

Mary Carter, Antoinette Davey, Christine Wright, Natasha Elmore, Jenny Newbould, Martin Roland, John Campbell and Jenni Burt

Capturing patient experience:

a qualitative study of implementing real-time feedback in primary care

Abstract

Background

In recent years, hospitals have made use of new technologies, such as real-time feedback, to collect patient experience information. This approach is currently rarely used in primary care settings, but may provide practices with a useful tool that enables them to take prompt, focused action to improve their services.

Aim

To identify the factors inhibiting and enabling the implementation of real-time feedback in general practices.

Design and setting

Qualitative study embedded within an exploratory trial (July 2014 to February 2015) of a real-time feedback intervention targeting patient experience in general practices in south-west England and Cambridgeshire.

Method

Semi-structured interviews ($n = 22$) and focus groups ($n = 4$, total of 28 attendees) with practice staff were audiorecorded, transcribed, and analysed thematically, using a framework based on constructs from normalisation process theory.

Results

Staff engagement with real-time feedback varied considerably, and staff made sense of real-time feedback by comparing it with more familiar feedback modalities. Effective within-team communication was associated with positive attitudes towards real-time feedback. Timing of requests for feedback was important in relation to patient engagement. Real-time feedback may offer potential as a means of informing practice development, perhaps as a component of a wider programme of capturing and responding to patients' comments.

Conclusion

Successful implementation of real-time feedback requires effective communication across the practice team to engender thorough engagement. Feedback processes should be carefully introduced to fit with existing patient and practice routines. Future studies should consider making real-time feedback content relevant to specific practice needs, and support participation by all patient groups.

Keywords

general practice; patient experience; qualitative research; survey.

INTRODUCTION

Although a culture of patient feedback has become part of routine healthcare practice — most notably via surveys of patient experience of care — there is little current evidence suggesting that collection of patient experience data necessarily results in significant improvements in service delivery.^{1–3} This may be due to perceived shortcomings associated with traditional forms of obtaining feedback; approaches that exploit the capabilities of new technologies may address some of these problems. Previous studies in the UK and US^{4–7} have found that real-time feedback has the potential to enable healthcare organisations to respond promptly to patients' concerns and make timely improvements to services. Real-time feedback usually involves the use of kiosks or hand-held electronic devices for the systematic collection, analysis, and reporting of feedback from patients who have recently used a healthcare service.^{4,5} By providing regular reports based on information obtained directly from their patients, real-time feedback offers general practices a practical way of incorporating regular patient feedback into service planning.

This qualitative study was undertaken as one element of an exploratory trial of a real-time feedback intervention, which investigated the feasibility and acceptability of real-time feedback in UK general

practice (full protocol available).⁸ Qualitative approaches were used to identify barriers and facilitators to the establishment of real-time feedback in general practices.

METHOD

General practices in south-west England and Cambridgeshire were eligible to participate in the exploratory trial if their score for communication items had been in the lowest 50% in the previous year's (2013) National GP Patient Survey.⁹ Reasonable travelling distance from the two research centres guided selection within the sampling frame. Practices were invited to participate in the exploratory trial until the target (10) was reached. Sampling was undertaken in this way to target an area of clinical and professional practice — communication — that is important to patients¹⁰ and may be amenable to change.¹¹

Real-time feedback kiosks were installed in the waiting areas of 10 practices ($n = 8$ south-west England, $n = 2$ Cambridgeshire) for 12 weeks. During this period, all patients attending the practice were invited to provide feedback about the care they had received. Survey items are detailed in Box 1. Practices were sent fortnightly reports based on this feedback.

Following the real-time feedback implementation period, and depending on practice preference, researchers conducted

M Carter, BA, MSc, PGDip, associate research fellow, Department of Primary Care; **A Davey**, MSc, MPhil, research fellow, Primary Care Research Group; **C Wright**, PhD, research fellow; **J Campbell**, FRCGP, professor of general practice & primary care, University of Exeter Medical School, Exeter; **N Elmore**, MSc, research assistant, University of Cambridge School of Clinical Medicine; **J Newbould**, PhD, honorary visiting fellow, RAND Europe; **M Roland**, FRCGP, professor of health services research, Primary Care Unit, University of Cambridge, Cambridge. **J Burt**, PhD, senior research associate, Cambridge Centre for Health

Services Research, Cambridge.

Address for correspondence

Mary Carter, University of Exeter Medical School, Department of Primary Care, Smeall Building, St Luke's Campus, Exeter EX1 2LU, UK.

