Factors influencing family physician engagement in practice-based quality improvement

Qualitative study

Tara Kiran MD MSc CCFP FCFP Linda Rozmovits DPhil Patricia O'Brien RN MScCH

Abstract

Objective To explore the experiences of family physicians leading quality improvement (QI) efforts and to better understand facilitators and barriers related to advancing QI in family practice.

Design Qualitative descriptive study.

Setting The Department of Family and Community Medicine at the University of Toronto in Ontario. The department launched a quality and innovation program in 2011 with the dual goals of teaching QI skills to learners and supporting faculty in leading QI efforts in practice.

Participants Family physician faculty who held QI leadership roles at any of the department's 14 teaching units between 2011 and 2018.

Methods Fifteen semistructured telephone interviews were conducted over 3 months in 2018. Analysis was informed by a qualitative descriptive approach. Consistency of responses across the interviews was suggestive of thematic saturation.

Main findings Substantial variation was found in the level of engagement with QI in practice settings despite the common training, forms of support, and curriculum the department provided. Four factors influenced the uptake of QI. First, committed leadership across the organization was fundamental to developing an effective QI culture. Second, external drivers such as mandatory QI plans sometimes motivated engagement in QI but sometimes were barriers, particularly when internal priorities conflicted with external demands. Third, at many practices, QI was widely perceived as extra work rather than as a way to enable better patient care. Finally, physicians described lack of time and resources as a challenge, particularly in community practices, and advocated for practice facilitation as a mechanism to support QI efforts.

Conclusion Advancing QI in primary care practice will require committed leaders, a clear understanding among physicians of the potential benefits of QI, alignment of external demands with internal drivers for improvement, and dedicated time for QI work along with support such as practice facilitation.

Editor's key points

- Despite investment in quality improvement (QI) initiatives by governments and organizations, QI efforts in Canadian primary care settings have had mixed results and factors affecting their success are unclear.
- In qualitative interviews with family physicians involved in QI leadership roles at family medicine teaching units in the greater Toronto area, 4 key factors emerged as having the greatest influence on uptake of QI in primary care: leadership and culture in the practice; external demands and drivers; perception of the benefits of QI; and resources and time available.
- Study participants pointed to a lack of consistent leadership support among their teams as a key barrier to QI engagement. Physicians at community-affiliated sites had no protected time for QI and tended to have higher patient loads and fewer resources than their counterparts affiliated with academic teaching hospitals.
- While there was general agreement that QI should be a mandatory element of primary care, family physicians indicated being able to identify QI priorities locally and having access to practical forms of support (eg, practice facilitators) may increase uptake of QI.

Points de repère du rédacteur

- Malgré les investissements dans les initiatives d'amélioration de la qualité (AQ) par les gouvernements et les organisations, les efforts en AQ dans les milieux de soins primaires canadiens ont eu des résultats partagés, et les facteurs qui ont nui à leur succès demeurent incertains.
- Dans un sondage auprès de médecins de famille exerçant des rôles de leadership en AQ dans des unités d'enseignement de la médecine familiale de la région du Grand Toronto, 4 principaux facteurs sont ressortis comme ayant la plus grande influence sur la participation à l'AQ en soins primaires : le leadership et la culture dans la clinique; les demandes et les exigences de l'extérieur; la perception des bienfaits de l'AQ; les ressources disponibles; et le temps disponible.
- Les répondants au sondage ont souligné le manque de soutien uniforme en matière de leadership au sein de leurs équipes comme étant un obstacle important à la participation à l'AQ. Les médecins des cliniques affiliées au milieu communautaire n'avaient pas de temps protégé pour l'AQ et avaient tendance à avoir des listes de patients plus nombreuses et des ressources plus limitées que leurs homologues dans les centres hospitaliers universitaires.
- Bien qu'il y ait eu un accord général selon lequel l'AQ devrait être un élément obligatoire des soins primaires, les médecins de famille se sont dits capables d'identifier les priorités locales en AQ et ont ajouté qu'un accès à des formes concrètes de soutien (p. ex. facilitateurs de la pratique) pourrait augmenter l'adhésion à l'AQ.

