Ontario Pharmaceutical Opinion Program: Second take

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Introduction

The profession of pharmacy has experienced a major evolutionary shift in how it practises. In response to reimbursement changes to the dispensary model, the focus has shifted to providing clinical services. As a result, the Ontario MedsCheck program was launched as a 20- to 30-minute one-on-one meeting of the patient with a community pharmacist to review his or her medication regimen and look for any drug-related problems or areas for optimization. Following a medication review, the pharmacist may receive remuneration for providing clinical recommendations through the Pharmaceutical Opinion Program. Previous studies have demonstrated financial viability of the program.¹

Pharmaceutical Opinion Program

In 2007, Ontario launched the MedsCheck program,² which was then supplemented by the Pharmaceutical Opinion Program³ on September 1, 2011, which is intended to provide a structured framework for the identification of potential drug-related problems (DRPs) and subsequent collaboration with prescribers. As a component of the expanded scope of practice, this program promotes improving patient outcomes, optimizing drug therapy and reducing inappropriate drug use and wastage. Recommendations for DRPs may be provided during the course of dispensing a new or repeat prescription or following a medication review.

Following a recommendation, 1 of 3 outcomes is expected:

1. **Not filled as prescribed** (may be due to unsafe therapy, forged/falsified prescription)
2. **No change to prescription therapy; filled as prescribed** (after discussing

recommendations, no changes to the prescription were made)

3. **Change to prescription therapy** (after discussing recommendations, changes to the prescription were made)

Following 1 of these 3 outcomes, the recommendation provides \$15 reimbursement for eligible patients.

Eligibility

Only Ontario citizens covered under the Ontario Drug Benefit program are eligible for reimbursement from the Pharmaceutical Opinion Program. These patients are primarily older than 65 years, with the remainder on social assistance or included through the Trillium program.² There is no restriction based on number of medications. Conversely, the MedsCheck program is available for any Ontario citizen taking 3 or more medications for a chronic condition or a single medication for diabetes with no age restriction.³

An important distinction for the Pharmaceutical Opinion Program is that for eligible patients, regardless of whether or not the prescriber accepts the recommendation, the pharmacy is still reimbursed \$15 for the pharmacist's efforts. The pharmacist must provide the most accurate suggestion based on the information available to him or her, which may be incomplete due to lack of access to patient's medical records or laboratory data.

The primary objective of this practice brief was to determine if providing pharmaceutical opinions is financially sustainable and viable as a practice in community pharmacy. Secondary objectives included comparing the effectiveness of phone versus fax as a method of

FIGURE 1 Breakdown of recommendation response, reimbursement and eligibility

communication, identifying trends between the different pharmaceutical opinion categories and in recommendations by disease state DRPs.

Methods

The author (as a pharmacist intern) conducted medication reviews and provided recommendations between June and August 2013 during a community pharmacy work placement in Thunder Bay, Ontario. The pharmacy completed approximately 10,000 prescriptions per month on average.

Patients visiting the pharmacy who met the eligibility criteria were offered a MedsCheck review at that time or the opportunity to schedule an appointment for a later date. Beyond creating a comprehensive list for the patient, additional objectives included optimizing drug regimens, combining medications, searching for potential DRPs, improving adherence and simplifying medication regimens to improve adherence. If collaboration with a prescriber was required, a summary of recommendations was provided to the patient, and the prescriber was contacted by phone and, if unavailable, then by fax. Since pharmacists in Ontario do not yet have access to

patients' medical records or laboratory data, this created a limitation for recommendations.

To reduce the number of recommendations missed for reimbursement, a copy of the original letter was filed in a separate folder for review at a later date. On August 28, 2013, all filed recommendations provided by the pharmacy intern were reviewed against patients' medication profiles on the computer system. All eligible recommendations and any applicable changes relevant to said recommendations were submitted for reimbursement.

To estimate sustainability and viability, the total revenue generated was tracked in a data sheet, while costs were primarily based on time consumed performing the service. Depending on the complexity and number of the recommendations, the average time required to draft or communicate a suggestion to the prescriber varied. This estimate includes time spent faxing or calling a prescriber.

