Initial uptake of the Ontario Pharmacy Smoking Cessation Program: Descriptive analysis over 2 years

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This research results from an Applied Health Research Question submitted by the Ontario Pharmacists Association (OPA) to the Ontario Pharmacy Research Collaboration (www.open-pharmacy-research.ca/research-projects/ahrq). OPA and the Ontario government indicated the importance of understanding the uptake of new pharmacy services to assist in planning future expanded scope services.

Cette étude fait suite à une question de recherche appliquée en santé que l'Association des pharmaciens de l'Ontario (APO) a présentée à l'Ontario Pharmacy Research Collaboration (www.open-pharmacy-research.ca/research-projects/ahrq). L'APO et le gouvernement de l'Ontario ont souligné l'importance de comprendre les principes qui guident l'adoption de nouveaux services pharmaceutiques afin de mieux planifier les services pharmaceutiques basés sur des champs de pratique élargis.

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ABSTRACT

Background: Smoking is a significant public health concern. The Ontario Pharmacy Smoking Cessation Program was launched in September 2011 to leverage community pharmacists and expand access to smoking cessation services for public drug plan beneficiaries.

Methods: We examined health care utilization data in Ontario to describe public drug plan beneficiaries receiving, and pharmacies providing, smoking cessation services between September 2011 and September 2013. Patient characteristics were summarized, stratified by drug plan group: seniors (age ≥ 65 years) or social assistance. Trends over time were examined by plotting the number of services, unique patients and unique pharmacies by month. We then examined use of follow-up services and prescription smoking cessation medications.

Results: We identified 7767 residents receiving pharmacy smoking cessation services: 28% seniors (mean age = 69.9, SD = 4.8; 53% male) and 72% social assistance (mean age = 44.4 years, SD = 11.8; 48% male). Cumulative patient enrollment increased over time with an average of 311 (SD = 61) new patients per month, and one-third ($n = 1253$) of pharmacies participated by the end of September 2013. Regions with the highest number of patients were Erie St. Clair ($n = 1328$) and Hamilton Niagara Haldimand Brant ($n = 1312$). Sixteen percent of all patients received another pharmacy service (e.g., MedsCheck) on the same day as smoking cessation program enrollment. Among patients with follow-up data, 56% received follow-up smoking cessation services (60% seniors, 55% social assistance) and 74% received a prescription smoking cessation medication. One-year quit status was reported for 12%, with a 29% success rate.

Conclusions: Program enrollment has increased steadily since its launch, yet only a third of pharmacies participated and 56% of patients received follow-up services. *Can Pharm J (Ott)* 2015;148:29-40.

Background

Tobacco use is the number one cause of preventable disease and death in Canada.^{1,2} More than 2.1 million Ontarians smoke tobacco, with prevalence estimates ranging from 16% (female) to 22% (male) of residents aged 12 or more years.³ It is estimated that 13,000 Ontarians die

of tobacco-related diseases annually.⁴ Smokers and individuals exposed to second-hand smoke are at increased risk of developing many chronic diseases. The most common diseases directly linked to smoking are cancer, cardiovascular disease and respiratory disease.^{5,6} Tobacco-related diseases contribute an estimated \$1.6 billion in

KNOWLEDGE INTO PRACTICE

- Only one-third of pharmacies participated in remunerated pharmacy smoking cessation services within the first 2 years of program launch, and only 56% of patients who were enrolled in the program received a follow-up service. These figures highlight missed opportunities for pharmacies and patients.
- A professional pharmacy service or use of a smoking cessation medication or over-the-counter product may present an opportunity to enroll patients into a pharmacy smoking cessation program.
- It is reasonable to offer other professional pharmacy services concurrently when enrolling patients into a pharmacy smoking cessation program.
- Pharmacists providing smoking cessation services can foster ongoing care relationships by arranging follow-up appointments.
- More in-depth and consistent quit status reporting will provide data to better understand the effectiveness of pharmacy smoking cessation services.

direct health care costs annually in Ontario.⁴ Smoking cessation interventions such as nicotine replacement therapy, physician's advice, individual behavioural counselling and increasing taxes on tobacco sales are estimated to save the Canadian health care system 33,307 acute care hospital days and \$37 million annually.^{1,7}

