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Expanded scope of practice is changing the landscape of pharmacy services that are delivered to patients in Canada. As such, understanding public perceptions of these services is critical to ensuring their success. This research highlights pharmacist and pharmacy characteristics that are considered by the public when deciding to engage in these services.

*L'élargissement du champ d'exercice modifie la gamme de services de pharmacie qui sont offerts aux patients au Canada. Il est donc essentiel de savoir ce que pense le public de ces services pour assurer leur réussite. Cette étude met en avant les caractéristiques du pharmacien et de la pharmacie que le public prend en compte lorsqu'il décide d'utiliser ces services.*

# Public perceptions of pharmacist expanded scope of practice services in Nova Scotia

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## ABSTRACT



**Background:** Community pharmacists have been transitioning from traditional dispensing roles toward a much broader scope of practice. The objective of this research was to explore public perceptions of expanded scope of practice (ESOP) services as they relate to pharmacy and pharmacist characteristics.

**Methods:** The Survey on New Services Offered by Nova Scotia Pharmacists was developed and deployed using in-pharmacy intercept surveys and online public surveys in Nova Scotia. The survey focused on 4 key ESOP elements/services: 1) prescribing for minor ailments (ambulatory conditions), 2) injections and vaccinations, 3) prescription renewals and 4) medication reviews. Data were analyzed using

comparisons between groups (multivariate analysis of variance) and principal component analysis.

**Results:** A total of 385 surveys were obtained from the public regarding their perceptions and use of ESOP services (online  $n = 237$ , in-pharmacy intercept  $n = 148$ ). A number of significant differences were found on the basis of respondent sex, age and the location of survey deployment.

**Discussion:** Overall, public perceptions of pharmacists' knowledge and skills in providing ESOP services are positive. A pharmacist's ability to communicate, protect confidentiality and provide quality information regarding medications is important to the public.

**Conclusion:** Respondents who already have a good relationship with their pharmacist are more likely to see value in ESOP services. Future public education strategies should focus on factors positively affecting the public's perceptions of ESOP services and should encourage public use of these services through intentional patient education of the benefits of ESOP services and strengthening of the patient-provider relationship. *Can Pharm J (Ott)* 2015;148:274-283.

## Background

Pharmacists in community pharmacy settings are transitioning from traditional dispensing roles to a broader scope of practice. In Canada, this includes the ability to prescribe for minor ailments, renew/extend prescriptions, prescribe

emergency drug therapy, change drug dosage/formulation, prescribe therapeutic substitutions, initiate prescription drug therapy, administer injections, and conduct, order, receive and interpret laboratory tests.<sup>1</sup> Expanded scope of practice (ESOP) services differ across the country

and there are variations of these services within provinces.

Proponents of ESOP services propose that this shift has the potential to increase timely access to important health care services for populations and encourage these services as part of the core role of pharmacists.<sup>2</sup> Despite the availability of ESOP, adoption by both pharmacists and the public has been slow, potentially related to characteristics of the public, pharmacists as individuals, and internal (e.g., human resources, workflow) and corporate and external (e.g., pharmacy business models, political and socioeconomic factors) factors that affect the pharmacy practice environment.<sup>3,4</sup> For example, vaccination services at pharmacies in the UK have increased levels of pharmacist job satisfaction, but patients have raised concerns regarding pharmacist expertise, privacy for sharing information and confidentiality of their information.<sup>5</sup> Other potential obstacles to the uptake of expanded services include structural barriers within the pharmacy, the tension with professional and business interests in community pharmacy practice and the capacity for pharmacists to integrate the ESOP with existing workload.<sup>6</sup> Recent surveys of public perceptions of ESOP services in Canada have found mixed results, with limited support for granting pharmacists prescribing authority but greater support for ESOP services related to minor ailments and prescription refills.<sup>7,8</sup>

Understanding public perceptions of the knowledge, skills and attitudes required by pharmacists to perform ESOP services will provide insight into public factors affecting the uptake of these new pharmacist roles. Recent Canadian polling results suggest that the public is supportive of ESOP services,<sup>9</sup> but gaps remain in our understanding about which perceptions are the most important influences on a patient's decision to use ESOP services. Building this knowledge base of ESOP in Canada is critical, as literature from other countries may not generalize well due to impacts of contextual factors from those jurisdictions (e.g., pharmacy business models, cultural and historical perspectives of pharmacists as health care professionals). Opinions on other factors (e.g., pharmacy business models) that extend beyond the immediate patient-pharmacist relationship also require further study to determine their impact on the public's use of ESOP services.

