



OPEN ACCESS

Putting out fires: a qualitative study exploring the use of patient complaints to drive improvement at three academic hospitals

Jessica J Liu,¹ Leahora Rotteau,² Chaim M Bell,^{1,2} Kaveh G Shojania^{1,2}

► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/bmjqs-2018-008801>).

¹Division of Internal Medicine, University of Toronto Faculty of Medicine, Toronto, Ontario, Canada

²Centre for Quality Improvement and Patient Safety (C-QulPS), University of Toronto, Toronto, Ontario, Canada

Correspondence to

Dr Jessica J Liu, University of Toronto Centre for Quality Improvement and Patient Safety (C-QulPS), 525 University Ave, Rm 630, Toronto, ON M5G 2L3, Canada; jesskelleher@gmail.com

Received 6 September 2018

Revised 9 April 2019

Accepted 4 May 2019

ABSTRACT

Background and objectives Recent years have seen increasing calls for more proactive use of patient complaints to develop effective system-wide changes, analogous to the intended functions of incident reporting and root cause analysis (RCA) to improve patient safety. Given recent questions regarding the impact of RCAs on patient safety, we sought to explore the degree to which current patient complaints processes generate solutions to recurring quality problems.

Design/setting Qualitative analysis of semistructured interviews with 21 patient relations personnel (PRP), nursing and physician leaders at three teaching hospitals (Toronto, Canada).

Results Challenges to using the patient complaints process to drive hospital-wide improvement included: (1) Complaints often reflect recalcitrant system-wide issues (eg, wait times) or well-known problems which require intensive efforts to address (eg, poor communication). (2) The use of weak change strategies (eg, one-off educational sessions). (3) The handling of complaints by unit managers so they never reach the patient relations office. PRP identified giving patients a voice as their primary goal. Yet their daily work, which they described as ‘putting out fires’, focused primarily on placating patients in order to resolve complaints as quickly as possible, which may in effect suppress the patient voice.

Conclusions Using patient complaints to drive improvement faces many of the challenges affecting incident reporting and RCA. The emphasis on ‘putting out fires’ may further detract from efforts to improve care for future patients. Systemically incorporating patients’ voices in clinical operations, as with co-design and other forms of authentic patient engagement, may hold greater promise for meaningful improvements in the patient experience than do RCA-like analyses of patient complaints.

INTRODUCTION

The patient experience has received increasing attention in recent years due to publicly reported patient satisfaction scores¹ and the availability of easily accessible comments from patients about their healthcare experiences on social media.^{2 3} In addition to standardised surveys, hospitals also use focus groups,

locally developed surveys and other strategies to obtain patient feedback.⁴ Patient experience data may inform improvement, as data show that patients can accurately identify quality of care issues not captured by incident reports and traditional chart review, and patient dissatisfaction predicts subsequent risk management episodes.^{4–12}

Patient complaints have also received more attention recently, with calls for more proactive, systematic use of the abundant complaints data collected in hospitals.^{13–18} As with incident reporting and root cause analysis (RCA), hospitals could investigate patient complaints and develop institution-wide changes that address recurring issues. That said, improving hospital safety through incident reporting and RCA has proven much more difficult than many expected.^{19–26}

To explore the feasibility of more proactively responding to patient complaints and developing system improvements, we studied the complaints process at three academic hospitals in a large urban centre. We investigated the current institutional role of the patient complaints process, seeking to identify barriers to more systematic use of patient complaints to address recurring quality problems.

METHODS

Study sites and participants

We interviewed 21 personnel at three of the nine fully affiliated University of Toronto teaching hospitals (hospitals A, B and C). All three hospitals have focused on key aspects of healthcare quality, including investments in the patient experience, with comprehensive processes to address the 1000–1800 patient complaints received each year. Because the hospitals use different names for these offices and



© Author(s) (or their employer(s)) 2019. No commercial re-use. See rights and permissions. Published by BMJ.

