ORIGINAL RESEARCH

PEER-REVIEWED

Family physicians' perceptions of pharmacy adaptation services in British Columbia

Natalie Henrich, PhD, MPH; Pamela Joshi, BSc, MSc; Kelly Grindrod, BSc(Pharm), MSc, PharmD; Larry Lynd, BSP, ACPR, PhD; Carlo Marra, BSc(Pharm), ACPR, PharmD, PhD

N. Henrich

I believe that it is essential for policy development to go hand-in-hand with evaluation. Consequently, I am interested in studying the introduction of BC's pharmacy adaptation initiative in order to contribute to our understanding of how the initiative fits with the needs of various stakeholders impacted by the initiative.

Je pense qu'il est essentiel que l'élaboration des politiques aille de pair avec l'évaluation. Par conséquent, je souhaite étudier l'introduction de l'initiative menée en C.-B. sur l'adaptation d'ordonnances par les pharmaciens de manière à mieux comprendre comment cette initiative répond aux besoins des diverses parties prenantes sur lesquelles elle a une incidence.

Abstract

Background: In 2008, the BC provincial government introduced legislation that enabled pharmacists to adapt prescriptions. The purpose of this study was to examine the perceptions, attitudes and practices of family physicians as they relate to pharmacy adaptation services.

Methods: Focus groups and interviews were conducted with physicians in 4 of the 5 regional health authorities of BC (Fraser, Interior, Vancouver Coastal and Vancouver Island) and transcripts were thematically coded and analyzed.

Results: Forty physicians participated in the 4 focus groups and 4 physicians participated in supplementary interviews. Physicians perceived 6 key concerns arising from the initiative: compromised patient monitoring, physician liability, physician burden, pharmacists' ability to make appropriate adaptations, conflicts of interest and impact on physician-pharmacist relationships. Physicians also believed that communication about the adaptation initiative was inadequate and that they were not sufficiently included in its development.

Interpretation: Most of the participating physicians had received very few, if any, prescription adaptations; hence their concerns about the potential impact of such adaptations are mostly speculative. They also indicated a lack of information concerning the details of the initiative and the scope of what pharmacists are permitted to adapt. However, whether or not their perceptions are accurate, physicians' beliefs about prescription adaptations will affect their acceptance of the initiative and thus their concerns need to be addressed.

Conclusions: Physicians are essential stakeholders in the prescribing process. To ensure that physicians support pharmacy adaptation services, their concerns should be addressed in the adaptation guidelines and efforts should be made to include them in discussions and provide them with detailed communications. ***Can Pharm J*** **2011;144:172-178.**

Introduction

In 2008, the BC provincial government passed legislation to expand the role of health care professionals in the province that enabled pharmacists to adapt and renew prescriptions. The legislation led to the development of the Professional Practice Policy #58 (PPP-58) by the College of Pharmacists of BC to provide a framework for safe and effective adaptations. As of January 1, 2009, BC pharmacists could renew existing prescriptions for up to 6 months from the original prescription date; change the dose, formulation or regimen of existing prescriptions; and perform therapeutic drug substitutions with the goal of enhancing public health, ensuring continuity of care and providing the public a choice in health care.[1] Additional details about PPP-58, as well as examples of adaptations, can be found in the College of Pharmacists

of BC Professional Practice Policy #58 Orientation Guide.[1] Before the passing of PPP-58, pharmacists could provide emergency prescription refills for a duration deemed appropriate by the pharmacist (i.e., usually less than 30 days) and were permitted to substitute brand name drugs with generic equivalents, but they were not authorized to make any other modifications or to renew a prescription. PPP-58 has not changed the fact that only physicians are allowed to initiate a prescription.