Results

Primary outcome: Sustainability and viability

After 3 months, 172 pharmaceutical opinions were provided for 64 patients (26 male, average age 72 years) and communicated to 41 different prescribers. This averages to 2.7 recommendations per patient. The majority of DRPs were regarding diabetes, cardiovascular health, or pain management. From the total number of recommendations provided, 52% received a response from the prescriber, with 70 recommendations (41%) eligible to be submitted for reimbursement. Although this generated \$1050.00 in revenue from eligible responses, \$1530.00 was not remunerated due to a lack of prescriber response or ineligibility (Figure 1). The average time required to draft a letter was 7 minutes per patient.

Cost analysis

A calculation is provided (Table 1) to assess the cost benefit of providing pharmaceutical recommendations by a pharmacist.

Secondary outcomes

Communication. When a DRP was identified, a phone call was initially made to the prescriber to discuss the recommendation. If unsuccessful, a letter was then faxed to the prescriber's office. Recommendations communicated via the phone were much more likely to be accepted

FIGURE 2 Distribution of drug-related problems by disease **TABLE 1** Cost analysis**Estimated pharmacist costs to providing program**Average pharmacist's rate of pay = \$47.90/h = \$0.80/min⁴

Average time to write a recommendation per patient = 7 minutes (5-10 minutes based on clinical experience)

Cost = 7 min/patient × 64 patients × \$0.80/min

Cost = **\$358.40**

Total potential revenue	Actual revenue generated	Lost revenue not available for reimbursement
Estimation for revenue if all recommendations had been eligible for reimbursement	Positive response from prescriber AND eligible for reimbursement	Lacking response from prescriber OR ineligible for reimbursement

Revenue = Reimbursement × number of recommendations

\$15 × 172 recommendations	\$15 × 70 recommendations	\$15 × 102 recommendations
Potential revenue = \$2580.00	Actual revenue = \$1050.00	Lost revenue = \$1530.00

Cost benefit

Profit = Revenue generated – pharmacists' costs

Profit = \$1050.00 – \$358.40

Profit = **\$691.60****Cost-benefit ratio**

= Revenue/cost

= \$1050.00/\$358.40

= **2.93**

For every \$1.00 spent, \$2.93 was generated

and reimbursable. Of the 55 phone recommendations, 51 were reimbursable. With discussion over the phone, the prescriber also agreed with 42 of the suggestions proposed by the intern. Conversely, of the 117 recommendations provided via fax, only 25 were eligible for reimbursement. Of all the faxed recommendations, the prescriber agreed with 41.

Pharmaceutical opinion classification trends.

Most recommendations were related to adherence, dangerously high dose and requiring additional drug therapy.

Disease-state DRP trends. Based on disease state and medical conditions, there were 58 recommendations related to cardiovascular disease,

TABLE 2 Trends with prescription interventions in pharmaceutical opinions²

POP classification	# POs	Frequent pharmaceutical opinions found
Therapeutic duplication	17	<ul style="list-style-type: none"> • Duplicate anticoagulation (ASA, clopidogrel, warfarin, NOACs) • Duplicate short-acting pain medication (Percocet, Tramacet, morphine)
Patient needs additional drug therapy	31	<ul style="list-style-type: none"> • Uncontrolled diabetes (elevated A1C and/or fasting blood glucose) • Uncontrolled hypertension (elevated systolic blood pressure leading to high Framingham risk score) • Uncontrolled hypercholesterolemia (elevated cholesterol leading to high Framingham risk score) • Uncontrolled pain • Continuous use of NSAID without gastroprotection (benefit from initiation of a proton pump inhibitor)
Suboptimal response to a drug	9	<ul style="list-style-type: none"> • Taking medication with lack of evidence for benefit (e.g., atenolol for cardiovascular disease prevention) • Subtherapeutic beta-blocker/ACE/ARB dosage with heart failure (need to titrate to target)
Dosage too low	1	<ul style="list-style-type: none"> • Prescription for male urinary tract infection too short in duration
Adverse drug reaction; possibly related to an allergy or a conflict with another medication or food	21	<ul style="list-style-type: none"> • Taking glitazone for diabetes and at increased risk for edema, heart failure, osteoporosis • Taking glyburide and at increased risk for hypoglycemia
Dangerously high dose	37	<ul style="list-style-type: none"> • Orthostatic hypotension from overmedicating, demonstrated through seated and standing blood pressure measurement • Insulin dose too high, patient at risk for hypoglycemia • Prolonged use of hormone replacement therapy—increasing the risk for breast cancer
Nonadherence; patient is refusing to take the drug or not taking it properly	56	<ul style="list-style-type: none"> • Recommend change insulin from cartridge to prefilled pen to improve adherence • Recommend combine diabetic medications to improve adherence (e.g., metformin and sitagliptin to reduce pill burden from 5 diabetic pills/day to 2/day)
Prescription has been confirmed false or has been altered	0	<ul style="list-style-type: none"> • The lack of pharmaceutical opinions in this category was likely due to the intern not yet checking prescriptions.

