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One step on the QI journey: team perspectives on surveys for improvement

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ABSTRACT

Background Surveys are widely used in healthcare to gather knowledge and information about services provided. There is a recognised gap between survey findings and their impact on practice, particularly for standardised surveys conducted at the national or organisational level. Findings are more likely to be acted on where there is a culture and infrastructure supportive of quality improvement (QI), but little is known about the experiences of local QI teams designing and using surveys in practice.

Objective To understand the experiences of QI teams designing and using surveys within a national QI collaborative, including perceived value and challenges.

Methods Using an interactive research approach, 14 semistructured interviews were conducted with members of the Cystic Fibrosis Lung Transplant Transition Learning and Leadership Collaborative. Data were analysed through multiple rounds of coding and inductive thematic analysis.

Results Collaborative participants viewed surveys positively as an improvement tool. The design and use of surveys was a team-based effort, embedded within the structure of the collaborative. Surveys illuminated local, microsystem and mesosystem data and provided patient and staff insights. As one step in the QI journey, surveys helped shape the direction of local QI work, resulting in positive changes in areas such as working relationships, patient interactions, staff education and work processes. Challenges experienced included: response rates and survey design, inability to act on findings, issues of sensitivity and anonymity, expertise to design surveys, time requirements, and survey fatigue.

Conclusions Surveys played a crucial role in driving QI efforts, leading to impactful changes in practice. Used within a supportive collaborative context, surveys became an essential tool for ongoing learning and improvement, highlighting the distinct needs of surveys used in QI compared with research.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Despite their popularity as a quality improvement (QI) tool, teams often face significant hurdles in translating survey findings into impactful practice changes.

WHAT THIS STUDY ADDS

⇒ This study shows that the context of a QI collaborative can support survey findings to lead to tangible impacts in practice. A mutually reinforcing relationship was observed: collaborative support, including teaching multi-disciplinary teams about improvement principles, fostered a receptive environment for survey design and utilisation, while the surveys, in turn, provided localised evidence and insights that strengthened the collaborative's impact and promoted action on its key goals.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ These findings indicate that surveys for improvement should be viewed as one part of a wider QI approach. Findings highlight the need to develop clearer guidance distinguishing the requirements for surveys designed for QI from those intended for research, balancing the need for rigour and practicality.

INTRODUCTION

Surveys are a widely used tool in quality improvement (QI) that offer a structured approach to gathering information from patients, families, caregivers and staff. Surveys capture valuable insights into experiences, opinions, views and impressions, providing data to drive improvement efforts. Many standardised surveys are initiated at a national level, organisational level or by professional bodies, for example, for patient satisfaction and employee engagement, with the intention to improve quality.[1 2] However, research has demonstrated that data collected is rarely acted on or used to impact service, with concerns raised over the accuracy of data, clinical engagement, lack of knowledge of effective interventions, and lack of time and support to respond to findings.[3 4]

It is widely recognised that simple feedback of survey data is unlikely to result in improvements, and that multifaceted approaches to QI are required.[5] When survey measures are dictated by external forces and fail to resonate with the realities of clinical practice, engagement from healthcare teams lessens, underscoring the need for meaningful and contextually relevant data. Previous research has also indicated that survey findings are more likely to be acted on where there is a culture and infrastructure supportive of QI, so that people have the requisite skills, competencies and motivation to act on survey data.[4 6 7] In essence, clinical teams may be more receptive to acting on data from surveys designed in response to their local needs, and clinical teams within QI supportive contexts may be capable of acting on survey findings.

Recent research from our team[8] has shown that surveys designed by local QI teams often have low face and construct validity, suggesting the surveys may be poorly constructed to obtain reliable responses. The study also raised concerns about the ethical issues of administering surveys and questioned the potential usefulness of survey findings. However, this prior study only explored an independent objective assessment of the survey items and did not explore how the teams perceived the design and use of surveys in practice. We sought a deeper understanding of how locally designed surveys were used in practice within the context of a QI collaborative. This follow-up study investigated the perspectives of the teams who created and implemented these surveys, exploring the perceived value, challenges and the impact on QI projects.

METHODS

Setting

The Cystic Fibrosis Foundation (CFF) launched the Cystic Fibrosis (CF) Lung Transplant (LT) Transition Learning and Leadership Collaborative (referred to as 'the collaborative') to address feedback from individuals with advanced CF lung disease indicating concerns they felt 'abandoned', represented 'failures in CF care', were 'no longer part of the CF family once they have lung transplantation' and that the LT referral process was broken.[9]

The collaborative convened 43 CF referral programmes and 10 LT programmes across 18 states and 2 Canadian provinces with the shared goal of improving care transitions. Multidisciplinary improvement teams ('teams') included physicians, nurses, social workers, physical and occupational therapists, respiratory therapists, nutritionists, pharmacists and patient/family partners from both the CF and LT programmes. Team members within CF and LT programmes had varying experiences of working together and variable levels of prior QI experience (ranging from no prior experience to prior engagement in QI collaboratives). Before the collaborative started, there was significant variation in how programmes approached the referral process.

