



ENAV Z. ZUSMAN

Pharmacists play a key role in promoting equitable access to reproductive health options, including the medical abortion pill mifepristone. We pursued this research to gain insight into the experiences of pharmacists in dispensing mifepristone, with the ultimate goal of providing optimal support for both pharmacists and patients. By doing so, we can improve equitable access to reproductive health options through accessible mifepristone dispensing throughout Canada.

Les pharmaciens jouent un rôle clé dans la promotion d'un accès équitable aux options de santé génésique, y compris à la pilule abortive, mifépristone. Nous avons poursuivi cette recherche afin de mieux comprendre l'expérience des pharmaciens qui délivrent la mifépristone, dans l'objectif ultime d'apporter un soutien optimal aux pharmaciens et aux patientes. Ce faisant, nous pouvons améliorer l'accès équitable aux options de santé génésique grâce à la délivrance de la mifépristone partout au Canada.

Dispensing mifepristone for medical abortion in Canada: Pharmacists' experiences of the first year

Enav Z. Zusman, MSc, PharmD^{ID}; Sarah Munro, PhD; Wendy V. Norman, MHSc, MD^{ID}; Judith A. Soon, BSc(Pharm), PhD^{ID}

ABSTRACT



Background: Mifepristone for medical abortion was first dispensed by community pharmacists in Canada directly to patients in January 2017. We asked about pharmacists' experiences over their first year dispensing mifepristone in order to evaluate the frequency of the new practice and assess availability in urban/rural pharmacies.

Methods: From August to December 2019, we invited 433 community pharmacists who had completed a baseline survey at least 1 year prior to participate in a follow-up online survey. We summarized categorical data using counts and proportions and conducted a qualitative thematic analysis of open-ended responses.

Results: Among 122 participants, 67.2% had dispensed the product, and 48.4% routinely stocked mifepristone. Pharmacists reported a mean of 26 and median of 3 (interquartile range, 1, 8) mifepristone prescriptions filled in their pharmacies in the previous year. Participants perceived that

the benefits of making mifepristone available in pharmacies included increased abortion access for patients ($n = 115$; 94.3%), reduced pressure on the health care system ($n = 104$; 85.3%), increased rural and remote abortion access ($n = 103$; 84.4%) and increased interprofessional collaborations ($n = 48$; 39.3%). Few participants reported challenges to maintaining adequate stock of mifepristone, but these challenges included low demand ($n = 24$; 19.7%), short expiry dating ($n = 12$; 9.8%) and drug shortages ($n = 8$; 6.6%). The overwhelming majority, 96.7%, reported that their communities did not resist the provision of mifepristone by their pharmacy.

Interpretation: Participating pharmacists reported many benefits and very few barriers to stocking and dispensing mifepristone. Both urban and rural communities responded positively to enhanced access to mifepristone in their community.

Conclusions: Mifepristone is well accepted by pharmacists within the primary care system in Canada. *Can Pharm J (Ott)* 2023;156:204-214.

© The Author(s) 2023



Article reuse guidelines:
sagepub.com/journals-permissions
DOI:10.1177/17151635231176270

KNOWLEDGE INTO PRACTICE



- Canadian pharmacists have been able to dispense mifepristone prescriptions directly to patients since November 2017.
- Perceived barriers raised by pharmacists for the successful dispensing of mifepristone in community pharmacies included cost, liability, lack of prescribers and inadequate stock.
- Pharmacists indicated a high degree of acceptability and feasibility to directly dispensing mifepristone over the first year of this new practice, with both urban and rural communities responding positively to enhanced access to mifepristone in their community pharmacy.
- Pharmacists reported very few barriers to stocking and dispensing mifepristone, once the medication was readily accessible through regular supply and distribution chains.
- Our results are relevant to high-income countries where abortion medications may be dispensed by community pharmacists or where transitioning to such a model is under consideration.

