Integrating pharmacists into family practice teams

Physicians' perspectives on collaborative care

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ABSTRACT

OBJECTIVE To explore family physicians' perspectives on collaborative practice 12 months after pharmacists were integrated into their family practices.

DESIGN Qualitative design using focus groups followed by semistructured interviews.

SETTING Seven physician-led group family practices in urban, suburban, and semirural Ontario communities.

PARTICIPANTS Twelve purposively selected family physicians participating in the IMPACT (Integrating family Medicine and Pharmacy to Advance primary Care Therapeutics) project.

METHODS We conducted 4 exploratory focus groups to gather information on collaborative practice issues in order to construct our interview guide. We later interviewed 12 physicians 1 year into the integration process. Focus groups and interviews were audiotaped and transcribed verbatim. Four researchers used immersion and crystallization techniques to identify codes for the data and thematic editing to distil participants' perspectives on physician-pharmacist collaborative practice.

FINDINGS The focus groups revealed concerns relating to operational efficiencies, medicolegal implications, effects on patient-physician relationships, and work satisfaction. The follow-up semistructured interviews revealed ongoing operational challenges, but several issues had resolved and clinical and practice-level benefits surfaced. Clinical benefits included having colleagues to provide reliable drug information, gaining fresh perspectives, and having increased security in prescribing. Practice-level benefits included group education, liaison with community pharmacies, and an enhanced sense of team. Persistent operational challenges included finding time to learn about pharmacists' role and skills and insufficient space in practices to accommodate both professionals.

CONCLUSION Physicians' perspectives on collaborative practice 12 months after pharmacists were integrated into their family practices were positive overall. Some ongoing operational challenges remained. Several of the early concerns about collaborative practice had been resolved as physicians discovered the benefits of working with pharmacists, such as increased security in prescribing.

EDITOR'S KEY POINTS

- This qualitative study explores physicians' perspectives on collaborative practice 12 months after pharmacists were integrated into their family practices.
- Four main themes emerged from the interviews with physicians: operational challenges, developing security, and clinical and practice-level benefits.
- Learning to work with a new discipline in family practice settings required physicians to take the time to understand pharmacists' roles and expertise, which was a challenge for some physicians. Once integrated into the practices, however, participants found that pharmacists freed up time for physicians.

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Intégration des pharmaciens dans les équipes de médecine familiale

Point de vue de médecins sur les soins en collaboration

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RÉSUMÉ

OBJECTIF Vérifier l'opinion de médecins de famille sur la pratique en collaboration une année après l'intégration de pharmaciens dans leur clinique de médecine familiale.

TYPE D'ÉTUDE Étude qualitative à l'aide de groupes de discussion, suivis d'entrevues semi-structurées.

CONTEXTE Sept groupes de médecine familiale dirigés par des médecins dans des milieux semi-ruraux, urbains et de banlieues d'Ontario.

PARTICIPANTS Douze médecins de famille choisis intentionnellement pour leur participation au projet IMPACT (Integrating family Medicine and Pharmacy to Advance primary Care Therapeutics).

MÉTHODES Nous avons tenu 4 groupes de discussion exploratoires pour identifier les défis de la pratique en collaboration en vue d'élaborer un guide d'entrevue. Nous avons ensuite interviewé 12 médecins qui participaient depuis un an au processus d'intégration. Les groupes de discussion et les interviews ont été enregistrés sur ruban magnétique et transcrits mot à mot. Quatre chercheurs ont utilisé des techniques d'immersion et de cristallisation pour coder les données, et une méthode d'identification des thèmes communs pour faire ressortir l'opinion des participants sur la collaboration médecin-pharmacien.

RÉSULTATS Les groupes de discussion ont révélé certaines préoccupations concernant l'efficience opérationnelle, les implications médico-légales, les effets sur la relation médecin-patient et la satisfaction au travail. Les interviews semi-structurées subséquentes ont révélé que certains problèmes opérationnels persistaient, mais que plusieurs étaient déjà résolus tandis qu'apparaissaient des avantages sur le plan clinique et pour la qualité de la pratique. Les avantages cliniques incluaient la disponibilité de collègues pouvant fournir des informations fiables sur les médicaments et rafraîchir leurs connaissances, et le fait de prescrire de façon plus sécuritaire. Les avantages pour la pratique incluaient la formation des membres du groupe, les liens avec les pharmacies locales et un meilleur esprit de groupe. Les défis opérationnels persistant incluaient le temps requis pour connaître les rôles et habiletés des pharmaciens, et le manque d'espace dans les cliniques pour loger les deux professionnels.