Teams were introduced to the collaboratives QI approach through learning sessions and coaching support. Team coaches were assigned to individual microsystem CF referral and LT programmes, and to the joint mesosystem CF LT transition team, providing guidance and support throughout the process. A particular emphasis was given to improving communication and building relationships between team members, specifically fostering connections and collaboration across CF and transplant programmes. Teams examined their local practices and shared systems, using the microsystem approach[10 11] and surveys as a tool to gather valuable insights from both patients and staff to guide their improvement efforts.

Methodological approach

This study used an interactive research approach.[12] The interactive research model originates from an action research paradigm where 'inquiry that is done by or with insiders to an organisation or community, but never to or on them'.[13] The approach is intended to create opportunities for researchers and practitioners to learn together during the entire research process—from the definition of the problem to the dissemination of results.[14] Interactive research has a dual focus of developing theory while also developing findings with practical relevance. A strength of this approach is that the interactive relationships between researchers and practitioners facilitate access to issues that would otherwise have remained hidden and can, therefore, produce knowledge with greater validity than if knowledge was produced through one-sided approaches.[15] A potential weakness of the approach is the ability of the researcher to maintain a critical perspective on the topics of interest and the necessary critical distance from practice.[16 17]

This project employed an independent researcher (JER) to lead the research and maintain a critical and detached stance on the research findings. JER led the previous survey review,[8] so had insight into the context of the collaborative, their use of surveys, and had established relationships with programme leaders and practitioners. Research was conducted in collaboration with three individuals who occupied practice-researcher hybrid roles (CBI, JKJ and MMG) who were able to provide access to and insights into practice.

Interviews

Interviews were conducted with members of the collaborative including team members, coaches and the collaborative director by an independent researcher (LE), who had no prior involvement in the collaborative. Building on the interactive research model,[12] two coaches (CBI and JKJ) and the collaborative director (MMG) were also interviewed as key informants to formalise the documentation of their views and opinions so that these could be analysed and fed into the interpretation of findings in a formal manner and to assist the independent researcher in maintaining critical distance.

Sampling

All teams, coaches and the collaborative director were invited to participate in the study seeking volunteers for interviews. Interviews were scheduled with all respondents who expressed interest. We expanded our participant pool by employing a snowball sampling technique,[18] asking participants to recommend colleagues for interviews.

Data collection

The research team developed a semistructured interview script, refining it after conducting two pilot interviews. This final script was used for all subsequent interviews. Interviews were conducted over Zoom between August 2021 and May 2023, totalling 445 min of data collection. Individual interviews ranged from 40 to 66 min, with an average duration of 56 min and were transcribed verbatim using a professional service.

To ensure accuracy, the transcripts were reviewed while listening to the recordings to correct any errors. Transcripts were then deidentified before analysis.

Data analysis

Analysis was led by JER with input from CBI, JKJ and MMG. Guided by the research questions and anticipated responses, the research team developed a preliminary coding tree. To ensure familiarity with the data, all authors thoroughly reviewed the interview transcripts. JER independently conducted the first three rounds of coding, iteratively building on the preliminary coding tree through thematic analysis.[19] Throughout this process, JER engaged in ongoing discussions with JKJ, CBI and MMG to clarify the meaning of terms and concepts and to access their practice-based insights to ensure that transcripts were correctly understood and interpreted. Through four iterative rounds of discussion, the authors worked collaboratively to refine the themes and coding, integrating their insights from the transcripts and their firsthand experience within the collaborative to ensure the emerging results were interpreted within the context of the collaborative. This collective and reflective process ensured consensus on the key themes and subthemes. Data analysis was supported in MAXQDA.

RESULTS

Fourteen people were interviewed: one collaborative director, five coaches and eight team members. The coaches covered a total of 50 (of 54 teams) teams across 35 sites (all participating sites). Team members were recruited from six teams across five sites.

Themes and subthemes are summarised in table 1, with supporting data provided in subsequent tables. The results highlighted the value of surveys within the collaborative process (table 2), the impact of surveys on the direction of the QI work (table 3), and the challenges encountered in designing and using surveys (table 4).

Table 1 An overview of the themes and subthemes identified from qualitative data analysis

Theme	Subthemes
Value of surveys within the collaborative process	Surveys were viewed positively as an improvement tool
	The design and use of surveys was a team effort, embedded within the structure of the collaborative
	Surveys illuminated local, micro- and mesosystem data, including insights from patients and staff
	Surveys were used as ‘one step’ in the QI journey
Impact of surveys on the direction of the QI work	Many survey findings confirmed existing views, providing data to increase awareness of the pervasiveness or magnitude of the problem
	Some findings were surprising and changed the direction of the QI work
	Surveys informed change ideas and measurement of the impact of changes made
	Survey findings led to tangible impacts
Challenges encountered in designing and using surveys	Teams were challenged by survey design and response rates
	In some instances, no action was taken in response to survey findings
	Challenges related to the sensitivity of information being gathered, and anonymity of feedback
	Participants recognised the decision to conduct a survey is not straightforward

QI, quality improvement.

