


Quality improvement: A strategy to accelerate pharmacist integration into team-based primary care practice

Taylor Raiche, BSP; Jessica D. Visentin, PharmD; Lisa Fernandes, BScPhm, PharmD;
Natalie Crown, BScPharm, PharmD; Lisa M. McCarthy, BScPhm, PharmD, MSc 

Introduction

The role of pharmacists in primary care teams has been a subject of increasing interest in recent years as Canadian primary care practice has shifted toward an interprofessional team-based model.¹ In the 2013 “Guidelines for pharmacists integrating into primary care teams,” Jorgenson et al.¹ summarized common barriers to pharmacist integration into these teams: lack of role clarity, physician resistance, patients’ uncertainty about the pharmacist’s role and lack of pharmacist assertiveness. In this practice brief, we discuss how a pharmacy team-led quality improvement (QI) project in an academic family health team addressed some of the aforementioned barriers, augmented the pharmacy team’s caseload and facilitated integration into the family practice care team for a pharmacy resident new to this setting.

Women’s College Hospital (WCH) in Toronto, Ontario, is Canada’s only academic ambulatory care hospital. Since 2012, WCH has offered a postgraduate year 1 (PGY1) pharmacy residency training program that is accredited by the Canadian Pharmacy Residency Board. After a 4-week immersive rotation in the WCH Family Practice Health Centre (FPHC), the pharmacy resident continues to provide direct patient care one day per week throughout the residency year, with preceptorship from the FPHC team pharmacist. The longitudinal component of this rotation provides a unique opportunity for residents to enhance their practice management and leadership skills by assuming progressive responsibility and independence for their own patient caseload.

We introduced a practice enhancement initiative into the 2018-2019 residency program to augment the pharmacy

resident’s case-finding strategy and to enhance the patient referral stream for the longitudinal FPHC rotation. To enrich the experience, we adopted a QI framework so that the resident could concurrently develop skills in evaluating small tests of change and planning subsequent, feedback-responsive iterations to scale the intervention.² The project was a targeted deprescribing initiative that aligned with the organization’s strategic goals regarding quality service excellence and patient engagement.³

We chose this initiative because, on a global scale, the World Health Organization has called for action by issuing a Patient Safety Challenge in 2017 to decrease avoidable medication-related harm by 50% within 5 years.⁴ Deprescribing is one strategy to address this aim and is well aligned with the pharmacy team’s scope of practice to address. Evidence-based clinical practice guidelines for deprescribing various medication classes have been published in recent years to guide best practice.⁵⁻⁹ We chose to target proton pump inhibitors (PPIs) first, as 40% to 55% of people using PPIs long-term do not have a valid indication for ongoing use.^{10,11} We plan to apply what we have learned with PPIs to develop targeted deprescribing processes for other classes of potentially inappropriate medications.

Methods

Our improvement aim was to deprescribe PPIs in at least 20% of eligible patients by 12 weeks of follow-up. We defined deprescribing as greater than or equal to 50% reduction in dose or frequency. This aim statement was informed by published results from a PPI deprescribing initiative completed by

TABLE 1 Eligibility criteria for PPI deprescribing¹

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> • Receiving proton pump inhibitor therapy for longer than 8 weeks, as indicated in the electronic medical record • 18 years of age or older 	<ul style="list-style-type: none"> • Barrett's esophagus • Chronic use of nonsteroidal anti-inflammatory drugs or corticosteroids • Severe esophagitis (Los Angeles grade C or D) • Documented history of bleeding gastrointestinal ulcer

another Ontario academic family health team, where deprescribing was successful in 26% of eligible people.¹²

We initially partnered with 3 physician champions to limit our population to a manageable size with the intent of spreading the intervention to other practices over time. We generated reports from our electronic medical record (EMR) to identify individuals with an upcoming appointment with one of those physicians who had been on a PPI for longer than 8 consecutive weeks. Pharmacy team members reviewed EMR records to assess whether a person might be eligible for deprescribing based on clinical practice guidelines (Table 1).⁶ A pharmacy team member approached the individual and their physician to explain that the patient was potentially eligible to reduce or stop the medication. If a pharmacy team member was not available to meet with the patient, we suggested that the physician discuss deprescribing during the appointment. Using the shared decision-making model, we introduced the choice to the person, described the options, provided additional written information and then helped the individual to explore personal preferences to make decisions about deprescribing.^{13,14}

The project was developed by 2 WCH pharmacy residents in partnership with our pharmacy clinician scientist (who supervises residency scholarly projects), FPHC pharmacist (resident preceptor) and residency program director. Supporters included FPHC physicians and other clinical team members, administrative staff and QI advisors. The project was approved by the WCH Ethics Assessment Process for Quality Improvement Projects (APQIP) and was granted a REB exemption (August 29, 2018, REB # 2018-0115-E).