Introduction

Mifepristone, marketed in Canada in combination with misoprostol, was first dispensed by community pharmacists in Canada in January 2017. Once mifepristone became available in Canadian community pharmacies, the abortion rate remained stable, while the proportion of all abortions that were undertaken as medical abortion increased rapidly.¹ In Ontario, over 2 years following the removal of dispensing restrictions, the proportion of medical abortions increased from 4% to over 30%.¹ While patients were initially required to pay privately for the approximately \$300 cost of mifepristone, by July 2019 all provinces and territories covered the cost of the medication.^{2,3}

To support the dispensing of mifepristone in community pharmacies, a guideline-based mifepristone checklist and a resource guide for pharmacists were published in April 2018 by the Contraception and Abortion Research Team (CART-GRAC).⁴⁻⁶ Continuing mifepristone education programs for community pharmacists were extensively provided between April 2016 and August 2020. Further support for implementation of the new practice was provided by a variety of resources and “Ask an Expert” features on the Canadian Abortion Providers Support (www.CAPS-CPCA.ubc.ca) virtual community of practice platform.⁷

We have previously reported our baseline survey over 2017 to 2019 (study administration period) among pharmacists from across Canada,⁸ which was conducted at the time they initially trained and/or began to implement mifepristone dispensing into their pharmacy practice. The initial dispensing conditions mandated training but this requirement

MISE EN PRATIQUE DES CONNAISSANCES



- Depuis novembre 2017, les pharmaciens canadiens peuvent délivrer des ordonnances de mifépristone directement aux patientes.
- Les obstacles perçus par les pharmaciens pour la délivrance de la mifépristone dans les pharmacies communautaires comprenaient les coûts, la responsabilité, le manque de prescripteurs et l'insuffisance des stocks.
- Les pharmaciens ont indiqué un degré élevé d'acceptation et de faisabilité pour délivrer directement la mifépristone au cours de la première année de cette nouvelle pratique, les communautés urbaines et rurales réagissant positivement à l'accessibilité accrue à la mifépristone dans leur pharmacie communautaire.
- Les pharmaciens ont signalé très peu d'obstacles au stockage et à la délivrance de la mifépristone, une fois que le médicament était facilement accessible par le biais des chaînes d'approvisionnement et de distribution régulières.
- Nos résultats sont pertinents pour les pays à revenu élevé où les médicaments abortifs peuvent être délivrés par les pharmaciens communautaires ou lorsque la transition à un tel modèle est envisagée.

was removed within months, so our eligibility criteria were adjusted to reflect the current regulations. That study identified perceived advantages and barriers for successful initiation to dispense mifepristone among community pharmacists.⁸ In that initial survey, we reported that 93.1% of participating pharmacists were able and willing to dispense mifepristone. Barriers to stocking/dispensing were rarely mentioned, with a few participants mentioning cost, liability, lack of prescribers or inadequate stock as barriers; facilitators included a private consultation setting, increasing accessibility for patients and reducing pressure on the health care system. Pharmacists reported a sense that dispensing mifepristone could improve access to abortion as well as enhance quality of care and patient experiences.⁸ We are now reporting the next step in our study, where we aimed to follow up with the initial survey participants after their first year of dispensing mifepristone to assess their impressions and experiences.

Methods

Between August 2 and December 11, 2019, we conducted a national cross-sectional survey among the 433 pharmacists working in a dispensing community pharmacy who had completed the initial survey at least 1 year prior.⁸ Participants agreed to be contacted via an e-mail address they provided. We invited them to complete our online survey,

hosted on the secured platform REDCap. Each participant received an individual invitation to complete the survey, which assigned them their original participant ID, allowing us to compare demographics provided in the initial survey between respondents and nonrespondents to the follow-up survey. We sent 5 reminders at 1-week intervals.^{9,10} We asked participants about their mifepristone dispensing experiences over the prior 12 months. This study is part of our program of research investigating implementation of mifepristone in Canada.^{5-7,11-15}

