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## Patient Feedback on Pharmacist Prescribing for Minor Ailments in a Canadian Province

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### Abstract

**Background:** Pharmacists have been given authority in many Canadian provinces to go beyond simply recommending over-the-counter medicines to patients with minor ailments. In Saskatchewan, they can prescribe medicines normally under the sole control of physicians for 17 conditions. An evaluation program is underway to assess the value of the program. **Methods:** Adults were recruited over a one-year period and were eligible for inclusion if prescribed an agent for an applicable condition. Pharmacists from 40 pharmacies participated in identifying people who received the service. Of patients agreeing to participate, a link to an online survey was provided. The survey included items on clinical improvement, care options, and patient confidence in knowing when to seek a physician for a minor ailment. **Results:** Forty-eight people were involved in prescribing encounters, with the majority seeking help for themselves. All but one saw their symptoms improve subsequent to pharmacist assistance, most often to a significant extent. Satisfaction with the service was high. Convenience and trust in pharmacists were primary reasons for choosing the service over medical care (rather than an issue potentially more worrisome such as not having a family physician). Had this service not been in place, 30.6% of those asking for help would have gone to a medical clinic or emergency room. Seventy-five percent were (at least) very confident in knowing when to seek a physician (rather than a pharmacist) for such conditions. **Conclusion:** Information on the clinical outcomes of pharmacist-led minor ailment care is starting to accrue in Saskatchewan. While the numbers are extremely low to date, what has become available suggests the service is of value to the citizens of the province, it is chosen for appropriate reasons, and is of an acceptable standard of care.

**Key words:** pharmacist prescribing, minor ailments

### Introduction

Minor ailments are a very common part of life. Canadian adults experienced an estimated 82 million headaches, 85 million colds/flu, and 46 million episodes of indigestion in one recent year.<sup>1</sup> Most people around the world do not seek formal care for these illnesses, but when that path is chosen, it can have a significant impact on a health care system.<sup>2-7</sup>

The situation is similar in Canada, where medical care for so-called minor ailments is costly. Over-the-counter (OTC) medicine industry executives claim that one in seven Canadians with minor ailments visit a physician.<sup>8</sup> They go on to state that if just 16% of Canadians – ones who relied on a physician for their mild symptoms – practiced self-care instead, an additional 500,000 Canadians could have access to a family physician. Canadians have also stated they do not like to bother physicians for minor ailments.<sup>9</sup>

Resources are indeed consumed by minor ailments. Thirteen percent of all physician visits in Ontario (circa 1989) were for colds/flu, representing 12.5% of government payments to physicians.<sup>10</sup> Minor ailments have accounted for approximately 10 to 20% of physician workload in various locales.<sup>11-13</sup> In Saskatchewan, physicians gave similar estimates for patient load.<sup>14</sup>

Pharmacists have a long history in minor ailment management and are an alternative for the care of such conditions. While it is true many people buy over-the-counter medicines in pharmacies without assistance, it is not an insignificant number that do choose to get help.<sup>15,16</sup>

Some provinces have gone one step further – going beyond pharmacists simply recommending OTC medicines to allowing them to prescribe for these ailments. Most provinces have adopted (or are currently pursuing) various degrees of prescriptive authority on this front. Pharmacists now have the option of selecting medicines from a limited formulary, ones traditionally under the sole control of physicians. Examples would be a topical antifungal for a diaper rash or a topical retinoid/antibiotic for a patient with acne.

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In January 2011, Nova Scotia was one of the first to add minor ailments as an expanded aspect of practice. Soon thereafter, legislation enabled Saskatchewan pharmacists to do the same. As of February 2012, this province became the first government in Canada to pay for minor ailments prescribing (\$18 per case). Between February 2012 and December 2014, 20,619 prescribing encounters took place, for a total outlay of \$371,125 in government payments.<sup>17</sup>

There is significant concern in medical circles as to whether pharmacist-directed care will be of an appropriate standard.<sup>14,18-20</sup> To comprehensively assess any such program, an approach would have to determine whether it is cost-effective (for pharmacists *and* society), whether appropriate clinical outcomes are met, whether the right patients are using the service, whether users are satisfied, the impact on physician workload, and so on.

Clinical outcome data is starting to appear for Canadian programs. In 2013, 125 Saskatchewan patients utilizing the program provided feedback relative to the seven ailments covered under the program (*Sask Minor Ailments 1* study).<sup>21</sup> Those receiving pharmacist-led care *significantly or completely* improved in 81% of cases. Approximately one-quarter stated he or she would have gone to a physician or emergency department had the minor ailment service not been available. Satisfaction with the service was high.

