and red reports are flagged by
40 the patient experience team which triggers an action plan by the appropriate ward manager.
41 The reports in theory are accessible to all staff but access is not mandatory. At monthly
42 intervals each divisional lead gathers the data from the FFT reports to create another entirely
43 separate report for Trust board meetings. The patient experience team are tasked to assist
44 with these regular reports, and also ensure that any feedback is acted upon. This highlights
45 the unstructured route of FFT feedback, how ownership of the FFT reports changes at each
46 timepoint, and the delay in providing FFT reports to the frontline staff. Despite the flow not
47 being streamlined, all four care settings follow the same sequence of steps from collection to
48 dissemination (impact).
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Identified themes

During the interviews, the participants were very clear about what they perceive as factors that promote and limit the effective use of FFT as a near real time feedback initiative. They were generally able to elaborate clearly and consciously on the causes and effects of these factors. Subsequently, many separate barriers and facilitators were categorised in four main themes (figure 2) as described below.

Capacity and resource

There was a lack of capacity and resource within the organisation to enable regular and consistent FFT collection. Specifically, frontline staff described having very limited time available to engage with the FFT collection, as they were usually too busy to remember to collect FFT feedback. To address this, the patient experience team introduced designated staff or 'champions' and volunteers. However this was done on an ad-hoc basis and prioritised following a mandate by the medical directorate when response rates dropped below the national average. There were also concerns about the use of digital tools used to collect FFT data due to the lack of availability of devices and issues with connectivity. A portion of FFT surveys were therefore being completed on paper and transferred onto a digital format. Participants felt that improving the digital infrastructure could subsequently enable redeployment of staff to improvement projects rather than spending time manually uploading FFT data. One participant said, "It is not good use of their time, we should take that resource and get them [staff] out on the wards doing some improvement work'.

Usage

Staff highlighted several factors which had an impact on the use of FFT reports. Firstly, FFT data was held in various formats, i.e., unprocessed, formatted for NHS England, summarised for divisional reporting, analysed through outsourcing and presented via a visualisation tool. The tool was only accessible with an individual log-in and once training had been completed. The number of lead nurses who had access and training on the visualisation tool was higher compared to frontline (junior) staff. We found that there was a lack of access to the visualisation tool for frontline staff and this was exacerbated by the ad hoc training. There were delays in creating FFT reports for frontline staff despite the near real-time capability, due the number of stakeholders involved in handling the FFT data as depicted in Figure 1. Additionally, participants felt that the use of FFT reports fell short because "there are no real sanctions for FFT and patient experience", and "some of them [staff] have so much to do" therefore, "it's something that gets forgotten". Therefore, managers had to take initiative to implement the FFT results, but this was not a priority as they spent their time preparing reports for divisional and trust wide meetings, where "FFT data was very rarely looked at".

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3 Furthermore, the sheer volume of free-text data received at the end of the month was not
4 amenable to manual thematic analysis. We also found that the overall FFT score did not
5 change much per month, and “not subtle enough to pick on variations”. Only services or wards
6 highlighted as ‘red’ (traffic light rating scale) on their FFT question score were followed-up.
7
8 One participant expressed that the main FFT question should change, “maybe it’s not the right
9 question, but it’s the question we’ve got and we have to deal with”.

14 Interoperability

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16 Despite the best attempt to ensure FFT data was interoperable, FFT data was loosely
17 triangulated with other quality and safety metrics that is presented as a report at the executive
18 quality committee. The biggest component of the report is the safety aspect, “we don’t spend
19 a lot of time on the FFT section as the month on month variation in the FFT score is negligible”.
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21 The outsourced visualisation reporting tool lacked satisfactory user experience and quoted as
22 being “clumsy”. One participant explained, “if the FFT reports were presented in such a way
23 that services could learn from each other, we can pre-empt problems in other areas”. Of note,
24 other patient feedback reports were reviewed in more detail such as the Adult Inpatient Survey
25 (14) as the results are presented in a way that is understandable. FFT reports were not linked
26 to other sources of patient feedback held within the organisation.
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28 However, ward managers printed FFT reports by offering a static dashboard, summarising
29 progress and areas for improvement at-a-glance. These types of reports were also included
30 in ward accreditation programmes and used as part of revalidation.