Survey development

We described the survey development in detail in our protocol paper¹¹ and in the report on our study that fielded this instrument among pharmacists initially training or beginning to dispense mifepristone.⁸ We used the definitions of Statistics Canada to define urban and rural setting and considered Census Metropolitan Areas (CMAs) to be urban settings and all other locations as rural settings.¹⁶

We included questions assessing the pharmacist's training, experience and views in respect to dispensing mifepristone in a community pharmacy, the awareness and response of the community (patients and prescribers) to the availability of the medication and the challenges and benefits experienced by the pharmacists. The majority of the survey questions were closed-ended, with 4 open-ended questions focusing on participants' experience with mifepristone (Appendix 1, available in the Supplementary Material section of the article).

Ethics

We received institutional review board approval from the University of British Columbia Children's and Women's Hospital Research Ethics Board (H16-01006). No incentive was provided to participants. Data were anonymized, encrypted and protected by a password, stored securely on a REDCap platform,¹⁷ and will be kept for 5 years.

Data analysis

We summarized categorical data using counts and proportions and used chi-square tests to determine the relationship between categorical variables. Because our questions were independent from one another, we included participants with partial data in our analysis. We excluded participants who had completed the initial survey less than a year before. We considered a p -value of <0.05 to be a statistically significant result. We performed all data analysis using Stata Version 15 (StataCorp; College Station, TX, USA).

We conducted a qualitative thematic analysis of open-ended responses and followed an inductive approach with the goal of condensing our raw textual data into a summary format, establishing links between participant responses and developing a framework of the underlying structure of experiences as described by our pharmacist participants.¹⁸⁻²⁰ Two authors

(E.Z.Z., J.A.S.) familiarized themselves with participants' responses before 1 author (E.Z.Z.) entered responses into NVivo 12 (QSR International) for analysis. We systematically coded each response, refined our codes and grouped them into categories and themes that arose from participants' responses. In our analysis, we considered the number of participants who contributed to each category and theme and conflicting opinions and experiences. Data interpretation was discussed by all authors, and together we refined the themes until we reached consensus.

Results

We collected survey results from 122 pharmacists working across Canada (response rate = 28.2%), with representatives from 10 of Canada's 13 provinces and territories (Table 1). Comparisons between those invited (i.e., pharmacists who had completed the baseline survey) and those completing the 1-year survey showed that compared with dispensing pharmacist employees, pharmacy owners were less likely to complete the follow-up survey ($p = 0.007$). No significant differences between participants who completed and did not complete the follow-up survey were seen for age, sex, education, urban/rural status or years of practice. Among participants, 67 (54.9%) reported receiving 1 or more prescriptions for mifepristone in their pharmacy over the prior 12 months. The mifepristone pharmacist dispensing checklist and/or resource guide had been used by 40 participants (32.8%) (Table 2). Approximately half ($n = 59$) of participants reported that their pharmacy routinely stocks mifepristone; of those, 79.6% reported that community physicians were aware that their pharmacy had mifepristone available. Fewer than 6 pharmacists reported that patients asked whether they stock mifepristone. In addition, 81.8% of pharmacists who stocked mifepristone reported that if mifepristone was not available in their community pharmacy, their patients would have to travel less than 30 km to fill their prescription elsewhere. No difference was seen in this estimated patient travel distance between pharmacists practising in rural or urban communities ($p = 0.364$) (Table 2).

Participants estimated they filled a median of 3 (IQR, 1, 8; range, 0-500) mifepristone prescriptions in the previous 12 months, with more prescriptions being filled by urban than rural pharmacists ($p = 0.330$) and higher numbers reported by pharmacies located close to a hospital. The type of community pharmacy in which the pharmacists worked was found to be associated with receiving ($p = 0.008$) and stocking ($p = 0.022$) mifepristone, with higher volumes among franchised pharmacies (e.g., large pharmacy store chains) and lower volumes among department/mass merchandise locations (e.g., department stores).