Since 1994, the Ontario government has introduced legislation to restrict tobacco sales in pharmacies, reduce access to tobacco products by youth, protect the public from second-hand smoke and promote smoking cessation programs.⁸⁻¹⁰ Since 2011, new policies have been added to help smokers quit: prescription smoking cessation medications added to the provincial formulary (August 2011),^{1,11} Pharmacy Smoking Cessation Program initiated (September 2011)¹² and pharmacists authorized to prescribe smoking cessation medications (October 2012).¹³ The Ontario Pharmacy Smoking Cessation Program provides remuneration to community pharmacies for smoking cessation assessment and follow-up visits for provincial drug plan beneficiaries.¹² The program funds up to 8 points of contact over 1 year using a fee-for-service scheme: program enrollment (includes readiness assessment and first consultation that may occur over 2 visits, \$40 total); and up to 7 follow-up counselling sessions: 3 primary within 3 weeks of enrollment (\$15 each) and 4 secondary within 30 to 365 days of enrollment (\$10 each) (Table 1).¹² Patients must provide consent to share health information

within the circle of care and establish a target quit date to enroll. Pharmacists must complete a training program that supports the Smoking Cessation Algorithm (5As: Ask, Advise, Assess, Assist, Arrange) and are requested to report the patient's quit status by the end of 1 year (no remuneration).¹² The first consultation is ideally completed in person at the pharmacy. Follow-up counselling sessions may occur in person, over the phone, by e-mail or by other means, as agreed by the patient. The location and method of communication must be documented.¹²

The purpose of our project was to describe the use of Ontario pharmacy smoking cessation services since program launch in September 2011.

Methods

Data sources and study inclusion

All residents of Ontario participating in pharmacy smoking cessation services from September 1, 2011, to September 30, 2013, were eligible. Patients were identified using pharmacy data submitted to the provincial government (Ontario Drug Benefit database) and linked to medical claims (inpatient, emergency department, hospitalization) and provincial health plan registration data. Patient age, sex, region (Local Health Integration Network [LHIN], urban or rural residence) and neighborhood income were determined using the Ontario Registered Persons Database. Other characteristics were based on medical (e.g., health conditions) and pharmacy (e.g., other professional pharmacy services) claims within 1 year before the first pharmacy smoking cessation service date. At the time of analysis, we had complete pharmacy and registration data through to September 30, 2013, and medical claims through to March 31, 2013. Health conditions based on medical claims were thus restricted to patients enrolled in the program by March 31, 2013. Participants younger than 11 years and those residing in long-term care, missing sex data or with date of death prior to enrollment were excluded.

Statistical analyses

Analyses were stratified by sex and provincial drug plan group based on age at enrollment into the Pharmacy Smoking Cessation Program: (1) seniors (ages ≥ 65 years) and (2) social assistance. Descriptive characteristics of patients were summarized as means or proportions. The number of service claims, unique patients and

unique pharmacies were plotted by month and summarized as means. We then summarized follow-up services and quit status for participants with program enrollment as their first smoking cessation service and with 6 months of follow-up data. In secondary analyses, we examined follow-up services and quit status among participants with 12 months of follow-up data. This study was approved by the Research Ethics Board of Sunnybrook Health Sciences Centre.

In an effort to put regional differences in program uptake into context, we pulled data from publicly available sources to estimate population size,¹⁴ unemployment,¹⁵ smoking prevalence³ and number of pharmacies,¹⁶ by LHIN.

Results

We identified 7767 eligible individuals (Figure 1): 28% seniors (mean age = 69.9, SD = 4.8; 53% male) and 72% social assistance (mean age = 44.4 years, SD = 11.8; 48% male).