CONCLUSION L'opinion des médecins sur la pratique en collaboration, une année après l'intégration des pharmaciens dans leur cliniques de médecine familiale, était globalement favorable. Il restait à résoudre certains problèmes opérationnels. Plusieurs des inquiétudes initiales concernant la pratique en collaboration étaient résolues, et les médecins découvraient les avantages de travailler avec les pharmaciens, notamment le fait de prescrire de façon plus sécuritaire.

POINTS DE REPÈRE DU RÉDACTEUR

- Cette étude qualitative examinait l'opinion des médecins sur la pratique en collaboration une année après l'intégration de pharmaciens à leur clinique de médecine familiale.
- Les interviews avec les médecins ont fait ressortir 4 thèmes principaux: défis opérationnels, sécurité accrue, et avantages sur le plan clinique et pour la qualité de la pratique.
- Le médecin qui apprend à travailler avec une nouvelle discipline dans une clinique de médecine familiale doit prendre le temps de comprendre les rôles et habiletés du pharmacien, et cela constituait un défi pour certains médecins. Une fois l'intégration effectuée, toutefois, les participants trouvaient que les pharmaciens leur faisaient gagner du temps.

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Demands to improve management of chronic diseases and use medications cost-effectively are leading to the creation of primary health care teams that include pharmacists. Despite the availability of effective medications, barriers to achieving the optimal benefits of medications continue to include patients' noncompliance, undertreatment of conditions or symptoms, and suboptimal or inappropriate prescribing.[1-3]

While pharmacists have seen improving collaborative relationships with physicians as a key avenue to improving patient outcomes,[4] physicians have often looked at interdisciplinary collaboration from the perspective of the shortcomings of team-based care, such as potential disruption of finances, work satisfaction, and patient-physician relationships.[5] Adjusting to collaborative practice models often means confronting issues of professional autonomy that play out both at the level of the professionals involved and the practice (organizational) level.[6] Attempts to modify physicians' roles have often met with considerable opposition because such reforms are generally viewed as threats to the independence and autonomy afforded to family physicians in Canada.[7-10]

In this article we explore physicians' perspectives on collaborative practice 12 months after pharmacists were integrated into their family practices.

METHODS

This qualitative study used exploratory focus groups followed by semistructured interviews and thematic analysis of data to explore family physicians' perspectives on collaborative care with pharmacists. Research ethics approval was obtained from the Research Ethics Boards of the Élisabeth Bruyère Research Institute in Ottawa, Ont, and McMaster University in Hamilton, Ont.

IMPACT program context

This study was part of a large-scale Ontario Primary Health Care Transition Fund demonstration project entitled Integrating family Medicine and Pharmacy to Advance primary Care Therapeutics (IMPACT). Seven nondispensing pharmacists were integrated into 7 family group practices from June 2004 to July 2006. The pharmacists provided medication assessments for patients; academic detailing, drug information, and education; and office-system enhancements to optimize drug therapy.

Recruitment of group family practices

The project team recruited 7 community-based, physician-led group family practices in urban, suburban, and semirural communities and 1 university teaching centre in Ontario. Key considerations in practice recruitment included physicians' interest in having pharmacists join the practice and diversity in physicians' sex, age, and scope of practice. Recruited practices contained between 7 and 14 family physicians. Although each practice had taken early steps toward working as a group, and 3 had recently introduced nurse practitioners, none had developed strong interdisciplinary teams or experienced working with integrated pharmacists in their practice settings.

Recruitment of pharmacists

The project team selected 7 pharmacists using criteria that would make it likely that these pharmacists would fit into the family practices: flexibility in approach, good communication skills, evidence of adaptability, and experience in pharmaceutical care.[11] The pharmacists, 6 women and 1 man, ranged in age from late 20s to early 40s. The pharmacists participated in a training workshop, and mentor pharmacists, who had had experience working collaboratively with physicians and had advanced clinical degrees, supported each of them throughout the first year of integration. The pharmacists worked approximately 2.5 days a week in their assigned family practices.