When asked to report the benefits of making mifepristone readily available in Canadian pharmacies, pharmacists noted increased geographic accessibility of medical abortion services for patients ($n = 115$; 94.3%), enhanced access in rural and remote communities ($n = 103$; 84.4%) and reduced pressure

TABLE 1 Follow-up survey participant demographics ($N = 122$)

Variable		<i>n</i> (%)
Sex	Female	87 (71.3)
	Male	35 (28.7)
Province	British Columbia	18 (14.7)
	Alberta	19 (15.6)
	Saskatchewan	8 (6.6)
	Manitoba	<6
	Ontario	49 (40.2)
	Quebec	<6
	New Brunswick	<6
	Nova Scotia	13 (10.6)
	Prince Edward Island	<6
	Yukon	<6
	Not specified	<6
Pharmacy practice setting	Urban	54 (44.3)
	Rural	63 (51.6)
	Not specified	5 (4.1)
Community pharmacy setting	Banner (e.g., I.D.A., Guardian, Pharmasave)	22 (18.0)
	Chain (e.g., Lawtons, Pharma Plus)	12 (9.8)
	Department (e.g., Wal-Mart, Safeway)	30 (24.6)
	Franchise (e.g., Shoppers Drug Mart, Medicine Shoppe)	26 (21.3)
	Independent	27 (22.1)
	Other	<6
	Missing	<6
Education	BScPharm	116 (95.1)
More than one answer allowed	Hospital residency	<6
	Community residency	<6
	Graduate degree	7 (5.7)
	E2P PharmD	<6

BScPharm, bachelor of science in pharmacy; E2P PharmD, entry-to-practice doctor of pharmacy; N , number of entire cohort; n , number of survey respondents.

on the health care system ($n = 104$; 85.3%). Pharmacists who routinely stock mifepristone ($n = 59$) in their pharmacy were asked about the challenges of maintaining an adequate stock. They highlighted low demand for the medication ($n = 24$; 40.7%), short expiration date of the co-packaged misoprostol ($n = 12$; 20.3%), previously expired stock ($n = 7$; 11.9%) or

a manufacturer-related drug shortage ($n = 8$; 13.6%). When participants were asked to report the barriers for dispensing mifepristone in community pharmacies, barriers were rarely reported and included drug shortage ($n = 11$; 9.0%), lack of private counselling area ($n = 11$; 9%) and/or liability concerns ($n = 8$; 6.6%). When asked about continuing education

TABLE 2 Follow-up survey of participant experiences with mifepristone

	All participants (N = 122)	Urban (n = 54)	Rural (n = 63)	p-value
Dispensed a prescription for mifepristone, n (%)				
Yes	67 (54.9)	30 (55.6)	34 (54.0)	0.863
Maintained a stock of mifepristone, n (%)				
Yes	59 (48.4)	25 (46.3)	32 (50.8)	0.628
Report that patients have difficulty to access mifepristone, n (%)				
Yes	18 (14.7)	11 (20.4)	7 (11.1)	0.141
No	41 (33.6)	13 (24.1)	25 (39.7)	
I don't know	62 (50.8)	29 (53.7)	31 (49.2)	
Estimated number of mifepristone filled in the last 12 months				
Mean ± SD	26.3 ± 87.2	28.8 ± 87.9	17.4 ± 75.4	0.330
Range	0-500	0-450	0-500	
Median (IQR)	3 (1, 8)	3.5 (1, 8)	2 (1, 8)	
Estimated distance travelled to fill mifepristone if not available at participant's pharmacy, n				
<30 km	43	23	20	0.364
>30 km	10	<10	<10	
Perceived benefits of making mifepristone available in Canadian pharmacies, n (%)				
Increased accessibility for women and couples	115 (94.3)	53 (98.1)	58 (92.1)	0.137
Increased accessibility in rural and remote areas	103 (84.4)	44 (81.5)	55 (87.3)	0.384
Increased job satisfaction	21 (17.2)	10 (18.5)	11 (17.5)	0.882
Increased interprofessional collaboration	48 (39.3)	19 (35.2)	27 (42.9)	0.397
Reduce pressure on the health care system	104 (85.3)	47 (87.0)	53 (84.1)	0.656
Perceived barriers pharmacists experienced when dispensing mifepristone, n (%)				
Patient unable to pay	15 (12.3)	<6	10 (8.2)	0.286
Need additional training	12 (9.8)	<6	<6	0.558
Drug shortage	11 (9.0)	<6	<6	0.558
Lack of private counselling areas	11 (9.0)	<6	7 (11.1)	0.284
Liability	8 (6.6)	<6	7 (11.1)	0.284
Resistance from pharmacy team	14 (11.5)	<6	9 (14.3)	0.404
Resistance from other health care professionals	9 (7.4)	<6	<6	0.556
Resistance from management	<6	<6	<6	0.058
Resistance from general public	<6	<6	<6	0.388

