Improving care by using patient feedback

December 2019
NIHR Dissemination Centre
doi 10.3310/themedreview-04237
Summary

Both staff and patients want feedback from patients about the care to be heard and acted upon and the NHS has clear policies to encourage this. Doing this in practice is, however, complex and challenging. This report features nine new research studies about using patient experience data in the NHS. These show what organisations are doing now and what could be done better. Evidence ranges from hospital wards to general practice to mental health services. Some organisations are using online ways of mining and analysing big data, using online feedback and approaches to involving patients in making sense of feedback and driving improvements.

Large amounts of patient feedback are currently collected in the NHS, particularly data from surveys and the NHS Friends and Family Test. Less attention is paid to other sources of patient feedback. A lot of resource and energy goes into collecting feedback data but less into analysing it in ways that can lead to change or into sharing the feedback with staff who see patients on a day-to-day basis. Patient’s intentions in giving feedback are sometimes misunderstood. Many want to give praise and others want to support staff and to have two-way conversations about care, but the focus of healthcare providers can be on complaints and concerns, meaning they unwittingly disregard useful feedback.

There are many different reasons for looking at patient experience feedback data. Data is most often used for performance assessment and benchmarking in line with regulatory body requirements, making comparisons with other healthcare providers or to assess progress over time. Staff are sometimes unaware of the feedback, or when they are, they struggle to make sense of it in a way that can lead to improvements. They are not always aware of unsolicited feedback, such as that received online and when they are, they are often uncertain how to respond.

Staff need the time, skills and resources to make changes in practice. In many organisations, feedback about patient experience is managed in silos from those that lead quality improvement. Whilst most organisations have a standard method for quality improvement, there is less clarity and consistency in relation to using patient experience data.

Staff act on informal feedback in ways that are not always recognised as improvement. Where change does happen, it tends to be on transactional tasks rather than relationships and the way patients feel. The research featured in this review shows that these challenges can be overcome and provides recommendations and links to practical resources for services and staff.

What can healthcare providers change as a result of these findings?

Organisations should embrace all forms of feedback (including complaints and unsolicited feedback) as an opportunity to review and improve care. While the monitoring of performance and compliance needs to conform to measures of reliability and validity, not all patient experience data needs to be numerical and representative – there can still be value in qualitative and unstructured feedback to provide rich insights on specific issues and to highlight opportunities for improvement. Organisations sometimes try to translate different types of information into a single view, but it is important to respect different sources - sometimes the outliers are more useful than the average. Organisations should also learn from positive as well as negative feedback.

Organisations should collect, collate and analyse feedback in ways that remain recognisable to the people who provide it whilst offering staff actionable findings. In many areas, including general practice, one of the major blocks to getting to grips with feedback is not having dedicated staff time allotted to it. Where there are dedicated staff leading patient experience, specialist training is likely to be needed, particularly in relation to improvement science. They also need to understand the strengths and weaknesses of different sources of feedback and be given the resources to use a broad range of collection systems.

The UK has led the world in the use of patient surveys, but staff are not always aware of them. Other forms of feedback including both structured and unstructured online feedback are emerging faster than the NHS’s ability to respond. Staff want to engage but need more understanding of, and confidence in, the use of different methods. As well as improving the transactional aspects of care (things like appointments and waiting times), organisations need to consider how data on relational experience (how the staff made them feel) is presented to staff. Summaries and infographics, together with patient stories, can motivate staff to learn from positive as well as negative feedback.
Why we wrote this review

Research into patient experience feedback is relatively recent, gathering pace in the 1990s. Research into how healthcare providers then use this feedback to improve services is at an early stage. We wrote this review to bring together emerging themes and to provide practitioners, policy makers and researchers with a platform for discussion.

Introduction to patient experience feedback

Healthcare is increasingly understood as an experience as well as an outcome. In addition to a publicly funded service, patient experience feedback is a form of holding those services to account. The NHS Constitution for England enshrines the focus of patients’ experience in principle 4, which states that: ‘The patient will be at the heart of everything the NHS does. It must support individuals to promote and to manage their own health. NHS services must reflect, and should be coordinated around and tailored to, the needs and preferences of patients, their families and their carers.’

Evidenceshowsthatpatientexperiencefeedbackcanshape servicestobettermeetpatients’needs. We alsoknowthatbetterpatientexperienceis associated with the efficientuse of services. It results in the patient being better able to use the clinical advice given, and to use the in-patient stay more effectively. It has also been shown to affect hospital length of stay (Doyle et al 2013).

Good patient experience is therefore seen as a central outcome for the NHS, alongside clinical effectiveness and safety: however, people have different ideas about what constitutes patient experience and feedback is collected in different ways. Patients’ satisfaction is often measured by feedback forms that come to them on an equal footing and the power to determine the kinds of feedback that are collected, the interpretation and action remains largely with the organisations involved. The public Inquiry into Mid Staffordshire NHS Foundation Trust showed that healthcare providers have some way to go in ensuring that patient experience becomes central to care management.

What feedback does the NHS collect?

Learning from what patients think about the care they have received is widely accepted as a key to improving the quality and safety of healthcare. Although an increasing number of surveys have been developed to measure patient experience, there has been a lack of standardisation and comparison. Few of these measures have not been very effective in actually improving care.

Looking to the future

Our review of the evidence on the use and usefulness of patient experience feedback shows that whilst there is a growing interest in using feedback for both accountability and service improvement, there are gaps in healthcare providers’ capacity to analyse and use it. These studies have added to our understanding of how patients and organisations deal with patient feedback over time. These should consider comments on acute care as well as from people with chronic conditions. As we move into an era where services become more networked, it would become essential to view feedback across organisational boundaries.

Observational studies are needed that take a longitudinal perspective to understand how staff and organisations deal with patient feedback over time. These should consider comments on acute care as well as from people with chronic conditions. As we move into an era where services become more networked, it would become essential to view feedback across organisational boundaries.