The objective of this new study (*Sask Minor Ailments 2*) was to further evaluate clinical outcomes in those receiving pharmacist-led care for 17 minor ailments in Saskatchewan.

### Methods

Patients were recruited over a one-year period (April 2015 to May 2016). Adults were eligible for inclusion if they were prescribed an agent by a pharmacist for an applicable condition. If the medicine was for a child, a parent could participate. No sample size determination was made. Instead, an attempt was made to capture all those who had a medication prescribed to them by a pharmacist over the entire year.

To find such patients, an advertisement and email were sent to all pharmacies asking for volunteer pharmacist recruiters. Pharmacists agreeing to help were then sent 20 patient recruitment cards (to be handed to the patient after the encounter) and a sheet for Frequently Asked Questions of the study. While every pharmacist in the province can legally prescribe for minor ailments, the pharmacists from 40 pharmacies throughout the province agreed to participate.

After being prescribed an eligible agent, a patient was asked (by the prescribing pharmacist) to participate in evaluating the service. The four inch by six inch recruitment card was given to them if interest was shown. The card identified them as a person receiving a medicine for a minor ailment and asked him/her to consider giving feedback on whether their condition eventually improved. The card stated that the researcher was not affiliated with that pharmacy. The card also mentioned a \$10 gift card for those completing the online survey. To reduce the risk of coercion, patients were asked to contact the researcher (only if interested) once they left the pharmacy. No data collection took place in pharmacies, pharmacists did not supply the researcher with any names of potential candidates, and patient data was not given back to pharmacies.

When patients agreed to participate, the researcher contacted them to determine an appropriate day for survey completion. The timing for data collection depended on the condition: a 7-day point (for such things as cold sores or oral thrush) or a 30-day point (for acne or seasonal allergies). Patients were provided with the website link to the online survey.

The data collection tool and delivery mechanism had been developed earlier to obtain patient feedback; the same approach was taken again.<sup>21</sup> For example, the following item was re-used: *Had you not asked for help in the pharmacy, what would you have done instead?* Options for responders included: *do nothing, use something you already had at home, buy an OTC medicine without help, or go to see a physician at a clinic or emergency room.* New items were also added, such as 1) patient confidence in knowing when to seek a physician (for a minor ailment) rather than a pharmacist and 2) the level of confidence in any self-diagnosis made. Response options for this series were based on a 5-point Likert scale: *not at all confident, somewhat confident, quite confident, very confident, and 100% confident.*

The Research Ethics Board of the University of Saskatchewan granted ethical approval.

### Results

Over the data collection period, 48 people both contacted the researcher and completed a questionnaire. Of those, one person was seeking help for another adult; six were doing so for a child, while 41 people were the ones with the actual ailment. Ages of the actual patients ranged from five months to seventy-one years, with the majority being female (Table 1).

As a result of pharmacist intervention, all but one person reported improvement, generally to a significant extent. Side effects of prescribed agents did not appear to be a problem (Table 2).

The number of symptom days varied, as is consistent with acute (e.g. cold sore) and chronic (e.g. allergic rhinitis) minor ailments (Table 3). One person had no symptoms at the time, as s/he was buying a product for a future recurrence (cold sore) and as a result, the table covers 47 cases rather than 48.

While in the pharmacy, 36 people asked for help, while 10 were offered help by staff. One person could not recall how events unfolded, while another did not answer. The 36 who asked for help were asked to reflect on why a physician was not chosen at this juncture. Of these 36, eight chose one reason from the list, two people chose two reasons, 14 people selected three reasons, nine chose four reasons, two chose five reasons to explain their situation, and one opted for six reasons, for a total of 106 reasons selected (Table 4).

These 36 were asked what they would have done if they had not asked for help in the pharmacy. One responder would have done nothing, four would have used something already available at home, 20 would have purchased an OTC medicine without help, 10 would have gone to a medical clinic, and one would have gone to the ER. This last patient reported having a cold sore, present for one day, with the lesion being self-described as “slightly serious”, and the person considering him/herself to be “very confident” in knowing when to seek a physician rather than a pharmacist.

Only one person sought a second opinion from a physician, with the reason being that an appointment had already been booked for the same ailment (which was kept).

Patients asking for help (n = 36) in the pharmacy could have opted to seek medical care instead. They were asked about their confidence in his/her ability for knowing when to seek a physician (rather than a pharmacist) for such a condition. Three were *somewhat confident*, six were *quite confident*, 16 were *very confident*, and 11 were *100% confident*.