## KNOWLEDGE INTO PRACTICE



- Members of the public positively perceive expanded scope of practice (ESOP) services and believe that their pharmacists have the requisite knowledge and skills to provide these services.
- Respondents who already have a good relationship with their pharmacist are very supportive of ESOP services, which suggests that one-on-one marketing of ESOP services within existing pharmacist-patient relationships may prove beneficial.
- Comfort level with the pharmacy and pharmacy staff, as well as convenience, was identified as significantly affecting the public's decision to use ESOP services.

Therefore, the objective of this research was to explore public perceptions of ESOP services by pharmacists in a Canadian province.

### Methods

The cross-sectional Survey on New Services Offered by Nova Scotia Pharmacists was developed and subsequently deployed using in-pharmacy intercept surveys in independent ( $n = 2$ ), chain ( $n = 1$ ) and mass merchandise ( $n = 2$ ) pharmacies, in both urban ( $n = 4$ ) and rural ( $n = 1$ ) areas, in Nova Scotia. Online public surveys were also conducted by a third party (Survey Sampling International)<sup>10</sup> in the summer of 2013. The survey was pretested with members of the public for wording and completion time. The survey focused on 4 key ESOP elements/services: 1) prescribing for minor ailments (ambulatory conditions), 2) injections and vaccinations, 3) prescription renewals and 4) medication reviews. Open-ended and 5-point Likert scale (i.e., 1 = strongly disagree; 5 = strongly agree) questions were used to obtain public perceptions of pharmacists' ability to deliver ESOP, comfort level with pharmacists' delivery of ESOP, likelihood of using these services and perceptions about pharmacies and ESOP in general. Finally, respondents were asked about the extent to which various pharmacy characteristics would influence their use of ESOP services.

For the purposes of this paper, questions regarding respondent perceptions of pharmacists and pharmacies were analyzed. A wide range of pharmacy and pharmacist characteristics were included, such as wait times, clarity of medical information provided and pharmacist communication. The characteristics were chosen to elicit respondent perceptions of pharmacists,

## MISE EN PRATIQUE DES CONNAISSANCES



- Les membres du public ont une opinion positive des services du champ d'exercice élargi (CEE) et ils considèrent que leurs pharmaciens possèdent les connaissances et les compétences requises pour offrir ces services.
- Les participants qui entretenaient déjà de bonnes relations avec leur pharmacien ont soutenu fortement les services du CEE, ce qui semblerait indiquer que le marketing individuel de ces services dans le cadre des relations existantes entre le pharmacien et le patient pourrait être avantageux.
- Le niveau d'aise avec la pharmacie et son personnel ainsi que la commodité sont les facteurs relevés comme ayant une incidence importante sur la décision du public d'utiliser les services du CEE.

system characteristics and pharmacy demographics and design. The Research Ethics Board at St. Francis Xavier University, Nova Scotia, provided ethics approval for this study.

Data were analyzed using descriptive statistics and comparison between group means using multivariate analysis of variance (MANOVA). Between-group comparisons were done on the type of survey completed (e.g., intercept, online) and the age and gender of the respondent. Pillai's trace was used to determine significance, as it is considered the most robust option and can be used when there are more than 2 independent variable groups. Only significant differences found between group means ( $p = 0.05$  level) during follow-up analyses of variance (ANOVA) are included in the final results. Statistical analysis was performed using SPSS Statistics 20.

### Results

A total of 385 surveys (online  $n = 237$ , in-pharmacy intercept  $n = 148$ ) were obtained from the public (Table 1) regarding their perceptions and use of ESOP services.

Respondents were confident that when they left their pharmacy with a prescription, they knew how to use the medication they were given, including how to take it and how to manage any possible side effects (mean = 4.43) (Table 2). Participants also strongly agreed that their pharmacists kept their personal information confidential (mean = 4.38), that pharmacists are drug experts (mean = 4.31), that pharmacists communicate well (mean = 4.34) and that their pharmacist readily answered their questions (mean = 4.37). Respondents were neutral regarding issues of

wait times. For example, opinions on prescription wait times being too long were at the midpoint of the scale (mean = 2.47). In addition, respondents were neutral regarding difficulty in understanding the drug information that is printed on their prescription (mean = 2.10).