The area of online feedback is a growing field, but staff are often uneasy and many organisations do not have systems and processes for responding to it. Organisations need to think about how they respond to feedback, including complaints.

There has been widespread acceptance that healthcare providers have some way to go in ensuring that patient experience becomes central to care management. There has been a lack of standardisation and comparison. Few of these measures have not been very effective in actually improving care.

There has been evidence that complaints can be an important outcome of care in their own right. The quality of such feedback is distinguished from, but complementary to, the quality of clinical care. Although an increasing number of surveys have been developed to measure patient experience, there has been a lack of standardisation and comparison. Few of these measures have not been very effective in actually improving care.

Study H

[Themed Review: Patient Feedback]
Themed Review: Patient Feedback

What do we mean by patient experience data?

We define patient experience data in this review as what individuals say about the care they have received. This is different from patients evaluating their care and treatment, such as through patient reported outcome data. Patient experience is wider than the data collected about it and this review focuses on documented forms of experience feedback, including unsolicited feedback. We acknowledge that this does not fully represent patient experience nor all the ways it is provided or the ways in which it influences change.

Studies we have included

This review focuses on research funded by the National Institute for Health Research (NIHR) which has made a substantial investment in new research in this area. In 2014 the NIHR called for research on the use and usefulness of patient experience data. Eight large, multi-method bids were successful, seven of which have been published in 2019 or will be published early in 2020. Prior to this, two other large studies looking at patient experience data were funded. Together these studies cover a range of care settings including general practice and mental health, although most are set in acute hospitals.

These nine studies form the core of this themed review. We do not consider them individually in the main text but use them to illustrate our main themes and we refer to them as studies A-I (box right). For more details about how they were undertaken and some of their key findings, please see the study summaries and references to full text reports at the end of the review.

The featured studies found some remarkably consistent themes. While we have used particular studies to illustrate each theme, this does not mean other studies didn’t find similar things.

In addition to the main nine studies, we also mention some other important evidence funded by NIHR and some research funded by other bodies, to add context and supporting information, and these are referenced in the references section at the end of the review.

This review seeks to explore the complexity and ambiguities around understanding and learning from patient experience. We also offer some solutions and recommendations. We hope that by shining a light on the tensions and assumptions uncovered in the featured studies, the review will help to start conversations between different parts of the system and with users of healthcare services. We anticipate that the audience will be broad, including policy makers, healthcare provider boards (including non-executive directors and governors), clinical staff as well as service users and the public at large.

Research featured in this review

A  Sheard, L. Using patient experience data to develop a patient experience toolkit to improve hospital care: a mixed-methods study (published October 2019)

B  Welsh, S. Evaluating the Use of Patient Experience Data to Improve the Quality of Inpatient Mental Health Care (estimated publication March 2020)

C  Donetto, S. Organisational strategies and practices to improve care using patient experience data in acute NHS hospital trusts: an ethnographic study (published October 2019)

D  Locock, L. Understanding how frontline staff use patient experience data for service improvement – an exploratory case study evaluation (published June 2019)

E  Powell, J. Online patient feedback: a multimethod study to understand how to Improve NHS Quality Using Internet Ratings and Experiences (INQUIRE) (published October 2019)

F  Sanders, C. Developing and Enhancing the Usefulness of Patient Experience Data using digital methods in services for long term conditions (the DEPEND mixed methods study). Understanding and enhancing how hospital staff learn from and act on patient experience feedback (estimated publication January 2020)


H  Burt, J. Improving patient experience in primary care: a multimethod study of research on the measurement and improvement of patient experience (published May 2017)

I  Graham, C. An evaluation of a near real-time survey for improving patients’ experiences of the relational aspects of care: a mixed-methods evaluation (published March 2018)

See ‘Study Summaries’ from page 28 for a summary of these studies.
Themed Review: Patient Feedback

A few words on research methods

Patient experience is highly personal and not all aspects of experience lend themselves to quantitative measurement. This makes research into patient experience complex.

The most common methods in this review were surveys, case studies, action research and improvement science approaches. Our featured studies contain a mixture of these methods, and each method has to be judged separately on its own merits rather than applying a universal set of criteria to all.

- Surveys obtain structured information although they can provide opportunity for free text comments.
- Case studies provide rich contextual data that can enable deeper understanding of how things work. They rely on multiple sources of evidence and often use mixed methods. This might include routine data collected from local sites combined with observation methods – researchers spending time shadowing staff and services – and interviews or focus groups around practices, process and relationships.
- Action research involves researchers working alongside staff and patients to plan and study change as it happens. The researcher is involved in constant assessment and redesign of a process as it moves toward a desired outcome.
- Improvement science approaches explore how successful strategies improve healthcare services, and why.

Structure of this review

In this review, we ask three key questions about collecting and using patient experience feedback: why, what and how? before considering how healthcare service providers make sense of and act on the feedback. We then reflect on the gaps in our knowledge and offer some immediate and longer term recommendations.

Performance monitoring and assurance

<table>
<thead>
<tr>
<th>Shared understanding and information</th>
<th>Improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison with other healthcare providers</td>
<td>Helping people to make choices about services</td>
</tr>
<tr>
<td>Monitoring impact of service changes</td>
<td>Understanding problems in services</td>
</tr>
<tr>
<td>Informing commissioning decisions</td>
<td>Public accountability</td>
</tr>
<tr>
<td>Compliance with standards</td>
<td>Increasing healthcare professionals’ understanding of the patients’ real life experience</td>
</tr>
</tbody>
</table>

Different purposes of patient experience feedback data for healthcare organisations or practitioners

- Performance monitoring and assurance
- Shared understanding and information
- Improvement

- Comparison with other healthcare providers
- Monitoring impact of service changes
- Informing commissioning decisions
- Compliance with standards

- Helping people to make choices about services
- Understanding problems in services
- Public accountability
- Increasing healthcare professionals’ understanding of the patients’ real life experience

- Improvement and redesign of services
- Reflection on healthcare professionals’ behaviours
- Frame care as person-centred rather than task or outcomes based
- Co-designing services with staff and patients
For patients and the public, there may also be free text data later in this review for sharing with other patients and to address wider issues by including free text boxes that allow people to discuss what is important to them. For some healthcare staff and policy makers, interest in it and therefore how we respond to patient experience data were often viewed as a ‘tick box exercise’ and they thought that their comments were not used.