Prior to implementation of the initiative, changes to PPP-58 were made by the College of Pharmacists of BC[2] as a result of consultations with the BC Medical Association (BCMA) and the College of Physicians and Surgeons of BC (CPSBC). The changes included the following: 1) clarification of the amount, duration and coverage of liability insurance, 2) specification that pharmacists will only honour handwritten "do not renew/do not adapt" statements, 3) reduction in the length of time for which a prescription can be renewed (from 1 year to 6 months), 4) mandatory notification to the prescribing physician within 24 hours of the adaptation and 5) renewal only for stable and chronic conditions. Some restrictions were also placed on changing the dose, regimen and formulation for drugs to treat cancer, cardiovascular disease, asthma, seizures and psychiatric conditions. After the initiative was passed, a press release was issued on January 1, 2009, by the BC Ministry of Health that briefly described the initiative and provided a College of Pharmacists of BC website that physicians (and others) could refer to for additional details and to download a brochure explaining the adaptations.

Findings about the initiative from research with pharmacists indicate that, in general, pharmacists feel that family physicians (hereafter referred to as "physicians") play a significant role in pharmacy adaptation services and that physicians' attitudes and practices were a critical component in facilitating or impeding prescription adaptations.[3] In semi-structured interviews with pharmacists, it was found that pharmacists perceived physicians to be resistant to the adaptation initiative. Pharmacists suggested that physicians who were resistant to prescription adaptation were modifying their prescribing practices to prevent their prescriptions from being adapted, such as including "do not adapt" (DNA) statements. As a consequence of this perceived resistance, some pharmacists reported that they were not using the pharmacy adaptation services policy to its fullest extent or were using emergency renewal procedures instead because of concerns about jeopardizing their relationships with physicians. Lack of a collaborative practice environment was perceived by pharmacists as a barrier to implementation of the program.[3] Given the significant role of physicians in the prescribing process, the objective of this current study was to explore physicians' attitudes and practices related to prescription adaptation in BC and to identify areas of support and resistance.

Knowledge into practice

- Pharmacy policy-makers can increase physician acceptance of prescription adaptations by addressing physicians' concerns in adaptation communications and guidelines.
- Faculties of pharmacy can modify training programs to ensure that pharmacists are equipped to make adaptations.
- Faculties of pharmacy can collaborate with faculties of medicine to develop interdisciplinary training programs for new physicians, pharmacists and other professionals to foster a collaborative working relationship.
- Pharmacists can educate physicians about the adaptation initiative and help increase their understanding of the guidelines and benefits of the initiative.

Methods

Procedure

Four focus groups and 4 supplementary interviews were conducted between December 2009 and January 2010. The use of focus groups allowed for the exploration of physicians' attitudes, perceptions and practices around adaptation services. All focus groups were conducted by an experienced qualitative researcher and the study coordinator. The focus group discussions were digitally recorded and transcribed. Questions about the initiative covered the following topics: 1) physicians' familiarity and knowledge of the initiative, 2) perceived strengths and benefits, 3) perceived weaknesses or problems, 4) physicians' practices around adaptation and 5) dissemination of information about the initiative. The complete focus group guide is available at **www.cpjournal.ca**. The study was approved by the University of British Columbia's Behavioural Research Ethics Board.

Recruitment

Physicians were recruited in partnership with Ipsos Reid, a public market research firm. Ipsos Reid telephoned potential participants from their physician database and screened them to ensure that they met the inclusion criteria. Forty-six physicians were scheduled to attend the 4 focus groups, and 40 participated. Focus groups were held at community facilities and lasted a maximum of 1.5 hours. An additional 4 physicians were recruited to participate in telephone interviews to supplement the Kelowna focus group (see Sample below). All participants were provided an honorarium of $250 for their participation.

Mise en pratique des connaissances

• Les décideurs en matière de pharmacie peuvent aider les médecins à mieux accepter l'adaptation des ordonnances en les rassurant sur les points qui les préoccupent relativement aux communications et aux lignes directrices en la matière.

• Les facultés de pharmacie peuvent modifier leurs programmes d'étude de manière à ce que les pharmaciens soient en mesure de faire des adaptations.

• Les facultés de pharmacie peuvent collaborer avec les facultés de médecine afin de mettre au point des programmes de formation interdisciplinaires pour les nouveaux médecins, pharmaciens et autres professionnels pour favoriser la collaboration professionnelle.