Those surveyed in person at a pharmacy indicated significantly higher scores for a number of pharmacy and pharmacist characteristics compared with respondents who completed the survey online ( $F[16, 362] = 1.702$ , Pillai's trace = 0.070,  $p = 0.044$ ). Significant differences were found between respondents based on age range ( $F[64, 1448] = 1.477$ , Pillai's trace = 0.245,  $p = 0.009$ ). After analysis using post hoc ANOVA tests, respondents aged 18-29 years indicated less agreement that there is good communication between their pharmacist and their other health care providers (mean = 3.75) compared with respondents aged 65 years and older (mean = 4.27,  $F[4, 374] = 3.843$ ,  $p = 0.004$ ,  $\eta^2 = 0.039$ ) and less agreement that their needs are put first as a patient (mean = 3.72) compared with respondents aged 65 years and older (mean = 4.22,  $F[4, 374] = 2.532$ ,  $p = 0.040$ ,  $\eta^2 = 0.026$ ). Respondents aged 18-29 years were also less likely to agree that pharmacists are drug experts (mean = 3.96) compared with respondents aged 40-49 years (mean = 4.44,  $F[4, 374] = 2.754$ ,  $p = 0.028$ ,  $\eta^2 = 0.029$ ). Respondents aged 30-39 years were less likely to agree that their pharmacist readily answers their questions (mean = 3.91) compared with respondents aged 65 years and older (mean = 4.51,  $F[4, 374] = 5.254$ ,  $p < 0.001$ ,  $\eta^2 = 0.053$ ). Respondents aged 18-29 were less likely to agree that they received information regarding minor conditions at their pharmacy (mean = 3.96) than respondents aged 50-64 years (mean = 4.36,  $F[4, 374] = 2.831$ ,  $p = 0.025$ ,  $\eta^2 = 0.029$ ). Respondents aged 18-29 years were more agreeable to longer waiting times if it meant that their pharmacist would take more time to talk to them (mean = 3.15) compared with respondents aged 65 years and older (mean = 2.49,  $F[4, 374] = 3.599$ ,  $p = 0.007$ ,  $\eta^2 = 0.037$ ). Finally, statistically significant gender differences were also found ( $F[32, 724] = 2.180$ , Pillai's trace = 0.176,  $p = 0.000$ ).

Examination of perceptions of various pharmacy characteristics that could influence respondent willingness to use ESOP services revealed several key findings. While several pharmacy characteristics were shown to be important in influencing public decisions to

TABLE 1 Respondent demographics

Characteristic	Online survey (n = 237)		Intercept survey (n = 148)	
	n	%	n	%
Gender				
Female	117	49.4	99	66.9
Male	120	50.6	48	32.4
No answer	0	0.0	1	0.7
Age				
18-29	37	15.6	16	10.8
30-39	33	13.9	14	9.5
40-49	49	20.7	33	22.3
50-64	68	28.7	59	39.9
≥65	50	21.1	26	17.6
Education level				
Less than high school	12	5.1	9	6.1
High school diploma	57	24.1	38	25.7
Some college/university	51	21.5	29	19.6
College/university degree	103	43.5	55	37.2
Postgraduate degree	14	5.9	16	10.8
No answer	0	0.0	1	0.7
Household income				
<\$10,000	5	2.1	5	3.4
\$10,000-\$29,999	42	17.7	12	8.1
\$30,000-\$49,999	66	27.8	24	16.2
\$50,000-\$99,999	70	29.5	41	27.7
≥\$100,000	27	11.4	31	20.9
Prefer not to answer	27	11.4	32	21.6
No answer	0	0.0	3	2.0
Health status				
Excellent	26	11.0	21	14.2
Very good	88	37.1	57	38.5
Good	71	30.0	58	39.2
Fair	39	16.5	8	5.4
Poor	13	5.5	3	2.0
No answer	0	0.0	1	0.7
No. of prescriptions filled in the last month				
0	30	12.7	12	8.1
1-3	88	37.1	49	33.1
4-6	40	16.9	47	31.8
7-9	24	10.1	16	10.8
≥10	55	23.2	23	15.5
No answer	0	0.0	1	0.7

