Physician perspectives on a tailored multifaceted primary care practice facilitation intervention for improvement of cardiovascular care

Clare Liddy\textsuperscript{a,b,*}, Jatinderpreet Singh\textsuperscript{a,b}, Merry Guo\textsuperscript{a} and William Hogg\textsuperscript{a,b}

\textsuperscript{a}C.T. Lamont Primary Health Care Research Centre, Bruyère Research Institute and \textsuperscript{b}Department of Family Medicine, University of Ottawa, Ottawa, Ontario, Canada.

\*Correspondence to Clare Liddy, Bruyère Research Institute, 43 Bruyère St, Annex E, Room 106, Ottawa, Ontario K1N 5C8, Canada; E-mail: cliddy@bruyere.org

Abstract

Background. Practice facilitation is an effective way to help physicians implement change in their clinics, but little is known about physicians’ perspectives on this service.

Objectives. To examine physicians’ responses to a practice facilitation program, focussing on their overall satisfaction, perceived most significant clinical changes, and interactions with the facilitator.

Methods. The Improved Delivery of Cardiovascular Care program investigated the impact of practice facilitation on improving the quality of cardiovascular primary care in Eastern Ontario, Canada, from 2007 to 2011. We conducted a qualitative content analysis of post-intervention surveys completed by participating physicians, using a constant comparison approach framed around the Chronic Care Model.

Results. Ninety-five physicians completed the survey. Physicians overwhelmingly viewed the program positively, though descriptions of its benefits and impact varied widely. Facilitators filled three key roles for physicians, acting as a resource centre, motivator and outside perspective. Physicians adopted a number of changes in their practices. These changes include adoption of clinical information systems (diabetes registries), decision support tools (chart audits, guideline documents, flow sheets) and delivery system design (community resources).

Conclusions. Most physicians appreciated having access to a practice facilitator and viewed the intervention positively. Insight into physicians’ perspectives on practice facilitation provides a valuable counterpoint to outcomes-based evaluations of such services. Further research should investigate potential obstacles in the group of physicians who make fewer practice changes, as well as the sustainability of this type of facilitation intervention.

Key words. Primary care, practice facilitation, qualitative study.

Introduction

Practice facilitation can be an effective way to help physicians implement change in their clinics (1–4). In practice facilitation, trained health care facilitators help physicians plan, implement and evaluate initiatives, such as adopting new guidelines, or optimizing patient care in the practice. Facilitators are simultaneously resource providers, coordinators, mentors and sharers of ideas between practices (1,5), and provide support that is both tailored and multifaceted—two key elements to implementing behavioural changes in physicians.
A recent systematic review reported that primary care practices with facilitators were almost three times more likely to adopt evidence-based guidelines than those without (2).

Practice facilitation originated in the UK and has been used in Europe and Australia for over two decades (1). In recent years, many health organizations in Canada and the USA have adopted practice facilitation as a means to support practice-based research networks and enact quality improvement in clinics (7,8). However, few studies have examined physicians’ perspectives on practice facilitation (9,10). Physican feedback would provide valuable insight into what makes practice facilitation impactful to a physician, what qualities and abilities physicians appreciate in a facilitator, and what components of a facilitation intervention are most easily adopted or most practical. Physician feedback would also be helpful to informing the design of future facilitation interventions.

The Improved Delivery of Cardiovascular Care (IDOCC) facilitation study is a stepped-wedge cluster randomized controlled trial that investigated the impact of practice facilitation on improving the quality of cardiovascular primary care (11). Trained practice facilitators worked with primary care physicians in Eastern Ontario over a 1- to 2-year period to improve the delivery of evidence-based cardiovascular disease care.

The objective of this article is to evaluate the experience of physicians who participated in IDOCC, focussing on (i) physicians’ overall satisfaction with the intervention, (ii) their views on their interaction with their facilitator and (iii) what clinical changes they reported making as a result of the IDOCC intervention. By exploring the physician perspective, we aim to provide insight into how practice facilitators help providers. This information will be of value to groups intending to design subsequent programs supporting practice facilitation.