(continued)

TABLE 2 (continued)

	All participants (N = 122)	Urban (n = 54)	Rural (n = 63)	p-value
For pharmacists who stocked but had not dispensed mifepristone (n = 59), n (%)				
Challenges to maintain an adequate mifepristone stock				
Low demand for the drug	24 (40.7)	9 (36.0)	15 (46.9)	0.340
Drug shortage	8 (13.6)	<6	<6	0.821
Lack of timely delivery of drug	<6	<6	<6	0.875
Short expiry date	12 (20.3)	7 (28.0)	5 (15.6)	0.372
Inadequate return policy	<6	<6	<6	0.472
Previous expired stock	7 (11.9)	<6	<6	0.857
Received training on mifepristone	112 (91.8)	48 (88.9)	60 (95.2)	0.199
Trained by SOGC Accredited Medical Abortion Training Program	98 (80.4)	44 (81.5)	50 (79.4)	0.774
Manufacturer's training program	16 (13.1)	9 (16.7)	7 (11.1)	0.383
Continuing pharmacy education event	<6	<6	<6	0.778
Mifepristone pharmacist dispensing checklist and/or resource guide, n (%)				
Used in practice (n = 122)	40 (32.8)	19 (35.2)	21 (33.3)	0.833
Found them useful (n = 40)	34 (85.0)	18 (94.7)	16 (76.2)	0.246

IQR, interquartile range; N, number in cohort; n, number of question respondents; SD, standard deviation.

training, the majority of participants (n = 112; 91.8%) reported that they had received training on mifepristone (Table 2), whereas only 12 pharmacists (9.8%) reported that they felt the need for additional education and training. Fewer than 6 pharmacists reported experiencing any resistance from the general public related to dispensing mifepristone, whereas 14 pharmacists (11.5%) reported resistance from other members of the pharmacy team. No differences were noted between pharmacists practising in urban or rural settings with regard to either source of resistance (Table 2).

Our open-ended questions were answered by 70 pharmacists. We organized their responses into 3 themes (Table 3).

Being prepared despite relatively low demand for mifepristone prescriptions

Pharmacists reported infrequent or unpredictable demand for prescriptions, with a number of participants having had “No scripts for it” yet. Consequently, stocking could be challenging due to the short expiry date on the product. In addition, the initial \$300 cost of the product ordered from the distributors

needed to be paid up front and would only be reimbursed by the provincial health authority once a prescription was filled and dispensed to a patient. This created tension between the desire to meet patient needs quickly and the desire to manage costs, as 1 participant indicated, “I do not want to make patients wait a working day to obtain this product but maintaining stock for a rarely used script is difficult.” Pharmacists also reported that occasionally, medication supplies could be delayed by a manufacturer shortage, which affects stocking. Participating pharmacists who did not regularly maintain mifepristone in the dispensary reported being able to order the medication from the distributor once a prescription was received, enabling next-day dispensing. Pharmacists also mentioned having referred patients to a partnering pharmacy that had the medication in stock in the dispensary.