• Les pharmaciens peuvent expliquer l'initiative d'adaptation aux médecins et leur faire mieux comprendre les lignes directrices et les avantages de cette dernière.

Sample

Family physicians registered with the College of Physicians and Surgeons of British Columbia (CPSBC) who resided in BC and who were currently writing prescriptions for medications were eligible to participate. Potential participants were chosen from a panel of more than 20,000 individuals in the Ipsos Reid database, which is comprised of individuals who had previously stated their interest in participating in research and for whom Ipsos Reid had contact information. To capture any potential variability in attitudes and perceptions about adaptation services related to geographic location or health authority, focus groups were conducted with physicians from 4 of the 5 regional health authorities of BC: Kelowna (urban-rural mix, Interior region), Abbotsford (urban-rural mix, Fraser region), Victoria (urban, Vancouver Island region) and Vancouver (urban, Vancouver Coastal region). The Kelowna focus group consisted of all males with a modal range of 20–29 years in practice. To better understand the potential diversity of Kelowna physicians, 4 supplementary phone interviews were conducted. These interviews included 3 females and 1 male, with a modal range of 10–19 years in practice.

Analysis

Focus groups and interviews were imported into NVivo 8 (QSR International, Australia), a qualitative research software program for thematic coding and analysis. A qualitative descriptive approach was used to develop thematic codes (Box 1) based on the content of the focus groups/interviews. The codes were reviewed by the study coordinator. A trained coder coded all the transcripts by applying the thematic codes to sections of the transcripts that related to each one. All coded transcripts were reviewed by the qualitative researcher. The content that was coded for each theme was reviewed and representative quotes from each focus group were selected. As well, any subthemes that emerged during the review were identified.

BOX 1 Thematic codes that emerged from the focus groups

Alternatives to the initiative
Benefits of the initiative
Chronic disease management and guideline-based care
Compromised patient monitoring and overall care
Conflict of interest
Dissemination
Do not adapt or renew
Exclusion of physicians
Generics
Incentives
Lack of patient history
Liability issues
Miscellaneous opposition to the initiative
Notification process
Pharmacist competency to adapt
Physician burden
Physician compensation
Preferred sources of information
Process of developing/implementing the initiative
Questions physicians had about the initiative
Reasons for the initiative
Relationship between pharmacists and physicians
Roles of pharmacists
Sources of information about the initiative
Volume of adaptations

In order to assess within and between group variability, analyses were performed to identify which themes were mentioned in which focus groups and the frequency with which each thematic code was applied to each focus group. Note that for the purposes of analysis, the Kelowna focus group and supplemental interviews were analyzed as a single unit.

Results

Forty physicians participated in the 4 focus groups and 4 physicians participated in telephone interviews to supplement the Kelowna focus group. Demographics of the participants and self-reported level of familiarity with the adaptation initiative are provided in Table 1. Definitions or guidelines for differentiating among categories of familiarity with the initiative were not provided to physicians. The responses were based on how physicians interpreted the categories and provide insight into how respondents perceived their own

level of familiarity rather than measuring it against a set metric.

All themes (see Box 1) arose in all focus groups with the exception of "chronic disease management and guideline-based care" and "notification process," which were not mentioned in the Vancouver and Kelowna groups, respectively. The occurrence of the other themes in each of the focus groups reflects the homogeneity of the perspectives across groups. Although not quantifiable, the general attitude toward the adaptation initiative and the concerns expressed were perceived by the focus group leaders to be extremely similar across the groups. No variability between groups could be detected based on the presence or absence of themes or from the impressions of the group leaders. Consequently, the results from all focus groups are presented in aggregate. Focus group results reflect the physicians' perceptions regarding pharmacy adaptation services. With the exception of physicians in Abbotsford, who reported as many as 10 adapted prescriptions per week, the other physicians reported receiving very few, if any, notifications of adaptations since the inception of the initiative. Thus, for many of the physicians, most of their concerns and opinions about the impact of adaptations were largely speculative.