Number of smoking cessation services over time

The number of service claims, unique patients and unique pharmacies are plotted by month in Figure 2. Within the first month of the

MISE EN PRATIQUE DES CONNAISSANCES

- Seulement un tiers des pharmacies ont participé aux services rémunérés d'abandon du tabac offerts en pharmacie pendant les deux premières années de lancement du programme, et seulement 52 % des patients ayant intégré le programme ont bénéficié d'un service de suivi. Ces chiffres ont mis en évidence les occasions manquées pour les pharmacies et les patients.
- Un service pharmaceutique professionnel ou le recours à un traitement d'abandon du tabac ou d'un produit en vente libre peut être l'occasion d'intégrer des patients à un programme en pharmacie d'abandon du tabac.
- Il est raisonnable d'offrir d'autres services pharmaceutiques professionnels en parallèle lorsque les patients intègrent un programme en pharmacie d'abandon du tabac.
- Les pharmaciens offrant des services d'abandon du tabac peuvent favoriser les relations de soin en prévoyant des rendez-vous de suivi.
- Un rapport plus approfondi et cohérent sur l'état de cessation du tabagisme fournira des données afin de mieux comprendre l'efficacité des services en pharmacie relatifs à l'abandon du tabac.

Pharmacy Smoking Cessation Program, 348 patients enrolled and 142 pharmacies delivered the service for the first time. The average

TABLE 1 Summary of Ontario Pharmacy Smoking Cessation services, duration and remuneration

Description	Suggested duration (min)	Fee (\$)
First consultation (once per year)* • Program enrollment occurs after the readiness assessment	20	40
Primary follow-up (maximum: 3 per year) [†] • Sessions 1-3, targeted within the first 3 weeks of enrollment	10	15
Secondary follow-up (maximum: 4 per year) [†] • Sessions 4-7, targeted within 30-365 days of enrollment	3-5	10
Quit status reporting (once per year) [‡]		
• Successful	—	0
• Unsuccessful	—	0
• Unknown	—	0

*Readiness assessment includes a questionnaire to determine readiness to quit smoking and involves patient consent for enrollment into the Pharmacy Smoking Cessation Program and the sharing of health information. Remuneration is only provided for patients who enroll in the smoking cessation program through a first consultation. An in-person appointment is recommended for the first consultation to ensure adequate time to discuss history and pharmacotherapy options. Patients are required to establish a target quit date and consent to communication timelines.

[†]Follow-up counselling sessions may occur in person, over the phone, by e-mail or by other means, as agreed by the patient. The location and method of communication must be documented.

[‡]Pharmacists are requested to report quit status within 365 days of program enrollment by entering one of the quit status product identification numbers (PINs), yet quit status reporting is not remunerated.

FIGURE 1 Study flow diagram **FIGURE 2** Number of pharmacy smoking cessation claims among all individuals over time, by month

Cumulative number of unique patients (solid line, $n = 7767$) and unique pharmacies (dashed line, $n = 1253$) participating in the program over time.

number of new patients enrolling into the program was 311 (SD = 61, range 185-400), and an average of 50 (SD = 30, range 20-142) new pharmacies provided the service per month. Smoking cessation services followed a cyclical pattern, with decreases in December and summer (July/August) and increases at the beginning of the year (January/February), in spring (March/April) and in late autumn (October/November).

Characteristics of patients enrolling in pharmacy smoking cessation services

Regions with the highest number of participants, based on patient residence, were Erie St. Clair ($n = 1328$; 17% of participants) and Hamilton Niagara Haldimand Brant ($n = 1312$; 17% of participants), followed by Champlain ($n = 810$; 10% of participants) and Central East ($n = 783$; 10%) (Table 2). The majority of participants resided in an urban area (89%), and

TABLE 2 Characteristics of patients receiving pharmacy smoking cessation services, by drug plan group (all values are percentages)

	Seniors (n = 2166)	Social assistance (n = 5601)	Total (N = 7767)
Reside in urban area*	86.1	90.5	89.5
Region of residence, by Local Health Integration Network (LHIN)*			
Erie St. Clair	18.2	14.5	17.1
South West	7.1	8.0	7.3
Waterloo Wellington	4.4	6.8	5.1
Hamilton Niagara Haldimand Brant	18.5	12.9	16.9
Central West	1.6	2.9	2.0
Mississauga Halton	2.2	4.6	2.9
Toronto Central	5.9	5.1	5.7
Central	4.7	5.7	5.0
Central East	9.9	10.6	10.1
South East	4.7	4.2	4.5
Champlain	10.3	10.8	10.5
North Simcoe Muskoka	5.4	5.8	5.5
North East	5.1	5.5	5.2
North West	2.0	2.8	2.2
Income, quintile*			
1 (lowest)	27.9	47.4	42.0
2	22.3	22.3	22.3
3	17.7	13.3	14.5
4	17.1	10.4	12.2
5 (highest)	15.0	6.7	9.0
Smoking cessation medication			
Use in year before index date [†]	41.6	37.9	38.9
Same day as index date	40.0	51.3	48.2
New use at index [‡]	32.7	41.4	40.7
Pharmacy practice services			
MedsCheck (MC)			
Use in year before index date	43.8	37.5	39.3
Same day as index date	19.3	13.6	15.2
New use at index	14.7	10.6	11.8
Pharmaceutical opinion (PO)			
Use in year before index date	10.8	10.8	10.8
Same day as index date	1.9	1.7	1.8
New use at index	1.7	1.2	1.4
Influenza immunization (IM) [§]			
Use in year before index date	2.2	1.7	1.8
Any MC, PO, IM			
Use in year before index date	48.7	42.2	44.0
Same day as index date	20.5	14.9	16.5
New use at index	13.4	9.9	10.9