Providing extra care through mifepristone counselling

Pharmacists recognized that the availability of private counselling rooms was important, particularly as “the [patient] experience can be very emotional.” Pharmacists commented on the

TABLE 3 Follow-up survey qualitative thematic analysis

Themes	Subcategories	Quotes
Being prepared despite relatively low demand for mifepristone prescriptions	No requests from patients	“We would definitely dispense Mifegymiso, except that we haven’t had any request from patients or prescribers! I have not heard of any interest at all in it from our pharmacy’s clientele.” “No scripts for it—I believe a large number of patients are accessing it directly through the hospital or primary care clinics.”
	Pharmacy caught unprepared with no stock	“The first time I received a prescription for it, our pharmacy had none in stock and it was a Friday before a long weekend, so we wouldn’t get an order until Tuesday. I had to call 14 other pharmacies nearby (including the hospital pharmacy) before I found a pharmacy who had one box in stock. Since then, I have ensured that we always have one on hand. This drug is meant to improve women’s access to abortion, so 13 pharmacies having none in stock is unacceptable. All should have a minimum of one on hand at all times.”
	Short expiry date	“Keeping inventory on hand when it is short dated, expensive and no credit is offered after expiration. I do not want to make patients wait a working day to obtain this product but maintaining stock for a rarely used script is difficult.”
	Getting timely supply to increase uptake	“In rural communities within BC the old approach of ordering from BCCDC hindered access because supply was not timely or we would have to hold stock until it expired (which is also not ideal). Demand is not super high, but now that we can have next-day access from our regular wholesaler and still expect full coverage, this may increase uptake.”
Providing extra care through mifepristone counselling	Counselling in private spaces	“The experience can be very emotional and a private counselling area could be a huge benefit.”
	Receiving compensation for counselling	“Usually they are very emotional about making their decision to abort. So we provide the counselling orally and also provide them with a written copy so they can reference it from home and a red flag pocket list for when they should seek immediate care. I wish the private and provincial plans compensated pharmacists for this extra time and care that we provide patients. It is wonderful to have drug coverage, but our worth in drug counselling is worth compensation too.”
	Patients declined counselling	“9/10 women provided Mifegymiso refuse counselling by the pharmacist. Counselling is part of this but I’m not sure if it’s the stigma or physician. Most say the physician has counselled them.”
	Counselling takes time	“Time constraints—busy pharmacy and I need them to come back when I have more time later in the day.”
Improving access and care through relationships with prescribers	Lack of mifepristone prescribers	“Very little participation on the part of physicians. Seems to only be prescribed by OB/GYN specialists—have not seen any Rx’s come from GP.”
	Prescribers’ refusal to provide a prescription	“There are many very religious physicians in our area and they do not prescribe for or provide medical abortions. Finding a physician who can do so without repercussions from the medical community is difficult.”
	Communicating with prescribers to maximize access to pharmacists	“In my setting, patients are usually well versed by OB-GYN prior to coming to pharmacy. We have a strong working relationship with the clinic.”

(continued)

TABLE 3 (continued)

Themes	Subcategories	Quotes
		"It would be helpful for prescribers to have access to which pharmacies commonly keep Mifegymiso in stock."
		"On both occasions that I have dispensed Mifegymiso, the doctors involved have specifically asked me to not counsel the patient as they have covered everything with the patient. I have taken the time to counsel the patient anyway in our private counselling room. The checklist is a great resource tool. I have even given a copy to the patients. Physicians need to know that pharmacists are part of the safe administration of this medication."

BCCDC, British Columbia Centre for Disease Control; GP, general practitioner.

desirability of receiving financial compensation for the additional professional time that is required to appropriately counsel patients on mifepristone: "I wish the private and provincial plans compensated pharmacists for this extra time and care that we provide patients. It is wonderful to have drug coverage but our worth in drug counselling is worth compensation too." Participants noted additional barriers to counselling, including time constraints and patients declining to receive counselling from the pharmacist.