To assess whether responders felt their own skill level in symptom assessment was higher than that of the general public, the same sub-group was asked about their confidence in other people making this same decision – when to seek a physician rather than a pharmacist for a minor ailment. One person chose *not at all confident*, 15 chose *somewhat confident*, 11 chose *quite confident*, six selected *very confident*, and three had *100% confidence* in the general public’s ability to do so. Overall, respondents had less confidence in the

general public’s ability to do so when compared to their own, although 10 responders attributed equal ability to both, while two people felt the general public had better skills than they possessed.

For their ailment and whether a health care provider had been seen in the past, 20 claimed none had been sought, 15 claimed a physician had been contacted, two said another pharmacist, and 11 indicated both a physician and another pharmacist had given them advice.

The 20 patients who had not previously consulted with a health care provider were asked to reflect on their confidence regarding what they felt their condition was (their ‘self-diagnosis’). From low to high, five were *somewhat confident* about what they felt they had, three were *quite confident*, three were *very confident*, and nine claimed to be *100% confident* about what the condition was before entering the pharmacy.

Feedback on the various dynamics of the encounter was largely positive (Table 5). Most felt a physician would not have been more thorough for that situation. Most would seek the pharmacist they interacted with for another minor ailment, but there was slightly less enthusiasm for doing so with ‘other’ pharmacists. Privacy during the consult did not appear to be an issue.

### Discussion

This research is the third report made available in Canada on clinical outcomes subsequent to pharmacist prescribing for minor ailments. Symptom resolution was high for patients receiving pharmacist-led care. All but one person reported seeing an improvement, with most (86.7%) stating the change was significant or greater. The extent of improvement was slightly higher than previous Saskatchewan data (*Sask Minor Ailments 1*), where 80.8% claimed at least significant improvement.<sup>21</sup> Of course, one must note that many minor ailments are by definition self-limiting and would likely improve on their own. Care must also be taken to not overly credit pharmacist involvement as the sole reason for any improvement. A host of other factors, such as accessing health-related Internet sites, could partially explain the results.

Nova Scotian pharmacists were among the first in the nation to obtain prescribing authority for minor ailments. Thirty-one ailments are covered under their program, including GERD, cold sores, and emergency contraception. For any encounter, pharmacists are to conduct a detailed assessment, make a prescribing decision, establish a plan for follow-up (as needed), then notify the primary care provider if a prescription was written (as is expected in Saskatchewan). Of 1,002 patient

interactions, 587 (59%) went on to complete satisfaction surveys.<sup>22</sup> Most (89%) saw satisfactory resolution of symptoms. Patient feedback indicated that being able to access health care sooner was a benefit. If the service had not been available, patients indicated they would have either seen their family physician (57%), sought help at a walk-in clinic (20%), while 9% would have gone to an emergency department. Ten percent would not have sought help.

The main reason for not seeking medical care in the current *Sask Minor Ailments 2* study was not due to the lack of a family physician. Rather, responders commented on access and convenience, as well as trust in pharmacists to handle minor ailments. These results are similar to the first study.<sup>21</sup> It suggests patients did not feel obligated to seek a different route for care. Two responders made these comments:

It was a pleasant surprise that the pharmacist was able to help otherwise it would have been left unaddressed. Had we known before this the pharmacist could help u we would have utilized it before.[subject10]

I am very pleased with this service. In the past, I treated cold sores with Abreva or Lipactin, which cost about \$15-20. Valtrex covered under my health benefits cost \$3 and it caused my cold sore to be much less disruptive and it was gone in 2 days. [subject 5]

Of those who asked for help (rather than offered to them by staff), 11 of 36 (30.6%) would have sought medical care if the program had not been available, up slightly from 27.2% seen a few years earlier during *Sask Minor Ailments 1*.<sup>21</sup> This has important cost implications for health care delivery. That said, further information would be needed on re-consultation rates before comments on program cost could be entertained. During *Sask Minor Ailments 2*, only one person sought medical care after the pharmacy consult, but others may have done so later in their course of illness and would not have been captured in the data (as only one follow-up took place).

The fact that the majority reported significant symptom resolution, and overall program satisfaction, suggests that re-consultation rates might be low. It must be noted as well that while the ailments here are considered to be 'minor', opting for medical care could have been a better decision on their part; serious illness can masquerade as something minor. But, pharmacists would be in a position to refer anyone to medical care, if deemed necessary, adding a layer of clinical oversight to a patient's assessment of his or her situation.

Interestingly, 75% (15 of 20) of patients who had never sought help before felt reasonably sure of what condition they had before going to the pharmacy. There is, of course, no guarantee they were correct in that assumption and again, a pharmacist would have taken steps to confirm or refute their suspicions.