Exploratory focus groups

We conducted 4 exploratory focus groups 3 months into the project to identify issues related to working with the IMPACT pharmacists. Each focus group comprised 4 to 9 physicians from 1 practice and the practice's integrated pharmacist. We thought the teams were far enough along in building their relationships that including the pharmacists would be advantageous in gathering information to help form the foundations of our interview questions. All focus groups were audiotaped and transcribed verbatim. The preliminary data gleaned from the focus groups were used to identify issues related to collaborative practice with pharmacists. These issues were then used to inform the development of the semistructured interview guide.

The following quotes from the focus groups illustrate the climate and concerns about medicolegal implications and the importance of maintaining the integrity of patient-physician relationships.

> We [physicians] are MRPs [most responsible persons] for every one of our patients. And I cannot delegate critical pieces of patient care to someone else. (Focus group 01)

> Nobody except the doctor makes the diagnosis. And whoever works with the doctor should know that the doctor has the final decision if joint therapy is needed. (Focus group 01)

Semistructured interviews

We purposively selected 12 physicians for semistructured interviews 12 months into the integration process. We

chose participants based on sex, practice location, years of experience, and perceived support of the pharmacist program based on ratings from the integrated pharmacists (**Table 1**). We oversampled physicians perceived as being less supportive of the pharmacist program. Low levels of support were determined from numbers of referrals to pharmacists and number of consults for drug information. A sociologist (S.H.) conducted all the interviews by telephone.

Table 1. Demographic characteristics of physicians interviewed: *N* = 12.

CHARACTERISTIC	N
Sex	
• Male	7
• Female	5
Years in practice	
• < 10	6*
• 10–20	3
• > 20	3
Level of support for program	
• Low	4
• High	3
• Variable	2
• Undefined	3
Location of practice	
• Urban	9
• Suburban	1
• Semirural	2

*3 staff physicians and 3 residents.

Analysis

Four research team members with varying professional backgrounds in family medicine (K.P.), pharmacy (B.F., N.K.), and sociology (S.H.) independently reviewed the transcribed information. They immersed themselves in the data, making notes in the margins, writing memos, and assigning codes that made sense to them as they began to "crystallize" themes out of the data.[12]

Codes were entered into NVivo, a qualitative data organization and analysis program. Codes were discussed and debated by the researchers during regularly scheduled monthly meetings, which were also attended by 2 additional research team members who provided feedback on the discussions. The team used a thematic editing approach[13] to the analysis to determine common themes and to search actively for outlying ideas, competing explanations, and various meanings. No new themes emerged from the last several interviews. Two additional interviews, unsuccessfully audiotaped owing to technical difficulties, also failed to produce new themes. We checked for reliability of the data by discussing preliminary interpretations during the interview process and by presenting the thematic findings to participating physicians.

FINDINGS

The research team identified 4 main themes from the interviews with physicians: operational challenges, developing security, benefits for both physicians and pharmacists, and practice-level benefits.

Operational challenges

Adjusting routines. A key challenge for physicians was adjusting their daily routines to include using a pharmacist. For example, early on it was a challenge to remember that the pharmacist was available as a resource during hectic days in a busy office.

> Quite honestly, in the beginning I couldn't remember that [the pharmacist] was there because I didn't use [the pharmacist] as much as I could have in retrospect…. But then when I started going, I thought [the pharmacist] was great and I used her as much as I could. It sounds pretty silly, but you get so busy between patients and seeing them every 10 to 15 minutes, I would say, "Oh I could have asked [the pharmacist] about that." (KI 04)

Finding time. A related concern for physicians was finding time to work with pharmacists in the context of a busy practice. At the beginning, time was required to learn how to work with pharmacists and to engage them in clinical decisions. About 12 months into the project, however, physicians had found that pharmacists could sometimes help save time and that pharmacists were often able to adapt to the pace of the practice and find opportunities to work on patient issues.

> I have to figure out where to put that time, but [the pharmacist] is very sensitive to that. So, for my part, when I am near [the pharmacist] … I drop in and talk. So we communicate that way. Then [the pharmacist] always stops in at least once a week to talk to me when I am free. We respect each other's time. (KI 06)

> I spend a little less time doing medication reviews and specifically going over how people take medications. So that's actually speeded things up for me. (KI 07)

Developing security

Information from the focus groups showed concerns relating to medicolegal implications and scope of practice. When we asked questions pertaining to these concerns 12 months into the project, we found it difficult to elicit any evidence that these early concerns remained. The following quotes represent participants' responses to direct questions regarding medicolegal concerns:

> I don't think there has ever been a situation where [pharmacists] have gone beyond their own area of expertise. So it's never been where a patient will come and say, "You know that pharmacist is talking to me about 'X.'" That doesn't happen. (KI 03)