Methods
Setting and context
The IDOCC project took place in the Champlain Local Health Integration Network (LHIN), the regional health authority in Eastern Ontario, Canada, from 2007 to 2011. All primary care practices in the Champlain LHIN were eligible to participate, excluding walk-in clinics. One hundred and ninety physicians from 83 primary care practices participated in the study.

The IDOCC intervention paired participating practices with one of four trained practice facilitators. Facilitators were health professionals with master’s degrees and clinical and managerial experience. All facilitators were trained in an intensive 7-week course focused on quality improvement, change management techniques, the Chronic Care Model (CCM), system tools for cardiovascular care and evidence-based guidelines used by the IDOCC project (http://www.idocc.ca).

Over the course of 1–2 years, physicians and facilitators met regularly to plan and implement changes with the aim of optimizing the practice’s cardiovascular disease care. At the beginning of each facilitation intervention, a trained chart abstractor conducted a chart audit of 66 randomly selected target patients within each participating practice. Facilitators used these audits to provide feedback to the practices about their performance. From there, physicians and facilitators would engage in consensus building to identify areas needing improvement and set goals. Facilitators used a variety of methods to aid physicians in achieving their goals, including evidence-based decision support, delivery system redesign support, patient self-management tools, guideline documents, flow sheets and information regarding available community resources.

Data collection
All physicians who participated in the IDOCC study were asked to complete a set of written post-intervention reflection questions (Appendix A). All questions were open-ended and designed to collect attitudinal information from each physician regarding the impact, if any, the intervention had on their practice, and what elements of the intervention they found most or least beneficial. Completion of these questions was a mandatory step in obtaining professional continuing education credits for their participation in IDOCC. Physicians were aware that facilitators would be able to view their responses to these questions.

Data analysis
The authors conducted a qualitative content analysis using a constant comparative approach (12). This approach was chosen as the best method to analyse the data, as physicians’ responses were open-ended and our study’s goal was to collect opinions and attitudinal information from participants. Content analysis allows themes to emerge from large sets of qualitative data and facilitates an understanding of broad trends across physician responses.

Two authors (MG and JS) read through all surveys to gain familiarity with emerging themes and key words. Authors MG and JS conducted coding in three stages using printouts generated by NVivo-10 software (13): (i) open coding, during which time all surveys were examined in detail; (ii) axial coding, whereby similar codes were categorized together and (iii) a selective coding approach, whereby all categories of codes were compared to each other systematically so as to identify patterns and major themes in the data. Throughout all three stages of data analysis, memos were written regarding the meaning of codes and decisions made during the coding process. MG compiled authors’ codes into NVivo for analysis. After each stage of coding, researchers discussed their interpretations of the data until consensus was reached. Changes to practice behaviour were examined using the CCM (14).

Results
In total, 190 physicians from 83 different practices participated, of whom 95 completed the post-intervention reflective survey. Respondents’ characteristics are shown in Table 1. All respondents provided answers to all four survey questions, though the amount of detail they provided in their responses varied significantly. The average word count of completed surveys was 261 words (interquartile range: 85). The largest completed survey was 588 words and the smallest was 149 words.

The facilitation intervention was perceived positively by nearly all physicians, whether or not they felt that the intervention had made a big impact on their practice. All physicians felt that they had benefited from the experience in at least some small way.

Physicians varied in the level of changes they made to their practices, with some making relatively minor changes (e.g., starting abdominal girth measurements, referring patients to more community resources and adding microfilament testing to their diabetes assessment) and others making more complex, system-level changes (e.g., creating hypertension or diabetes clinics, patient registries, patient self-management programs, programs to increase smoking cessation and systems to identify high-risk patients). Physicians who made minor changes found that facilitation mostly served to verify that their current practice behaviours were in line with current guidelines.
Physician perspectives on practice facilitation