Value of surveys within the collaborative process

Surveys were viewed positively as an improvement tool

Teams used surveys as part of their QI efforts, often citing their perceived ease of use and familiarity as key reasons for their adoption. Many participants noted the prevalence of surveys in everyday life, reinforcing their perception of surveys as a valuable and straightforward tool.

> I just think everybody’s comfortable. You're used to getting surveys, it’s like how hard could it be? So they would very quickly say, ‘Oh, we should do a survey.’ It was easy for them to suggest doing a survey without thinking through why they'd actually want to do a survey and how to go about doing it. - participant 6 (coach)

The design and use of surveys was a team effort, embedded within the structure of the collaborative

Teams reported valuing the three surveys provided by the collaborative (patient satisfaction, staff satisfaction[20] and relational coordination[21]) but also stated the need to design their own surveys to inform their local improvement efforts. New surveys were designed locally, drawing on the expertise of multidisciplinary team members, patient/family partners, and coaches.

All participants emphasised the crucial role of the teams in determining the survey’s focus and deciding on appropriate actions based on the findings. Most team members participated in the design of new surveys, primarily during QI meetings. However, tasks such as survey distribution, collection, data entry and analysis were often delegated to

Table 2 Supportive data for the theme 'value of surveys within the collaborative process' and related subthemes

Value of surveys within collaborative process	
Surveys were viewed positively as an improvement tool	"I don't think [the data] could have been obtained in such a short period of time in such a concise way. I think it could have been obtained perhaps in conversation. But I think doing a survey was the most concise, precise, efficient way to access that knowledge or access that information." - participant 9 (team member)
The design and use of surveys was a team effort, embedded within the structure of the collaborative	Using provided surveys "Some of them used a patient satisfaction survey that was [provided by the collaborative]. However, many of the teams would go ahead and alter some of them to meet their organization, the local context." – participant 5 (coach)
	Surveys designed by the multidisciplinary team "It always seemed like a team process, but somebody would take the lead on developing the questions or, one of them would volunteer to draft the questions, but then everybody would have input and it would be something that they would discuss at a meeting. One of their improvement meetings is that somebody would come back with the questions and then they would make recommendations about what they wanted to add, what they liked." - participant 6 (coach)
	Patient/family partners involvement "As we were picking questions, we did have a huge brainstorming session where we just threw out questions and I think what it ultimately came down to was really utilizing that patient and her family member, her mom, to really say, 'Okay, this is our perceptions as medical professionals, as the ones providing care, but you guys are the patients. You're the family member. You lived this in a different way than we live it.' And they were very helpful and insightful, very smart, knowledgeable." - participant 11 (team member)
	Role of the coach **"**Yes, that support was really great. When they assign a coach is starting this collaborative that was a plus.We as the team went into this collaborative as a new team within the CF community. And we were able to use his guidance to create all of this, the surveys, what was effective, what was not so he was really fantastic to have that coach to tell us how to use the surveys, how to implement the surveys." – participant 3 (team member)
Surveys illuminated local, microsystem and mesosystem data, including insights from patients and staff	"So, the surveys, they gave us direction. They gave us a clearer path on what do we need to address. So, the 5Ps [a QI method advocated by the collaborative] helped us to hypothesize what issues might be there and how we can possibly … where to go. But the surveys confirm this is a big issue, this is not a big issue. This is as big as you thought it was, or it's not. And so it was big. So, for the staff, we saw that we had some knowledge gaps, and then so we had to jump in and to fix that." - participant 10 (team member)
Surveys were used as 'one step' in the QI journey	"I also remember kind of getting thrown to the wolves. We get this project and we're like, 'We don't really know what to do,' and we really struggled to figure, to really get to the point to do that survey. But once we decided on the survey, did the questions, I think it really just helped to inform the rest of that project." - participant 11 (team member)

QI, quality improvement.

specific team members. A mixture of in-person and electronic surveys was used, with electronic surveys tending to be viewed as easier to administer and less time-consuming for data entry and analysis than paper-based surveys.

Patient involvement was seen as important to survey design. Nearly all participants reported including patients in survey design and/or testing. In some cases, patients played a key role in shaping the focus of both the surveys and the overall QI work. In other instances, their involvement was more limited, such as reviewing the wording of surveys designed by the teams.

The coaches assisted teams with survey design and deployment. They also provided support in addressing challenges that extended beyond the teams' capabilities, such as navigating complex analytics, ensuring confidentiality and determining whether surveys were the most appropriate approach compared with alternative methods like interviews or focus groups. The coaches tailored their support to each team's specific needs, drawing on their individual experience and expertise, and worked together to pool knowledge and provide specialised methodological and analytical support when necessary.