**Performance or comparison**

The distinction between different purposes directs the type of information collected, the way it is analysed and how it is subsequently used. Where the focus is on performance or comparisons, quantitative data such as that obtained from surveys are the most common method and patients largely report that patient experience data were often viewed as a ‘tick box exercise’ and they thought that their comments were not used.

*Study D* notes that although survey data are collected from patients, they are not usually involved in analysing it not deciding how to act on it. They feel that their feedback could serve different purposes. *Study F* found that patients distinguish between generalised feedback that is intended for other patients and their families and feedback that is raising a specific concern to the service provider. When providing online feedback for other patients, people said the fact that the feedback was not matched by its use by care providers. *Study F* found that the purpose of providing feedback was not clear to most patients. The lack of organisational response to their survey feedback meant that they perceived it as a ‘tick box exercise’ and they thought that their comments were not used.

*Study D* notes that although survey data are collected from patients, they are not usually involved in analysing it not deciding how to act on it.

**Who gives this feedback?**

Patient experience is multi-dimensional. On one hand, it can be the ‘transactional’ experience of the process, e.g. waiting times, information provided and the immediate outcomes. On the other hand, it can be how people feel about interactions with healthcare staff and whether people felt treated with dignity and respect. Different types of information are needed to explore different aspects of experience. Whilst many surveys are related as well to transactional experience, other methods, such as patient narratives might provide richer information. This thematic review found that *Study A* observed that there are at least thirty different types of data collection patient experience. Healthcare providers don’t always know how to make the best of this diverse range of data, or of the myriad of unsolicited feedback. This can leave both the public and the healthcare providers uncertain about whether to use patient experience data and also how to act on it.

**What sort of feedback?**

Patient experience is multi-dimensional. On one hand, it can be the ‘transactional’ experience of the process, e.g. waiting times, information provided and the immediate outcomes. On the other hand, it can be how people feel about interactions with healthcare staff and whether people felt treated with dignity and respect. Different types of information are needed to explore different aspects of experience. Whilst many surveys are related as well to transactional experience, other methods, such as patient narratives might provide richer information. This thematic review found that *Study A* observed that there are at least thirty different types of data collection patient experience. Healthcare providers don’t always know how to make the best of this diverse range of data, or of the myriad of unsolicited feedback. This can leave both the public and the healthcare providers uncertain about whether to use patient experience data and also how to act on it.

*Study D* also found that patients felt their feedback could serve different purposes. *Study F* found that patients distinguish between generalised feedback that is intended for other patients and their families and feedback that is raising a specific concern to the service provider. When providing online feedback for other patients, people said the fact that the feedback was not matched by its use by care providers. *Study F* found that the purpose of providing feedback was not clear to most patients. The lack of organisational response to their survey feedback meant that they perceived it as a ‘tick box exercise’ and they thought that their comments were not used.

*Study D* notes that although survey data are collected from patients, they are not usually involved in analysing it not deciding how to act on it. They feel that their feedback could serve different purposes. *Study F* found that patients distinguish between generalised feedback that is intended for other patients and their families and feedback that is raising a specific concern to the service provider. When providing online feedback for other patients, people said the fact that the feedback was not matched by its use by care providers. *Study F* found that the purpose of providing feedback was not clear to most patients. The lack of organisational response to their survey feedback meant that they perceived it as a ‘tick box exercise’ and they thought that their comments were not used.

*Study D* notes that although survey data are collected from patients, they are not usually involved in analysing it not deciding how to act on it. They feel that their feedback could serve different purposes. *Study F* found that patients distinguish between generalised feedback that is intended for other patients and their families and feedback that is raising a specific concern to the service provider. When providing online feedback for other patients, people said the fact that the feedback was not matched by its use by care providers. *Study F* found that the purpose of providing feedback was not clear to most patients. The lack of organisational response to their survey feedback meant that they perceived it as a ‘tick box exercise’ and they thought that their comments were not used.

*Study D* notes that although survey data are collected from patients, they are not usually involved in analysing it not deciding how to act on it. They feel that their feedback could serve different purposes. *Study F* found that patients distinguish between generalised feedback that is intended for other patients and their families and feedback that is raising a specific concern to the service provider. When providing online feedback for other patients, people said the fact that the feedback was not matched by its use by care providers. *Study F* found that the purpose of providing feedback was not clear to most patients. The lack of organisational response to their survey feedback meant that they perceived it as a ‘tick box exercise’ and they thought that their comments were not used.
In contrast to objective data, Martin et al. (2015) discuss the importance of ‘soft’ intelligence: the informal data that is hard to classify and quantify but which can provide holistic understanding and form the basis for local interventions. This applies well to patient experience and Locock et al. (2011), in another NIHR-funded study, discuss the use of narratives as a powerful way of understanding human experience. Bate and Robert (2007) note that narratives are not intended to be objective or verifiable but celebrate the uniquely human and subjective recalled experience or set of experiences. One form of narrative-based approach to service improvement is experience-based co-design.

How is feedback on patient experience collected and used?

Currently the NHS expends a lot of energy on collecting data with less attention paid to whether this provides the information necessary to act. Study B’s economic modelling revealed that the costs of collecting patient feedback (i.e. staff time) far outweighed efforts to use the findings to drive improvement in practice at present. Study G found variations in how data are generated and processed at different Trusts and describe the differences in how Friends and Family Test (FFT) data are collected. The 2015 guidance from NHS England states that: ‘Patients should have the opportunity to provide their feedback via the FFT on the day of discharge, or within 48 hours after discharge’. However, discharge is a complex process and ward managers and matrons frequently said that this was an inappropriate point at which to ask patients for feedback.