E-mail: mary.d.carter@exeter.ac.uk

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How this fits in

Although it is possible to implement real-time feedback successfully in most GP practices, its potential for contributing to service improvement may not be realised unless the facilitators and barriers to full practice engagement are understood and addressed. This study highlights the potential of real-time feedback for contributing to improved patient experience. It emphasises the need for effective communication within general practices to ensure that the processes involved in obtaining, and acting on, patient feedback are understood by all staff, enabling patient concerns to be promptly and effectively addressed.

Box 1. Real-time feedback survey items

Item wording	Response options presented
• How likely are you to recommend our GP surgery to friends and family?	Extremely likely/Likely/Neither likely nor unlikely/Unlikely/Extremely unlikely/Don't know
• How easy is it to get through on the telephone to this practice?	Very easy/Fairly easy/Not very easy/Not at all easy/Haven't tried or Don't know
• How easy is it to get an appointment for a time that suits you?	Very easy/Fairly easy/Not very easy/Not at all easy/Haven't tried or Don't know
• How helpful do you find the receptionists at this GP surgery or health centre?	Very helpful/Fairly helpful/Not very helpful/Not at all helpful/Don't know
• Overall, how satisfied are you with the care you get at this GP surgery or health centre?	Very satisfied/Fairly satisfied/Neither satisfied nor dissatisfied/Fairly dissatisfied/Very dissatisfied
• Have you had an appointment with a health professional at the practice today?	Yes/No
• If Yes: Which of the following health professionals did you see?	Doctor/Nurse/Healthcare assistant or phlebotomist (for a blood test)/Practice counsellor/Other health professional
• Which doctor or nurse did you see today?	List (and photographs) of individual staff at the practice plus: Another doctor/Another nurse/Don't know
• Do you have confidence and trust in the doctor or nurse you saw today?	Yes, definitely/Yes, to some extent/No, not at all/Don't know or Can't say
• How good was the health professional at each of the following ... (a) Giving you enough time (b) Listening to you (c) Treating you with care and concern (d) Taking your problems seriously	Very good/Good/Neither good nor poor/Poor/Very poor/Doesn't apply
Up to two items (with relevant response options) on topics selected by the practice team were included after the clinician communication skills items, or (for patients who had not consulted a health professional) after the overall experience item.	
• Are you ...?	The patient/Parent or guardian of the patient/Spouse or partner of the patient/Another relative or friend of the patient/Other
• Are you/Is the patient ...?	Male/Female
• How old are you/Is the patient?	<18/18–25 years/26–45 years/46–65 years/>65 years
• What is your/the patient's ethnic group?	White/Mixed/Asian or Asian British/Black or black British/Chinese or Other
• If you would like to leave any further comments, please type below	Space for free-text comments

either semi-structured interviews with a purposive sample of staff, ensuring all professions were represented, or a practice-based focus group to which all staff were invited. These sessions explored aspects of the real-time feedback implementation including training, technical support, using real-time feedback to collect patients' views, the content of the fortnightly reports, and the impact of receiving feedback. Interviews (lasting 20–30 minutes) and focus groups (lasting 40–45 minutes) were audiorecorded and transcribed verbatim.

QSR NVivo 10® was used for coding, linking, and retrieving the qualitative data from the sources described above. After initially reading a sample of the transcripts independently, two qualitative researchers noted and discussed preliminary themes. Any differences were resolved, and duplications were eliminated.

Normalisation process theory (NPT),¹² originally developed to understand the embedding of new technologies into health systems, guided the production of a coding framework for the refined themes. NPT is underpinned by four constructs:

- coherence (how people make sense of a new system/process);
- cognitive participation (how people engage with it);
- collective action (how people make new systems work in practice); and
- reflexive monitoring (how people assess new systems' value).

According to NPT, these constructs often operate and are experienced simultaneously.^{12,13} Two researchers used the NPT framework to analyse and code the transcripts, including any data that did not appear to fit neatly. The analysis was discussed in regular sessions with a third researcher, who managed qualitative and quantitative aspects of the real-time feedback research. Data identified as falling outside the NPT constructs concerned details of the research process, rather than the findings of this specific study, so have not been explored for the purposes of this article.

RESULTS

After initially approaching a total of 28 practices, 10 were recruited. Nine of the 28 practices declined to participate and nine had not responded by the time the target was achieved. Participating practices were located in a variety of settings, with a range of list sizes and deprivation deciles. Staff from four practices took part in focus

groups. Interviews were conducted with staff members ($n = 22$) from the remaining six practices. Table 1 details practice and staff characteristics.