Table 3 Supportive data for the theme ‘impact of surveys on the direction of the QI work’ and related subthemes

Impact of surveys on the direction of the QI work	
Many survey findings confirmed existing views, providing data to increase awareness of the pervasiveness or magnitude of the problem	“On the patient side, we focused a lot on educational barriers and anxiety surrounding transplants. That was really the theme that emerged, that patients who were being referred for transplantation were very fearful and scared. [It] wasn't a surprise that people were nervous or scared, or apprehensive. I think the fact that it came out as such a universally strong signal and response, I think, drew it to our attention as… This, perhaps, needs more attention than we are acknowledging.” – participant 8 (team member)
Some findings were surprising and changed the direction of the QI work	“I think I remember our one survey that went well was about the comfort level of the teams in talking about transplant…. They were very surprised that their colleagues were not comfortable talking about and answering questions about transplant. And this was a CF referral team, so that surprised them. So I think that they were surprised more so about just this, everybody, even though they're working together, that people had different comfort levels in talking about transplant with the patients or being approached with it. So that was really interesting because they just assumed everybody would be comfortable with this. But they discovered that everybody wasn't, and some people, it would put them in a very awkward spot if a patient would ask them about transplant or say something to them about transplant.” - participant 6 (coach)
Surveys informed change ideas and measurement of the impact of change made	“I think the survey was absolutely crucial in us moving through in the CFLTT project. Without that survey, we wouldn't have had our PDSA, we wouldn't have been able to move forward in any other steps of the project. So I think that in itself was just absolutely crucial.” – participant 11 (team member)
Survey findings led to tangible impacts	Working relationships “It helped the referring teams to understand we need to get patients, they're not ready, we need to get them ready… but [the staff from different sites] also get to understand and respect each other, and each other’s level of knowledge, and they started to be included in the… meeting once a week where they went over patients who might be eligible for transplant, they started… to include the regional teams in that. So someone wanted to call in and talk about that, you know, particular patient, they were able to do it. Yeah, that was a huge change it was great. ” - participant 1 (coach)
	Clinician-patient interactions “It helped us to learn that a lot of our patients did not necessarily feel prepared for the transplant process. So, it led to us creating these educational modules that we would do as a pre-transplant center to prepare the patients for transplant once they got there, so that they would feel more prepared and more knowledgeable. But the way that we knew that that was our gap or what we needed to start to work and fix there was from the surveys.” – participant 10 (team member)
	Staff education “So the results of the survey informed the transplant education that … our pre-transplant nurse, who is our patient educator, it informed where she would focus the majority of her education with the referring teams. I think it also informed us as a transplant center where we needed to focus in terms of just our communication with the [CF] centers.” - participant 9 (team member)
	Changes to processes “We created a link to a patient support group. So we partnered with a patient support group. We formalized that relationship. And then, we made sure to introduce it to patients and offer it early in the process as opposed to later when they were further in. And we did the same thing for financial education. We created a resource. We made sure that it was available to be offered to patients a little bit earlier in the process rather than later” – participant 8 (team member)

QI, quality improvement.

Surveys illuminated local, microsystem and mesosystem data, including insights from patients and staff

Surveys were used to gain insights into the perspectives of patients and staff, with a tendency to focus on subjective topics such as experience, relationships and confidence. Surveys were most often conducted as part of the ‘assess’ and ‘diagnose’ phases of the microsystem methodology, aligning with investigation of the microsystem

Table 4 Supportive data for the theme 'challenges encountered in designing and using surveys.' and related subthemes

Challenges encountered in designing and using surveys	
Teams were challenged by survey design and response rates	"[The teams] would put it together and just jump right into it. I don't know for sure if any of the others had done any pilot testing of it, and I suspect not but that's just a gut feeling. Again, I think the surveying was not looked at, I believe, by many of these groups as something that you really have to pay attention to the quality of it…. I doubt that there is a lot of pilot testing of it ahead of time… " – participant 7 (coach) "we sent it to the team members within our group, and say, "Do these sentences flow? Do we have to change the order of the questions? Do we have to change any of the wording?" And after, I think, we sent it amongst our team, people felt comfortable, and so we sent it out." - participant 4 (Team member) "Unfortunately, the first survey we did not have a lot of feedback, we did but not the way we expected. But based on the patient that [did] reply back… we created a [information] folder, and we sent another survey" – participant 3 (team member)
In some instances, no action was taken in response to survey findings	"I think that the patients responding and saying that is like, "Yeah. You're right. We should be doing more of that on this side," but it's this next question of, "Well, how?" with manpower and all the rest." - participant 4 (team member) "And there were surveys around some of the behavioural health stuff that just didn't go anywhere. It just was something that did not gain traction and their psychologist eventually left the department…. But you know they can only do so much at one time. " - participant 2 (coach)
Challenges related to the sensitivity of information being gathered, and anonymity of feedback	"And so we as a team were looking at this because it was a very strongly worded response (about a "very negative experience"). And so I think we were caught off guard with the extent of that one. And then from there we were trying to figure out … Well, clearly this is anonymous. You can't reach out to the patient to offer further support and debriefing around their experience, because you're not supposed to know who it is. And there wasn't any identifying information. It's just enough of us know the story and have the experience to know that….. And I think we were a bit stuck. We didn't know what to do with that response." – participant 4 (team member)
	"Part of was just trying to keep the anonymity I had one team… and they're getting data back [from colleagues] and then I [get] a private email saying, I'm not comfortable, we're getting some responses back, and I'm not comfortable having this knowledge. So, we had to stop. Have a team meeting and say, we need to change the process because people are feeling uncomfortable… People were being very honest let's just put it that way. And they weren't comfortable being the one having that information." – participant 2 (coach)
	"They went ahead and administered it to patients as it was a paper survey and did it as patients came into the center. For me, I think it puts a patient in an awkward situation… if I'm a patient and I receive care at one particular center and you're giving me a paper satisfaction tool that I need to then return to you during that visit or at the end of the visit, I think for me it would be the ability to maintain confidentiality and to give honest responses. This is where you get care, and so I think, I just felt a little uncomfortable about the process that they used…. I think if you can't maintain confidentiality, well… for me it's something really important because I think it ensures the integrity of the answers and honesty of the answers…." - participant 5 (coach)
Participants recognised the decision to conduct a survey is not straightforward	"These teams can spend way too much time trying to develop these surveys on their own, when they could be doing something else. And, they don't have the time… you know in some teams there so… the level of sophistication around surveys and data is so varied across the many many teams that we've coached in cystic fibrosis that having a more structured kind of go to, here's the kind of survey you could use to figure out where your patients are right now with lung transplant" – participant 1 (coach) "We still use surveys and stuff now, as well, but it's also one that we use with a grain of salt because we are very aware of survey fatigue, which a lot of us have. I know I have it, as well. So, we ask ourselves, is this survey really the best way of getting this information? Is this a necessary survey?" - participant 10 (team member)
	"If we had done [interviews] with patients, I think we wouldn't have got as much feedback. Some of it, we would have, for sure, particularly the ones that we have better relationships with, the patients who feel comfortable sharing this information. I think doing it anonymously [with a survey] allows a bit more safety and freedom for patients." – participant 4 (team member) "Interviews would probably taken a lot more effort [than surveys]. And I don't mean that we wouldn't have done it. But with some of these sensitive topics the interviewer needs to be well equipped to deal with those visceral reactions that patients may have had that we didn't even know if they had." – participant 13 (team member)