To cite: Liu JJ, Rotteau L, Bell CM, et al. *BMJ Qual Saf* Epub ahead of print: [please include Day Month Year]. doi:10.1136/bmjqs-2018-008801

Table 1 Hospitals, interviews and professions

Academic hospital	Interview subjects (interview number, specialty)	
Hospital A	Patient relations personnel	
	Patient relations personnel	
	Advanced practice nurse (general internal medicine)	
	Nursing unit manager (long-term care)	
	Nursing unit manager (emergency department)	
	Physician (general internal medicine)	
Hospital B	Physician (emergency department)	
	Nursing unit manager (general internal medicine)	
	Patient relations personnel	
	Physician (general internal medicine)	
	Nursing unit manager (general internal medicine)	
	Hospital C	Patient relations personnel
		Patient relations personnel
Patient relations personnel		
Patient relations personnel		
Physician (general internal medicine)		
Physician (emergency department)		
Nursing unit manager (general internal medicine)		
Patient relations personnel		

personnel, we refer to patient relations offices (PRO) and patient relations personnel (PRP) throughout the manuscript. We chose to focus on PRP and other health professionals rather than patients themselves because we sought the institutional perspective on functions of the complaints process and the extent to which it ever drives improvement initiatives.

Purposive sampling²⁷ began by interviewing PRP at two hospitals. During the interviews we asked the participants to identify hospital units they perceived to have varying experiences with patient complaints, such as units regarded as effective at addressing complaints, those experiencing more challenges or those with high numbers of patient complaints. Applying maximum variation sampling, we identified two units at each hospital based on the PRP's knowledge of their organisation in an effort to construct a holistic understanding of the phenomenon at each hospital.²⁸ We sought to recruit a nursing leader (unit manager) and a medical leader (clinical service director or role related to the patient experience) from each unit to provide insights into the use of patient complaints in improvement efforts across different contexts. We initially collected data at hospitals A and B. Based on the ongoing data analysis, we added a third hospital (C), following the same process, to ensure sufficient depth and breadth of data to describe and analyse the complaints process

and enhance transferability of the findings.²⁹ Table 1 lists the study participants.

Interviews and analysis

Two authors (LR and JL) conducted 21 semistructured interviews between May 2014 and April 2016. A semistructured interview guide (online supplementary appendix 1) was used for all interviews and all interviews were transcribed verbatim. The semistructured nature of the interviews allowed for areas of inquiry most relevant to the participants to be emphasised and specific prompts within the interview guide to be developed for future interviews. Participants often focused on the challenges related to the patient complaints process. We also encouraged participants to share examples of efforts to improve quality of care based on individual complaints or recurring themes in complaints data. LR and JL reviewed the first four transcripts independently and then discussed the transcripts to develop initial codes and a coding template. The coding template was adapted throughout data collection, in order to organise the data in an iterative manner, to ensure all relevant information was captured. The coding template included categories related to the process of addressing and resolving complaints, perceptions of the processes and outcomes of the processes. All transcripts were coded using Nvivo V.10 (QSR International).

We conducted a thematic analysis of the coded transcripts to identify patterns across the data.³⁰ We identified and continued to develop several main themes: the institutional roles of the patient complaints process; common categories of complaints and factors impacting their resolution; and the degree to which specific complaints ever led to improvements. The analysis began with developing an understanding of each theme for the individual hospitals, followed by comparing each theme between hospitals to produce an across-hospital understanding. LR and JL met with coauthors KGS and CB throughout the analysis process to discuss and refine the themes.

FINDINGS

Our findings are presented in two sections. First, we present the perceptions of the patient complaints process by study participants. Second, we outline interrelated challenges of using patient complaints in hospital improvement efforts.

Institutional roles of the patient complaints process

The PRP and clinical leaders at all three hospitals generally displayed authentic interest in providing a venue for patients' voices to be heard. Yet, at times, the goal seemed to consist merely of letting patients vent, with little sense of generating improvements as even a consideration.

[Patients] just want someone to be there to listen to them. I think a lot of patients understand, but they

have to rant it somewhere, they need to say it out, and after they're saying it, they will feel better. (Advanced Practice Nurse, Hospital A)

People just want to be heard. [PRP] make the patient feel heard. We are listening to your feedback, and they are giving the feedback. They're communicating, they're telling the patient we've informed the relevant people, the physician, the department chief, the patient care manager (Physician, Hospital A)

Beyond simply listening to patients, PRP at all three hospitals described the majority of their work as achieving 'complaint resolution', typically defined as addressing the immediate concerns of individual patients in as timely a fashion as possible. Many participants referred to this part of the job as 'putting out fires':

The nuts and bolts of [our] day is trying to put out fires, and deal with people (PRP, Hospital A)

A lot of what we do is manage expectations of patients and put out fires along the way (PRP, Hospital C).