Facteurs qui influent sur la participation des médecins de famille à l'amélioration de la qualité fondée sur la pratique

Étude qualitative

Tara Kiran MD MSc CCFP FCFP Linda Rozmovits DPhil Patricia O'Brien RN MScCH

Résumé

Objectif Explorer les expériences de médecins de famille qui dirigent des efforts en amélioration de la qualité (AQ) et mieux comprendre les facteurs qui facilitent ou entravent l'avancement de l'AQ en pratique familiale.

Type d'étude Une étude qualitative descriptive.

Contexte Le Département de médecine familiale et communautaire de l'Université de Toronto (Ontario). En 2011, le département a instauré un programme d'amélioration de la qualité et d'innovation, qui avait comme double objectif d'enseigner aux apprenants les habiletés en AQ et de soutenir le corps professoral dans la gestion d'efforts d'AQ dans la pratique.

Participants Des médecins de famille enseignants qui exerçaient des rôles de leadership en AQ dans les 14 unités d'enseignement du département, entre 2011 et 2018.

Méthodes Quinze entrevues téléphoniques semi-structurées ont été effectuées sur 3 mois, en 2018. L'analyse reposait sur une approche descriptive qualitative. L'uniformité des réponses dans les entrevues suggérait une saturation thématique.

Principales constatations Des variations considérables ont été constatées dans le degré d'engagement envers l'AQ en dépit de la formation commune, des formes de soutien et du cursus qu'offrait le département. Quatre facteurs ont influé sur la participation à l'AQ. Premièrement, un leadership engagé envers l'AQ était essentiel au développement d'une culture efficace de l'AQ. Deuxièmement, des demandes de l'extérieur, comme des plans d'AQ obligatoires, motivaient parfois l'engagement, mais se révélaient aussi être des obstacles, surtout lorsque les priorités internes étaient en conflit avec les demandes de l'extérieur. Troisièmement, dans de nombreuses cliniques, l'AQ était largement perçue comme du travail supplémentaire plutôt qu'un moyen de permettre de meilleurs soins aux patients. Enfin, les médecins ont décrit le manque de temps et de ressources comme un réel défi, surtout dans les pratiques communautaires, et ils ont plaidé en faveur de la facilitation de la pratique comme mécanisme pour soutenir les efforts en AQ.

Conclusion L'avancement de l'AQ dans la pratique des soins primaires exigera des leaders engagés, un compréhension claire des bienfaits possibles de l'AQ, la concordance des demandes d'amélioration de l'extérieur avec celles à l'interne et du temps réservé pour les travaux d'AQ, de même que du soutien tel que la facilitation de la pratique.

Primary care serves as the front door of the health care system, and approximately 85% of Canadians have a family physician.[1] However, the quality of care they receive or the access to care they have sometimes fall short. Global comparisons with other high-income countries put Canada near the bottom of the list when it comes to timely access to care after hours or when unwell,[2] and there is substantial practice variation in chronic disease management.[3]

Practice-based quality improvement (QI) has the potential to improve patient experiences, health outcomes, and costs in primary care.[4,5] Quality improvement entails a rigorous approach to defining and understanding a problem within a system, testing change, using measurement to understand whether that change is beneficial, and iteratively refining and spreading successful changes.[6] Continuous QI is a pillar of the Patient's Medical Home,[7] the College of Family Physicians of Canada's vision for how primary care should be delivered in Canada. Governments in Canada and abroad have invested in supporting practices in their adoption of QI using various strategies, including learning collaboratives, practice facilitation, and mandatory QI plans. Evaluations of these efforts suggest mixed results.[8-10] The United Kingdom has used financial incentives to motivate practitioners to engage in QI, also with variable results—including some improvement and some unintended negative consequences.[11] The College of Family Physicians of Canada unveiled an initiative in 2017 to promote QI in family medicine.[12] However, it is unclear to what extent QI methods can be integrated into Canadian primary care practice and what factors influence the success of QI initiatives.

In 2011 the Department of Family and Community Medicine (DFCM) at the University of Toronto (U of T) in Ontario launched a quality and innovation program with the dual goals of teaching QI skills to learners and supporting faculty in leading QI in their respective practice settings. Anecdotally, program leaders observed variable uptake of QI, and this observation sparked a qualitative study to explore the experiences of family physicians leading QI efforts locally and to better understand facilitators and barriers related to advancing QI in family practice.