The following are the major themes that emerged in the focus groups, along with exemplary quotations (verbatim) by physicians.

Perceived benefits

The physicians appeared frustrated that communications about the initiative never specified the purpose of its implementation and, consequently, they were unclear of the intended benefits. The physicians speculated on the potential benefits and acknowledged that the program could 1) be convenient for patients, 2) save the government money and 3) alleviate some difficulties associated with patient access to physicians. However, most physicians did not identify any possible benefits of the initiative.

There were also physicians who disagreed with the aforementioned benefits, speculating that the long-term costs associated with the potential deleterious patient outcomes would exceed any short-term savings. Some physicians expressed that they were able to handle their patient loads and see their patients in a timely manner to do prescription renewals. There was agreement that patients would find the adaptation services convenient, but it was qualified that, despite the convenience, they believed patients would actually suffer from using these services because of the less frequent health monitoring by their physicians.

TABLE 1 Demographic characteristics of physician participants

	No.	%
Regional health authority		
Fraser (Abbotsford)	11	25.0
Interior (Kelowna)	9	20.4
Vancouver Coastal (Vancouver)	12	27.3
Vancouver Island (Victoria)	12	27.3
Gender		
Male	27	61.4
Female	17	38.6
Age, years		
35–54	30	68.2
55+	14	31.8
Number of years practising		
0–9	5	11.4
10–19	16	36.4
20–29	19	43.2
30+	4	9.0
Familiarity with adaptation services		
Not very familiar	8	18.2
Somewhat familiar	28	63.6
Very familiar	8	18.2

Concerns about the adaptation initiative

Six key concerns were expressed by physicians in the focus groups (Table 2). They are presented below from most to least important, as perceived by the focus group leaders and based on the frequency of comments made on each.

1. Compromised patient monitoring

The physicians' most commonly expressed concern with the initiative was the potential disruption in patient monitoring as a result of pharmacists renewing prescriptions. Physicians explained that they give their patients prescriptions for a specific duration to provide treatment until they believe it would be necessary to see them again for follow-up. They stated that services provided during the physician visit cannot be substituted with a pharmacist's renewal.

> *...When I write prescriptions and I write them for 3 months or 6 months, or sometimes 9 or 12 months, it's because at that point in time I think I need to see the patient again and re-evaluate them.... If they go back to the pharmacist in 6 months and get renewed for another 6 months, they're really not getting proper care.*

Concern was also expressed about the negative consequences that could result from renewing a prescription without evaluating the patient and from stable conditions becoming unstable in the absence of physician monitoring.

2. Physicians' liability

Perceptions about physician liability for negative health outcomes associated with an adapted prescription were shared by most participants. Prior to the focus groups, many physicians were unaware that pharmacists are liable for adapted prescriptions and are required to carry liability insurance. However, even with this information, physicians continued to express concern about liability they might have in association with an adapted prescription.

Physicians worried that if they received a notification of adaptation by fax and did not object to the adaptation, they were implicitly consenting to the change and therefore potentially liable for subsequent outcomes. There was also concern that even if the physicians were not directly liable for the adaptation, they were responsible for the patient's overall health care. If a pharmacist could modify the treatment prescribed by the physician, then the physician might be left coping with a patient whose health may have been compromised as a result of the adaptation.

3. Physician burden

Physicians believed that each adaptation generates additional work for them — work for which they do not receive financial compensation. Although charting and possible pharmacist and/or patient follow-up in response to a notification may only take several minutes for a single adaptation, there was concern that with a high volume of adaptations this could accumulate to a significant amount of uncompensated work.

> *Every day I get faxes and I have to read them, pull the chart, look at the chart, do the same amount of thinking as when I see a patient and am paid for it.… And I am getting quite irritated by it because I'm not compensated at all and I'm doing the same amount of work as if I had done it all myself.*

Physicians expressed irritation that they were required to handwrite "do not adapt or renew" (DNA) on their prescription, rather than using a check box or stamp. This was perceived as adding undue burden and was interpreted as a way to reduce the physicians' use of DNA.