In keeping with the sense of urgency associated with responding to fires, participants emphasised the importance of resolving patient complaints immediately.

Patients want that resolving while on the unit. They don't want to call us afterwards, looking back and saying what could have been done differently. They want a result in the moment. That's why we found being more proactive in that respect is more helpful. (PRP, Hospital C)

A lot of times it's helpful because if the patient is on the unit and their family is upset, (the hospital) don't want them to go home and be upset and then call 6 months later and say this is what happened. It's really difficult to go back and maybe they could litigate or something, where if we've picked it out while they're there we have the opportunity to build a relationship and then they have a better experience and it's more positive for everybody. (PRP, Hospital C)

As illustrated by these two quotations, the focus on resolving complaints quickly took two forms. The first was answering relatively simple concerns in the moment, often obtaining information from specific healthcare providers (eg, when an operation or follow-up appointment would occur). Similar to 'patient navigator' roles described in the literature, the PRP do not have direct roles in clinical care but enhance care by facilitating communication.^{31 32}

Patient Relations is excellent...paraphrasing it all, and bringing it back in a written form so the patients and their families have a good closed loop of what happened, and what the feedback, and what is going to come of it so things don't happen to someone else. Or even for themselves, to know this is what it was, this is what happened, you saw this tiny part of it, but there was a lot of behind-the-scenes work that happened to

get to the result, we're sorry if we didn't communicate it well with you. (Nursing Unit Manager, Hospital B)

In such cases, PRP acted as liaisons between the patient and the clinician or staff member. Taking direct accountability for investigating patient complaints in order to identify potential quality improvement efforts is not part of the specific mandate of the PRO. Rather, it is the responsibility of the unit leaders, clinic directors or individual clinicians against whom complaints are filed. One PRP (Hospital B) stated that "*we don't own the outcome but we can facilitate putting people in touch*" and another (Hospital A) explained that her PRO "*wants the units to take ownership over [the complaint]*".

Patient Relationship [sic], they acknowledge the problem, they will call the individual unit, let them know that this is the complaint, but they don't necessarily do investigation. So it will be up to us. (Advanced Practice Nurse, Hospital A)

The second form of 'putting out fires' involved defusing emotional situations when a simple solution was neither realistic nor feasible, in order to prevent escalation to a risk management episode:

If [addressing a complaint] is done properly, I think it can reduce medical legal risk for higher-level complaints to external bodies, college, lawsuits, human rights bodies, things like that." (Physician, Hospital B)

In such cases, 'putting out fires' involved validating patient concerns and apologising on behalf of the institution:

I think patients want to have their own experiences acknowledged and validated. They want to have an expression of remorse, apology, personal connexion. 'I'm so sorry that this happened to you.' Patients, then, want to know that somebody has learnt from this experience and you fixed it because I came forward. (PRP, Hospital C)

Challenges of using patient complaints to achieve systemic quality improvement

Although participants did not identify quality improvement as a specific mandate of the PRO, clinical leaders and PRP clearly expressed the intent to improve patient care. However, they acknowledged that concrete improvements to prevent future complaints occurred rarely. We identified three interrelated challenges to the use of patient complaints to drive improvement efforts: (1) The nature of the issues identified in complaints are well known, but difficult to address. (2) The use of weak change strategies. (3) Resolution of complaints outside the formal complaints structure.

(1) The nature of the issues identified are well known, but difficult to address

Across all sites, PRP consistently identified poor communication as the most common category of complaints year after year.

“[The top two complaints are] always communication or attitude. Sometimes, it’s attitude and communication. Sometimes, it’s hard to tell which is the antecedent. Sometimes, the attitude prompts crummy communication. Sometimes, the communication is good, but the attitude is so bad that it taints the communication. (PRP, Hospital C)

The majority are related to communication, so lack of communication or inconsistency in communication. Sometimes they’re not getting any information or sometimes they’re getting pieces that are different from lots of different people, which is related to the fact that there are so many people that are involved and certain pieces of information can only be provided by certain people. (PRP, Hospital A)

Communication complaints were described as preventable, pervasive and well known. According to one nursing unit manager (hospital B), *‘nothing is new, but we don’t have a solution’*. Some study participants viewed communication and attitude issues as under the control of the individual care providers, and that receiving such a complaint could catalyse self-improvement.