Table 1. Characteristics of physicians participating in the IDOCC study who provided survey responses at the conclusion of the intervention (2011)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Participants % (n = 95)</th>
<th>Non-participants % (n = 95)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>60</td>
<td>66</td>
</tr>
<tr>
<td>Male</td>
<td>40</td>
<td>34</td>
</tr>
<tr>
<td>Practice model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family Health Group</td>
<td>38</td>
<td>20</td>
</tr>
<tr>
<td>Family Health Organization</td>
<td>21</td>
<td>30</td>
</tr>
<tr>
<td>Community Health Centre</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>Family Health Network</td>
<td>17</td>
<td>0</td>
</tr>
<tr>
<td>Health Service Organization</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Family Health Team</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>Fee for Service</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Long-Term Care</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>MD degree graduation year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000–present</td>
<td>14</td>
<td>16</td>
</tr>
<tr>
<td>1990–99</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>1980–89</td>
<td>37</td>
<td>33</td>
</tr>
<tr>
<td>1970–79</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>1960–69</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

There were no real changes to our practice. This is what we were already doing. It did make us fine tune and keep up with newer recommendations, but I honestly think we were already doing that.

Physicians who made larger changes tended to show a more open attitude towards improving their practice in their self-reflection surveys, and consistently valued the chart audit and feedback as a means to discover areas of weakness, rather than simply viewing it as a confirmation that they were doing well:

The chart abstraction along with the feedback helped us to visualize more directly the strengths and the weaknesses of our practice. The main problem was mainly documentation in the EMR of smoking status and previous therapy offered to help [quit] smoking.

When discussing the impact of the intervention, physicians’ comments adhered to two main themes: the role of the facilitator in supporting change, and the actual changes they made to their practice (Table 2).

Role of the facilitator
Facilitators filled a number of key roles for physicians, which can be described by the following three themes: resource centre, motivator and outside perspective.

Resource centre
Most physicians felt that facilitators were a useful resource for gaining knowledge, sharing advice and helping with various tasks. Physicians appreciated the tools and advice that facilitators provided, and liked that facilitators offered a structured approach to problem solving. Many physicians reported an increased use of community resources in their management of patients and described community resources as a great way for patients to receive support, encouragement and information outside of the clinic:

[Community resources] provide other options for patients to be involved in management of their own disease rather than just seeing me.

Table 2. Themes pertaining to physicians’ attitudes towards the benefits of practice facilitation that emerged from the qualitative content analysis

<table>
<thead>
<tr>
<th>Theme</th>
<th>Subtheme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role of the facilitator</td>
<td>Resource centre</td>
</tr>
<tr>
<td>Changes in practice</td>
<td>Motivator</td>
</tr>
<tr>
<td></td>
<td>Outside perspective</td>
</tr>
<tr>
<td></td>
<td>Clinical information systems</td>
</tr>
<tr>
<td></td>
<td>Decision support tools</td>
</tr>
<tr>
<td></td>
<td>Delivery system design</td>
</tr>
</tbody>
</table>

Physicians very much appreciated that facilitators were able to investigate specific clinical questions and provide evidence-based responses. One physician described that he was ‘able to ask questions and [the facilitator] would come back with answers that were up to date and backed up with studies’. Most physicians felt that the intervention increased their familiarity with current guidelines and evidence, helping them improve their practices:

My practice has improved in the way we manage [coronary artery disease] risk factors, patients with diabetes, and hypertension. I have gained significant knowledge thanks primarily to [my facilitator].

[Practice facilitation] has fine-tuned my management of diabetic patients as well as improved the quality of my smoking cessation intervention by putting outside resources at my fingertips.

Facilitators would also accomplish organizational tasks if needed, for instance reorganizing flow sheets or compiling literature or patient education materials. Physicians especially appreciated how facilitators tailored their help to meet their individual needs and interests:

The focus on issues that both needed improvement as well as interested me was key in me being open to suggestions.