*Proportions adjusted for missing regional data (<1% missing postal code).

[†]Index date is the first pharmacy smoking cessation service date.[‡]New use at index indicates no use within the year prior to the first pharmacy smoking cessation service date.[§]Too few immunizations occurred on the same day as the index to report (cell sizes <6).

TABLE 3 Characteristics of patients with 6-month follow-up (all values are percentages)*

	Seniors			Social assistance			Total
	Female (n = 765)	Male (n = 872)	Total (n = 1637)	Female (n = 2228)	Male (n = 2125)	Total (n = 4353)	(N = 5990)
Health care services utilization in prior year							
Inpatient hospitalization, any	15.3	14.3	14.8	12.2	12.8	12.5	13.1
Physician smoking cessation service, any	92.7	94.0	93.4	94.0	93.2	93.6	93.6
Chronic health conditions							
Diabetes mellitus	21.2	27.5	24.6	13.1	17.8	15.4	17.9
Cardiovascular disease	51.8	62.7	57.6	22.2	31.2	26.6	35.1
Major cardiovascular event [†]	18.6	27.6	23.4	6.3	11.7	9.0	12.9
Psychiatric condition [‡]	24.3	16.4	20.1	49.6	40.8	45.3	38.4
Respiratory disease [§]	35.2	30.4	32.6	22.8	18.6	20.7	24.0
Lung cancer	2.0	2.9	2.4	0.6	0.4	0.5	1.0

*Enrollment into the smoking cessation program by March 31, 2013.

[†]Congestive heart failure, myocardial infarction or stroke.

[‡]Anxiety, depression, bipolar disorder, schizophrenia.

[§]Asthma, chronic obstructive pulmonary disease or emphysema.

approximately half of social assistance beneficiaries (47%) and a quarter of seniors (28%) resided in neighbourhoods in the lowest income quintile.

Almost half (44%) of participants (49% seniors, 42% social assistance) had received another professional pharmacy service (Med-sCheck, pharmaceutical opinion or influenza immunization) in the year before program enrollment and 16% (21% seniors, 15% social assistance) on the same day as enrollment. In addition, a prescription smoking cessation medication was dispensed to 48% (40% senior, 51% social assistance) of patients on the same day as their first smoking cessation service. Nearly 41% (33% seniors, 41% social assistance) were classified as new users at program enrollment because they had not received a prescription smoking cessation medication through the provincial drug plan in the prior year. Region of residence and use of professional pharmacy services were similar among men and women (data not shown).

Characteristics based on medical claims are reported for the 5990 (77%) patients with medical claims and 6-month follow-up data (Table 3). History of hospitalization (15% seniors, 13% social assistance) and physician smoking cessation services (93% seniors, 94% social assistance)

were similar between men and women. However, a higher proportion of women had respiratory disease and psychiatric conditions, while diabetes and cardiovascular disease were more prevalent among men.