Communication is something that can be changed, something that is a skill that can be developed. Which is encouraging, at least to me, that the top complaints are things that we actually have control over... communication is feedback that can be shared with someone for their own reflection, and they can look back on that and think, what could I have done differently. (Nursing Unit Manager, Hospital B)

Other participants, however, noted that most clinicians simply apologise when a complaint arises rather than working on improving their communication style.

Even the [physicians] that get a lot of complaints, and they aren’t willing to change the aspect of their practice that gets a lot of complaints, but they are willing to review the case, and read the letters, and offer an apology, and that kind of stuff. They are usually, they’re almost always amenable to that piece of it, but they’re not usually amenable to [other] little changes (PRP, Hospital A)

To address frequent complaints about poor communication, PRP at all hospitals described the periodic implementation of a programme aimed at educating staff about better communication and customer service. While PRP expressed positive views towards educational interventions in addressing patient complaints, they acknowledged that communication issues continue to top complaints lists year after year.

So 23 years that this office has been in place, [complaint] one and [complaint] two are always communication or attitude... So, it’s always communication, attitude and perceptions of care. Those have been the consistent top three in the last 23 years. They are the consistent top three [complaints] in every other hospital who

has come to develop a Patient Relations Office (PRP, Hospital C)

A second perennial category of complaints related to wait times and scheduling of care, described as *‘system issues’*. These complaints led to frustration for many of the study participants due to the lack of ability to effect change or provide the patients with a resolution to their complaint.

You might wait your 2 years [for surgery] and then you get bumped because there’s an emergency that comes in...and, we just expect to hear complaints about that, and we say, I’m sorry, I’ll find information about what the current wait time is. That’s all I can do. And, we understand, that it’s not ideal, but I cannot fix that for you. It’s frustrating to have to give that message that there isn’t anything I can do for you and there really is nowhere else you can go except write your Minister of Health. What’s that going to do? Probably nothing. (PRP, Hospital B)

In such apparently insoluble cases, ‘putting out fires’ took the form of listening to the patient, validating their concerns and, if required, apologising on behalf of the institution.

(2) The use of weak change strategies

Efforts to prevent future complaints took the form of one-off staff education sessions teaching general communication skills and de-escalation techniques. Beyond communication problems, PRP described some other complaints for which educational sessions constituted the only improvement effort.

Then I had a patient who complained because a nurse in the recovery room didn’t believe her that her epidural wasn’t working for her abdominal surgery, and she was in pain, and the nurse didn’t really believe her. Then when the next nurse came on, did the testing, and found that yes, in fact the epidural was not working, and obviously she was in pain, so then the clinical nurse educator for the recovery room did a whole new re-education on how to test epidural blocks. Because the first nurse said, well, the surgeon said it was working, and it’s like, okay, but if the surgeon says it’s working, and the patient says it’s not, then you need to do these things, so they had a whole re-education thing for the nursing about that. So it’s things like that, I think, that are helpful. (PRP, Hospital A)

The few times that PRP described change efforts other than educational sessions were limited to local solutions (ie, only on the unit involved). Even then, change was only triggered after multiple complaints and, in one example involving problematic entry mats which bunched up in the doorway, only after a patient injury.

So, then I called and said, someone has been injured now. And, they said, okay, we’re going to do a full review with occupational therapy of what we need to

do with these mats, are these good enough, what can we do with them? And, then they ended up ordering new mats that stay secure, have a very thin edge that gradually gets a little bit thinner, and a good distinct colouring for people who are visually impaired to be able to see it better. (PRP, Hospital C)

Replacing the mats clearly aims to improve care for future patients. Yet, multiple prior complaints did not prompt replacing the mats. And, even when an injury finally led to doing so, no investigation of potential safety issues with other mats across the institution occurred. The few other improvements generated by complaints were similarly restricted to specific units. None of the participants named an instance of a more institution-wide improvement initiative in response to patient complaints.