Motivator
Facilitators were reported to have promoted team-building, maintained motivation and momentum, initiated discussion among colleagues and bridged gaps in communication between nursing and physician staff:

I am very grateful for [my facilitator’s] help, reminders, summaries and general prodding me along during the course of this study. As I joked with [my facilitator], every physician should have ... someone like her to facilitate achieving the study objectives.

This motivation appeared to have an impact on how physicians practiced, with many physicians reporting a modest increase in the diligence and aggressiveness in which they pursued disease prevention, treatment and monitoring. One physician summarized a common sentiment among physicians when she said ‘I am more vigilant with the care of my patients’.

Outside perspective
Many physicians reported that the facilitator provided a much-appreciated outside perspective on themselves and their clinics. Physicians expressed feeling validated when facilitators provided feedback on their patient care, especially when facilitators compared them to other physicians in the study. Physicians also liked that facilitators shared examples of what worked well in other practices. One physician noted that interacting with his facilitator ‘gives me the chances to discuss how other similar practices function’.
Changes in practice
Physicians felt they made a number of beneficial changes to their practice after participation in the facilitation program, including increased measuring of waist circumference, increased smoking cessation efforts and more aggressive management of cardiovascular risk factors such as blood pressure, lipid levels and weight (Table 3). To examine these changes, we have viewed the most commonly reported themes through the lens of the CCM. Developed by Wagner et al. (14), CCM aims to assist practices in delivering patient-centred, evidence-based care to patients with chronic illnesses through focus on six interrelated system changes. CCM takes a holistic approach to health system innovation, emphasizing change at the community, system, practice, and patient level. However, as our study focussed on physicians’ perspectives regarding practice facilitation, we have grouped their changes based on three provider-level factors: clinical information systems, decision support tools, and delivery system design.

Clinical information systems
Implementing clinical information systems represented one of the more complex changes undertaken by participating physicians. Consequently, these changes were less common than those in the other categories. However, six physicians described implementing diabetes registries as a result of the facilitation intervention.

Decision support tools
Physicians described adopting a number of tools that helped them provide care based on patient preferences and the latest evidence. The most common tools that physicians discussed were chart audits, flow sheets and guideline documents.

Chart audits are a procedure in which facilitators randomly select a number of patients’ charts and review them to identify what measures, treatments and tests physicians are providing, and to what extent their activities match prescribed clinical guidelines. The term ‘chart abstraction’, an element of the chart audit process, was used regularly by physicians to refer to chart audits. Chart audits were universally perceived by physicians as beneficial, as they allowed physicians to identify their strong points and target their areas of weakness. For instance, one physician noted that the chart audit ‘helped our clinic team see that too many of our diabetic patients were not reaching their appropriate targets’. Furthermore, physicians reported that chart audits helped them gain insight into their patient population, which allowed them to better manage patients:

The main impact of my participation in this study has been to make me more aware of my need to ensure patients at risk of CV disease are followed at appropriate intervals and how easy these individuals can be lost to follow up.

The guideline document was widely praised for being comprehensive, easily accessible and up-to-date. Many physicians found that reviewing the guideline document and keeping it on hand as a reference helped them adhere better to current standards of care:

Having complete and meaningful guidelines to treat diabetics and patients with cardiovascular disease [made it] easier to assess all the risk factors in an individual patient.

The flow sheets were also widely praised by physicians. Flow sheets are brief documents compiling all pertinent information pertaining to an individual patient’s care. They provide a reminder for physicians to address any long-term or chronic conditions a patient may have at all visits, regardless of the visit’s primary purpose, in order to ensure comprehensive care. Physicians appreciated flow sheets for their ability to assist in organizing patient information. Physicians noted that flow sheets made their practices more efficient, saved time, allowed them to identify problems that need to be addressed and helped ensure that their patients receive appropriate treatment:

The various flow sheets for hypertension and diabetes have simplified my work. At a glance I can see how my patients are responding to the care and management. The patients also have noticed a positive change in how their problems are being addressed efficiently, managed in a prompt way.