The analyses of interviews and focus group discussions suggested that a range of cultures and communication styles existed within participating practices, although no formal assessment of these was undertaken.

Engaging with real-time feedback and making it work was notably more successful

in practices with an open, inclusive communication style. These practices tended to include all staff members in the real-time feedback implementation and discuss feedback as a multidisciplinary group.

In practices with a less inclusive culture, real-time feedback was sometimes viewed with suspicion or ignored altogether; in these practices, staff were inclined to work predominantly within their own professional group and all-practice discussions appeared to be rare.

Table 1. Characteristics of participating practices and staff

Practice	List size ^a	Deprivation decile ^b	GPPS communication centile, range ^c	Interviews by staff type	Focus group attendees by staff type
007	8005	2	10.1–20	GP ($n = 1$) Administrative including receptionists ($n = 2$) Nurse ($n = 1$)	
010	4114	8	30.1–40		GP ($n = 2$) Administrative including receptionists ($n = 5$) Nurse ($n = 2$)
011	13 000	6	30.1–40		GP ($n = 1$) Administrative including receptionists ($n = 2$) Nurse ($n = 1$)
015	11 727	7	20.1–30		GP ($n = 2$) Administrative including receptionists ($n = 3$) Nurse ($n = 2$)
016	15 189	2	30.1–40	GP ($n = 1$) Administrative including receptionists ($n = 1$) Nurse ($n = 1$)	
017	9500	7	30.1–40	Practice manager ($n = 1$) GP ($n = 1$) Administrative including receptionists ($n = 1$) Nurse ($n = 1$)	
018	4568	2	30.1–40		GP ($n = 1$) Administrative including receptionists ($n = 6$) Nurse ($n = 1$)
021	6675	7	10.1–20	Practice manager ($n = 1$) GP ($n = 2$) Administrative including receptionists ($n = 1$) GP registrar ($n = 1$)	
068	3618	10	20.1–30	Deputy practice manager ($n = 1$) Administrative including receptionists ($n = 1$)	
069	10 998	9	20.1–30	Practice manager ($n = 1$) Deputy practice manager ($n = 1$) Administrative including receptionists ($n = 2$)	

^aProvided by practice at the start of the exploratory trial. ^bDeprivation data (lower numbers indicate more deprivation).¹⁴ ^cDerived from the practice's overall scores on communication items in the national GP Patient Survey (Year 7 data). GPPS = GP Patient Survey.

Making sense of the real-time feedback implementation

Most practices were used to obtaining and handling feedback from their patients, but real-time feedback was new to staff involved in this study; they made sense of it by comparing it with more familiar feedback methods.

Some favoured the convenience and immediacy of real-time feedback when comparing it with traditional paper-based surveys, which often entailed additional work for the practice, including data analysis:

'With forms they were ... maybe taken away and told to bring them back later and perhaps never did, whereas this was like, well you're doing it now, and it's done.' [069005, deputy practice manager, interview]

However, by contrast, others highlighted problems with feedback from patients who had not had time to reflect on their experience:

'You're gonna get some hot-headed responses aren't you? I mean people are going to come out and get really cross, there'll be some emotion going on there that if they cooled down for 5 minutes you wouldn't get those responses.' [015009, practice nurse, focus group]

For some practices, real-time feedback was part of a strategy for obtaining patient feedback, and valued as an additional means of staying abreast of patients' concerns.

Some staff mentioned links between real-time feedback and other schemes, such as the Friends and Family Test (FFT)¹⁵ and GMC appraisals,¹⁶ and viewed the extra data provided by real-time feedback positively:

'... we're very familiar with GP surveys ... I think everybody was very enthusiastic that it was an alternative form of this, rather than the paper ones that we always struggled with ... so having an alternative which is sort of there and part of the furniture and whatever was actually really quite nice.' [017019, practice manager, interview]

Staff drew on personal experience of customer service initiatives in other contexts, recognising that nowadays people are frequently asked for feedback about a range of services, not only health care. These experiences made real-time feedback feel familiar:

Engaging with real-time feedback

Findings about how practices engaged with real-time feedback, and made it work in practice, are presented together. These were considered through the lens of two related NPT constructs — cognitive participation and collective action — which focus on how people interact with, and work to embed, an innovation.