Number of pharmacy smoking cessation follow-up services and quit status reporting

Among the 5990 participants with 6-month follow-up, 56% (61% seniors, 54% social assistance) had at least 1 primary follow-up session, and 28% (35% seniors, 25% social assistance) had at least 1 secondary follow-up service (Table 4). Prescription smoking cessation medication was dispensed to 72% of participants, with 45% being new users. Among the 443 participants with quit status data in the 6-month follow-up period, 23% (32% seniors, 21% social assistance) were successful, 59% were unsuccessful and 17% had unknown quit status. Results were similar by sex within drug plan status as well as among the 4167 participants with 12-month follow-up, except that use of primary follow-up services was slightly lower among male seniors (57%) than female seniors (64%). Quit status reporting increased from 7% to 12% with 12 months of follow-up: 29% successful (37% seniors, 27% social assistance), 56% unsuccessful (55% seniors, 57% social assistance) and 14% unknown status.

TABLE 4 Proportion of patients with 6-month follow-up data receiving follow-up services, smoking cessation prescription medication and quit status reporting, by drug plan group and sex (all values are percentages)

	Seniors			Social assistance			Total
	Female (n = 765)	Male (n = 872)	Total (n = 1637)	Female (n = 2228)	Male (n = 2125)	Total (n = 4353)	(N = 5990)
Primary follow-up, any	63.0	59.1	60.9	54.4	54.0	54.2	56.0
1 session	22.2	23.5	22.9	22.7	22.6	22.7	22.7
2 sessions	12.9	11.0	11.9	11.4	9.6	10.5	10.9
3 sessions	27.8	24.5	26.1	20.3	21.7	21.0	22.4
Secondary follow-up, any	36.5	34.1	35.2	25.3	25.5	25.5	28.1
1 session	15.3	15.7	15.5	13.2	12.6	12.9	13.6
2 sessions	14.8	13.0	13.8	7.9	8.4	8.2	9.7
3 sessions	5.2	4.5	4.8	3.1	3.6	3.3	3.7
4 sessions	1.2	0.9	1.0	1.2	0.9	1.0	1.0
Prescription drug, any*	64.4	67.9	66.3	73.9	75.5	74.7	72.4
Use prior to index†	30.5	28.7	29.5	26.9	26.6	26.8	27.5
New user‡	34.0	39.2	36.8	47.0	48.8	47.9	44.9
Quit status reported, any	6.4	6.7	6.5	7.7	7.8	7.7	7.4
Reported: successful	26.5	36.2	31.8	21.1	20.0	20.5	23.3
Reported: unsuccessful	65.3	50.0	57.0	55.0	64.2	59.5	58.9
Reported: unknown	8.2	13.8	11.2	22.8	15.8	19.3	17.4

*Smoking cessation drug dispensed during the follow-up period.

†Smoking cessation drug dispensed during the follow-up period and within 1 year prior to program enrollment.

‡Smoking cessation drug dispensed during the follow-up period and no evidence of prescription smoking cessation drug dispensed in the year prior to enrollment into the Pharmacy Smoking Cessation Program.

Putting regional results into context

Table 5 summarizes community characteristics and Pharmacy Smoking Cessation Program participation data by LHIN. Logically, the proportion of pharmacies within each LHIN approximated the proportion of residents in each LHIN; for example, 5% of Ontario pharmacies and 5% of the population aged 10 years or older reside in the Erie St. Clair region. However, Erie St. Clair had the highest pharmacy participation rate (66%), and thus despite only representing 5% of the Ontario population, pharmacies and smokers, it was the region with the greatest number of participants ($n = 1328$, 17.1%). Hamilton Niagara Haldimand Brant had similar enrollment numbers as Erie St. Clair ($n = 1312$, 16.9%) yet with a larger proportion of the population (11%), smokers (12%) and provincial pharmacies ($n = 433$, 12%),

reflecting 38% pharmacy participation. Central West (6%), Mississauga Halton (9%), Toronto Central (12%) and Central (13%) had the fewest enrollees relative to population size and lowest pharmacy participation rates (<30%). South East (47%), North Simcoe Muskoka (47%), North East (42%) and North West (48%) had high pharmacy participation rates, despite each being home to less than 5% of Ontario's population.