(3) Addressing complaints outside of the formal structure

Nursing and medical leaders reported that many patients complain directly to unit staff rather than via the formal patient complaints process. Several nursing unit managers indicated responding to unit-based complaints makes up a large part of their job. Unit managers preferred handling patient complaints directly, as official complaints through the PRO might suggest failures in their management. Moreover, they considered the additional bureaucracy of a formal complaint burdensome, and many complaints lodged through the PROs would eventually come back to unit managers for resolution anyway.

If any concerns go to patient relations it's not the ideal way of receiving [complaints], because I want to address the concerns or issues up front instead of them going home and writing [formal complaints]. It's almost kind of reactive... it's not an ideal situation. (Nursing Unit Manager, Hospital B)

I'd rather deal with [complaint], than them having to go to Patient Relations because I find that process alone very frustrating for patients and families. So they think that Patient Relations is there for them, and then they're told 'No, you need to go and find your nurse manager, or talk to the nurse manager on the unit, and she will help you with your issues.' (Nursing Unit Manager, Hospital A)

One example of a local improvement outside of the formal complaints process was the purchase of a snack fridge in a particular unit in response to recurring complaints about inflexible meal delivery times:

So, how the nutrition department delivers trays is based on the floor. They go from up and down. So sometimes, let's say, at 4:45 you have your dinner tray. Some of the diabetic patients or they're young, then by 9:00 or 10:00 they're hungry. What do you do? Based on those complaints, we have the staff working group, we made a change, we purchased a snack fridge, we arranged some snacks, like sandwiches." (Nursing Unit Manager, Hospital B)

While such interventions may reduce future complaints in this unit, hospital-wide issues involving meal delivery remain unaddressed because the PRO does not learn of them.

DISCUSSION

Our analysis of interviews with staff involved in the patient complaints process at three academic hospitals highlighted challenges in harnessing patient complaints to drive systemic improvements, analogous to the challenges in using incident reporting and RCA strategies in the patient safety literature. That the major categories of complaints remained unchanged year after year in itself attests to difficulties in developing effective improvements from past complaints. PRP reported recurring complaints involving recalcitrant system issues such as wait times, which might have solutions but require substantial additional resources and engagement from institutional leadership. PRP also reported continual problems with poor communication between providers and patients, the response to which consisted of one-off educational sessions. Presumably, in an effort to do something rather than nothing, PRP reach for simple and inexpensive responses. Doing more—intensive training in communication skills or systematic approaches to delivering feedback from patients to providers—would require major institutional commitments,³³ as would resolving persistent problems with wait times for planned tests and procedures.

Handling complaints outside formal PRO structures (ie, on clinical units) also posed a challenge. While handling complaints on the unit produced some local solutions, most complaints do not reach an organisational level where they could be analysed more systemically and addressed proactively. The case of the repeated complaints about entryway mats illustrates both the limited degree to which complaints drive improvements and the tendency for improvements to occur only locally, not hospital-wide, when they do occur. It took physical injury to a patient to prompt replacing the problematic mats. And, that replacement occurred only on that specific unit.

The description by PRP of their daily work as 'putting out fires' resembles DeVos *et al*'s characterisation of 'case-by-case (complaints) handling in isolation',³⁴ and also the 'fix and forget' approach reported by Hewitt *et al* in their study of incident reporting.³⁵ Yet, the focus on 'putting out fires' also raises a more insidious challenge to harnessing complaints data to improve the patient experience. On the one hand, PRP seemed earnest in their espousal of providing a space for the patient's voice to be heard. On the other hand, the daily work of 'putting out fires' and comments such as 'patients just need to rant it somewhere' focus on simply placating patients and resolving complaints as quickly as possible. This focus may in effect suppress the patient voice.

Adams *et al* described an underlying defensiveness of hospitals when responding to patient complaints—a desire to deflect or quickly terminate complaints lest they escalate to more serious risk management episodes.³⁶ When viewed through such a lens of institutional defensiveness, challenges to using patient complaints to drive system-wide improvements come as no surprise. Addressing individual complaints, such as answering specific questions about scheduling or access to test results, may address what a specific patient wants in the moment. But, overemphasis on this type of work may detract from efforts to improve the care experience for future patients.