As reported in the literature, when care for minor ailments is sought by patients, physicians and pharmacists are very common choices. Physicians are seen as a first choice by many.<sup>9,23-25</sup> Researchers found that of 1,521 people seeking help from physicians for a minor ailment, only 38% opted for pharmacist care when offered the option.<sup>26</sup> People often feel the need for re-assurance that their situation is nothing serious. In other reports, it is the pharmacist who would first be approached.<sup>27-29</sup> Mothers in the United Kingdom have noted they would consult with pharmacists if their children had coughs, colds, aches, and pains, but turn to their physician for childhood fever, sickness, diarrhea, and rashes.<sup>30</sup>

In other British work, those visiting a pharmacy felt their symptoms were not serious enough to consult a physician, while those visiting a physician felt their symptoms were not serious enough for the emergency department.<sup>31</sup> In their report, convenience of location was the most common reason for patients choosing between pharmacist care, general practice clinics, or an emergency department. Their results suggested similar health-related outcomes and substantially lower costs with pharmacy consultations for minor ailments.

The scope of ailments was broader during the newer *Sask Minor Ailments 2* work, and although the numbers obtained were extremely low, all but three conditions were addressed by at least one pharmacist. Perspective on some of these cases might help shed light on whether delays in care would have occurred as a result of pharmacist intervention. There was one case of GERD. The patient had seen a physician for it before and symptoms were present for several weeks. The situation was self-described as slightly serious, and if the pharmacist had not been approached, an OTC product would have been purchased without help. Three cases of patients with hemorrhoids reported in. Two had seen a physician before while one had not, symptoms had been present for either 2-3 days, 4-5 days, or several weeks, and the patients described the severity as either slightly (n = 2) or fairly serious.

On the front of self-assessment, people had more confidence in their own ability to make care decisions than others doing the same. This was also seen in another report on consumer confidence in personal ability to select OTC products versus other people's abilities.<sup>32</sup> The authors of this report speculated that people may be over-estimating their own abilities.

The current study has limitations. Patient uptake was extremely low; only 48 patients participated over one year. This same number of cases could be easily seen by a clinic physician within a week or two, not an amount upon which to judge a program. Forty-eight cases is also incomparable to the 10,000 pharmacist prescribing encounters that likely occurred across the province over the same time period (for which study candidates could have been drawn from). Unfortunately, only a small number of pharmacists were able to help with patient accrual. Thus, thousands of patients would not have been aware of the study.

Pharmacists were tasked with referring patients to the study and there is a possibility that only patients reflecting ideal encounters were offered a card. Volunteer bias was a possibility.

Patients provided clinical outcomes and the researcher only checked in once for follow-up, potentially leading to a limited view of treatment success. For example, follow-up for a case of thrush occurred at 7 days and at that point, the patient would state whether a second opinion had been sought. If one was sought a week later, it would not have been captured by this work.

When deciding on the most appropriate therapy for a patient, pharmacists can suggest doing nothing (wait-and-see), home remedies, an OTC medicine, a prescribed agent, or referral to a physician. Pharmacists receive reimbursement for only two of those options – an OTC medicine or when prescribing an agent, with the latter being more lucrative. It is not known whether pharmacists opted to prescribe more often when an OTC agent would have sufficed. A mystery shopper study may be in order to determine if pharmacists are selecting the most appropriate option.

### Conclusion

Information on the clinical outcomes of pharmacist-led minor ailment care is starting to accrue in Saskatchewan. While the numbers are extremely low to date, what has become available suggests the service is of value to the citizens of the province and appears to be of an acceptable standard of care. One may also offer that this choice of care is being chosen by patients for acceptable reasons – convenience and trust in pharmacists. To counter-argue this last point, however, choosing care out of convenience may side step the possibility that a physician may have been the better option at times. A design to follow patients with similar illnesses receiving physician care versus pharmacist care would help answer that. An economic evaluation would also allow for better assessment of true program benefit, if any.

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| <b>Table 1 Patient characteristics</b> |              |
|--|--------------|
|  | <b>N (%)</b> |
| <b>Gender</b>                          |              |
| Female                                 | 34 (70.8)    |
| Male                                   | 14 (29.2)    |
| <b>Age (years)</b>                     |              |
| < 1                                    | 2 (4.2)      |
| 1-9                                    | 1 (2.1)      |
| 10-19                                  | 8 (16.7)     |
| 20-29                                  | 10 (20.8)    |
| 30-39                                  | 6 (12.5)     |
| 40-49                                  | 5 (10.4)     |
| 50-59                                  | 9 (18.8)     |
| 60-69                                  | 5 (10.4)     |
| 70-79                                  | 2 (4.2)      |
| <b>Health status</b>                   |              |
| Excellent                              | 16 (33.3)    |
| Very good                              | 17 (35.4)    |
| Good                                   | 12 (25.0)    |
| Fair                                   | 3 (6.3)      |
| Poor                                   | 0            |