TABLE 2 Public perceptions of pharmacists

Survey item	Mean	SD	Location of survey deployment, out of pharmacy/in-pharmacy (n = 237/148)*	Respondent gender, female/male (n = 216/168)*
Pharmacists are drug experts.	4.31	0.859	4.19/4.49	
My pharmacy puts my needs as a patient first, and business second.	4.01	0.977	3.87/4.23	4.14/3.84
My pharmacist communicates well.	4.34	0.825	4.24/4.50	4.49/4.15
There is good cooperation between my pharmacist and other health care providers such as my doctor.	4.00	0.919	3.88/4.20	4.18/3.79
Wait times for my prescriptions are too long.	2.47	1.295		
I would be okay with long wait times for my prescriptions if the pharmacist spent more time talking with me about my medications and health.	2.88	1.066		
I would like my pharmacist to provide me with information about medications I buy without a prescription (e.g., medications for cough and cold, upset stomach).	3.74	1.044		
I rarely want to speak to the pharmacist about my medications.	2.73	1.220		
I would like my pharmacist to spend more time talking to me about my prescriptions.	2.91	1.031		
I want my pharmacist to have time to speak with me when I need him/her.	4.10	0.881	4.01/4.23	4.19/3.95
I find it difficult to understand the printed drug information that comes with my prescription at my pharmacy.	2.10	1.080		
I find it difficult to understand what my pharmacist tells me about my prescription.	1.77	0.942	1.85/1.64	1.64/1.95
My pharmacist keeps my personal information confidential.	4.38	0.891		4.46/4.28
My pharmacist readily answers my questions.	4.37	0.915	4.23/4.59	4.52/4.15
When I leave the pharmacy with my prescription, I am confident regarding how to use the medication, including how to take my medications and how to manage possible side effects.	4.43	0.807	4.36/4.56	4.51/4.33
If I ask, I am provided with information regarding minor conditions (such as cold sores, dry eyes, minor sore throats and seasonal allergies) at my pharmacy.	4.27	0.857	4.17/4.43	4.36/4.13

\*Mean differences significant at  $p = 0.05$ .

**TABLE 3** Pharmacy criteria affecting use of expanded services

Criterion	Mean	SD	Respondent gender, female/male* (n = 216/168)
The location of the pharmacy	4.20	0.946	
The length of time I have to wait for my prescriptions	4.15	0.926	
How well I know the pharmacist	3.87	1.109	4.01/3.67
The age of the pharmacist	2.39	1.155	
The gender of the pharmacist	2.14	1.204	
The knowledge and skills of the pharmacist	4.62	0.680	4.71/4.48
The pharmacy has a list of all my personal medications on file.	4.54	0.723	4.66/4.37
How the pharmacist and other pharmacy staff treat me	4.41	0.815	4.55/4.24
The pharmacist explains the service and offers it to me.	4.36	0.783	4.55/4.24
The hours of operation of the pharmacy	4.21	0.885	
The cost of the services provided by the pharmacy	4.37	0.869	
The variety of non-health-related products available at the pharmacy	3.40	1.259	
The friendliness of the pharmacist and other pharmacy staff	4.28	0.824	
I can call and speak to the pharmacist when I need him/her.	4.25	0.873	
The type of pharmacy where the service is offered (e.g., stand-alone pharmacy, pharmacy in a grocery store, pharmacy in a big-box store)	3.22	1.298	
My ability to have a conversation with the pharmacist in a way that I understand	4.38	0.787	4.50/4.23
My ability to talk with the pharmacist in a private counselling room	3.78	1.099	
How easy it is to talk to the pharmacist for advice regarding my health concerns	4.31	0.839	4.44/4.15

\*Mean differences significant at  $p = 0.05$ .

use ESOP services, the knowledge and skill of the pharmacist, the pharmacy having a list of all the patient's personal medications on file, how the pharmacist and other pharmacy staff treat the patient and the ability of the patient to have a conversation with the pharmacist in a way that is easily understood were of greatest importance to respondents (Table 3). Statistically significant gender differences were also found within the pharmacy criteria ( $F[36, 714] = 0.141$ , Pillai's trace = 0.176,  $p = 0.032$ ), with results indicating that female respondents agreed more with the importance of pharmacist knowledge and skills. In addition, the cost of the service and the pharmacist's explanation of the service were shown to be of high importance to the entire sample.