Our study of three academic hospitals affiliated with a single Canadian university cannot assume transferability across other institutions and countries, although we have provided detail on context and study participants to allow for consideration of applicability elsewhere. We took care to interview a range of hospital personnel at three different hospitals to explore the phenomenon in multiple contexts. In addition, our findings are based on staff member interview data alone and were not interpreted alongside additional data sources, such as quantitative complaints data or observations of the patient complaints process.

Other institutions might have some concrete examples of effective system-wide improvements based on patient complaints data. However, the limited impact of incident reporting and RCAs on improving patient safety over a much longer period of time does not bode well for succeeding with a similar approach to improving the patient experience.^{18 37} Although not supported by any of our specific results, one might argue that the key to meaningful improvements lies not with attempting to develop systems solutions by analysing patterns of patient complaints, but rather in more systematically engaging patients in clinical operations, as with patient co-design and other forms of authentic patient engagement.^{38–41} Patients will always need a place to voice complaints. But, making PROs the only place in the health system to hear this voice seems unlikely to generate improvements that address recurring problems in the patient's experience.

Contributors All authors (JL, LR, CM, KGS) made substantial contributions to the conception or design of the work, and analysis and interpretation of data for the work. JL, LR, CM and KGS were equally involved in drafting the work or revising it critically for important intellectual content, gave final approval for the version to be published, and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Ethics approval The research ethics boards from all three hospital sites approved this study.

Provenance and peer review Not commissioned; externally peer reviewed.

Data sharing statement Data are available upon reasonable request.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

REFERENCES

- Davidson KW, Shaffer J, Ye S, *et al*. Interventions to improve hospital patient satisfaction with healthcare providers and systems: a systematic review. *BMJ Qual Saf* 2017;26:596–606.
- Rozenblum R, Greaves F, Bates DW. The role of social media around patient experience and engagement. *BMJ Qual Saf* 2017;26:845–8.
- Griffiths A, Leaver MP. Wisdom of patients: predicting the quality of care using aggregated patient feedback. *BMJ Qual Saf* 2018;27:110–8.
- Lee R, Baeza JI, Fulop NJ. The use of patient feedback by hospital boards of directors: a qualitative study of two NHS hospitals in England. *BMJ Qual Saf* 2018;27:103–9.
- Zhu J, Stuver SO, Epstein AM, *et al*. Can we rely on Patients' reports of adverse events? *Med Care* 2011;49:948–55.
- Weingart SN, Pagovich O, Sands DZ, *et al*. Patient-reported service quality on a medicine unit. *Int J Qual Health Care* 2006;18:95–101.
- Taylor BB, Marcantonio ER, Pagovich O, *et al*. Do medical inpatients who report poor service quality experience more adverse events and medical errors? *Med Care* 2008;46:224–8.
- Stelfox HT, Gandhi TK, Orav EJ, *et al*. The relation of patient satisfaction with complaints against physicians and malpractice lawsuits. *Am J Med* 2005;118:1126–33.
- Hickson GB *et al*. Patient complaints and malpractice risk. *JAMA* 2002;287:2951–7.
- Montini T, Noble AA, Stelfox HT, *et al*. Content analysis of patient complaints. *Int J Qual Health Care* 2008;20:412–20.
- Cydulka RK, Tamayo-Sarver J, Gage A, *et al*. Association of patient satisfaction with complaints and risk management among emergency physicians. *Am J Emerg Med* 2011;41:405–11.
- Weissman JS, Schneider EC, Weingart SN, *et al*. Comparing patient-reported hospital adverse events with medical record review: do patients know something that hospitals do not? *Ann Intern Med* 2008;149:100–8.
- Reader TW, Gillespie A, Roberts J. Patient complaints in healthcare systems: a systematic review and coding taxonomy. *BMJ Qual Saf* 2014;23:678–89.
- Hsieh SY. A system for using patient complaints as a trigger to improve quality. *Quality Management in Healthcare* 2011;20:343–55.
- Hsieh SY. The use of patient complaints to drive quality improvement: an exploratory study in Taiwan. *Health Serv Manage Res* 2010;23:5–11.
- Coulter A, Locock L, Ziebland S, *et al*. Collecting data on patient experience is not enough: they must be used to improve care. *BMJ* 2014;348:g2225.
- Gallagher TH, Mazor KM. Taking complaints seriously: using the patient safety lens. *BMJ Qual Saf* 2015;00:1–4.