4. Ability of pharmacists to make appropriate adaptations

The majority of physicians considered pharmacists to be unqualified to adapt prescriptions. The primary reason for this was that physicians believed that adapting a prescription required medical training that pharmacists lack. In adapting prescriptions, pharmacists were seen as taking on the role of physician, a role for which physicians perceived they had not been trained. Physicians were also concerned that pharmacists lacked the patients' medical histories and that it would be inappropriate to take a medical history in the pharmacy setting given the lack of privacy.

A minority of physicians believed that pharmacists are sufficiently trained and capable of making appropriate adaptations. For example, one physician explained that pharmacists have knowledge about medications that may surpass her own and that she would appreciate adaptations that improve the prescription. She said the following:

> *I'm quite prepared to admit there may be situations where the pharmacist may have a good reason for a slight adjustment that wouldn't*

TABLE 2 Physicians' concerns about the adaptation initiative*

Concern	Description
Compromised patient monitoring	Physicians will see their patients less often if pharmacists renew prescriptions.
Physicians' liability	Physicians worry about being liable for complications associated with an adapted prescription.
Physician burden	Physicians will have an increase in uncompensated work because of charting associated with adaptations, possible follow-ups in response to notifications and handwriting "do not adapt" on prescriptions.
Ability of pharmacists to make appropriate adaptations	Physicians lack confidence in the adequacy of pharmacists' training for decision-making needed for adaptations.
Conflicts of interest	Physicians worry that pharmacists may adapt prescriptions because of financial benefits resulting from the adaptation (e.g., fee for service, "kickbacks" from pharmaceutical companies).
Physician-pharmacist relationship	The pharmacist-physician relationship may be weakened by reduced dialogue/interaction as pharmacists adapt prescriptions without consulting physicians and by physician resentment that their medical decisions are being modified.

*Concerns are listed in order from most to least frequently expressed in the focus groups.

occur to me or that, on further reflection, I would agree was better than what I had done. I mean, I certainly go to pharmacists and ask advice on medication decisions and so on.

5. Conflicts of interest

Physicians believed that there was an incentive for pharmacists to make adaptations in order to receive the service fee, which could result in unnecessary adaptations. Physicians also believed that pharmacists received incentives from pharmaceutical companies that produce generic drugs when switching a prescription from a brand name to a generic drug and this contributed to their suspicion about the motives of pharmacists when adapting to a generic drug.

I mean, a lot of us know pharmacists and there are a lot of kickbacks involved in the drug industry. So there is a conflict of interest, especially when it comes to generics.

6. Physician-pharmacist relationship

A minority of physicians expressed concern that pharmacist adaptations would jeopardize the relationship between physicians and pharmacists. Collaborative discussion about prescription modifications was highly valued by these physicians. Physicians did not understand why the pre-adaptation system needed to change when, from their perspective, it was working well. Despite these perceived harmonious relationships, physicians suggested that by removing the dialogue and allowing pharmacists to independently adapt prescriptions, the physicians would resent the pharmacists overriding their medical decisions.

Communications about the initiative

The most common source through which physicians learned about the adaptation initiative was mass media. Other less frequently cited sources were e-mails/faxes sent by the BC Medical Association (BCMA), patients, pharmacists and drug representatives. In contrast to how they originally received information about the initiative, physicians preferred to be notified about changes to the initiative by e-mails or faxes sent from the BCMA or CPSBC. Ideally, the communiqué would be addressed specifically to the physician and sent well in advance of when the changes would come into effect.

The major criticism about communications was that the physicians felt they were left out of the process of developing the initiative:

I think it's like a slap in the face, okay. We don't have input. This is what's going on and you adapt quickly.

Those who did receive communications felt that the information lacked detail and that no rationale for the initiative was provided.