Delivery system design
The majority of physicians expressed appreciation for learning about the various community resources available to their patients, noting that facilitators helped integrate the practice with community resources to highlight a more team-based approach. Facilitators often tailored their recommendations to programs available within the physician’s catchment area, making their suggestions particularly relevant to patients:

In learning about the available resources, my patients can benefit from help in their area of the city.

Many physicians noted that they were previously unfamiliar with the programs that the facilitators recommended, and would thus have been unable to direct their patients to them without this information. By learning of these programs, physicians were able to ensure that their patients received more comprehensive care than they would have been able to provide on their own:

<table>
<thead>
<tr>
<th>Change made</th>
<th>Frequency reported (N=)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased measurement of waist circumference</td>
<td>40</td>
</tr>
<tr>
<td>More aggressive efforts for smoking cessation</td>
<td>38</td>
</tr>
<tr>
<td>More aggressive identification and treatment of cardiovascular risk factors</td>
<td>27</td>
</tr>
<tr>
<td>Increased use of flow sheets for diabetes</td>
<td>19</td>
</tr>
<tr>
<td>Increased use of patient self-management tools</td>
<td>14</td>
</tr>
<tr>
<td>Increased use of BP Tru blood pressure machine</td>
<td>14</td>
</tr>
<tr>
<td>Increased distribution of patient education materials</td>
<td>13</td>
</tr>
<tr>
<td>Increased counselling on salt reduction</td>
<td>12</td>
</tr>
<tr>
<td>Clarification of evidence regarding aspirin use</td>
<td>11</td>
</tr>
<tr>
<td>Referral to community smoking cessation programs</td>
<td>11</td>
</tr>
<tr>
<td>Increased use of flow sheets for cardiovascular disease</td>
<td>9</td>
</tr>
<tr>
<td>Increased use of Framingham risk assessment</td>
<td>7</td>
</tr>
<tr>
<td>Referral to community exercise/weight loss programs</td>
<td>6</td>
</tr>
<tr>
<td>Referral to community diabetes education program</td>
<td>6</td>
</tr>
<tr>
<td>Increased use of electrocardiograms</td>
<td>5</td>
</tr>
<tr>
<td>Increased use of microfilament testing in diabetes care</td>
<td>5</td>
</tr>
<tr>
<td>More confident with insulin initiation</td>
<td>4</td>
</tr>
<tr>
<td>Increased use of claudication questionnaire</td>
<td>4</td>
</tr>
</tbody>
</table>

*From a total of 95 participant responses.*
I find that [the care] I can provide in the office is not complete—the client needs community support in the form of dietary advice, exercise, support [groups], etc.

Some physicians also found informational material for patients, such as pamphlets, posters and self-management tools, to be beneficial. These physicians stated that educational literature helps keep patients informed and can reinforce issues addressed during their appointments. A few physicians also mentioned the benefits of educational literature ‘for patient education/empowerment’, as the information this literature provides is vital in fostering self-management behaviours and strategies among patients.

Discussion

Overall, physicians responded positively to the facilitation intervention, a perspective reported in previous studies (15,16). This is an encouraging finding, as practice facilitation is becoming more widely used across North America (7,8).

Role of the facilitator

Practices face a variety of barriers to the uptake of new guidelines and behaviours, including a lack of awareness or training regarding guidelines, and logistical challenges such as inadequate staff support, resources and time (17–19). It is thus not surprising that physicians in our study appreciated a wide range of support from facilitators, who adopted a number of important roles. As resource centres, they provided information for evidence-based decision-making, quality-improvement tools, or assistance with administrative or organizational tasks. As motivators, they encouraged change and facilitated communication. As an outside perspective, they helped physicians guide and manage improvements to their practices. These findings are supported by previous studies that have illustrated facilitators as professionals who need to fulfil multiple roles (1,2,8).

Changes in practice

Physicians reported making a number of changes to their practice behaviour. These changes adhered to the practice-level factors of the CCM and included clinical information systems (implementing disease registries), decision support tools (chart audits, flow sheets and guideline documents) and delivery system design (connecting practices with community resources). The variety of clinical changes reported by physicians further emphasizes the well-known need for practice facilitation to be tailored to range of support, as different physicians have different needs and preferences (2,8). The fact that certain clinical changes were more popular than others suggests either a common care gap, or that those changes were more easily adopted because they were more easily coordinated or learned.