5Ps (purpose, patients, professionals, processes and patterns), and in conjunction with other tools, for example, 30 000 ft view and process mapping.[10 11] As part of the wider QI approach, surveys helped teams build a detailed understanding of their own local context including microsystems and mesosystems. The surveys also supported teams in connecting the aims of the collaborative to the specific local challenges, increasing their sense of ownership and engagement with the collaborative goals.

> I think that it helps to educate the teams, it gives them an insight into their patient and colleagues' views of 'what's life like here?' You know what's it like to patients, what's it like to staff – participant 1 (coach)

Surveys were used as 'one step' in the QI journey

The collaborative's QI approach provided a supportive framework for using surveys, which in turn strengthened the overall QI efforts.

Survey findings supported the overall QI approach by helping the teams better understand the problems they faced and providing direction for local QI work in defining aims, prioritising actions and next steps. Teams used surveys to quickly obtain feedback and information to guide the next steps of their QI work. Surveys were viewed as one step in the QI journey, not as an end goal or a standalone QI method.

The practical utility of the survey data was prioritised, sometimes at the expense of considerations about the survey instrument's quality or validity. This prioritisation stemmed not from a disregard for methodological rigour, but rather from a lack of awareness or training on these issues. The urgency of the QI work and the need for rapid feedback typically outweighed concerns about survey design.

> Is this the right perfect survey? Probably not. At the same time, we're getting some information to start with, which will inform what we want to do next and we can confirm the data in another way. So it's more of a, looking at down a path, [it] is one point not the end point. - participant 2 (coach)

Impact of surveys on the direction of the QI work

Surveys were found to have an important impact on the direction of QI work.

Many survey findings confirmed existing views, providing data to increase awareness of the pervasiveness or magnitude of the problem

Many surveys focused on issues identified by the collaborative, teams or patients. These surveys offered a structured way to gather and present evidence about problems that teams already knew or suspected existed. The findings helped to raise awareness and motivate action to address these concerns. Even when teams anticipated problems, the scale or severity revealed by the surveys often surprised them, prompting new actions or increased prioritisation of existing concerns.

> This was the lynchpin of the whole darn thing. This was the evidence because we've been complaining for a long, long time, but nobody ever sat down and collected any data. Nobody ever sat down and did it methodically to say, 'This is what's being told to the patient. This is what their perception of they're getting is. From this finance talk that they had, they're not getting anything from it.' This was the lynchpin. This was the game changer for us. - participant 12 (team member)

Some findings were surprising and changed the direction of the QI work

Occasionally, survey findings challenged pre-existing assumptions, forcing teams to re-evaluate their services and identify unexpected areas for improvement. This fostered a shared understanding of the issues and increased openness to change.

> It was a bit of a surprise as to how unprepared the patients felt…. And so we may have thought that we were doing a pretty decent job of preparing them… Not knowing as well, how unprepared or how anxious they may have been about the process because of what they did not know or how they were blindsided by parts of the process. So, that was something that we wanted to address that we found out from the survey. - participant 10 (team member)

Surveys informed change ideas and measurement of the impact of changes made

Surveys were instrumental in informing the development of change ideas and conducting Plan-Do-Study-Act (PDSA) cycles,[22 23] a fundamental component of the collaborative's QI approach. Surveys enabled teams to assess the impact of their interventions by gathering data before and after implementation, facilitating data-driven improvements.