Experience-Based Co-Design (EBCD)

EBCD involves gathering experiences from patients and staff through in-depth interviewing, observations and group discussions, identifying key ‘touch points’ (emotionally significant points) and assigning positive or negative feelings. A short edited film is created from the patient interviews. This is shown to staff and patients, conveying in an impactful way how patients experience the service. Staff and patients are then brought together to explore the findings and to work in small groups to identify and implement activities that will improve the service or the care pathway. Accelerated EBCD, which replaces the individual videos with existing videos from an archive has been found to generate a similar response. The Point of Care Foundation has a toolkit which includes short videos from staff and patients involved in experience-based co-design (EBCD) projects.


Credibility of data

Some healthcare staff feel more comfortable with feedback that meets traditional measures of objectivity and are sceptical about the methods by which patient experience data is collected. Study H reports that general medical practitioners express the informal data that is hard to classify and quantify, but which can provide holistic understanding and form the basis for local interventions. This applies well to patient experience and Locock et al. (2014), in another NIHR-funded study, discuss the use of narratives as a powerful way of understanding human experience. Bate and Robert (2007) note that narratives are not intended to be objective or verifiable but celebrate the uniquely human and subjective recalled experience or set of experiences. One form of narrative-based approach to service improvement is experience-based co-design.

Objective or richness?

In contrast to objective data, Martin et al. (2015) discuss the importance of ‘soft’ intelligence: the informal data that is hard to classify and quantify, but which can provide holistic understanding and form the basis for local interventions. This applies well to patient experience and Locock et al. (2014), in another NIHR-funded study, discuss the use of narratives as a powerful way of understanding human experience. Bate and Robert (2007) note that narratives are not intended to be objective or verifiable but celebrate the uniquely human and subjective recalled experience or set of experiences. One form of narrative-based approach to service improvement is experience-based co-design.

How is feedback on patient experience collected and used?

Currently the NHS expends a lot of energy on collecting data with less attention paid to whether this provides the information necessary to act. Study B’s economic modelling revealed that the costs of collecting patient feedback (i.e. staff time) far outweighed efforts to use the findings to drive improvement in practice at present. Study G found that staff consider presentation of the data to be important. They want to be able to navigate it in ways that answer questions specific to their service or to particular patients. This may go some way to explaining DeCourcy et al. (2012) findings that results of the national NHS patient survey in England have been remarkably stable over time, with the only significant improvements seen in areas where there have been coordinated government-led campaigns, targets and incentives.

Despite Trusts routinely collecting patient experience data, this data is often felt to be of limited value, because of methodological problems (including poor or unknown psychometric properties or missing data) or because the measures used lack granular detail necessary to produce meaningful action plans to address concerns raised.

Study B

The suggestion that patient experience does not need to be representative of the whole population or collected in a standardised way has led some to question the quasi-research use of the term ‘data’, with its assumptions about which data are acceptable.

Study C

The Point of Care Foundation has a toolkit which includes short videos from staff and patients involved in experience-based co-design (EBCD) projects.

Launched in April 2013, the Friends and Family Test (FFT) has been rolled out in phases to most NHS-funded services in England. FFT asks people if they would recommend the services they have used and offers supplementary follow-up questions. A review of the test and the way it is used has led to revised guidance for implementing the new FFT from 1 April 2020.

The changes announced already mean that:
- There will be a new FFT mandatory question and six new response options
- Mandatory timescales where some services are currently required to seek feedback from users within a specific period will be removed to allow more local flexibility and enable people to give feedback at any time, in line with other services
- There will be greater emphasis on use of the FFT feedback to drive improvement
- New, more flexible, arrangements for ambulance services where the FFT has proved difficult to implement in practice

Hearing stories (not just counting them)
Entwistle et al (2012) have argued that existing health care quality frameworks do not cover all aspects that patients want to feedback and that procedure-driven, standardised approaches such as surveys and checklists are too narrow. For many of the public, patient experience feedback is about being heard as a unique individual and not just as part of a group. This requires their experience to be considered as a whole, rather than reduced to a series of categories. Patient stories are also powerful ways of connecting with healthcare staff; however, they are often seen as too informal to be considered as legitimate data.

Study A suggests that hearing stories more means more than simply collecting patient stories but also including the patient voice in interpreting feedback. Shifting away from the idea of patient feedback as objective before and after measures for improvement, the authors used participative techniques including critical, collective reflection to consider what changes should take place. The researchers suggest that this approach more closely resembles the principles of experience based co-design and other participatory improvement frameworks and that it is an area that is ripe for further exploration.

Asking about patient experience can appear straightforward, however Study B observed that the quality of relationships between staff and patients affects the nature of feedback patients or carers give to staff. In their study of people in mental health units, patients or carers would only offer feedback selectively and only about particular issues at the end of their stay if they had experience good relationships with staff during the admission.

Positive experience feedback
Many patients provide feedback about good experience, but staff don't always recognise and value it. Study A observed that most wards had plenty of generic positive feedback. However, this feedback is not probed and therefore specific elements of positive practice that should be illuminated and encouraged are rarely identified. Study C found that positive feedback tends to be shorter, often a single word like ‘fantastic’. There is a danger of giving less weight to this type of feedback. Study B described how patients in mental health settings spent time thinking about the way to frame and phrase praise; however, positive feedback was often treated in an (unintentionally) dismissive way by staff.

Informal feedback
Study F describes how staff recognised that sometimes experience is shared naturally in day-to-day discussions with service users but does not get formally captured. Staff expressed a wish for more opportunities to capture verbal feedback, especially in mental health services. Study G found that staff do use informal feedback and patients stories to inform quality improvements at ward level, but this was not considered as ‘data’. This made the patient contribution invisible and staff could not be aware where the intelligence informing a proposed change came from.