ACE, angiotension converting enzyme; ARB, angiotensin-resin blocker; ASA, acetylsalicylic acid; NOAC, novel oral anticoagulant; NSAID, nonsteroidable anti-inflammatory drug; POP, Pharmaceutical Opinion Program; POs, pharmaceutical opinions.

50 diabetes suggestions, 15 pain management suggestions, followed by 49 other recommendations. This trend follows the disease state prevalence for chronic conditions in Thunder Bay, where over half of the aged population has hypertension, one-quarter has diabetes and over half has arthritis (all above the provincial averages).⁴

Discussion

This study was performed to determine trends with recommendations and to further assess the clinical and financial potential of the Pharmaceutical Opinion Program. As this program

generates less revenue per activity than other clinical services and requires collaboration with prescribers, it may be less desirable to perform during the daily duties of a community pharmacist. On the other hand, an active pharmacist who is able to identify a large variety of DRPs can generate even more revenue from pharmaceutical opinions than from MedsCheck. This form of revenue directly rewards the pharmacist for DRP identification—the more up-to-date and educated the practitioner, the more DRPs they can identify, which translates into additional revenue.

Revenue of \$1050 was generated, with wage costs of \$358.40. This left \$691.60 in gross profit and a cost-benefit ratio of 2.93 (for every \$1.00 spent, \$2.93 was generated). With approximately half of recommendations reimbursable, this cost analysis affirmed the primary study objective that the Pharmaceutical Opinion Program is financially viable and sustainable with the potential to generate revenue and profit. For secondary outcomes, the study identified that communication via phone was more successful than faxing. The common trends for pharmaceutical opinions were related to adherence, dangerously high dose and requiring additional drug therapy, with the majority of DRPs relating to cardiovascular disease, diabetes and pain management.

Extent of knowledge and experience

The major limitation for recommendations by any practitioner is his or her level of knowledge and accompanying experience. As a pharmacy intern, the author had the benefit of recently learning the most current guidelines, treatment options and learned clinical expertise from the pharmacy school educators. This was offset by limited practical experience. As a result, the DRPs the author identified were heavily influenced by what was learned during the pharmacy curriculum and work placements. By comparison, the longer a pharmacist has been practising, the greater this shift from recent education to clinical practice. Pharmacists who want to remain competent and capable of providing evidence-based recommendations and effectively screening for DRPs must take steps to remain up to date with current evidence and practices.

Influence from environment for DRP types

The pharmacy in this study is located on a central street close to a business core and residential areas. Prescriptions ranged from chronic disease management, walk-in clinic and hospital prescriptions. One limitation of this study was that no attempt was made to classify the prescriptions by their source. The source of the prescriptions will strongly influence the type of DRPs identified by the pharmacy location.

Barriers

Lack of response from prescribers. Unfortunately, 82 (47%) recommendations did not receive a response from the prescriber. This percentage echoed the results of an earlier version of the

study from 2012,¹ where 42% of recommendations received no response. This lack of response was exclusive to the recommendations made by fax. As expected, direct communication with the physician over the phone led to greater success in receiving a response.