Conclusions

Physicians generally had an unfavourable view of the prescription adaptation initiative and felt that its benefits were limited. Physicians were primarily concerned about the potential for negative consequences to their patients' health as a result of reduced physician monitoring and potentially inappropriate adaptations made by pharmacists. There were also concerns about the physicians' liability for adaptations, an increase in uncompensated work related to adaptation notifications and possible conflicts of interest for pharmacists. Physicians felt that they were not sufficiently consulted in the development of the initiative and that communications lacked detail and should have been disseminated in advance of the initiative's implementation.

Some of the physicians' beliefs are based on incorrect or incomplete information about pharmacists and the initiative; however, the accuracy of their beliefs is of secondary importance. What matters most is that front-line physicians believed that problems could arise as a result of prescription adaptations and, consequently, these beliefs influence their acceptance of the initiative. This could be addressed by an effective communication campaign directed at physicians from trusted sources. It should also be seriously considered that, as stakeholders, physicians provide important perspectives on the initiative that may not have been addressed during the course of consultation. Consequently, there is real value to listening to the issues raised by physicians, as they may identify previously undetected weaknesses in the initiative.

The lack of support by the physicians in our focus groups is consistent with the opinions voiced by delegates to the Canadian Medical Association General Council in 2007, who advocated that "pharmacists be precluded from all manner of independent prescribing."[4] A small body of literature from the United Kingdom focusing on supplementary prescribing has explored pharmacists' expanded prescription authority. Similar to the current study, Cooper et al. showed that physicians had a general lack of awareness of supplementary prescribing and were concerned about the erosion of doctors' roles, professional hierarchy and patient safety.[5] Weiss and Sutton found that supplementary prescribing may pose a challenge or threat to medical dominance or physicians' medi-

cal authority.[6] Consistent with the concerns raised in our focus groups about whether pharmacists have received the necessary training for independent prescribing, Stewart et al.'s study found that physicians were also concerned about the ability of pharmacists to prescribe independently, including concerns about pharmacists' competence in taking medical histories, performing physical assessments and making diagnoses.[7] A study by Lloyd et al.[8] revealed mixed reactions by physicians to pharmacists' supplementary prescribing. Physicians who were very familiar with the practice (i.e., mentors to prescribing pharmacists) were supportive of pharmacists taking on the responsibility. However, these physicians tended to support this practice within team settings where the pharmacists had direct access to physicians (rather than in community settings) and when the prescriptions were for chronic conditions for which management was protocol-driven. The relationships between physician mentors and prescribing pharmacists remained constant or improved, contrary to concerns voiced by physicians in our focus groups who thought that relationships might deteriorate. The findings from these studies suggest that physicians may require significant support when shifting clinical responsibilities to other health care professionals.

Limitations

This study is limited by the fact that the physicians participating in the focus groups had had very few of their prescriptions adapted. During the first year in which adaptations were permitted, some physicians never received a notification, others received "a few," and some received, at most, between 2 and 10 per week. Consequently, their beliefs about the impact of adaptations on their patients and themselves are largely speculative. Nonetheless, it is these beliefs that are shaping their buy-in for the initiative. As well, the study only included physicians in BC; thus, the results may not be generalizable to other provinces in Canada or to other countries.

Physicians are essential stakeholders in the prescribing process. To ensure that physicians are comfortable with the continued development of pharmacy adaptation services and that their concerns are addressed in the adaptation guidelines, it is important that initiative processes are transparent and that efforts are made to include physicians in the discussion and provide them with timely and detailed communications from trusted sources. In addition to the ongoing evaluation of the initiative, it would be beneficial to monitor long-term patient outcomes to identify what, if any, impacts prescription adaptations have on patient health. ■

From the Providence Health Care, Centre for Health Evaluation & Outcome Sciences (Henrich), Vancouver; the BC Mental Health and Addiction Services, Research and Networks (Joshi), Vancouver; the University of British Columbia, Collaboration for Outcomes Research and Evaluation (Lynd, Marra), Faculty of Pharmaceutical Sciences, Vancouver, BC; and the School of Pharmacy, University of Waterloo (Grindrod), Waterloo, ON. Contact nhenrich@cheos.ubc.ca.

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