Results

At baseline, 11% (291/2623) of patients had been prescribed a PPI for longer than 8 weeks, with 43% (124/291) deemed eligible to deprescribe. We met with 55% (68/124) of these people. The pharmacy resident met with 10 and the remainder were assessed by the pharmacist ($n = 17$) or physicians ($n = 41$). The majority of follow-up phone calls at 4, 8 and 12 weeks were provided by the pharmacy resident and pharmacist. Over 6 months of data collection, we successfully helped 21% (14/68) deprescribe by 12 weeks, consistent with success rates previously reported in other centres.¹² Most patients reduced their PPI use by at least 50% within the first 4 weeks. Our team continues to make iterative changes to optimize the efficiency of identifying and assessing eligible people.

Discussion

Beyond achieving the QI aim statement, the team felt there were several reflections arising from the experience that are worthy of sharing in a Practice Brief (Box 1), as they may be helpful for addressing some of the known barriers experienced by pharmacists integrating into primary care teams.¹ To overcome potential uncertainty about where to begin in a new role, a pharmacist can identify, and lead, a practice-level enhancement that has the potential to positively impact patient care.

Leading a QI project aimed at implementing widely accepted, evidence-based guidelines to optimize drug therapy is a strategic way to minimize potential prescriber resistance to recommendations.⁵⁻⁹ Obtaining buy-in for these recommendations helps to build trusting collaborative relationships with prescribers and may minimize resistance to future involvement of the pharmacist in medication-related decision-making.¹⁵ Physicians and other health care professionals appreciate when someone takes initiative in solving a problem.¹⁶ As a pharmacist, leading a QI project related to medication safety demonstrates not only initiative but also clinical expertise in medication-related decision-making.

The guidelines by Jorgenson et al.¹ acknowledge an “overarching theme regarding the importance of pharmacist assertiveness.” This is supported by research done by Rosenthal et al.¹⁷ who have highlighted several pharmacist personality traits that could potentially hinder successful integration into the primary care team, including lack of confidence and a fear of new responsibility. Recent Canadian research suggests that pharmacy practice change is influenced by multiple factors, summarized by the “9 Ps of practice change” mnemonic.¹⁸ These 9 themes were identified by Gregory et al.¹⁸ in the context of community pharmacy, but we feel these observations can extend to other primary care settings, such as team-based models. In this case, QI initiatives can serve as “**P**rocess pointers,” that is, iterative change ideas that enlighten the pharmacist to optimized processes. **P**ositive reinforcement and **P**hysician acceptance are probable when QI aims are achieved and improved patient care outcomes are realized. Last, the pharmacist’s **P**rofessional identity can be augmented through leading—or less intensively, joining—a QI initiative when new to this practice setting. Engaging in QI work early in joining the practice may help to improve a pharmacist’s assertiveness and confidence and help to drive practice change, potentially expediting integration.

BOX 1 Reflections on pharmacist integration into primary care teams using QI*1. Generate referrals using a targeted case-finding strategy*

We aimed to bolster the pharmacy team's caseload by identifying patients eligible for PPI deprescribing. Over 140 patients identified by the case-finding strategy had scheduled appointments in clinic within the first 6 months of the project. On the days the resident was in clinic, she was able to meet several patients to discuss deprescribing and then provide ongoing follow-up on subsequent clinic days. Many individuals eligible for PPI deprescribing were older adults experiencing potentially problematic polypharmacy who could benefit from ongoing care from a pharmacist. The pharmacy resident performed comprehensive medication reviews with 7 patients and several others asked specific questions about their other medications. This experience provides proof of concept that a targeted intervention with a specific case-finding strategy can build a pharmacy professional's caseload.