> …our survey for the patients indicated that they had incomplete understanding of transplant processes, that survey was there, it became [our] baseline. We revised our education manual. We provided that with our patients. And then, we took a survey afterwards to see how that education assessment part of their survey was scored after they had gone through an education module. So that same survey was the assessment in the beginning, but then was actually a measurement for us to also see whether or not our interventions were being effective. - participant 8 (team member)

Survey findings led to tangible impacts

In some cases, survey findings exposed problems in working relationships within or between clinical teams. By presenting these issues in a structured and quantifiable manner, the surveys helped raise awareness and motivate action to improve these relationships. This often resulted in concrete efforts to address communication breakdowns and enhance collaboration, aligning with the collaborative's goals and the support provided by coaches to tackle relational issues. Survey findings also triggered changes to formal processes and systems that supported communication and relationships, such as the development of staff directories.

Many of the surveys led to changes in clinician–patient interactions, improving communication, information provision and addressing patient concerns. Surveys revealed issues important to patients that staff had previously been unaware of (e.g., patients not feeling prepared for the transplant process), motivating teams to take action. Surveys provided insights into what changes should be made to better meet patient needs, leading to tangible changes in practice (e.g., developing new educational materials about the transplant process, modifying discussions between clinicians and patients, and tailoring conversations and materials to individual patient needs). Changes were also made to practices and processes to support more patient-centred care, including the formalisation of patients' 'get to know me' documents and 'meet and greet' sessions between CF patients and the lung transplant teams.

Survey findings also led to changes in staff education. Surveys revealed a lack of knowledge and confidence among team members in relation to aspects of CF and transplant care and informed what types of interventions should be developed to address these needs.

Survey findings sometimes prompted changes to processes. For example, teams clarified which healthcare professionals were involved in patient assessments at different points in time, such as engaging social workers to address psychosocial aspects of transplant preparation or involving finance staff for insurance and financial support. By highlighting gaps in patient support, surveys encouraged teams to formalise processes, fostering greater multidisciplinary input and collaboration across specialties. This led to smoother patient journeys and improved overall experiences.

The collaborative facilitated the sharing of these interventions and resources between teams, promoting cross-team learning and minimising duplication of effort.

> I think we made some really nice changes to help patients in the long run, and I think it's led to a lot better conversations. Whenever we present a patient, when we get a new referral and they're ready for potential listing, we have a conversation, we have a selection meeting, and I really think it's opened the dialogue between our specialties where we can really talk about the patient. - participant 11 (team member)

Challenges encountered in designing and using surveys

Teams were challenged by survey design and response rates

When designing their own surveys, teams did not adhere to strict methodological criteria. Predeployment testing was not always conducted, and when it was, it often involved members of the QI team rather than external individuals.

There was a general lack of awareness regarding sampling or target populations during survey design. This led to uncertainty about reasonable response rates, impacting expectations and sample size considerations. Some teams and coaches retrospectively acknowledged the challenges of not having a clear understanding of their survey respondents' demographics, which made interpreting the findings difficult. Teams encountered a range of response rates to their surveys. While some were disappointed by low participation despite their best efforts, others found value in even a small number of responses, gaining valuable insights and identifying unexpected areas for improvement.

In some instances, substantial resources were dedicated to the creation of rigorously designed surveys. However, these efforts proved futile when the surveys were met with resistance from teams who found them impractical or irrelevant to their needs.

> I don't think the frontline is interested in the psychometrics at all. They want practical, 'How do I do this that gives me meaning that I can understand?' … nobody … wants to hear what went on behind the scenes with that to validate it. They like the result of that survey to know, 'Here is where we're strong and here's where we need to work on improve.' That's all they want. They want information to take action on. So I feel very strongly about that as a practitioner, scholar secondly or in parallel sometimes. But I think it's got to have high value added to very busy frontline teams. - participant 14 (director)

In some instances, no action was taken in response to survey findings

There were instances when teams collected data but did not know how to interpret the data, or how to act on the findings. Challenges with acting on the findings typically reflected a lack of resources, limited scope of influence, or lack of prioritisation among staff.

In other instances, teams found that the data they collected was not suitable to inform action. In these cases, the problem seemed to stem from initial survey design, where a focus was placed on collecting data, and insufficient attention was paid to how findings would be used.

Challenges related to the sensitivity of information being gathered, and anonymity of feedback

Participants raised concerns regarding the sensitivity of information collected through surveys, difficulty responding to negative feedback and anonymity of feedback. This was considered a particular risk with this patient group given the reverence patients expressed towards the clinicians for literally saving their lives through the lung transplant operation, and how that influenced their tendencies to raise concerns or express any criticism.

Concerns were raised about the potential for surveys to cause distress among patients, particularly given the life-changing trajectory that lung transplantation can have. Respondents cited examples of patients feeling upset or anxious after completing surveys. To mitigate this, participants emphasised the importance of involving patients in the survey design and thoroughly testing surveys to ensure they are clear, concise and sensitive to patient needs. Additionally, it was suggested that interviews, conducted with empathy and care, could offer a more supportive and personalised approach to gathering feedback from patients, especially on emotionally challenging topics.