Significant differences in pharmacy criteria that influenced patient willingness to use ESOP services were also observed among various age groups after MANOVA was performed ( $F[72, 1428] = 2.236$ , Pillai's trace = 0.405,  $p = 0.000$ ). Post hoc ANOVA analysis revealed that respondents aged 18-29 were less likely to indicate that knowing the pharmacist well was important (mean = 3.28) compared with respondents aged 50-64 (mean = 4.16,  $F[4, 371] = 6.785$ ,  $p < 0.001$ ,  $\eta^2 = 0.068$ ), or the age of the pharmacist (mean = 2.13) compared with respondents aged 50-64 (mean = 2.66,  $F[4, 371] = 3.374$ ,  $p = 0.010$ ,  $\eta^2 = 0.035$ ). Younger respondents (18-29 years) were also less likely to agree that the ability to have a conversation with their pharmacist was important (mean = 4.08) compared with respondents aged

50-64 (mean = 4.49) and aged 65 years and older (mean = 4.53,  $F[4, 371] = 3.816$ ,  $p = 0.005$ ,  $\eta^2 = 0.040$ ) and that the ability to call and speak to the pharmacist is important (mean = 3.70) compared with respondents aged 65 years and older (mean = 4.56,  $F[4, 371] = 10.248$ ,  $p < 0.001$ ,  $\eta^2 = 0.099$ ). Respondents aged 65 years and older placed greater importance on the hours of operation (mean = 4.38) than respondents aged 18-29 (mean = 3.89,  $F[4, 371] = 2.942$ ,  $p = 0.020$ ,  $\eta^2 = 0.031$ ), as well as the cost of the services provided (means = 3.70 and 2.94, respectively;  $F[4, 371] = 2.593$ ,  $p = 0.036$ ,  $\eta^2 = 0.027$ ).

### Discussion

Our findings indicate that the public holds positive views of pharmacists' knowledge and skills for providing ESOP services. These findings are supported by previous Canadian research that can be interpreted to show that the public views pharmacists as health care professionals, just like doctors and nurses; as drug experts; and as a resource for information and advice about their health.<sup>7-9</sup> Respondent perceptions in this study revealed the importance of communicating well, ensuring ongoing confidentiality of information and providing quality information to patients regarding their medications. Previous research has highlighted the importance of pharmacist communication skills in influencing patient satisfaction levels and trust in their pharmacist.<sup>11</sup>

The results of this study underscore the importance many patients place on having good relationships with their pharmacists as a motivator for pharmacy use. While differences were found between female and male respondents, responses were overwhelmingly positive for both groups. Engaging patients in a participative relationship and positive interpersonal communication has been shown to improve medication-related outcomes and may result in improved self-efficacy for patient medication management.<sup>12</sup> As such, patients who regularly interact with their pharmacist and who feel comfortable communicating with their pharmacist already may feel more positively about the pharmacist and be more likely to engage in ESOP services. For those individuals who do not already have an established relationship, efforts to develop relationships through tailored communication might improve uptake of expanded services. Based on our findings, it would be beneficial for pharmacy owners, managers and staff pharmacists to determine appropriate mechanisms, including

how to improve patient-centred relationships, for targeting awareness and ESOP utilization strategies toward those individuals who would benefit from being more engaged with pharmacy-based services.

Previous research suggests that women place more emphasis on the personality of their pharmacist and the services available and are more likely than men to interact with pharmacists.<sup>8,13,14</sup> The findings support placing higher priority on interpersonal communication for this demographic. Overall, male respondents were less positive in their perceptions of pharmacies and less discriminating among the pharmacy characteristics that could influence their willingness to use ESOP services. These results could indicate that male patients either do not place as much value on interpersonal relationships with their pharmacist as do female patients or do not regularly interact with a pharmacist in the same manner. These results might also be a reflection of consumer behaviour, in that women might be more likely to pick up prescriptions or ask health questions.<sup>14</sup> As the scope of practice for pharmacists increases, female patients may be more willing to engage in these services and a strategy may be required to determine how to engage male patients in ESOP services.

Differences in respondent age groups revealed that patients aged 18-29 years are willing to wait longer for their prescriptions if they then get the opportunity to speak to their pharmacists for longer. These respondents also indicated less confidence in knowing how to use their medication. This being the case, improved pharmacist consultations for this segment could be beneficial. Respondents aged 18-29 years also placed less emphasis on the importance of having a conversation with their pharmacist. This might point to confidence in being able to understand their pharmacist and a desire to have more opportunities to talk. Increased pharmacist interaction with younger patients, particularly if focused on explaining how medication should be used, appears to be both needed and wanted by this group. Certain segments of young adults, such as those with mental illness, which are often first diagnosed in this age group, can experience significant medication-related knowledge gaps with few existing supports, other than the Internet and peers, to inform their decisions.<sup>15</sup> This represents a vulnerable and potentially marginalized population that could significantly benefit from pharmacists' knowledge and expertise.