| <b>Table 2 Clinical outcomes of pharmacist prescribing</b>   |              |
|--|--------------|
|  | <b>N (%)</b> |
| <b>Did symptoms improve</b>                                  |              |
| yes  | 45 (97.8)    |
| no, the situation got worse                                  | 0            |
| no, the situation remained the same                          | 1 (2.2)      |
| <b><i>Of situations with improvement, to what extent</i></b> |              |
| slight improvement   | 0            |
| some improvement   | 1 (2.2)      |
| moderate improvement   | 5 (11.1)     |
| significant improvement                                      | 24 (53.3)    |
| condition completely cleared                                 | 15 (33.3)    |
| <b>Side effects were a problem</b>                           |              |
| strongly disagree  | 30 (75.0)    |
| disagree   | 7 (17.5)     |
| agree  | 2 (5.0)      |
| strongly agree   | 1 (2.5)      |
| <b>Agent did not work fast enough</b>                        |              |
| strongly disagree  | 24 (60.0)    |
| disagree   | 13 (32.5)    |
| agree  | 3 (7.5)      |
| strongly agree   | 0            |



| <b>Table 3 Nature of symptoms</b>   |              |
|-------------------------------------|--------------|
|                                     | <b>N (%)</b> |
| <b>Medical condition</b>            |              |
| Acne                                | 2 (4.2)      |
| Allergic rhinitis                   | 10 (20.8)    |
| Athlete's foot                      | 2 (4.2)      |
| Canker sore                         | 1 (2.1)      |
| Cold sore                           | 14 (29.2)    |
| Diaper rash                         | 0            |
| Dysmenorrhea                        | 1 (2.1)      |
| Eczema                              | 3 (6.3)      |
| Folliculitis                        | 2 (4.2)      |
| Headache                            | 2 (4.2)      |
| Heartburn                           | 1 (2.1)      |
| Hemorrhoids                         | 3 (6.3)      |
| Impetigo                            | 0            |
| Jock itch                           | 0            |
| Sprain                              | 1 (2.1)      |
| Ringworm                            | 2 (4.2)      |
| Thrush, oral                        | 4 (8.3)      |
| <b>Number of days with symptoms</b> |              |
| 1 day                               | 13 (27.7)    |
| 2-3 days                            | 9 (19.1)     |
| 4-5 days                            | 3 (6.4)      |
| 6-7 days                            | 5 (10.6)     |
| several weeks                       | 15 (31.9)    |
| about 1 year                        | 1 (2.1)      |
| several years                       | 1 (2.1)      |
| <b>Severity of symptoms</b>         |              |
| not serious                         | 7 (14.9)     |
| slightly serious                    | 19 (40.4)    |
| fairly serious                      | 14 (29.8)    |
| quite serious                       | 6 (12.8)     |
| very serious                        | 1 (2.1)      |

**Table 4 Reasons for choosing a pharmacist over physician care**

|   | N (%)     |
|---|-----------|
| <b>Reasons</b>                                      |           |
| Doctor's office was closed                          | 2 (1.9)   |
| Could not get medical appointment soon enough       | 12 (11.3) |
| Do not like to wait in physician waiting room       | 23 (21.7) |
| Do not have a family doctor                         | 4 (3.8)   |
| The problem was not serious enough for medical care | 13 (12.3) |
| You trust pharmacists for minor ailment care        | 28 (26.4) |
| It is easier to get help from a pharmacist          | 23 (21.7) |
| Other   | 1 (0.9)   |

**Table 5 Feedback on encounter with pharmacist**

|   | Strongly Disagree | Disagree | Agree | Strongly Agree |
|---|-------------------|----------|-------|----------------|
| Pharmacist explained how to use medicine                          | 2                 | 0        | 4     | 39             |
| Pharmacist asked appropriate questions                            | 3                 | 0        | 5     | 37             |
| Pharmacist spent enough time with me                              | 1                 | 0        | 7     | 36             |
| The advice provide was confusing                                  | 33                | 10       | 1     | 0              |
| Adequate privacy was provided during consult                      | 2                 | 4        | 11    | 27             |
| A doctor would have been more thorough                            | 29                | 11       | 2     | 1              |
| You would seek help from this pharmacist for other minor ailments | 3                 | 1        | 2     | 36             |
| You would seek help from other pharmacists for minor ailments     | 3                 | 3        | 10    | 26             |