Methods

Setting and context

The DFCM at U of T is the largest academic family medicine department in North America, with approximately 1750 faculty and almost 400 residents as of 2019.[13] The department includes 14 teaching units in the greater Toronto area that are core training sites for family medicine residents. Physicians at the 14 sites are paid under a blended capitation model that incorporates financial incentives for cancer screening, immunizations, and care for patients with select chronic diseases (eg, diabetes, heart failure). Thirteen of the units are part of family health teams that receive government funding to hire nonphysician health professionals and have accountabilities including submission of an annual quality improvement plan (QIP) that prioritizes areas such as same-day or next-day access, patient-centredness, and timely appointments following hospital discharge.[14] Family physician services in Ontario are fully covered by the Ontario Health Insurance Plan for all permanent residents and are provided free of charge at the point of care.

Each unit has a unique organizational and governance structure. Five units are affiliated with an academic teaching hospital (fully affiliated) and receive some funding to support academic activities. The remaining 9 units are affiliated with community teaching hospitals (community-affiliated) and are more dependent on clinical income. Units range in size from approximately 11 physicians serving 14,000 patients to 80 physicians serving 46,000 rostered patients. Each site has its own approach to selecting QI priorities based on a mix of internal and external drivers, with the latter including priorities articulated by government, local hospitals, and the DFCM. Most units have committees overseeing QI that include physicians, other clinical staff, and administrators; priorities are also informed by residents' selections of project topics.

Study design and participants

We conducted a qualitative descriptive study based on 15 semistructured telephone interviews. Participants had to have served as a QI lead at 1 of the 14 DFCM teaching units between 2011 and 2018. Telephone interviews (average length 43 minutes) were conducted by a research team member (L.R.) between June and August 2018. Interviews explored participants' experiences in the DFCM Quality and Innovation Program, including barriers and facilitators related to establishing a robust QI culture at their sites, approaches to QI capacity building, and approaches to external demands for particular quality metrics to be used (the full interview guide is provided in the Appendix, available from **CFPlus***). The study received approval from the Research Ethics Board at U of T.

Recruitment

Since this was a limited cohort (N=25), all eligible individuals were invited to participate. All prospective participants received study information and an invitation to participate via an email issued by the DFCM Quality and Innovation Program. Interested individuals were asked to respond directly to the qualitative researcher (L.R.) to protect their anonymity and to provide an opportunity to ask questions before they decided

*The **Appendix** is available from **https://www.cfp.ca**. Go to the full text of the article online and click on the **CFPlus tab**.

whether to participate. The information letter explained the purpose of the study, the conditions of participation, and the rights of research participants. It also indicated that the qualitative researcher would not disclose the identities of either responders or nonresponders to the Quality and Innovation Program. Once an individual indicated their willingness to participate, the qualitative researcher contacted them directly to arrange an interview time. Consent to participate was indicated by individuals making their request for an interview.

Following initial circulation of the information letter, the qualitative researcher followed up with nonresponders by email at 2-week intervals. After 2 rounds of follow-up, no further direct contact was attempted. Several generic reminders about the interview opportunity were circulated to QI leads throughout the data collection period. All responders (n=15) were interviewed.

Analysis

All interviews were audiorecorded and transcribed verbatim by a professional transcriptionist. Transcripts were checked against sound files for accuracy and corrected where necessary. A coding framework was developed in discussion with the study team incorporating both a priori categories embedded in the interview guide and additional concepts that emerged from interviews. Initial organization of the data using open coding was undertaken by the qualitative researcher. Discussion with the study team informed development of axial codes to map relationships between categories. Selective coding was then used to articulate a thematically organized narrative account of the data. The constant comparative method was used to test the integrity of the coding framework and included searches for disconfirming evidence.[15]

A qualitative descriptive approach informed the analysis.[16] This was considered most appropriate given the applied health services research context and the aim of producing a detailed account of an organizational program as perceived by participants of that program. HyperResearch software, version 3.7.3, was used to facilitate data coding and management, and the qualitative researcher undertook all coding and analysis, supported by the study team. The response rate yielded sufficient variation that there were no concerns about aspects of experience in the program missing from the data. Consistency of responses across the interviews was suggestive of thematic saturation.