2. Jump in on the action

Recognizing the importance of face-to-face interactions, the resident was encouraged to deliberately situate herself in places where other health professionals, including physicians, often congregated (i.e., the practice's team rooms). The pharmacy resident would do this prior to an eligible patient's appointment to opportunistically discuss any recommendations or plans with the prescriber. This physical proximity led to additional opportunities that helped shape the pharmacy resident's role and workflow. Examples included referrals for comprehensive medication reviews, requests for patient-specific drug therapy recommendations (e.g., management of a drug interaction) and general drug information questions. Another example occurred when a physician not involved in the QI project overheard one of these conversations and proposed a new collaborative QI project to optimize prescribing of antihyperglycemics. These opportunities diversified the resident's referral stream and caseload and created opportunities to develop relationships with other team members and patients by connecting through repeated follow-up.

3. Leverage literature and existing practice tools

As expected, there were instances in which the physician and pharmacy resident expressed differing opinions about whether ongoing long-term PPI therapy was warranted. This created several opportunities for the pharmacy resident to share best available evidence with prescribers, leveraging published guidelines and providing evidence-based tools to help support (de)prescribing.^{6,14} These conversations enhanced the prescribers' impression of the resident's potential contributions to patient care and, again, created opportunities for collaborative care for other patients. Having these conversations early in relationship-building also provided insights into each physician colleague's thought processes and conflict management styles.

4. Advocate for your role in patient care

The general public often associates pharmacists with pharmacies.¹⁹ As such, an early lesson learned by the resident was the need to provide a clear overview to patients about the role of the pharmacist in the primary care clinic. Opening the interaction with a brief statement as to *how* and *why* the patient was identified for the particular intervention was helpful for establishing trust and a therapeutic relationship. Even in situations where deprescribing was not appropriate, the interaction still posed an opportunity to provide education about the pharmacist's role in helping people weigh the benefits and risks of each medication. The resident also came to appreciate the importance of communicating that the role of the team-based primary care pharmacist is intended to complement, not replace, the patient's existing relationship with their community pharmacist.

5. Encourage (and practice) shared decision-making

Some patients were surprised that the pharmacy resident suggested a trial of discontinuing their medication, stating they had never realized that treatment did not necessarily need to be lifelong. This prompted some to ask about the ongoing reason for use of their other medications and, in at least one case, prompted a recommendation to a physician to deprescribe another medication. The pharmacy resident observed that these interactions heightened people's awareness of their own role in decision-making. Deprescribing interventions presented the pharmacy resident with opportunity to practise partnering with patients in very intentional ways to encourage shared decision-making.

6. Get inspired

Exposure to the unique roles and responsibilities of team-based primary care pharmacists was not a component of the pharmacy resident's experiential undergraduate pharmacy education. Like other pharmacists' experiences described in the literature, she noted that the fear of fulfilling new responsibilities initially led her to take on a more reactive role in patient care by waiting for other health care professionals to refer to the pharmacy team.^{15,17} She recalled that the QI intervention, however, gave her an initial sense of purpose. By not just participating in but rather helping to develop and lead a structured intervention to address an identified issue, the pharmacy resident felt more motivated and valued as part of the team.

Table 2 provides additional tips on these reflections.

TABLE 2 Additional tips to ease pharmacist integration into team-based primary care