Online Feedback
A new and developing area of patient experience feedback is through digital platforms. UK and US data show that online feedback about healthcare is increasing and likely to continue to grow fast but this presents its own specific challenges to healthcare providers.

Themed Review: Patient Feedback
A new and developing area of patient experience feedback is through digital platforms. UK and US data show that online feedback about healthcare is increasing and likely to continue to grow fast but this presents its own specific challenges to healthcare providers.
Learning from positive experience feedback

Vanessa Sweeney, Deputy Chief Nurse and Head of Nursing – Surgery and Cancer Board at University College London Hospitals NHS FT decided to share an example of positive feedback from a patient with staff. The impact on the staff was immediate and Vanessa decided to share their reaction with the patient who provided the feedback. The letter she sent, and the patient’s response are reproduced here:

Dear XXXXX,

Thank you for your kind and thoughtful letter, it has been shared widely with the teams and the named individuals and has had such a positive impact.

I’m the head of nursing for the Surgery and Cancer Board and the wards and departments where you received care. I’m also one of the four deputy chief nurses for UCLH and one of my responsibilities is to lead the trust-wide Sisters Forum. It is attended by more than 40 senior nurses and midwives every month who lead wards and departments across our various sites. Last week I took your letter to this forum and shared it with the sisters and charge nurses. I removed your name but kept the details about the staff. I read your letter verbatim and then gave the sisters and charge nurses the opportunity in groups to discuss in more detail. I asked them to think about the words you used, the impact of care, their reflections and how it will influence their practice. Your letter had a very powerful impact on us as a group and really made us think about how we pay attention to compliments but especially the detail of your experience and what really matters. I should also share that this large room of ward sisters were so moved by your kindness, compassion and thoughtfulness for others.

We are now making this a regular feature of our Trust Sisters Forum and will be introducing this to the Matrons Forum – sharing a compliment that this large room of ward sisters were so moved by your kindness, compassion and thoughtfulness for others.

We have taken a lot from it and will have a lasting impact on the care we give.

Thank you again for taking the time to write this letter and by doing so, having such a wide lasting impact on the teams, individuals and now patients leaving feedback in an online environment. FT decided to share an example of positive feedback from a patient with staff. The impact on the staff was immediate and Vanessa Sweeney, Deputy Chief Nurse and Head of Nursing – Surgery and Cancer Board at University College London Hospitals NHS Foundation Trust (UCLH) shared it with the sister and charge nurses. They removed your name but kept the details about the staff. I read your letter verbatim and then gave the sisters and charge nurses the opportunity in groups to discuss in more detail. I asked them to think about the words you used, the impact of care, their reflections and how it will influence their practice. Your letter had a very powerful impact on us as a group and really made us think about how we pay attention to compliments but especially the detail of your experience and what really matters. I should also share that this large room of ward sisters were so moved by your kindness, compassion and thoughtfulness for others.

We are now making this a regular feature of our Trust Sisters Forum and will be introducing this to the Matrons Forum – sharing a compliment that this large room of ward sisters were so moved by your kindness, compassion and thoughtfulness for others.

We have taken a lot from it and will have a lasting impact on the care we give.

Thank you again for taking the time to write this letter and by doing so, having such a wide lasting impact on the teams, individuals and now senior nurses from across UCLH. We have taken a lot from it and will have a lasting impact on the care we give.

The patient replied:

Thank you so much for your email and feedback. As a family we were truly moved on hearing what impact the compliment has had. My son said “really uplifting” I would just like to add that if you ever need any input from a user of your services please do not hesitate to contact me again.

Who writes and reads it?

Study E surveyed 1,326 nurses, 52% of whom were experienced nurses. When asked if they had ever read online feedback, 32% of nurses reported that they had. Among experienced nurses, a greater proportion read online feedback (44%) than among inexperienced nurses (20%).

Study F found that 8% of nurses would have read online feedback if the feedback was more positive. This suggests that nurses prefer positive feedback over negative feedback, and that they are more likely to read positive feedback than negative feedback.

Study G suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study H indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study I found that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study J suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study K indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study L suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study M suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study N indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study O suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study P indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study Q suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study R indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study S suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study T indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study U suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study V indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study W suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study X indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study Y suggests that there is an association between nurses’ experience with online feedback and their level of satisfaction. Nurses who have read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Study Z indicates that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies A, B, and C indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies D, E, and F indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies G, H, and I indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies J, K, and L indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies M, N, and O indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies P, Q, and R indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies S, T, and U indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies V, W, and X indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.

Studies Y, Z, and A indicate that nurses who read online feedback are more likely to report higher levels of job satisfaction and engagement than nurses who have not read online feedback.
Who, where and when?

Feedback on general practice care

Much of the research into using patient feedback has been on inpatient, acute hospital care. However, Study H looked at how people using primary care services provide feedback through patient surveys, and how the staff in GP practices used the findings. The study was particularly interested in practices with low scores on the GP Patient Survey and whether patient feedback reflected actual GP care. The findings were similar to studies in hospitals. GP practice staff neither believed nor trusted patient surveys and expressed concerns about their validity and reliability and the likely representativeness of respondents. They were also more comfortable with addressing transactional experiences such as appointment systems and telephone answering. Addressing relational aspects, such as an individual doctor’s communication skills, was seen to be much more difficult.

The researchers videoed a number of patient/GP consultations and then asked the patients to complete a questionnaire about the GP’s communication. The researchers interviewed a sample of these patients, showing them the video and asking them to reflect on how they completed the questionnaire. The patients readily criticised and asked them to reflect on how they completed the questionnaire. The patients readily criticised and asked them to reflect on how they completed the questionnaire.

Feedback from vulnerable people

Healthcare staff often express concerns about asking vulnerable people and those who have had a traumatic experience to give feedback but are reluctant to accept anonymised feedback. Speed et al (2016) describe this as the anonymity paradox where some patients feel anonymity is a prerequisite for effective use of feedback processes in order to ensure future care is not compromised but professionals see it as a major barrier as they are concerned about reputational damage if they cannot fact check the account.