Staff relationships with each other and with patients were a crucial part of the real-time feedback implementation. The level of communication concerning feedback from patients within practices varied among the participating practices:

'There's nothing that's kept away from us ... whether it be good or bad ... if we have to do something to either make it better or keep up what we're doing then they [patients] tell us.' [007021, administrative staff, interview]

'We do get some feedback but it's not a lot. I think it's almost like an e-mail to say if you want to look at it you can look at it on there, you know ... we never have a meeting where we are all in the room and discussing it, we don't discuss anything.' [069013, receptionist, interview]

Individuals within the same staff team in a practice also had differing communication styles. Some reception staff had sufficient confidence to encourage patients to leave real-time feedback, but others did not.

Similarly, some GPs were reluctant to ask their patients for feedback. One suggested that requesting feedback tarnished an otherwise positive consultation:

'It can feel awkward ... if the conversation has gone really well, it sometimes slightly undermines the goodness of the conversation or the help that you've given.' [007002, GP, interview]

Timing of the request for feedback was an important consideration. Several interviewees mentioned the problem of asking patients to leave feedback after a consultation when the patient has little time, or is busy with responsibilities for children or older relatives. Some thought that patients may have more time before a consultation, while in the practice and waiting to be seen:

'It's much easier to get patients to fill things in while they're waiting than when they've finished ... because they're sitting down waiting ... and looking for something to do.' [011018, office manager]

Staff from one practice noticed that patients attending a one-off influenza clinic were particularly willing to leave feedback. Although sometimes practices viewed concurrent requests for other forms of feedback (such as questionnaires or the FFT) as problematic, real-time feedback was mainly viewed as part of a programme of practice–patient communication, rather than a competing initiative. Generally, however, staff said they could not prioritise requests for feedback at busy times:

'When we're queuing three people ... it's the last thing on our minds, is to say "oh, can you go and use the feedback machine?", to be honest with you.' (017025, receptionist, interview)

Appraising and learning

Staff expressed a variety of views about the developmental value of real-time feedback to themselves as individuals and for their practice team. Many commented on how real-time feedback complemented, or duplicated, other forms of feedback; sometimes staff were happy to have confirmation of messages received via other feedback processes, but sometimes the duplication was used to disparage real-time feedback as a learning tool:

'... we had our CQC inspection, and we had our report, around the same time as we were doing this, so it kind of all fitted in quite nicely together, and then we've had our patient participation questionnaire ... I think it's also useful to get feedback in different ways, and not rely too much on one method, 'cos some of them can give quite different pictures or they can confirm the kind of whole.' (011017, practice manager)

'The trouble is a lot of what they tell us are things that we already know and the trouble is because of the way the system runs whether it be the structure of the building or whether it be the constraints that the NHS puts on me, y'know, the fact that I haven't got a million pounds to spend today, it's essentially I do what I can with what I've got and what I'm given and so therefore can't, I think most of what they tell me I already know. Or if I don't know it's probably not something I can easily change.' (021001, GP)

Many staff noticed low real-time feedback completion rates, and feared that the majority of patients had not been given, or taken, the chance to participate. Some believed that real-time feedback attracted

only patients with extreme views, excluding the 'middle ground'; the immediacy of the feedback (just after a consultation) was seen as encouraging patients with an axe to grind and excluding those with more moderate views. For these reasons, the rationale for acting on real-time feedback was sometimes felt to be quite limited:

'It attracts two types of people ... the people who love you and tell you they love you and the people that just had a really bad experience that day and want to take it out on the system really.' (015016, practice manager, focus group)

Some staff were concerned that real-time feedback may exclude the views of patients with limited language or literacy skills (including some ethnic minorities, migrants, refugees, and asylum seekers); likewise, some suggested that older people may be uncomfortable using new technology to give feedback.

Several commented on the content of the real-time feedback survey, and criticised the number of demographic questions included; being generally positive about tailoring the survey to make it relevant to their organisation, they indicated they would appreciate greater flexibility in this regard.

Staff members found the free-text comments more helpful and revealing than quantitative responses, and reported that sometimes these comments provided the context and detail required for staff to learn from, and act on, patient views.

Although staff understood the reasons for retaining the anonymity of real-time feedback responders, they suggested that patients could be invited to leave their name as an option, allowing for individual issues to be followed up effectively.

Several practice managers mentioned that they were making, or intended to make, changes based on real-time feedback. Some wanted to amalgamate real-time feedback results with data from other sources before formulating a plan. Some practices planned to notify their patients about changes made on the basis of real-time feedback, whereas others involved patients in formulating these changes. Similarly, the degree of involvement of the wider practice team in action planning varied among practices. Many were keen to involve all staff in discussions (based on regular progress reports) about acting on feedback. Some individuals, however, felt remote from the decision making:

'I haven't been involved. I don't know what

the plan is from here.' (016021, receptionist, interview)

These disparities relate to the differing communication cultures within practices, mentioned earlier on, which underpinned the success or otherwise of the real-time feedback implementation.