38 Impact

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40 In the action planning process, staff found free-text comments written by patients more
41 meaningful compared with the FFT score. Seeing patients’ own comments brought the
42 experiences to life for frontline staff and added a “sense of urgency” to address them in
43 improvement efforts. However, due to the sheer volume there was a desperate need to
44 consider automation in the form of text classification and sentiment analysis in the hope that
45 the insights from free-text are not neglected and continue to have impact. Staff called for more
46 flexibility in the timing of FFT collection as it was conducted mostly on discharge. One
47 participant mentioned that “patient experience shouldn’t start when they are being discharged,
48 it should start when they are being admitted”. Evaluations made from FFT reports were
49 primarily used for internal benchmarking and comparisons with other Trusts, but did not result
50 in local improvements. When the nursing directorate intervened, their experience and
51 expertise allowed for improvements to be made locally driven by frontline staff. It is important
52 to note that most frontline staff lacked formal quality improvement training. Once trained in the
53 outsourced visualisation tool, frontline staff were independently able to identify areas that
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3 required attention by understanding trends and utilising word clouds generated from the free-
4 text comments.
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Discussion

We highlighted the factors that promote and limit the effectiveness of FFT as a near real time feedback initiative and demonstrated in detail the complexity involved in processing FFT data within the organisation (Figure 2). The process map (Figure 1) highlighted the number of various stakeholders involved resulting in lack of ownership and the inconsistency in FFT reports hindering FFT-driven improvement efforts. Data from the qualitative interviews revealed several concerns highlighted by staff based on four themes; capacity and resource, usage, interoperability and impact of FFT. We discuss why this can impede effective use of FFT as a near real-time feedback initiative and investigate the literature for strategies that healthcare providers could consider deploying to increase staff engagement and thereby improve patient experience.

Recent studies have emphasised the pre-conditions for highly engaged staff, which include meaningfulness of work,(15) sustainable workload,(15) accountability,(16) opportunities for learning and development,(16, 17) strong leadership,(16-18) involvement in decision-making,(17) and relatively flat hierarchies.(17) There is evidence (19) that suggests that staff struggle to translate data into action: 'perceived barriers included a lack of knowledge of effective interventions, and limited time and resources'. Frontline staff are focused on their current patients. This is in direct contrast to the focus of the hospital management who produced FFT reports based on the experience of previous patients who were cared for weeks before. At board level, the focus was on monitoring of FFT response rate and no accountability for lack of FFT-driven improvement. In fact, frontline nursing staff, of which majority lacked access to the visualisation software, were at the bottom of the hierarchy for viewing FFT reports. This disconnect offers some explanation for the lack of engagement of staff with FFT and was one of the main reasons that staff were ambivalent to FFT as a real-time feedback initiative. Sheard et al (20) identified that there is a lack of staff ownership of patient feedback and this most often pertains to staff flux or demoralisation with action plans failing to be initiated. They demonstrated that when staff sought to make improvements from patient feedback, changes to the structures or processes of the individual ward on which they worked, this often led to success.

A systematic review (21) noted that despite the FFT policy mandate, the particular expertise needed to be able to conduct effective and meaningful data collection, analysis and interpretation appears not to have been provided to any great extent. This can be seen from clinician and staff reports that, while often they believe patient experience reports are important in their organisations, they also state that they have neither the time nor the

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3 expertise to use these data to any great effect.(21) This barrier has been highlighted in our
4 study as well as previous studies, (4, 19, 22, 23) calling for a need for staff training in data
5 analysis and statistics to facilitate full understanding and use of results particularly if data is
6 outsourced. Our findings revealed that frontline staff that were critical in championing and
7 implementing improvement work when given the right training and opportunity. For e.g., staff
8 recommended making the FFT reports printable by offering a static dashboard, summarising
9 progress and areas for improvement at-a-glance and in near real-time. However, any
10 improvement programme introduced in other services could not be shared widely, resulting in
11 repetition and inefficiencies.
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19 There should be an organisational emphasis where patient experience data collected has the
20 ability to be meaningfully utilised by frontline staff. Sheard et al (24) made recommendations
21 to facilitate healthcare organisations to change the way patient feedback is used, by tackling
22 both macro-level structural/organisational factors and micro-level factors surrounding how
23 individuals interact with patient experience data. An organisational strategic focus that
24 prioritises utilisation over collection, and ensuring data is relayed to staff by patient experience
25 teams in an accessible, straightforward and engaging manner, coupled with staff training that
26 encompasses both quantitative and qualitative analytical techniques and quality improvement
27 (QI) methodologies.
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33 34 35 Transforming culture by embracing frontline staff