Study B studied patient experience feedback in mental health settings. Some staff felt that inpatient settings were an inappropriate place to obtain feedback or that the feedback would be unhelpful. This was partly because staff recognised that they felt they did not have enough time to spend with people who were very unwell and to make some of their feedback. However, there was also a belief in some units that the feedback from those who were acutely unwell especially if psychotic was not reliable. The researchers found that people in mental health settings are able to provide feedback about their experiences even when unwell, but detailed and specific feedback was only available near to or after discharge. Some patients were wary of giving formal feedback before discharge for fear of the consequences, an anxiety shared by carers. However, patients wanted their feedback gathered informally at different points during their stay including their day to day experience, irrespective of wellness. The researchers also found that where patients were not listened to in the early part of their admission, they were less likely to provide feedback when asked at the end of their stay.

Feedback from people with long term conditions

Study F explored patient experience data in services for people with long-term musculoskeletal conditions and people with mental health conditions and how the staff in GP practices used the findings. The study was particularly interested in practices with generally low scores, explaining about their validity and reliability and the likely representativeness of respondents. They were also more comfortable with addressing transactional experiences such as appointment systems and telephone answering. Addressing relational aspects, such as an individual doctor’s communication skills, was seen to be much more difficult.
settings. Patients felt that there should be more opportunities to capture verbal feedback, especially in mental health services. Gaining feedback required considerable sensitivity given the complexity that some people live with. People with mental health problems often said they would be unlikely to use digital methods to give feedback, especially when unwell, when they might feel unable to write and would prefer to give verbal feedback. Some older respondents with experience of musculoskeletal conditions expressed a concern that some people would prefer to give verbal feedback. Some older unwell, when they might feel unable to write and digital methods to give feedback, especially when problems often said they would be unlikely to use.

What do healthcare providers do with patient experience feedback?

Numerous studies point to an appetite amongst healthcare staff for ‘credible’ feedback. However, despite the rhetoric and good intentions, healthcare providers appear to struggle to use patient experience data to change practice. Study A’s national survey found few English Mental Health NHS Trusts were able to describe how patient experience data were analysed and used to drive service improvements or change. Only 27% of Trusts were able to collect, analyse and use patient experience data to support change. 51% of Trusts were collecting feedback but they were experiencing difficulty in using it to create change, whilst 22% were struggling to collect patient experience feedback routinely. The researchers report it was clear that data analysis was the weakest point in the cycle. Study B found only half of Trusts responding to their survey had a specific improvement (QI) strategy included how they would use patient experience data to change practice. Study C found only half of Trusts responding to their survey had a specific improvement (QI) strategy included how they would use patient experience data to change practice. Study D found that staff look at multiple feedback sources plus their own ideas of what needs to change, using a sense-making process akin to ‘evidence-based practice’. Despite the desire for patients to tell their stories in their own words, the challenge of managing and integrating large volumes of free text feedback prevents its widespread use. Two of the NIHR research studies featured in this review sought to address these concerns by developing automated tools to analyse free text feedback. Study F and Study G both applied data mining techniques to free text comments to identify themes and associated sentiments (positive, negative or neutral), and to translate that into improvement actions (Flott et al 2004). Study B produced a short video explaining their research. https://vimeo.com/353575867

Data for performance assessment is reduced to categories and stripped of its context. Whilst many healthcare staff express a wish to have an overview or average figure, evidence shows that there is a tendency for more people who are either very pleased or very unhappy to respond to patient feedback. This means that there is a U-shape distribution of responses and using averages can therefore be misleading. This is echoed in aggregated organisational scores, which can mask significant variation between different teams and units.

Data collection and analysis of surveys is often outsourced and individual organisations may not receive support to make sense of survey findings and to translate that into improvement actions (Flott et al 2016).
negative, or neutral although they used slightly different techniques to do so. In Study F, the text mining around sentiment was against those produced by qualitative researchers working on the same datasets in both general hospital and mental health facilities, although for some themes, e.g. care quality, the qualitative research appeared to provide a higher number of positive sentiments than the text mining. The researchers produced an electronic tool that allowed the rapid automated processing of free-text comments to give an overview of comments for particular themes whilst still providing an opportunity to drill down into specific, or unusual comments for further manual analysis to gain additional insight. The study highlighted the challenges of dealing with informal and complex language that frequently appears in patient feedback. This meant that many comments are automatically excluded from analysis by the text mining computer programmes. Whilst text mining can provide useful analysis for reporting on large datasets and the processing did not follow a linear format of the feedback: accessible reporting such as infographics were particularly helpful. Study F found the themes provided in graphs, for staff to see at a glance. Data was also sorted by sentiment, allowing the weighting to positive or negative to the original comments. Data was also sorted by themes provided in graphs, for staff to see at a glance. Data was also sorted by sentiment, allowing the weighting to positive or negative to areas needing improvement which could be highlighted to boost staff morale. The software was designed specifically for the Cancer Experience Survey, but the researchers believe it will be possible to develop the software to be as accurate on other topics of care. How does the data get used? Study C set out to describe the journey from data to impact but found that ‘journey’ was not a useful way of looking at what happened to the data and the processing did not follow a linear path. They found that the transformation of the data to action is partly dependent on whether the people involved have the authority and the skills meant they could not interrogate it. This was compounded by a lack of time as staffing calculations did not factor in any time for reflecting and acting on patient feedback. Also, questioning the feedback used different parameters (e.g., keywords and graphs) were essential tools to help staff understand areas for improvements quickly. Where do data lead? Patient experience data is most widely used to identify areas of incremental change to services that do not require a change to staff behaviour. There is a potential tension between quick wins and more complex improvement. Study A reported that nurses want to understand how their patients feel so they can develop more appropriate ways of relating to them. This is reflected in the observations by many studies that actions taken in response to feedback are largely to improve transactional experience. Study B contrasted ‘environmental’ changes that related to the physical environment or tangibles like diet, seating areas in wards, temperature control and the physical environment of the ward with ‘cultural’ change (changes related to relationships with colleagues, the feelings of respect and dignity and staff attitude). This resonates with Gleeson et al.’s (2015) systematic review which found that patient experience data were largely used to identify small areas of incremental change to services that do not require a change to staff behaviour.
Patient experience and quality improvement

While patient experience is often talked about as one of the cornerstones of quality, patient experience feedback was seen by a number of researchers to have an ambiguous relationship with quality improvement systems. Study C noted that informal feedback gets lost but the improvements are also seen as informal and not captured. This illustrates a theme repeated through many of the featured studies that patient experience data is seen as separate from other quality processes and that it is often collected and considered outside organisational quality improvement structures.