Results

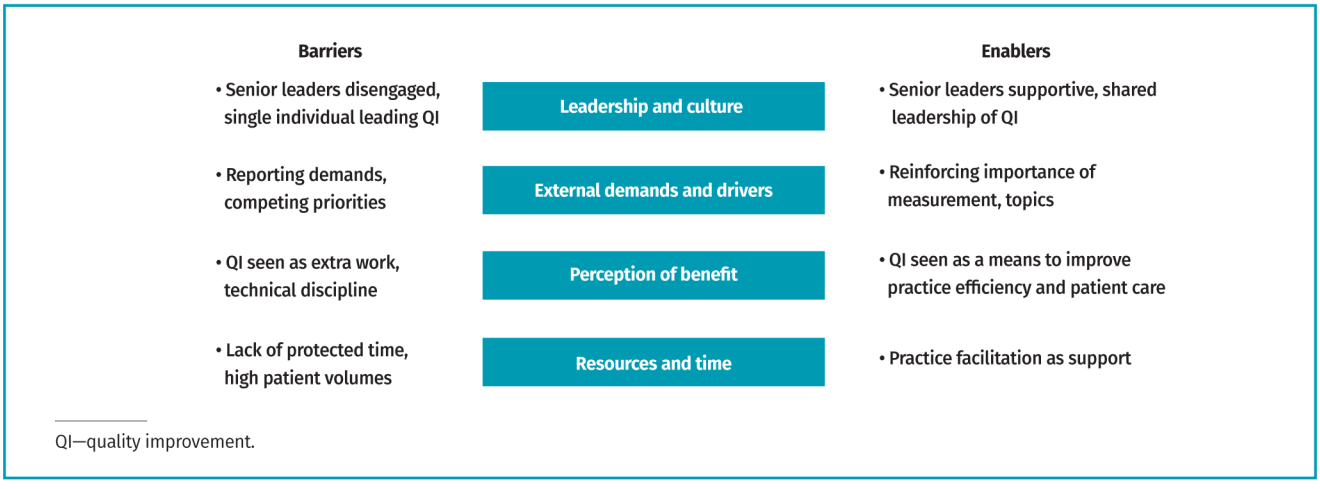
Fifteen of the 25 individuals invited to participate agreed to be interviewed, representing 11 of 14 teaching units. Two individuals declined the invitation while the remainder did not respond. Sixty percent of participants and 50% of nonparticipants worked in community-affiliated settings. All participants in the study practise comprehensive family medicine, with 4 having areas of focus as parts of their practices; 10 had completed Lean Six Sigma Green Belt training and 13 had completed additional QI training. Lean Six Sigma Green Belt certification provided faculty with applied educational experiences focused on improving clinic or team (mesosystem) processes and reducing variation in approaches to patient care. Two-thirds of participants were women and two-thirds had led practice QI activities for more than 5 years. Participants ranged in age from their 30s to 60s.

Four key factors emerged as having the greatest influence on engagement in QI in primary care: leadership and culture; external drivers; perceived benefits and burdens of QI; and resources (**Figure 1**).

Leadership and culture

Participants identified committed leadership as one of the most fundamental requirements for development

Figure 1. Key factors influencing primary care physician engagement in QI



QI—quality improvement.

of an effective QI culture. It is worth noting that leadership was broadly conceived and included clinical and administrative leadership as well as governance: "One of the reasons we've been successful at [site] is because we have had the buy-in of our leadership team and, very early on, the support of our chief. I don't know to what degree that's happened in some of the other sites."

Where such leadership was evident, participants described the local QI culture as highly engaged and fully integrated into day-to-day operations with a widely shared sense of ownership related to QI: "The culture is so positive regarding QI that here I am doing [QIPs], redesigning resident curricula. We actually redesigned the entire family health team's programs with QI at the centre of [them]."

In contrast, faculty leads at sites where leadership support for QI was absent or intermittent commonly described engagement with QI at their site as being limited to a handful of individuals or as being inconsistent and dependent on circumstance: "I think people pay lip service to it, but in terms of actually getting people involved in QI activities, it's the same core people [who always] do it. I would say it's probably only about 4 or 5 [who] really are consistently involved."