Previous research has indicated mixed perceptions related to pharmacists' ability to provide ESOP services and their role within the health care system.<sup>8,16,17</sup> The findings of this study provide support for the use of ESOP services by the public in Nova Scotia and highlight some of the challenges faced by pharmacists wishing to provide these services in their pharmacy. Given the results of this study, pharmacists should be proactive in their approach to educate patients about ESOP services and the potential benefits on their health and on the health care system as a whole. Raising awareness of ESOP has been suggested as an important step in improving patient uptake of new services.<sup>7</sup> Results from this study suggest that improving public awareness at the point of contact, including medication consultations and prescription renewals, may be beneficial in increasing public comfort levels and use of ESOP services. Patients who have been going to a pharmacist for some time may be more willing to engage in ESOP services than patients who do not regularly see one pharmacist. As such, activities that build and maintain pharmacist-patient relationships, including direct dialogue regarding the patient's health, may be important strategies to consider for increasing public uptake of ESOP services.

### Limitations

This study presents several limitations in the interpretation of results. First, the survey sample consists of patients in Nova Scotia. As a result, the findings from this study may not be generalizable to other jurisdictions in Canada and do not reflect differences in the use of ESOP services among provinces. Second, the survey respondent demographics are not wholly representative of the population of Nova Scotia, which could lessen the generalizability of the results to the public as a whole. Results from the 2006 Census suggest that the education levels of the research sample are relatively high. For example, while only 5.5% of respondents in this study indicated they had attained an educational level less than high school, 26.8% of Nova Scotia residents indicated this in the last census. Furthermore, while 41% of respondents had a college or university degree in this study, only 28.5% of Nova Scotia residents indicated this in the 2006 Census.<sup>18</sup> The age proportions are slightly elevated compared with Nova Scotia demographics reported in the 2011 Census, which indicate that 15% of

the population are between the ages of 40 and 49, 23.3% are between the ages of 50 and 64, and 16.6% are aged 65 years and older.<sup>19</sup> As such, future research in this area should aim to ensure a more representative sample in order to reduce potential bias. Additionally, nonresponse bias cannot be measured in this study because we did not capture demographic information for individuals who chose not to participate in the study. A number of respondents in this study had not filled any prescription drugs in the last month, which may indicate a healthier public sample that would be more likely to be interested in ESOP services aimed at promoting and improving their health. Nonetheless, this research provides insight into how different segments of the population view pharmacists and new expanded pharmacy services, providing for better understanding of the uptake of these new services by the public.

Several questions in the survey regarding ESOP services were presented as a group. It is possible that specific pharmacy characteristics vary in importance with respect to different ESOP services. For example, having a list of medications on file would most likely be perceived to be more important for medication reviews or prescribing activities but perhaps less critical for the provision of vaccinations. As well, responses were captured at only one point in time and may be subject to recall bias for participants who completed the online survey and who had not interacted with their pharmacist recently. Finally, both the online survey and intercept survey samples were combined for the analysis. While differences are highlighted regarding perceptions of pharmacists, combining the samples could be problematic given the more positive results from intercept survey respondents that could indicate a recency effect or social desirability bias.

### Conclusion

This research explores public attitudes of ESOP services for pharmacists in Nova Scotia. Our findings indicate that the public perceives ESOP services positively and believes that pharmacists have the necessary knowledge and skills to engage in these activities. Significant differences were found for many of the survey questions with regard to respondent gender and age groups. Overall, female respondents had more positive perceptions regarding ESOP services. Additionally, respondents aged 18-29 years were



less likely to view pharmacists positively within the new expanded role, possibly because these respondents interact less with pharmacists or do not have a regular pharmacy. As such, future research should explore experiences of these respondents (males and individuals aged 18-29 years) within the community pharmacy setting to determine specific preferences of these groups and how best to improve ESOP uptake by this segment of the population. Older respondents placed a higher emphasis on knowing their pharmacist, feeling comfortable asking questions and having expanded services that are convenient to access. As such, respondents who already have a good relationship with their pharmacist are more likely to see the value in expanded services.