Teams also acknowledged that receiving negative or critical feedback, even when constructive, can be challenging. This highlighted the importance of fostering a learning culture where teams are open to feedback and have individuals, often coaches, who can skilfully navigate and facilitate discussions around difficult feedback. The perceived challenges associated with receiving difficult feedback from staff were also cited as a reason why surveys might not be conducted more frequently. This underscores the need for a supportive environment where staff feel safe providing honest feedback and where teams are equipped to receive and process such feedback constructively.

Anonymity in surveys was crucial for honest feedback but proved challenging due to small patient populations and close team relationships. Teams often felt able to identify respondents despite anonymity measures. Additionally, maintaining anonymity for staff surveys was difficult due to limited numbers in each role, potentially requiring third-party involvement (such as the coach) for collation and feedback.

Concerns arose about addressing significant patient concerns raised in anonymous surveys, highlighting the need to balance anonymity with opportunities for follow-up and support. These challenges emphasise the importance of carefully designing surveys to be sensitive to potentially distressing questions, especially following life-changing experiences, and incorporating options for patients to request further support.

Participants recognised the decision to conduct a survey is not straightforward

While surveys were generally perceived as easy to use, teams recognised the difficulty of crafting effective questions that yield meaningful responses. Many team members and coaches acknowledged a lack of expertise and training in developing methodologically sound questions, highlighting a need for support in this area. While some teams benefited from dedicated time and resources for survey design, others found this work falling outside of their formal working hours. Access to organisational resources, such as electronic survey software and data expertise, streamlined the process for some, but the level of organisational support varied considerably across teams.

Concerns about survey fatigue and the potential for overwhelming respondents highlighted the need to carefully consider when surveys are the most appropriate method for gathering feedback, and when alternative approaches like interviews, focus groups or conversations might be more suitable.

DISCUSSION

Surveys provided crucial data at the microsystem and mesosystem levels, offering insights unavailable from broader organisational surveys. This enabled teams to gain a deeper understanding of their specific context and the needs of their patients and colleagues, ultimately leading to more targeted and effective improvements. However, a tension emerged between the recommendation for standardised, validated surveys and the desire for local adaptation or bespoke survey creation, reflecting the teams' need for contextually relevant information.

This paper's findings both support and challenge those of our previous study that highlighted common errors in surveys designed by local QI teams and raised concerns relating to ethics, appropriateness, usefulness and methodological issues.[8] Importantly, this study confirms that the ethical risks predicted in the previous study were experienced in practice, with examples of patient distress when completing surveys on sensitive health topics. Findings also support our previous suggestion that teams should pause before deciding to conduct a survey, considering if it is the most appropriate method to use, or whether informal conversations, interviews or focus groups might be a more appropriate method, especially for sensitive topics. This study also highlights the limited consideration given to methodological rigour when designing local surveys. However, in challenge to our previous study, these issues appeared to be of less importance to the teams who still found value in the surveys and the role they played in highlighting new areas for investigation or action. This suggests that the ability for surveys to provide new insights and useful information was of greater value to the teams than their methodological rigour and raises questions about the design requirements of surveys for improvement versus research.

Systematic reviews of the use of patient experience surveys indicated that they typically have a limited impact on changing the practice and behaviours of clinicians, and only typically influence administrative processes and educational materials.[24 25] However, the findings presented in this paper demonstrate that surveys do have the potential to impact clinician behaviours, and the relationships and working practices between diverse healthcare professionals. We believe that there are three major differences between the typical use of patient experience surveys compared with the use reported in this study, which help explain their increased impact in practice.

First, our findings suggest that the QI culture engendered by a QI collaborative may support team formation, team receptivity and capability to conduct surveys and act on survey findings. Furthermore, in the context of the collaborative surveys, they were used as one tool in a wider QI approach, rather than a standalone tool or intervention. This interpretation is supported by existing research which highlights the importance of having an improvement culture and infrastructure to support teams to act on survey findings.[4 6 7]

Second, our findings suggest that the ability to tailor surveys to specific micro- and mesosystem QI enquiries may increase the relevance and impact that they have on practice. There may be value in the ground-up design of surveys to increase team ownership and buy-in, interest in results and commitment to act based on results. This is supported by existing dissemination theories that highlight the need for teams to customise and adapt interventions.[26 27]

Third, investing in the local design and use of surveys appeared to have supported teams to reach a shared understanding and acceptance of the challenges they were facing and provided a burning platform and motivation for collective action to take place. This perspective is supported by previous studies[23] and theoretical perspectives highlighting the role they can play as a 'boundary object' capable of brokering knowledge between different professional groups (communities of practice) and facilitating collaborative working.[28]

The barriers identified relating to the design and use of surveys also resonate with previous research studies, including lack of expertise with survey methods including analysis and interpretation of data, and the ability for surveys to provide information useful to informing QI efforts.[29] These findings resonate with research exploring the use of quantitative measures in QI, which demonstrated the challenges of local QI teams designing measurement plans, collecting data and analysing and interpreting the data, and highlighting the need for relevant expertise and supportive infrastructure to develop high-quality measures.[30]

Strengths, limitations and future work

A strength of this research was the interactive research model. Engagement of members of the collaborative in the research provided a deep understanding of local contextual issues supporting interpretation of the findings and a focus on the practical implications of the research. Our findings highlight that the process of doing a QI survey has value in and of itself, as improvements to services were made by participating teams.