Lee et al (2017) studied how two NHS Trust boards used patient experience feedback. They found that although patient survey findings were presented to the boards, they were not used as a form of quality assurance. The discussion of surveys and other kinds of feedback did not of itself lead to action or explicit assurance. Different measures were equally important in determining whether and how boards use feedback. Study A found that Quality Improvement teams were rarely involved in managing and acting on patient experience feedback, or if they were, they focused on strategy at an organisational level rather than practice change at local level. Study D observed that in most organisations ‘improvement structures’ are dealt with separately, by different teams with different levels of authority. There was a strong feeling that there needs to be a formal process for managing experience data with sufficient resources to ensure specific action can be taken.

Study C observed complex relationships between institutionally recognised quality improvement efforts (formal QI) and the vast amount of uninstitutionalised improvement work that takes place in response to patient experience data in less well documented ways (everyday QI). They found that whilst patient experience feedback did have the right skills, they were able to use imperfect data, set it into context and search for further data to fill the gaps and use it to improve services.

Study C created a video explaining what they found about how staff can use patient experience feedback to improve care. You can view the video at https://www.youtube.com/watch?v=dYH3bE8F-yg.

The Point of Care Foundation website hosts a guide developed as part of Study D. It provides a guide for clinical, patient experience and quality teams to draw on. Study C found patient experience data to improve quality in healthcare and covers gathering data, getting started and improvement methods.

**Themed Review: Patient Feedback**

**Conclusions**

Our review of the evidence shows that there is much work in NHS organisations exploring how to collect and use data about patient experience. This complements the ‘soft intelligence’ acquired through experience and informal inquiry by staff and patients. However, we found that this work can be disjointed and stand alone from other quality improvement work and the management of complaints.

The research we feature highlights that patients are often motivated to give praise, or to be constructively critical and suggest improvements and wanting to help the NHS. NHS England has also developed a programme to pilot and test Always Events, those aspects of the patient and family experience that should always occur when patients interact with healthcare professionals and the health care delivery system. However, the research featured on patient feedback often has a management focus on ‘bad’ experiences and therefore the rich information about what goes right and what can be learnt from organisations that are effective in continuously improving the experience of patients.

The framework was developed to help NHS organisations to achieve good and outstanding ratings in their Care Quality Commission (CQC) inspections. The framework enables organisations to carry out an organisational diagnostic to establish how far patient experience is embedded in its leadership, culture and operational processes. It is divided into six sections, each sub-divided and listing the characteristics and processes of NHS Improvement Patient Experience Improvement Framework

**Themed Review: Patient Feedback**

This complements the ‘soft intelligence’ acquired through experience and informal inquiry by staff and patients. However, we found that this work can be disjointed and stand alone from other quality improvement work and the management of complaints.

The Point of Care Foundation website hosts a guide developed as part of Study D. It provides a guide for clinical, patient experience and quality teams to draw on. Study C found patient experience data to improve quality in healthcare and covers gathering data, getting started and improvement methods.
This report was written by Elaine Maxwell and Tara Lamont of the NIHR Dissemination Centre.

We acknowledge the input of the following experts who formed our Steering Group:

- Jocelyn Cornwell - CEO - Point of Care Foundation
- Dr Sara Donetto - Lecturer - King's College London
- Chris Graham - CEO - Picker Institute
- Julia Holding - Head of Patient Experience, NHS Improvement
- Professor Louise Locock - Professor in HSRU - University of Aberdeen
- Dr Claire Marsh - Senior Research Fellow/Patient and Public Engagement Lead - Bradford Institute for Health Research
- David McNally - Head of Experience of Care, NHS England
- James Munro - Chief Executive - Care Opinion
- Laurie Olivia - Head of Public Engagement and Involvement - NIHR CRN
- Professor John Powell - Associate Professor - University of Oxford
- Professor Glenn Robert - Professor - King's College London
- Neil Tester - Director - Richmond Group
- Professor Scott Welch - Professor of Mental Health - University of Sheffield

We are also grateful to the following staff in NHS organisations who reviewed the final draft:

- Melanie Gager - Nurse Consultant, Royal Berkshire NHS FT
- Lara Harwood - Service Experience Lead, Hertfordshire Partnership NHS FT
- Lisa Anderton - Head of Patient Experience, University College London Hospitals NHS FT


This mixed methods study used patient feedback surveys and a new national survey of patient experience leads into three themes about the importance of patient experience in acute hospital wards in England. The main aim of this study was to explore the strategies and practices organisations use to collect and interpret patient feedback. The study included a scoping review of current evidence, analysing data in any detail and there was little evidence that demonstrated the effectiveness of this process. The study also used a systematic review of 116 papers to identify patient experience work was well regarded but vulnerable to criticism on quality and the use of data. The results of this study suggest that patient experience work was well regarded but vulnerable to criticism on quality and the use of data. The results of this study suggest that patient experience work was well regarded but vulnerable to criticism on quality and the use of data. The results of this study suggest that patient experience work was well regarded but vulnerable to criticism on quality and the use of data.
The aim of this research was to improve the use of free-text comments, which were broadly positive about using RTF and valued the ability to support service reconfiguration and quality improvement. This programme of research explored how different patients wanted more meaningful and informal feedback to suit their needs. Principal investigators Burt, J. and Campbell, J. and Roland, M (2017)