DISCUSSION

Summary

Real-time feedback represents a new approach to collecting patient feedback for primary care staff and patients. This study found that real-time feedback was received more positively by practices in which information about, and enthusiasm for, new initiatives were shared throughout the practice. This required good communication between staff groups and individuals, fostering a sense of involvement in all aspects of the implementation. In practices where messages about the rationale for real-time feedback, and the content of ongoing progress reports (from the research team) were communicated effectively, 'buy-in' from all staff was achieved.

Many practices viewed real-time feedback as part of ongoing communication with their patients and, in such settings, the immediacy of it helped offset 'feedback fatigue'. Conversely, in practices where information was not communicated effectively among all staff groups, individuals, and patients, there was a feeling of remoteness from the feedback process. Greater practice involvement with the design of the survey, and actual topics covered, may achieve a greater sense of ownership, trust, and engagement among staff.

Timing of requests for patient feedback (pre/post-consultation and within the context of other practice activities) is also an important consideration and can greatly affect staff perceptions of real-time feedback and their ability and willingness to prioritise it.

Some practice staff were concerned about low real-time feedback response rates and highlighted the likelihood that some groups of patients may not be comfortable leaving feedback using the real-time devices.

Strengths and limitations

All the practices approached were located within one of two broad geographical areas, and had received scores in the lowest 50% for the GP Patient Survey communication items in the year preceding the study. The final sample included a range of settings,

list sizes, and deprivation deciles. Medical, nursing, administrative, and reception staff contributed to discussions in focus groups or gave their views in one-to-one interviews.

Both qualitative researchers were from a health services research background. The project manager, with oversight of both qualitative and quantitative aspects of the real-time feedback research, contributed to regular discussions about the analysis.

The research team's understanding of the obstacles and drivers associated with embedding real-time feedback in general practices has been enhanced by organising qualitative data according to NPT constructs. Although it is important to note that all four NPT constructs operated and were experienced concurrently, the adoption of this underpinning framework¹² has enabled a coherent view of the processes involved in implementing real-time feedback.

General practice staff acknowledged that their attitudes towards real-time feedback were influenced by the restricted availability of the kiosks (for one 12-week period only), so attitudes towards a permanent implementation may differ from the findings presented here.

Comparison with existing literature

Practice culture and communication style greatly influence the reaction of staff to new initiatives, such as real-time feedback. These study findings highlight the importance of ongoing, effective communication throughout the organisation; this enabled real-time feedback to be accepted and incorporated into practice routines and processes. Previous studies on nurses^{6,17,18} and guidance from the Department of Health¹⁹ have identified the importance of good communication within healthcare teams when implementing systems for collecting patient views. Other studies have found that working towards shared goals can break down barriers between professional groups and enhance communication within practice teams.^{20,21} The study presented here suggests, however, that pre-existing effective communication has helped to embed this new approach to collecting patient feedback within general practices.

This study concurs with existing literature about the feasibility of implementing real-time feedback systems in healthcare settings,⁴⁻⁷ and supports previous findings that immediate feedback may contribute to responsive action planned and taken by practices to address their patients' concerns.¹⁵ It also confirms some of the patient groups for whom this means of feedback may not be suitable; namely,

those with literacy problems, older people, and some minority ethnic groups.^{4–6,22,23}

Implications for research and practice

More prescriptive instructions for practices ensure that all members of staff understand and are involved in developing their role with regard to real-time feedback, and are allowed time to discuss results and contribute to action planning. These are important components of successfully embedding the use of real-time feedback in general practices. This guidance may steer practices with a less inclusive culture towards greater involvement of all their staff. This study also highlights the importance of timing. Practices should:

- pay attention to practice-based contingencies to take account of busy

times and how patients' time can best be utilised; and

- carefully plan real-time feedback to fit with other feedback initiatives and avoid 'over-surveying' patients.

Further exploration of patient perspectives about real-time feedback and the development of materials for non-English speakers are important areas for future research.

Patients' views are important. Recent research has highlighted challenges associated with developing and implementing effective techniques for capturing patients' experiences of care; this study identifies real-time feedback as an approach that, if carefully implemented in practice, may offer the potential for addressing some of these challenges.