36 Organisations need to improve their understanding of how frontline staff can use FFT data for
37 quality improvement; what motivates them to get involved in improvement; what helps or
38 hinders; and what can be done to make FFT reports more convincing, credible and practically
39 useful. Senior leadership should give staff a voice and play an active role in supporting staff
40 in addressing system problems and delivering change through genuine sharing of
41 responsibility.(25)
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45 Ipsos-MORI raise three critical issues for real-time data driven service improvement, all of
46 which have a bearing on how effective real-time data is for key stakeholders, and all of which
47 would benefit from further research: practicality of implementation, quality of data collected
48 and organisations ability to translate data into action.(26) They also highlight key issues for
49 healthcare services to focus on: ensuring the patient experience data is as granular and real
50 time as possible, combining this with qualitative and other data sources, producing data
51 reports that are accessible and focus managers attention on areas of improvement,
52 implementing real-time data as an organisational rather than technical exercise, and actively
53 bringing staff on board to champion and use the data to improve patient experience. Explaining
54 the benefits of FFT to staff and dealing openly with issues of scepticism and resistance to
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3 change will increase the likelihood of success.(6, 7) Indovina et al. (27) showed that real-time
4 experience reporting, coupled with staff education and coaching, improved satisfaction of
5 inpatients. Similar findings were reported (28), augmenting the need to cultivate a culture that
6 promotes staff communication and engagement. Furthermore, evidence suggests there is a
7 relationship between staff wellbeing and (a) staff-reported patient care performance and (b)
8 patient-reported patient experience. So, where patient experience is low, so too is staff
9 wellbeing and vice versa.(29)
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14 15 16 Improving reporting by addressing clinical analytics

17 The need for advanced analytic capability in the NHS is growing and faces the same cost
18 pressures that impact all other realms of service development and QI. Recent literature (5)
19 reveals some of the barriers and facilitators associated with technology driven real-time data
20 collection. The main barriers were related to familiarity, connectivity and positioning, which
21 was similar to our findings. Another barrier noted in our study was the lack of awareness of
22 end users' individual values and needs. As a result these technologies either fail to
23 be utilised at all or adaptations are made to fit them into pre-existing workflows that were not
24 considered a priori. Therefore, assessing user insights and acceptance during the
25 development and testing phases, and delivering technical support and versatility to data
26 collection approach (5) is likely to improve the likelihood of meaningful implementation and
27 uptake.
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30 Analysis of free-text comments was challenging due to time and resource constraints, and
31 prone to delays which resulted in outdated information. A semi-automated process to rapidly
32 identify and categorise comments from free-text responses may overcome some of the
33 barriers encountered with manual extraction and long processing times. Patient experience
34 themes and sentiment can be extracted from free-text comments, highlighting areas of
35 concerns and providing the context and details required for staff to rapidly learn and act on
36 patient feedback (28), thereby addressing the FFT re-development programme requirements.
37 By investing resources in building the capacity to innovate and develop clinical analytics within
38 the organisation will not only improve services but also build a foundation of technical
39 knowledge in the organisation and create a culture that promotes innovation. Sheard et al (24)
40 state that "if patient experience feedback is to be valued, then it should stop being viewed as
41 the poor relation to patient safety and finance whilst simultaneously—and concertedly—
42 moved outside the remit of being badged as a problem for corporate and shop floor nursing
43 to solve".
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58 Limitations

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3 Participants in the study were directly involved in FFT reporting, however, a broader sample
4 of staff with little to no FFT involvement such as healthcare assistants, administrative staff,
5 and student nurses would have been valuable. They are in fact the coal face in delivering the
6 patient experience, so they need to be represented in order to understand how FFT can be
7 used as a real-time feedback initiative. Moreover, this was a single site study with a small
8 sample size, which may not be representative of the UK as a whole.
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13 14 **Conclusion**

15 The use of staff 'FFT champions', supplementary free-text, visualisation tool, and enhancing
16 ward accreditation using FFT reports promoted the use of FFT in some care settings.
17 However, the unstructured flow of FFT data from collection, analysis to dissemination failed
18 to align with real-time reporting aspirations and timely interventions. This was exacerbated by
19 lack of ownership and accountability, training and access to FFT reports, resulting in staff
20 ambivalence. The results also demonstrate that there is too much FFT free text for meaningful
21 analysis, and the output is limited to the provision of sufficient capacity and resource to analyse
22 the data, without consideration of other options, such as implementing text analytics on free
23 text FFT data and developing versatile and targeted point of care FFT collection.
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31 32 **Contributors**

33 Conception and design of the work: MK, KF, EM. Data collection: MK and KF. Data analysis
34 and interpretation: MK, KF, SHW, EM. Critical revision of drafts for important intellectual
35 content: MK, KF, DM, SHW, RK, AD, EM. Final approval of the version to be published: MK,
36 KF, DM, SHW, RK, AD, EM.
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54 not-for-profit sectors.
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58 59 **Data sharing**