Discussion

An innovation is defined as an idea, practice or object that is *perceived* as new.¹⁷ The Ontario Pharmacy Smoking Cessation Program is one of several innovations in Ontario that have expanded professional pharmacy services. It recognizes the important role and opportunity for community pharmacists to provide accessible

TABLE 5 Community characteristics, patient enrollment and pharmacy participation in smoking cessation services in Ontario (September 2011 to September 2013), by Local Health Integration Network (all values are percentages)

Region	Summary of community characteristics					Pharmacy smoking cessation participation*		
	Size† (based on number of residents)	Unemployment‡	Smoking prevalence§	Smokers in Ontario**	Pharmacies (n = 3693)††	Patients (program participants) (n = 7746)	Pharmacies (program participants) (n = 1248)‡‡	Pharmacy participation rate§§
Erie St. Clair	4.8	9.0	21.5	5.4	5.0	17.1	9.8	65.6
South West	7.2	6.9	21.5	8.1	6.6	7.3	7.9	40.4
Waterloo Wellington	5.6	6.0	16.5	4.9	5.0	5.1	5.6	38.3
Hamilton Niagara Haldimand Brant	10.6	7.2	21.5	12.0	11.7	16.9	13.2	38.1
Central West	6.4	9.6	14.6	4.9	5.7	2.0	3.8	23.0
Mississauga Halton	8.7	7.1	16.6	7.6	9.0	2.9	4.3	16.2
Toronto Central	9.1	8.5	20.1	9.6	11.8	5.7	9.3	26.7
Central	13.3	8.4	15.2	10.6	13.0	5.0	7.1	18.5
Central East	11.8	9.3	18.9	11.8	11.8	10.1	11.1	32.0
South East	3.7	7.6	24.1	4.7	3.1	4.5	4.3	46.6
Champlain	9.4	6.3	18.5	9.2	8.1	10.5	11.4	47.3
North Simcoe Muskoka	3.5	8.2	18.5	3.4	3.1	5.5	4.2	46.5
North East	4.2	7.3	27.3	6.1	4.4	5.2	5.4	41.6
North West	1.8	6.7	19.6	1.8	1.7	2.2	2.4	47.6
Total (Ontario)	100	7.8	19.0	100	100	100	100	33.8

*Adjusted for missing data: patients (program participants), n = 21 (0.3%); pharmacies (program participants), <1%.

†Estimate based on number of residents aged ≥10 years within each region, N = 12,055,340 (2012 Census, Statistics Canada, Table 109-5325).¹⁴

‡Ages ≥15 years (2012 Labour Force Survey, Statistics Canada Table, 109-5324).¹⁵

§Ages ≥12 years (2012 Canadian Community Health Survey, Statistics Canada, Table 105-0501).³

**Proportion smokers ages ≥15 years by Local Health Integration Network (LHIN) estimated from population size and smoking prevalence.

††Number of community pharmacies and thus proportion in province by LHIN estimated based on Ontario College of Pharmacists public register after excluding hospital in-patient pharmacy departments, remote dispensing locations and closed pharmacies (last updated October 22, 2013).¹⁶

‡‡Number of participating pharmacies within each LHIN based on first 3 digits of postal code.

§§Proportion calculated by dividing the number of participating pharmacies in the LHIN by the total number in the LHIN.

support to residents interested in quitting smoking. Despite a slow yet steady increase in the number of pharmacies providing services over time, only one-third of pharmacies in Ontario provided smoking cessation services over the 25 months since program launch.

We identified regional variation across Ontario LHINs, with Erie St. Clair championing the service with the most patients enrolled ($n = 1328$) and highest pharmacy participation rate (66%). Hamilton Niagara Haldimand Brant was a close second in terms of number of patients, yet only 38% of pharmacies participated. Higher enrollment rates in these 2 regions that are home to steel or automotive manufacturing industries may be attributed to local awareness campaigns,¹⁸⁻²² targeted workplace programs or provincial public health initiatives.¹ Additionally, the prevalence of smoking among individuals aged 15 to 75 years is estimated to be highest in trades, transport and equipment operator occupations (34%), particularly among the young adult workforce (age 20-34).^{1,23} Thus, smoking cessation may be a high public health priority for these regions. Better understanding of the barriers to and facilitators of offering smoking cessation services from a local, regional or provincial perspective may improve pharmacy participation across Ontario.

We note a steady increase in the number of program enrollees over time, following a seasonal cyclical pattern. Cyclical trends may relate to patient travel patterns (winter and summer holidays), pharmacy workload, New Year's resolutions and National Non-Smoking Week in January. Better understanding of the patient and pharmacy drivers of the cyclical pattern may help pharmacies in planning for smoking cessation and other expanded scope of pharmacy practice services.