Reflection	Tips
Generate referrals using a targeted case-finding strategy	<ul style="list-style-type: none"> - Learn how to run reports in electronic medical record software to identify people at risk of drug therapy problems. <ul style="list-style-type: none"> ○ Design reports that are reflective of the unique population (e.g., high prevalence of antipsychotic use for behavioural and psychological symptoms of dementia). - Use a screening tool to identify people at risk of drug-therapy problems.²⁰ - Prepare a list of the pharmacy team's most high-impact service offerings and review it one-on-one with clinicians; post a paper copy or provide laminated "pocket cards." - Work with the practice's leadership or QI team to identify opportunities for involvement in QI aims or new programs.
Jump in on the action	<ul style="list-style-type: none"> - Work at a station in busy areas of the clinic during downtime (e.g., team rooms, nurses stations, etc.). <ul style="list-style-type: none"> ○ Stay alert for opportunities to help with activities other health professionals may find time-consuming (e.g., addressing hesitancy about vaccinations) that align with the pharmacist's scope of practice. ○ Participate in team huddles or connect with team members at the start of clinic to seek out opportunities to offer medication-related services. ○ If permitted, proactively review the charts of patients booked for the next day, starting with one physician or nurse practitioner's practice.
Leverage literature and existing practice tools	<ul style="list-style-type: none"> - Subscribe to relevant journals' RSS feeds, preappraised evidence newsletters (e.g., CADTH, McMaster Evidence Alerts, MedSask, Therapeutics Initiative), or podcasts. - Start a journal club and facilitate the critical appraisal of a medication-related journal article relevant to the population's needs.
Advocate for your role in patient care	<ul style="list-style-type: none"> - Join a multidisciplinary practice advisory committee. - Present a case at team rounds that demonstrates your role in improving patient outcomes and care delivery. - Send out a regularly scheduled medication information bulletin (e.g., <i>RapidRx Newsletter</i> available at www.impactteam.info/practiceEnhancements.php). - Proactively offer support for management of anticipated medication-related questions (e.g., email a bulletin for suggested management of pharmacotherapy during a medication shortage).
Encourage (and practise) shared decision-making	<ul style="list-style-type: none"> - Remind patients that they are key team members in making decisions about their care. - Become familiar with patient decision aid resources. <ul style="list-style-type: none"> ○ The Ottawa Hospital Research Institute curates a database of decision aids (https://decisionaid.ohri.ca/AZlist.html). - Document the information you provided to the person regarding all options so that other clinicians are aware that the individual is equipped to make an informed choice.
Get inspired	<ul style="list-style-type: none"> - Join the CPhA/CSHP Primary Care Specialty Network (https://cshp.ca/psn-communities) or other practice specialty networks (www.qid.io) to expand your networking circle. - Seek out mentor(s), either formally or informally. Mentor and mentee responsibilities, recommended discussion topics and useful resources have been previously published in this journal.²¹ - Partner with another clinician to lead a project or co-chair a committee. - Take an Open School course on QI through the Institute for Healthcare Improvement (http://www.ihl.org/education/IHIOpenSchool/courses/Pages/default.aspx).

CADTH, Canadian Agency for Drugs and Technologies in Health; QI, quality improvement.

Limitations

The number of eligible people assessed by the pharmacy resident was relatively few compared with other providers due to the limited number of appointments scheduled for the days she was in clinic. However, she was also responsible for collecting and analyzing the data for the QI project, which involved regularly collaborating with the physician champions and other team members. Through these activities, the pharmacy resident refined her practice management and interprofessional communication skills. These skills are key for addressing the barriers pharmacists experience when they integrate into primary care teams, including a lack of role clarity, physician resistance, patients' uncertainty about the pharmacist's role and lack of assertiveness.^{1,16} Further,

conducting this project leveraged the relationship capital and quality improvement culture already present at WCH FPHC. Launching a project in a setting without an existing quality improvement culture will likely present challenges not recounted in this experience, such as prolonged implementation time.

Conclusion

After joining an established primary care team, the pharmacist's drive to establish a well-defined and valuable role can be both exciting and daunting, especially for new practitioners. New and experienced pharmacists alike can consider leading a practice enhancement initiative using QI methods to build their practice and facilitate integration into new settings. ■

From Women's College Hospital (Raiche, Visentin, Fernandes, Crown, McCarthy), Toronto, Ontario; Medication Assessment Centre, University of Saskatchewan (Raiche), Saskatoon, Saskatchewan; South East Toronto Family Health Team (Visentin); the Department of Family and Community Medicine (Fernandes, McCarthy) and the Leslie Dan Faculty of Pharmacy (Crown, McCarthy), University of Toronto, Toronto, Ontario. Contact lisa.mccarthy@utoronto.ca.

Acknowledgments: We would like to thank Drs. Danielle Martin, Carol Kitai and Brad Lichtblau of Women's College Family Practice Health Centre, as well as Bibi Khan, clinic secretary and Ameet Mathrani, EMR Systems Administrator, for their partnership in this project. At the time of writing, Taylor Raiche and Jessica Visentin were ambulatory pharmacy practice residents at Women's College Hospital.

Author Contributions: Conceptualization, methodology, writing-reviewing and editing: All authors. Data curation, investigation, writing-original draft: TR. Project administration: LM. Resources: LF, LM. Supervision: LM, NC, LF. All authors approved the final version of the article.

Declaration of Conflicting Interests: The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding: The authors received no financial support for the research, authorship and/or publication of this article.

ORCID iD: Lisa M. McCarthy  <https://orcid.org/0000-0001-9087-1077>

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