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3 Recruitment began before 1st January 2019, therefore no data sharing plan is included.
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6 **Competing interests**

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8 None declared
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11 **Patient consent for publication**

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13 Not required
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17 **Figure 1** This demonstrates the complex flow of FFT as a real-time feedback initiative and the
18 stakeholders involved as the feedback cascades down. The division comprises of Surgery
19 and Cancer, Medicine and Integrated Care, Women's and Children and Clinical Support and
20 Private Patients.
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25 **Figure 2** A summary of key factors that promoted and limit the effectiveness of FFT as a near
26 real-time feedback initiative based on four key themes.
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Ethics statement

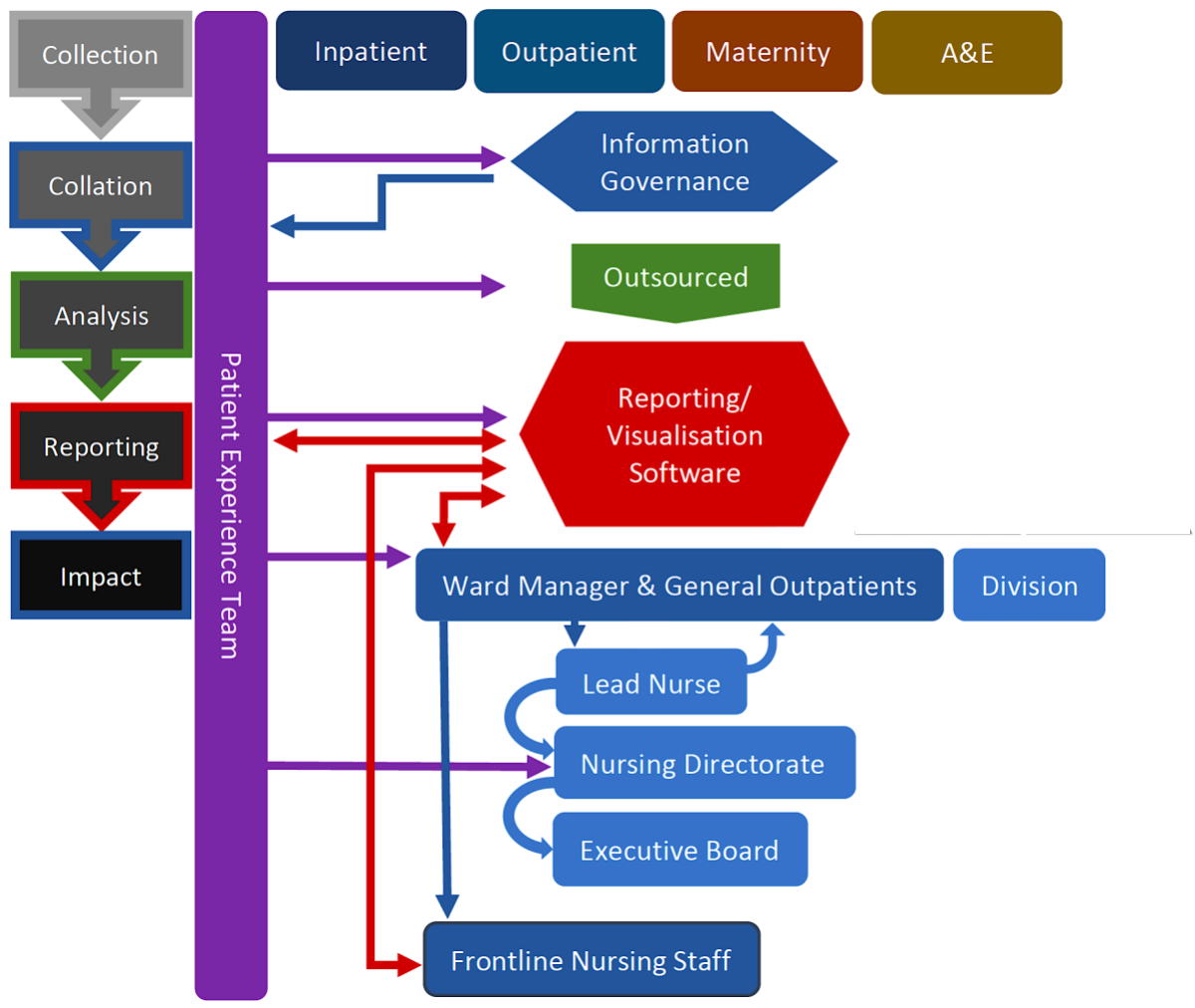
This study received ethical approval from North East – Tyne and Wear South Research Ethics Committee, 17/NE/0306.