Consideration must also be given to the prescribers' preferred method of communication. For example, some prescribers were more open to receiving phone calls, while others had instructed their administrative assistants to direct that all communications must be sent by fax.

There were also several instances when the prescriber did not respond to the recommendations from the fax, but the patient dropped off a new prescription with the same instructions recommended by the pharmacist. This illustrates a lack of understanding on the part of prescribers about the logistics of the Pharmaceutical Opinion Program and suggests that further education and collaboration may be required.

Ineligibility for reimbursement. Another 20 (12%) recommendations that received a response were ineligible for reimbursement due to the current restriction of the Ontario Drug Benefit (ODB) program. This may deter pharmacists from spending time writing recommendations when they will not be reimbursed for their efforts. To ensure that all patients have access to the same level of care, the government should consider expanding eligibility of the program.

Classification of pharmaceutical opinions

Although the majority of recommendations were related to adherence, dangerously high dose and requiring additional drug therapy, many of the identified DRPs fit under several categories. For example, categories 5 (adverse drug reaction) and 6 (dangerously high dose) are difficult to differentiate. A high dosage of a medication is likely to cause an adverse drug reaction. Categories 3 (suboptimal response to a drug) and 4 (dosage too low) are also duplicative, as a suboptimal response to a drug may be related to a low dosage.

Category 7 (nonadherence) is worded in a somewhat one-sided way and does not include wording regarding improving adherence through more user-friendly dosage forms (e.g., prefilled insulin pens) or combination medication.

Finally, the addition of a category related to optimizing drug therapy may be warranted.

Patients may be on a medication regimen with no ill effects or concerns, which may still not be the best option for them. For example, a patient who has had a myocardial infarction or has heart failure may be on a regimen lacking a specific agent, but since the patient has had no side effects, recommending a therapy does not easily fit any of the Pharmaceutical Opinion Program categories.

Future direction

The Pharmaceutical Opinion Program holds great potential to improve patient health and quality of life. Expanding the eligibility criteria to all Ontario residents would ensure pharmacies are reimbursed for their efforts to improve a patient's medication regimen. Consideration by other provinces also carries merit. Most provinces already possess some variation of a medication review program, but Ontario is the only province with a recommendation-type program. Adopting such a program would supplement the existing medication review programs in other provinces, which would facilitate the identification and communication of DRPs with prescribers. With sustainability and viability demonstrated with the primary objective and a strong variety and severity of DRP classifications with the secondary objectives, this program would positively augment other provincial programs.

In regards to communicating with prescribers, efforts need to be taken at the individual, group, advocacy and provincial levels. It should be the responsibility of all practising pharmacists to introduce and acquaint themselves with any prescribers they interact with on a regular basis. This would also be applicable for the pharmacy as

a group to work collaboratively with other health professional groups (e.g., family health teams, clinics). Pharmacy advocacy groups should collaborate with physician and nursing advocacy groups to communicate details of the MedsCheck and Pharmaceutical Opinion Programs. The Ministry of Health and Long-Term Care could also become more involved to facilitate this communication.

Consideration might also be given to restructuring the program to no longer require a prescriber response for reimbursement. Dependence on the prescriber can be a barrier to pharmacy remuneration.

Since documenting, writing, communicating and billing for pharmaceutical opinions is a new and complex task, pharmacies and educational institutions (pharmacy schools) should continue to develop training programs to ensure pharmacy students, interns, pharmacists, pharmacy assistants and pharmacy technicians are well versed in how to complete these activities. Attention could also be paid to common types of DRPs and solutions.

Conclusion

The Ontario Pharmaceutical Opinion Program offers a new avenue of practice for community pharmacists beyond the traditional dispensary model. This program may lay the foundation for future development of other clinical programs that may enhance pharmacists' abilities to act on behalf of the patients' best interests. As our profession continues to evolve with the changing health care environment, the Pharmaceutical Opinion Program may become a main artery of compensation for the community pharmacist. ■

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