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Ethical approval

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Competing interests

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REFERENCES

- Boiko O, Campbell JL, Elmore N, *et al*. The role of patient experience surveys in quality assurance and improvement: a focus group study in English general practice. *Health Expect* 2015; **18(6)**: 1982–1994.
- Asprey A, Campbell JL, Newbould J, *et al*. Challenges to the credibility of patient feedback in primary healthcare settings: a qualitative study. *Br J Gen Pract* 2013; doi: 10.3399/bjgp13X664252.
- Russell S. *Patients' experiences: top heavy with research*. 2013. <http://www.research-matters.com.au/publications/PatientsExperiencesReview.pdf> [accessed 12 Aug 2016].
- Dirocco DN, Day SC. Obtaining patient feedback at point of service using electronic kiosks. *Am J Manag Care* 2011; **17(7)**: e270–e276.
- Wofford JL, Campos CL, Jones RE, Stevens SF. Real-time patient survey data during routine clinical activities for rapid-cycle quality improvement. *JMIR Med Inform* 2015; **3(1)**: e13.
- Larsen D, Peters H, Keast J, Devon R. Using real time patient feedback to introduce safety changes. *Nurs Manag (Harrow)* 2011; **18(6)**: 27–31.
- NHS Practice Management Network. *A best practice guide to using real-time patient feedback*. http://www.practicemanagement.org.uk/uploads/best_practice_guide_to_using_real-time_patient_feedback_final_version_august_2010.pdf [accessed 12 Aug 2016].
- Wright C, Davey A, Elmore N, *et al*. Patients' use and views of real-time feedback technology in general practice. *Health Exp* 2016; doi:10.1111/hex.12469.
- Ipsos MORI. *GP Patient Survey*. <https://gp-patient.co.uk/> [accessed 16 Aug 2016].
- Cheraghi-Sohi S, Hole AR, Mead N, *et al*. What patients want from primary care consultations: a discrete choice experiment to identify patients' priorities. *Ann Fam Med* 2008; **6(2)**: 107–115.
- Stein T, Frankel RM, Krupat E. Enhancing clinic ian communication skills in a large healthcare organization: a longitudinal case study. *Patient Educ Couns* 2005; **58(1)**: 4–12.
- May C, Finch T. Implementing, embedding, and integrating practices: an outline of normalization process theory. *Sociology* 2009; **43(3)**: 535–554.
- Blickern C, Kennedy A, Jariwala P, *et al*. Aligning everyday life priorities with people's self-management support networks: an exploration of the work and implementation of a needs-led telephone support system. *BMC Health Serv Res* 2014; **14**: 262.
- GOV.UK. *Official statistics. English Indices of Deprivation 2010*. <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2010> [accessed 25 Aug 2016].
- NHS England. *Friends and Family Test in GP practices: summary of the guidance*. 2014. <https://www.england.nhs.uk/wp-content/uploads/2014/07/fft-gp-summ-14.pdf> [accessed 12 Aug 2016].
- General Medical Council. *Supporting information for appraisal and revalidation*. Manchester: GMC, 2012. http://www.gmc-uk.org/RT_Supporting_information_for_appraisal_and_revalidation_DC5485.pdf_55024594.pdf [accessed 23 Aug 2016].
- Reeves R, West E, Barron D. Facilitated patient experience feedback can improve nursing care: a pilot study for a phase III cluster randomised controlled trial. *BMC Health Serv Res* 2013; **13**: 259.
- Gluyas H. Effective communication and teamwork promotes patient safety. *Nurs Stand* 2015; **29(49)**: 50–57.
- Department of Health. *Understanding what matters: a guide to using patient feedback to transform care*. 2009. http://webarchive.nationalarchives.gov.uk/+http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_099780 [accessed 12 Aug 2016].
- Bunniss S, Gray F, Kelly D. Collective learning, change and improvement in health care: trialling a facilitated learning initiative with general practice teams. *J Eval Clin Pract* 2012; **18(3)**: 630–636.
- Spooner A, Chapple A, Roland M. What makes British general practitioners take part in a quality improvement scheme? *J Health Serv Res Policy* 2001; **6(3)**: 145–150.
- Zarghom S, Di Fonzo D, Leung FH. Does socioeconomic status affect patients' ease of use of a touch-screen (iPad) patient survey? *Interact J Med Res* 2013; **2(1)**: e1.
- Heart T, Kalderon E. Older adults: are they ready to adopt health-related ICT? *Int J Med Inform* 2013; **82(11)**: e209–e231.