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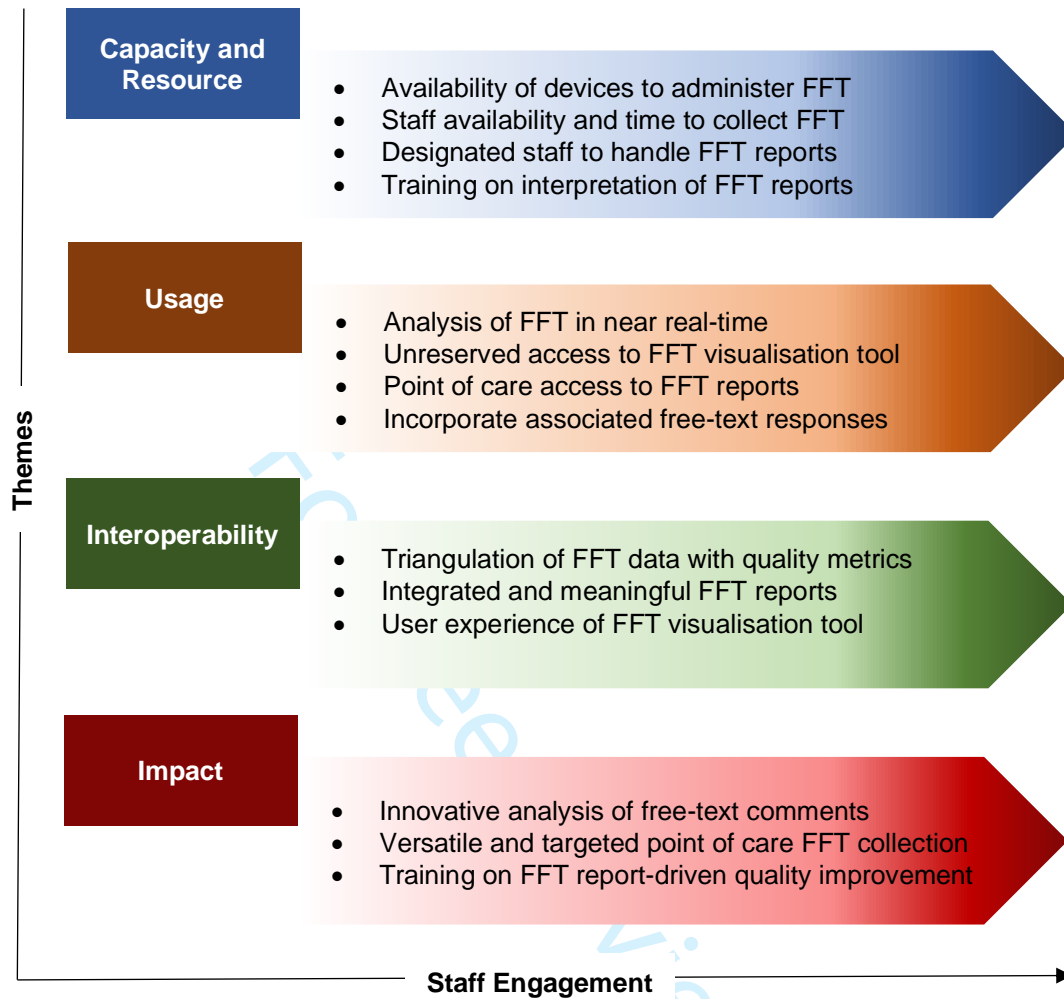
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Review only



Standards for Reporting Qualitative Research (SRQR)*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

Title and abstract

<p>Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1
<p>Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	2

Introduction

<p>Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	4
<p>Purpose or research question - Purpose of the study and specific objectives or questions</p>	4

Methods

<p>Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	5
<p>Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	5
<p>Context - Setting/site and salient contextual factors; rationale**</p>	5
<p>Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	5
<p>Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	5
<p>Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	5

1 2 3 4 5	Data collection instruments and technologies - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	5
6 7 8	Units of study - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	5
9 10 11 12	Data processing - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	6
13 14 15 16	Data analysis - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	6
17 18 19 20	Techniques to enhance trustworthiness - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	6

Results/findings

23 24 25 26	Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	6
27 28 29	Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	8, 9, 10

Discussion

32 33 34 35 36 37	Integration with prior work, implications, transferability, and contribution(s) to the field - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	12
38 39	Limitations - Trustworthiness and limitations of findings	14

Other

42 43 44	Conflicts of interest - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	16
45 46	Funding - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	15

*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

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**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Reference:

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014
DOI: 10.1097/ACM.0000000000000388

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