External drivers affecting engagement with QI

External drivers named as factors enabling engagement with QI included mandatory QIPs, financial incentives, and primary care issues being highlighted in the media, such as with Choosing Wisely Canada[17] campaigns. However, external drivers such as QIPs and performance metrics were also mentioned as areas of concern. While there was general agreement that ongoing QI should be a requirement for primary care, participants voiced concerns about the volume of quality data requested, metrics that they believed were poorly defined, and lack of alignment between external demands and internal improvement priorities, as this generated work without benefiting the practice:

> You have to report measures to this branch and this branch and this branch. It's sort of exhausting, and to what [end]? You're just reporting things. How is this translating into good patient care?

> Follow-up after discharge is a tricky one. We have a huge maternity care practice here, and a lot of [patients] are discharges from hospital after [they've had] a baby, so we're not really going to follow up on things like that. Half the time we don't receive the discharge summaries. Some of the measures have been made to be simplistic when there are quite complex factors at play.

Perceived benefit or burden of QI

At many sites, QI was not yet integral to the culture of primary care practice. Rather, it was widely perceived as extra work rather than as a way to enable more efficient working practices and to improve patient care. As a result, there was resistance to taking on anything that could be seen as additional, nonessential activity, especially if there was no guarantee that the investment would produce sustainable, high-yield results. Colleagues were described as being more open to engaging in QI if they believed it would yield sustainable improvements in how practices were run and how care was delivered: "So, for staff physicians, it was office efficiencies. The big one was advanced access, just workflow and patient cycle times in the office."

A perceived burden was the technical aspect of QI. Many participants observed that the methods used could make QI seem daunting and inaccessible, especially to colleagues who were new to the discipline: "I do feel that there's a sense of alienation from the QI world. So, if there's an improvement opportunity, they may defer to the QI team because they feel alienated or that it's a foreign language. I think it's just the lingo."

For this reason, several faculty leads chose to de-emphasize the specialized language and technical aspects of QI, favouring a more accessible approach that would help new practitioners see its value more readily in their day-to-day work:

> I try to make it practical. I try to give examples, because when you just go through a PDSA [plan-do-study-act] cycle or you go through a process map it's boring. They don't understand the practicality of it. And I think we really need to change it so that people understand the real practical applications of it.

In a similar vein, the iterative nature of QI was described as a barrier to engagement because it required patience, reflection, and a willingness to try things without any guarantee of a definitive outcome in the short term. Put another way, iterative processes could be unattractive to already overstretched colleagues who want assurance that any effort they expend will yield tangible results: "There can be a certain ambivalence toward QI because of the iterative nature of it. Initially, the concepts are rather broad and nebulous, and therefore are sometimes difficult for faculty to appreciate until they get into a project."

Resources

Community-affiliated sites typically had much heavier patient loads and fewer resources than fully affiliated sites. They also had no protected time for QI. Community-affiliated sites therefore faced greater challenges in attempting to engage the wider faculty in QI activities:

> I talked to some of my academic colleagues and they have family medicine practices of 300 or 400 patients, whereas I'm not familiar with anyone in our clinic

> [who] has less than a thousand. Without protected time, that's one of the challenges.

Faculty leads in community settings thus often described themselves as lone voices speaking up for QI in an environment where the local culture was not yet well established.

One frequently raised suggestion was that having dedicated QI facilitators would enable sites to move forward with QI initiatives more easily. Many participants believed that they were unable to gain traction because they lacked the capability and spare capacity to design and initiate QI work. Moreover, many participants believed that achieving widespread faculty engagement in QI would be unlikely without additional facilitation, especially at sites where there was no dedicated time for QI. Having QI facilitators was also seen as a way to boost engagement because the initial investment of time and effort was often a barrier for colleagues:

> I think it's hard to get buy-in early because people don't see the benefit [until] they've had to put in a bunch of work. How it's worked for me in the very beginning is having a facilitator in your practice to move the project along.

Discussion

We conducted a qualitative study involving family physicians leading QI efforts at teaching sites affiliated with a large family medicine department at a Canadian university. We found substantial variation in the level of engagement with QI in different practice settings despite the sites having common departmental training, support, and curricula. We identified 4 factors that influenced uptake of QI in primary care practice: leadership and culture in the practice; external demands and drivers; perception of the benefits of QI among family physicians in the practice; and resources and time available.