Principal investigator Graham, C. (2018)

This mixed methods research evaluated whether near real-time feedback can measure relational aspects of care. It also considered how best to engage primary care staff in improving their performance and whether it could be used to improve relational aspects of care that are important to patients. The survey was administered by volunteers using a computer-based methodology to 3928 participants on hospitals with varying patient experience survey results. A small, but statistically significant, improvement in staff performance after the course of the study was demonstrated. Staff and volunteer surveys (n=214) and interviews with 12 practice managers revealed various factors which influenced the use of near real time feedback including the reporting format, free-text comments, buy-in from senior staff, volunteer engagement and initial start-up challenges. Graham C, Kibabuwa S, Casper R, King J, Szmur L Jenkinson C, et al. An evaluation of a near real-time survey for improving patients’ experiences of the relational aspects of care: a mixed-methods evaluation. Health Serv Deliv Res 2016(815)

Principal investigator Burt, J. Campbell, J. and Roland, M (2017)

This programme of research explored how different patients measure their experiences of general practice and out of hours services and how core patient staff respond to feedback. The study engaged primary care teams in the approach to providing feedback. This suggested that the toolkit would be useful and provided a feasible and cost-effective tool, with a favourable cost-benefit ratio. It implemented into practice with appropriate infrastructure support. The toolkit was tested with 13 staff at 3 UK NHS Trusts (Leeds, London, Wessex). It demonstrated the value of using a multidisciplinary mixed stakeholder co-design approach in the development of Big Data approaches to patient feedback. It also showed that the awareness of communicated feedback was a barrier to implementing multimodal computer-based feedback. The study had three parts. First, a scoping review of 43 studies, along with surveys of 32 different stakeholders in healthcare on clinical digital toolkit design informed the development of staff rules for the data mining part of the study, and prototype toolkit dashboard. Second, a automated rule-based digital mining approach was developed so that it could accurately analyse free text comments in surveys, grouping them into themes. Co-design consensus-forming mixed stakeholder concept mapping workshops with 34 participants and interviews reached consensus on a shortlist of 19 themes to be shown on a dashboard the data mining had sorted, six of which were core and therefore provided the default view. In phase 3, the toolkit was deployed through the approach was evaluated. The data mining was found to have an F-score=92% thus similar to human coding levels. Discrete choice experiment (DCE) explored which tool was more preferred and incorporated a single cost-benefit analysis. The authors were apprehensive about the digital kiosks but were more likely to use them if they were provided meaningful and informal feedback. The authors had developed a video describing their findings.

Principal investigator Burt, J. Campbell, J. and Roland, M (2017)


This programme of research explored how different patients measure their experiences of general practice and out of hours services and how core patient staff respond to feedback. The study engaged primary care teams in the approach to providing feedback. This suggested that the toolkit would be useful and provided a feasible and cost-effective tool, with a favourable cost-benefit ratio. It implemented into practice with appropriate infrastructure support. The toolkit was tested with 13 staff at 3 UK NHS Trusts (Leeds, London, Wessex). It demonstrated the value of using a multidisciplinary mixed stakeholder co-design approach in the development of Big Data approaches to patient feedback. It also showed that the awareness of communicated feedback was a barrier to implementing multimodal computer-based feedback. The study had three parts. First, a scoping review of 43 studies, along with surveys of 32 different stakeholders in healthcare on clinical digital toolkit design informed the development of staff rules for the data mining part of the study, and prototype toolkit dashboard. Second, a automated rule-based digital mining approach was developed so that it could accurately analyse free text comments in surveys, grouping them into themes. Co-design consensus-forming mixed stakeholder concept mapping workshops with 34 participants and interviews reached consensus on a shortlist of 19 themes to be shown on a dashboard the data mining had sorted, six of which were core and therefore provided the default view. In phase 3, the toolkit was deployed through the approach was evaluated. The data mining was found to have an F-score=92% thus similar to human coding levels. Discrete choice experiment (DCE) explored which tool was more preferred and incorporated a single cost-benefit analysis. The authors were apprehensive about the digital kiosks but were more likely to use them if they were provided meaningful and informal feedback. The authors had developed a video describing their findings.
References


DeCuiry A, West E, Barton D. (2017) The National Adult Inpatient Survey conducted in the English National Health Service from 2002 to 2009: how have the data been used and what do we know as a result? BMJ Health Serv Res Rev 12:71.


Themed Review: Patient Feedback

Themed Review: Patient Feedback
The NIHR Dissemination Centre helps clinicians, commissioners and patients to make informed decisions about which treatments and practices are most effective in health care, social care and public health.

We assess hundreds of the latest research papers from the National Institute for Health Research and other health research organisations to identify the most reliable, relevant and significant findings.

By summarising, contextualising and analysing these findings with the help of health and social care experts, we provide dependable, accessible, actionable information for those who need it.

**NIHR Signals**
Signals are accessible, timely summaries of recent health research. They explain why the study was needed, what it found and what the implications are for practice. New Signals are published every week on the Discover Portal.

Discover Signals at [discover.dc.nihr.ac.uk](http://discover.dc.nihr.ac.uk)

**Keep in touch**
Join our mailing list to receive our latest news and evidence.
Visit: [discover.dc.nihr.ac.uk](http://discover.dc.nihr.ac.uk) to subscribe.

**Contact Us**
Email us: disseminationcentre@nihr.ac.uk
Follow us on Twitter: [@NIHRevidence](https://twitter.com/NIHRevidence)

---

**Right evidence, better decisions**

---

**Improving the health and wealth of the nation through research**

---

The NIHR Dissemination Centre is funded by the NIHR with contributions from Health and Care Research Wales and the HSC R&D Division, Public Health Agency in Northern Ireland.