The findings also suggest that future public education strategies should focus on factors positively affecting the public's perceptions of

ESOP services, such as convenience and trust in pharmacists, in order to encourage greater awareness and uptake. Given the significant proportion of the population who have not yet used ESOP services, pharmacists can encourage public use of these services through intentional patient education on the benefits of ESOP services and through nurturing a health care provider relationship with their patients by directly dialoguing with them about their health. However, findings from research on workplace conditions in community pharmacies suggests that at present, pharmacists do not have the support or time necessary to provide patients with the full value of their knowledge and skills or to build such relationships. As such, effective implementation of this recommendation will require pharmacist owners, managers and staff pharmacists to establish a coordinated team approach. ■

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## References

1. Canadian Pharmacists Association. *Summary of pharmacists' expanded scope of practice across Canada*. Available: [www.pharmacists.ca/cpha-ca/assets/File/pharmacy-in-canada/ExpandedScopeChartEN.pdf](http://www.pharmacists.ca/cpha-ca/assets/File/pharmacy-in-canada/ExpandedScopeChartEN.pdf) (accessed August 8, 2014).
2. Zermansky AG, Petty DR, Raynor DK, et al. Clinical medication review by a pharmacist of patients on repeat prescriptions in general practice: a randomised controlled trial. *Clin Gov* 2003;8:81-3.
3. Torrance J. What is holding pharmacists back? *Can Pharm J (Ott)* 2014;147:278-80.
4. Morrison J. Expanded pharmacy practice: where we are and where do we need to go? *Can Pharm J (Ott)* 2013;146:365-7.
5. Francis M, Hinchliffe A. Vaccination services through community pharmacy: a literature review. *Public Health Wales* 2010;1:1-23.
6. Cooksey JA, Knapp KK, Walton SM, et al. Challenges to the pharmacist profession from escalating pharmaceutical demand. *Health Aff* 2002;21:182-8.
7. Kelly DV, Young S, Phillips L, Clark D. Patient attitudes regarding the role of the pharmacist and interest in expanded pharmacist services. *Can Pharm J (Ott)* 2014;147:239-47.
8. Perepelkin J. Public opinion of pharmacists and pharmacist prescribing. *Can Pharm J (Ott)* 2011;144:86-93.
9. Abacus Data. *Pharmacists in Canada: a national survey of Canadians on their perceptions and attitudes towards pharmacists in Canada*. Available: [www.pharmacists.ca/cpha-ca/assets/File/news-events/PAM2015-Poll.pdf](http://www.pharmacists.ca/cpha-ca/assets/File/news-events/PAM2015-Poll.pdf) (accessed April 4, 2015).
10. SSI. *About us*. Available: [www.surveysampling.com/en/who-we-are/aboutus](http://www.surveysampling.com/en/who-we-are/aboutus) (accessed September 24, 2014).
11. Bentley JP, Stroup LJ, Wilkin NE, Bouldin AS. Patient evaluations of pharmacist performance with variations in

- attire and communication levels. *J Am Pharm Assoc* (2003) 2005;45:600-7.
12. Worley-Louis MM, Schommer JC, Finnegan JR. Construct identification and measure development for investigating pharmacist-patient relationships. *Pat Educ Counsel* 2003;51:229-38.
13. Carroll NV, Gagon JP. Identifying consumer segments in health services markets: an application of conjoint and cluster analyses to the ambulatory care pharmacy market. *J Health Care Mark* 1983;3:22-34.
14. Boardman H, Lewis M, Croft P. Use of community pharmacies: a population-based survey. *J Pub Health* 2005;27: 254-62.
15. Murphy AL, Gardner DM, Kisely S, et al. A qualitative study of antipsychotic medication experiences in youth. *J Can Acad Child Adolesc Psychiatry* 2015;24:61-9.
16. Eades CE, Ferguson JS, O'Carroll RE. Public health in community pharmacy: a systematic review of pharmacist and consumer views. *BMC Pub Health* 2011;11: 582.
17. Ratiopharm. *The Ratiopharm CFP report on pharmacy services: consumers' perception of pharmacy*. Mississauga (ON): Ratiopharm; 2004.
18. Statistics Canada. *Educational attainment*. 2009. Available: [www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/educ41a-eng.htm](http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/educ41a-eng.htm) (accessed June 17, 2014).
19. Statistics Canada. *Focus on geography series, 2011 Census*. 2014. Available: <https://www12.statcan.gc.ca/census-recensement/2011/as-sa/fogs-spg/Facts-pr-eng.cfm?Lang=Eng&GK=PR&GC=12> (accessed July 23, 2015).