Physicians in our study were leading QI activities at a time of growing external accountability for quality[14] that included some practice-based forms of support[9,18] and incentives.[19,20] Despite this context, there was not consistent leadership support for QI in their teams, which is a foundational element for building QI capacity in primary care.[21,22] Existing forms of support were insufficient and many participants articulated the desire for practice facilitation or coaching. Practice facilitation is widely regarded as an important enabler of QI.[23-26] However, participants' descriptions of coaching suggest they wanted someone with dedicated time to lead change, which is beyond a usual practice facilitator role and likely speaks to overly stretched resources within the practice.

Data feedback and effective teams are core elements of high-performing primary care practices,[21,22] yet these were not strong themes in our study—perhaps because practices were still struggling with more foundational leadership engagement. Challenges with data were articulated in relation to the burden of reporting for accountability and externally directed measures that were not viewed as being meaningful. Others have described the risk of focusing too much on measurement without having the resources and skills available in practices to enable action.[27]

Our study describes physicians' QI leadership experiences 7 years after the initiation of a QI program in our academic family medicine department. Our findings, together with other research,[21-23] reinforce the importance of engaged leadership as the foundation of high-performing primary care, and we have since been deliberate about building a shared vision for practice transformation among leaders at our academic sites. We hope to harness intrinsic motivation and encourage sites to focus on applying QI methods to improvement opportunities they identify locally rather than those prioritized by others, an approach that has helped some of our practices already.[28] We have also begun to develop, collect, and report quality of care measures centrally in collaboration with our teams to encourage data-driven improvement, to free up site resources currently spent on measurement, and to galvanize the selection of common objectives that are meaningful to our practices.

For policy makers, our results suggest that mandating QI may encourage some physicians to embrace improvement work but that emphasizing too many measures or those of questionable value will disengage physicians. Indeed, the current provincial audit and feedback report for primary care[29] and related measurement framework[30] contain a plethora of measures that some have questioned in value.[31]

Limitations

Our study has some limitations. First, we describe the experiences of academic family physicians affiliated with a single university, which may limit the generalizability of our findings. However, participating physicians worked in 11 different clinical settings varying by geographic location, size, and amount of academic funding (with some having none). Second, we heard the views of only those family physicians who led QI efforts locally and not those of other team members involved in QI efforts.

Conclusion

Our study highlighted 4 factors influencing uptake of QI in primary care: leadership and culture, external demands, perception of benefit, and resources and time available. Our findings align with Berwick's call for a new era in medicine where we reduce mandatory measurement and end individual-level financial incentives.[32] Instead, accountability should be balanced with practical forms of support such as practice facilitation, and

we need to demonstrate to physicians that QI is not just a technical exercise but also has the potential to both improve care and bring joy to work.[33]

Dr Tara Kiran is Vice-Chair of Quality and Innovation in the Department of Family and Community Medicine (DFCM) at the University of Toronto (U of T) in Ontario; Associate Professor in the Faculty of Medicine and the Institute of Health Policy, Management and Evaluation at U of T; Scientist in the MAP Centre for Urban Health Solutions at St Michael's Hospital in Toronto; and a staff physician in the DFCM at St Michael's Hospital. **Dr Linda Rozmovits** is Senior Qualitative Researcher with Health Experiences Research Canada in Montréal, Que. **Patricia O'Brien** was Manager of the Quality and Innovation Program at the time of writing and is now Manager of Education Development in the DFCM at U of T.

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Contributors

The study was conceived by **Patricia O'Brien** and **Dr Philip Ellison**. **Patricia O'Brien** and **Dr Linda Rozmovits** designed the study; **Dr Rozmovits** collected the data and conducted the analysis. All authors interpreted the results. **Dr Tara Kiran** drafted the initial manuscript and all authors critically reviewed it and provided final approval for publication.

Competing interests

At the time of the study, **Dr Tara Kiran**, **Patricia O'Brien**, and **Dr Philip Ellison** received salary support from the Department of Family and Community Medicine at the University of Toronto.

Correspondence

Dr Tara Kiran; email **tara.kiran@utoronto.ca**

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