Of interest, 44% of enrollees (49% social assistance, 42% seniors) received another expanded scope of pharmacy practice service within the year prior to their first pharmacy smoking cessation service, with 16% occurring on the same date. A professional pharmacy service such as MedsCheck may be an opportunity to offer a readiness assessment to quit smoking and vice versa. Similarly, drop-off or pick-up of a prescription smoking cessation medication or a consultation for over-the-counter products may be an opportune time to engage patients in a discussion about the Pharmacy Smoking Cessation Program. In 2012, approximately 19% of smokers in Ontario who quit or attempted to quit smoking

in the past 2 years used a prescription smoking cessation medication and 35% used nicotine replacement therapy.²⁴ Varenicline (Champix) and bupropion (Zyban) are publicly funded in Ontario with limited-use authorization for 12 weeks of treatment in conjunction with smoking cessation counselling.¹¹ Nearly half (48%) of program enrollees were dispensed a prescription smoking cessation medication on the date of their first pharmacy smoking cessation service. Information on whether pharmacists initiated prescriptions was not available from claims data at the time of this study. However, it is likely that most were prescribed by physicians, since 94% had a physician smoking cessation service in the year prior to program enrollment and pharmacist prescribing was not possible until October 2012. It is encouraging that patients are receiving support from multiple health care providers. Multimodal approaches with medication, counselling and social support services have been shown to improve a person's chance of quitting successfully.²⁵⁻³¹

Once participants were enrolled in the program, smoking cessation follow-up services were low. Just over half (56%) of participants with 6-month follow-up data had 1 or more primary follow-ups, only 28% had at least 1 secondary follow-up and only 7% had quit status reported (increased to only 12% among those with 12-month follow-up data). Reporting quit status is optional and not remunerated, and thus its role in program evaluation may not be well understood. Pharmacists are asked to collect data by submitting a code in the same manner as submitting claims through the public drug plan.¹² The successful quit rate of 23% over 6 months and 29% over 12 months is hard to interpret given the low response rate. Quit status data may underestimate the effectiveness of the service because it is reported as a "yes" or "no" with no opportunity to report reductions in the number of cigarettes smoked. However, no information on relapse is available and our estimate is well above the 6.4% reported success rate in 2010 for Ontario smokers (quit for ≥ 30 days at some point in the past year) and the estimated 1.3% of smokers who achieved 12-month abstinence.¹

Within the first 2 years of the Pharmacy Smoking Cessation Program, less than 0.05% of all smokers in Ontario participated, yet even helping a small proportion of smokers can have significant long-term health benefits and reduce future use of health care resources. Indeed, it is

estimated that only 5% of Ontario smokers participated in a smoking cessation program in the 2011-2012 fiscal year.¹ More research is needed to identify strategies to optimize the role of community pharmacists in promoting, approaching and assisting patients with smoking cessation.²⁹ A survey of pharmacists from Ontario, Québec, Saskatchewan and Prince Edward Island identified 70% or more with positive attitudes toward smoking cessation services, yet less than 40% intervened in the past year.³² Within Canada, only Ontario and Saskatchewan have a provincial program to compensate community pharmacies for smoking cessation services.³³ In our study, we described patients who enrolled in the program. No information is available on people who were approached but declined participation. We are also limited to information captured in administrative claims databases and thus cannot comment on the use of nonprescription smoking cessation products or the number of patients engaged in pharmacy smoking cessation services through family health teams, private insurance

plans or other public health initiatives. Despite these limitations, our descriptive study has significant strengths, as it leveraged administrative claims data, the gray literature and public professional licensing registries to examine the uptake of a professional pharmacy service by region and over time. Our results are useful as a first step to better understand the uptake and implementation of a new pharmacy public health service and highlight the benefits and opportunity to capitalize on health care utilization data to examine expanded scope of pharmacy practice services.

Conclusion

Program enrollment has increased steadily since its launch, yet only one-third of pharmacies participated by the end of 2 years, only 56% of patients received follow-up services and quit status was reported for only 12% of program participants. Better understanding of the barriers, facilitators and drivers of pharmacy smoking cessation services may help to improve program uptake and quit status reporting across the province. ■

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