- 18 Kellogg KM, Hettinger Z, Shah M, *et al.* Our current approach to root cause analysis: is it contributing to our failure to improve patient safety? *BMJ Qual Saf* 2017;26:381–7.
- 19 Peerially MF, Carr S, Waring J, *et al.* The problem with root cause analysis. *BMJ Qual Saf* 2016;26:417–22.
- 20 Mitchell I, Schuster A, Smith K, *et al.* Patient safety incident reporting: a qualitative study of thoughts and perceptions of experts 15 years after ‘*To Err is Human*’. *BMJ Qual Saf* 2016;25:92–9.
- 21 Macrae C. The problem with incident reporting: Table 1. *BMJ Qual Saf* 2016;25:71–5.
- 22 Williams H, Cooper A, Carson-Stevens A. Opportunities for incident reporting. Response to: ‘The problem with incident reporting’ by Macrae *et al.* *BMJ Qual Saf* 2016;25:133–4.
- 23 Benn J, Koutantji M, Wallace L, *et al.* Feedback from incident reporting: information and action to improve patient safety. *BMJ Qual Saf* 2009;18:11–21.
- 24 AW W, Lipshutz AK, Pronovost PJ. Effectiveness and efficiency of root cause analysis in medicine. *JAMA* 2008;299:685–7.
- 25 Lee A, Mills PD, Neily J, *et al.* Root cause analysis of serious adverse events among older patients in the Veterans Health administration. *The Joint J Qual Patient Safety* 2014;40:253–62.
- 26 Noble DJ, Pronovost PJ. Underreporting of patient safety incidents reduces health care's ability to quantify and accurately measure harm reduction. *Journal of Patient Safety* 2010;6:247–50.
- 27 Patton MQ. *Qualitative Research & Evaluation Methods*. 3rd ed. Thousand Oaks: Sage Publications, Inc, 2002.
- 28 Suri H. Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal* 2011;11:63–75.
- 29 O'Reilly M, Parker N. ‘Unsatisfactory Saturation’: a critical exploration of the notion of saturated sample sizes in qualitative research. *Qual Res* 2013;13:190–7.
- 30 Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101.
- 31 Kwan JL, Morgan MW, Stewart TE, *et al.* Impact of an innovative inpatient patient navigator program on length of stay and 30-day readmission. *J Hosp Med* 2015;10:799–803.
- 32 Balaban RB, Galbraith AA, Burns ME, *et al.* A patient navigator intervention to reduce hospital readmissions among high-risk safety-net patients: a randomized controlled trial. *J Gen Intern Med* 2015;30:907–15.
- 33 Lee VS, Miller T, Daniels C, *et al.* Creating the exceptional patient experience in one academic health system. *Acad Med* 2016;91:338–44.
- 34 de Vos MS, Hamming JF, Marang-van de Mheen PJ. The problem with using patient complaints for improvement. *BMJ Qual Saf* 2018;27:758–62.
- 35 Hewitt TA, Chreim S. Fix and forget or fix and report: a qualitative study of tensions at the front line of incident reporting: Table 1. *BMJ Qual Saf* 2015;24:303–10.
- 36 Adams M, Maben J, Robert G. ‘It’s sometimes hard to tell what patients are playing at’: How healthcare professionals make sense of why patients and families complain about care. *Health* 2018;22:603–23.
- 37 Trbovich P, Shojania KG. Root-cause analysis: swatting at mosquitoes versus draining the SWAMP. *BMJ Qual Saf*;26:350–3.
- 38 Sabadosa KA, Batalden PB. The interdependent roles of patients, families and professionals in cystic fibrosis: a system for the coproduction of healthcare and its improvement: Table 1. *BMJ Qual Saf* 2014;23(Suppl 1):i90–4.
- 39 Batalden M, Batalden P, Margolis P, *et al.* Coproduction of healthcare service. *BMJ Qual Saf* 2016;25:509–17.
- 40 Herrin J, Harris KG, Kenward K, *et al.* Patient and family engagement: a survey of US Hospital practices. *BMJ Qual Saf* 2016;25:182–9.
- 41 Ocloo J, Matthews R. From tokenism to empowerment: progressing patient and public involvement in healthcare improvement. *BMJ Qual Saf* 2016;25:626–32.