> No medical legal issues have come to mind. I think that depends on the person, you know. We have the same kind of thing with nurse practitioners, for

> instance. We always worry about whose responsibility was it and did somebody drop the ball. But I think [the pharmacist] documents everything carefully, and I am confident that if [the pharmacist] has a concern [he or she] is going to pass it back to me. (KI 06)

Clinical benefits

Clinical benefits included having a colleague to provide drug information and fresh perspectives, feeling more secure about prescribing, and increased scope of practice. Regarding access to drug information, one physician noted the following:

> Having easy access to information about medications, just having somebody there that if you have a question while you are seeing a patient you can pop out, go into [the pharmacist's] office and ask practical questions about dosing or interactions or limited access forms, just things like that. So one of the best parts is just having somebody there that you can ask questions. And then the other part being that you having [the pharmacist] there to help you with specific patients and doing medication reviews. (KI 07)

Other respondents commented on the benefits of the fresh perspectives provided by pharmacists.

> Um, just getting a fresh opinion. Sometimes you get so deeply into the management of a patient that it's nice to have somebody sort of stand back and just give you a nice overview and quite often [the pharmacist] will in a note just summarize things differently than I have been doing. (KI 03)

Physicians also noted the benefit of feeling more secure as a result of being able to consult with a pharmacist, both for drug information and for patient issues. One physician said the following:

> I had a situation, a very unfortunate situation, where a patient of mine, unfortunately a young woman died in her sleep. As a physician, you always second guess yourself and think, "Okay, all right, could anything I've done [have] made a difference here?" .... Or drug interactions or things like that. So I got [the pharmacist] to look that up for me and really just to serve as a sounding board .... "Okay, is there anything here that you think could have been a problem?" And [the pharmacist] was very reassuring, and that was great because number one, it gave me peace of mind, but it also served as reinforcement to my own thinking. (KI 11)

Others noted how the pharmacist was able to affirm a physician's direction in patient care by helping to present a united front. This was often helpful in managing clinically challenging patients.

> It is sometimes difficult in people with chronic pain to deal with what's appropriate in terms of narcotic addiction, when it's an appropriate use and when people are crossing the line. And so I have used [the pharmacist] to help with that and [the pharmacist] has talked to the person separately, kind of on a different vein than I do, and then we get together and talk to the patient and we've had some success by doing that, more than I've had seeing the same patient over and over again, and they want their medication and I don't want to give it to them .... Both for the information it provides and providing a united front to the patient. (KI 06)

> And the one person in particular who was doing okay, but you know, always had so many symptoms going on, [the pharmacist] was able to sit down and look at each of the medications and give feedback on each of them and make some really good recommendations on a couple of switches that could be made, which when I had sort of briefly mentioned that to that patient in the past, they were resistant to that, but when [the pharmacist] sat down and said, "Here is why we would think these switches would be good," the patient was really open to making those adjustments. (KI 09)

Another theme that emerged was the opportunity to expand the scope of clinical practice because of the pharmacist's assistance. For example, a physician noted,

> "We initiate insulin now. We have been doing that more in the office now that [the pharmacist] has been teaching the patients on how to use the syringes and how to use their glucometer." (KI 03)

Practice-level benefits

Pharmacists also had an effect at the practice level. Practice-level benefits included freeing up resources, providing a link with community pharmacists, providing group education, and fostering an enhanced sense of "team." While finding time to work with pharmacists was a challenge initially, once familiar with pharmacists' skills, several physicians noted that the pharmacists allowed them to free up their time. One respondent reported the following:

> I think that it just frees up the physician's time because we have to do less patient education, less medication reviews, and things like that. And then the patient himself benefits from better education. It frees up resources and just provides better care overall. (KI 07)

When asked about benefits or rewards of having pharmacists around, physicians highlighted group education benefits.

> [The pharmacist] does some educational stuff with us as well. [The pharmacist] comes to [physician] rounds, and often we will ask questions, and [the pharmacist] will go away, look some things up, and bring it back. (KI 07)

Along with education, physicians appreciated assistance in providing a bridge between the family practice and community pharmacists. One respondent said:

> It's nice to have 1 more team member as well who could communicate with ... can help communicate with the community pharmacy and help arrange things there .... Often [the pharmacist] will call the community pharmacy and arrange to have the dose set up and delivered .... That's one way in which [the pharmacist] makes it easier for the nurses and for the physicians. (KI 07)

Several physicians reported the enhanced sense of team they felt with the pharmacist as part of their practice. Once the pharmacists' skills and roles were discovered, the benefit to the practice team became apparent.