The most well-received intervention tools were the guideline documents and flow sheets (decision support tools), and community resources (delivery system design). Flow sheets have been reported to be highlights of a previous practice facilitation study, where facilitation was successful in improving preventive care (16). As has been the case in previous facilitation studies, the chart audit and feedback was perceived by physicians to be essential for identifying areas of weakness and for setting appropriate goals for quality improvement (2,8,16,20). Likewise, other studies have noted benefits of linking physicians with community resources, including a reduction of duplication of services, better support for patient self-management and a more integrated, team-based approach to care (8).

We found that physicians who made more complex changes involving the implementation of entirely new systems (e.g. diabetes clinics, patient registries or patient self-management programs) expressed a more positive and open attitude than those who made simpler changes pertaining to their practice behaviour (e.g. starting abdominal girth measurements or referring patients to more community resources). This correlation between positive attitudes and implementation success has been previously reported (15,20).

Implications for future research

While previous research has shown that clinical improvements can last beyond the facilitation period (1,21), implementation of systematic or behavioural changes to a practice may take years to complete. Further research should address physician perspectives during the years after which facilitation has ended, to identify potential obstacles in maintaining the changes made during practice facilitation, and assess if physicians are better able to enact quality-improvement initiatives on their own.

Limitations

The 50% response rate to the post-intervention question set shows that attitudinal information from a significant portion of IDOCC physicians is missing. There is also the possibility of selection bias, as participating physicians may have been more inclined to give positive comments than non-participants. Participants may also have felt inclined to make positive comments to be polite or avoid offending facilitators. The phrasing of some questions in the questionnaire may imply a positive response from physicians. Some respondents gave brief or ambiguous responses to certain questions, while others gave much more complete and thoughtful responses. Lastly, researchers were unable to probe respondents to clarify their meaning as surveys were self-administered and completed prior to data analysis.

Conclusion

Most physicians appreciated having access to a practice facilitator and viewed the intervention positively. Facilitators fulfilled multiple roles that benefited physicians, including acting as a resource centre, motivating and coordinating physicians, and bringing an outside perspective to the practice. The most popular intervention tools were concise guideline documents, flow sheets and information regarding community resources. This insight into physicians’ perspectives on practice facilitation provides a valuable counterpoint to outcomes-based evaluations of such services, and can help inform subsequent intervention development by highlighting what physicians appreciate in a facilitator and what tools and resources they are most likely to use. Further research should investigate potential obstacles in the group of physicians who made minimal practice changes, the sustainability of this type of facilitation intervention and the intensity of facilitation (i.e. number and duration of facilitator visits to practices) needed in order to effect enduring change.

Declarations

Funding: Primary Health Care Services program of the Ontario Ministry of Health and Long-Term Care; Pfizer Canada (indirectly through the Champlain Cardiovascular Disease Prevention Network); Canadian Institutes for Health Research (CIHR grant no. RN135299-235459); and the Ottawa Hospital Academic Medical Organization’s Innovation Fund.

Ethics approval: Ottawa Hospital Research Ethics Board.

Conflict of interest: none.
Appendix A. Post-intervention reflection questions completed by participating physicians at the end of the IDOCC facilitation program

Q1. What is your overall impression of the impact of your participation in this study?

Q2. List five changes to your practice that have been a direct result of this study.

Q3. Explain the value to your learning of each of the following:

   (a) The chart abstraction (including the feedback received)
   (b) Having the outreach facilitator work with your practice
   (c) Guideline document
   (d) Community resources
   (e) Flow sheets
   (f) Other materials that have been incorporated into the practice including literature, posters etc.

Q4. What aspects of your practice will not change (either because you are already practicing in a manner that reflects current evidence or because you believe the evidence does not support a change in your practice)?

References