A limitation of the research is the potential positivity bias of the respondents, which could stem from the voluntary nature of team participants who may have been more likely to volunteer following positive experiences of using surveys. There is also a potential for recall limitations given the retrospective nature of the research. Future research could be conducted prospectively, following a range of preselected teams to mitigate against these weaknesses.

The involvement of collaborative faculty in the interactive research model may have also biased interpretation of findings given their vested interest in the success of the programme. The roles of the independent interviewer and researcher were intended to mitigate the risk of positivity bias in the interviews, and in analysis and interpretation of results. Within the interactive research approach, the success of the independent researcher in maintaining a critical stance and advancing scientific knowledge is assessed on the impact the researcher had in being able to 'stir-up' prior received norms of the groups and to foster a new and mutual understanding.[14 31] A clear example of the independent researcher playing this role was observed in this study. A dominant prior perceived norm of the group was that locally designed surveys were likely to be of low value to the teams as they did not conform to the rigorous methodological development standards. Research findings failed to support this norm, and many instances were identified in which locally designed surveys had impacts on improvement work, in spite of the lack of methodological rigour in their development. The researcher had to maintain an independent and critical stance to challenge the prior norms of the group and gain acceptance of this theoretical development. The three hybrid practitioner-research members of the team at first robustly challenged these findings, engaging the lead researcher in a critical in-depth reflection of the collected data, before together the group arrived at a new and mutual understanding of how to interpret the data and the implications of these findings. All of this suggests the research was conducted with a genuine commitment to reflexivity, critical thinking and learning to inform future practice.

A further limitation is the ability to attribute the changes and impacts on practice described by participants to the surveys as opposed to the wider collaborative. This highlights the challenges of separating the surveys from the context of the collaborative and the interdependency between the two. The study is also limited in lacking a counterfactual to understand how the teams would have behaved without support from the collaborative. To mitigate this, we have drawn on examples from published research where surveys have been used as a standalone QI tool to support our interpretation of the data. Further research could explore these relationships in more detail.

Implications for practice and research

These findings underscore the need for clearer guidance distinguishing the requirements for surveys designed for QI from those intended for research, in similarity to the distinction between measurement for improvement vs research.[32] Surveys for improvement are not an endpoint in themselves, but rather a tool embedded within a broader, iterative process of change.

Surveys in QI settings prioritise actionable insights over definitive conclusions, guiding teams towards areas needing attention. QI teams favour a quick, localised understanding of their current situation, making the time investment in methodologically rigorous survey design and distribution less of a priority. In this study, the collaborative organisers had anticipated this need, which informed the centralised provision of standardised surveys for the teams to use—but these surveys, while used and valued by the teams, were not sufficient to meet all their needs for customisation to explore their specific contexts. Teams wanted to do the right thing to inform their improvement efforts and learn more about the population and colleagues, yet local relevance and quick approaches were more important than a validated survey.

This research highlights the need to re-evaluate traditional survey approaches in the context of QI. It calls for a shift in thinking, prioritising actionable insights and ethical considerations over rigid adherence to research-grade methodological rigour, and consideration of the balance of ‘how much is good enough’ between rigour and usefulness.

Locally designed surveys hold immense potential to drive positive change in practice. However, this potential must be balanced with the risk of poorly designed surveys generating misleading data and leading to ill-informed actions. Ensuring surveys are conducted effectively is crucial to maximise their benefits while safeguarding against unintended consequences. This means striking a balance between methodological rigour and the local relevance, usefulness and actionability that QI teams value.

To empower QI teams, future guidance should focus on maximising efficiency and impact of surveys for improvement:

- Establish clear quality standards: Define what constitutes a ‘good enough’ survey for QI, emphasising ethical conduct, actionable findings and relevance to the local context.
- Streamline survey design: Provide resources like survey repositories and adaptation guides, reducing the need for teams to ‘reinvent the wheel’.
- Build capacity and capability: Equip collaboratives, coaches and teams with the knowledge and tools to design, implement and analyse surveys effectively.
- Offer tailored support: Acknowledge the dynamic nature of QI and encourage and support adaptation of survey approaches to meet evolving needs.

By striking a balance between rigour and practicality, we can unlock the full potential of surveys as a catalyst for meaningful and sustainable improvement in healthcare.

CONCLUSIONS

This study shows that the context of a QI collaborative can support survey findings to impact practice. Surveys conducted within the QI collaborative had an important impact on the direction of QI work and led to tangible changes in practice. A mutually reinforcing relationship was observed: the collaborative’s support, including teaching improvement teams about survey principles, fostered a receptive environment for survey design and utilisation, while the surveys, in turn, provided localised evidence and insights that strengthened the collaborative’s impact and promoted action on its key goals. Surveys were not seen as an endpoint in themselves, but rather a tool embedded within a broader, iterative process of change. Findings highlight the need to distinguish the requirements for surveys designed for QI from those intended for research.

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