> I think having a pharmacist on the team is invaluable, just as the doctors, just as the nurses, just as a physiotherapist is. We are all the same team. (KI 04)

> Patients love it. I mean the responses of patients have been uniformly positive. They like the fact that somebody else is involved with their care. It makes them feel important. And it also sort of empowers them. I mean [the pharmacist] has a way of giving back to them how they want to fix things up a little bit better. (KI 03)

DISCUSSION

Identifying physicians' concerns about collaborative practice through focus groups and then following them up in interviews 12 months into the integration process provided a window onto physicians' experiences during the start-up of pharmacist-physician collaborative practice. At 12 months, the main area of concern for physicians was the time needed to learn about pharmacists' skills and to adapt to new practice patterns. The main benefits identified were gaining fresh perspectives, having access to current information on drugs, and having increased security in prescribing within the practice.

Changing practice patterns and health service delivery is difficult for physicians. Successful changes in practice occur when new approaches incorporate aspects directed at patients, care providers, and the practice.[14] The findings in this study revolved around the real challenges of adjusting old routines and managing time differently, as well as the contributions made by pharmacists to direct patient care, interprofessional collaboration, and practice level improvements to medication prescribing and use. Greenhalgh et al[15] conducted a systematic review of studies looking at the adoption of innovative methods of service delivery. They identified several key elements that facilitated adoption: the relative advantages of the innovation, its complexity, its compatibility with existing routines, how easily a trial of the innovation could be carried out, and how well the innovation could be adapted to the practice. Our findings highlight the importance of flexibility on all sides, how easily the pharmacist could be contacted, and how well pharmacists could adapt to the context of working with physicians.

At the wider level of the health system, the challenges of medication management have been recognized worldwide, and many countries have been working to integrate pharmacists and medication services into primary health care. Physicians' initial concerns about collaborative practice were understandable because, beyond the fact that the pharmacist program represented an innovation, there was the additional overlay of threat to professional autonomy that can arise in collaborative practice. Similar observations have been made in the United Kingdom.[6,16] Although the practices in our study had agreed to participate, we noted in the earlier focus groups that the physicians had concerns about working with pharmacists. At the 12-month point, we were unable to find evidence that these concerns remained, and clinical benefits for physicians and practices had emerged. For example, several physicians began to see that having pharmacists on-site could actually increase clinical security. The enhanced sense of team that emerged might also have played a role in improving adherence to medications.

Implications for practice

Team-based care seems to work best in focused areas, and teamwork is influenced by organizational culture and requires effective administrative leadership.[5] Trials of having pharmacists on health care teams have demonstrated improved quality of processes of care and greater patient satisfaction with education, but have yet to consistently demonstrate improved health outcomes.[17-19] While learning to work together challenges old routines, as our study shows, it might also bring new possibilities to family practice and expand scope of practice to include such things as prescribing insulin and more successfully managing challenging patients. Successful teams recognize the professional and personal contributions made by all members.[20,21]

Limitations and implications for future research

The family practices and pharmacists in this demonstration project can be considered pioneers in the integration process and could differ from the general population of physicians and pharmacists. For example, the pharmacists were selected for their communication skills and adaptability, and the proportion of physicians interviewed who had less than 10 years' experience was greater than the proportion in the overall family physician population. We also acknowledge the risk that some questions in the interview guide could have encouraged positive responses. The research team went to great lengths, however, to oversample physicians who were less supportive of the program. Given the subjective nature of qualitative inquiry, future work could be directed at answering research questions related to teamwork and clinical security using more quantitative measures.

Conclusion

Physicians found changing practice routines challenging. Learning to work with a new discipline in family practice settings required physicians to find the time to understand pharmacists' roles and expertise. While some operational challenges remained 12 months into the process, several clinical and practice-level benefits had emerged.

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Contributors

Drs Pottie and **Farrell** contributed to conception and design of the study, analysis and interpretation of data, and drafting the manuscript. **Ms Haydt, Dr Dolovich, Ms Sellors, Dr Kennie, Dr Hogg,** and **Dr Martin** contributed to conception of the study, interpretation of data, and drafting the manuscript. All the authors gave final approval to the article submitted.

Competing interests

None declared

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