Improving access and care through relationships with prescribers

Participants also reinforced the importance of having a strong working relationship with prescribing physicians. Some pharmacists suggested that prescribers might benefit from having access to a list of pharmacies that regularly stock mifepristone. Infrequently, pharmacists reported a lack of mifepristone prescribers in their community or the refusal of some prescribers to provide patients with a mifepristone prescription, as 1 participant explained, "There are many very religious physicians in our area, and they do not prescribe for or provide medical abortions. Finding a physician who can do so without repercussions from the medical community is difficult." Some concerns were raised about physicians requesting pharmacists to not counsel their patients, while some patients refused to be counselled by the pharmacists based on their physician's advice, thus compromising the pharmacists' ability to fulfil their professional responsibilities in safe medication dispensing.

Discussion

Among pharmacists from across Canada who participated in our initial research, we found that a year later they were willing and able to dispense mifepristone and noted that mifepristone was easily integrated into pharmacy practice. Very few participants reported barriers for stocking mifepristone, and the barriers reported were low demand for the drug, short expiry date (miso-prostol expires within a year) and drug shortages. The acceptability and feasibility of integrating mifepristone into the usual model

of pharmaceutical care was straightforward, with rarely reported barriers that were no different than for any other medication with a short expiry date. Pharmacists emphasized that patients need to know that the medication is available in their community. The majority of respondents reported that their communities were supportive of having mifepristone available for their residents through pharmacies, with few pharmacists reporting any community resistance. We found no differences between responses received from pharmacists who work in urban versus rural settings for any of the parameters studied.

In our initial survey, pharmacists predicted that the main barriers to mifepristone dispensing would be the cost of the medication (30.5%), liability concerns (18.2%), lack of prescriptions (16.6%) and inadequate stock (15.7%).⁸ Subsequent cost coverage by provincial governments removed the most substantial barrier, and this follow-up survey demonstrated that the remaining barriers noted in the initial study did not affect the dispensing of mifepristone. Once ordered, the medication would usually arrive the following day, which minimized barriers for stocking. Pharmacists report after 1 year of practice that they were willing and able to dispense mifepristone and experienced minimal resistance from the pharmacy team, other health care professionals and the general public, which was consistent with the predictions of the pharmacists captured in our initial survey.⁸ Based on preliminary results from our initial survey indicating pharmacist concerns about the time involved in counselling medical abortion patients, our team at CART-GRAC developed The Medical Abortion Checklist and the Pharmacist Resource Guide for Medical Abortion.^{5,6} These resources aim to support pharmacists with their prescription assessment and patient interaction and provide important counselling points, monitoring parameters, supportive care options and follow-up plans.⁵ The documents also include suggested use of language and ways of creating a safe, supportive, nonjudgmental environment for the patient.⁵ Although an open access resource is available for download from the CAPS CPCA Forum website⁴ and from the Canadian Pharmacists Association website,²¹ only one-third of survey

participants reported using these resources when dispensing mifepristone. The proportion of mifepristone-dispensing pharmacists using the resource may increase with time, as the survey was fielded concurrent with initial uptake of this resource. With 86% of users finding the checklist and resources useful for their practice, future studies assessing the reasons behind the underutilization are needed and will help identify ways to further enhance access and use of these resources.

Others have assessed pharmacists' experiences with dispensing mifepristone. Munro et al.¹² conducted semi-structured interviews with Canadian pharmacists who intended to offer mifepristone dispensing at their pharmacy within the first year of its availability. Their findings concur with ours in that pharmacists were willing and able to integrate this service into their daily practice, with positive experiences reported among those who had already dispensed mifepristone.¹² Munro et al. also found that the timely incorporation of mifepristone into community pharmacies was easy to implement, as implementation of mifepristone in community pharmacies was encouraged and supported by professional organizations, continuing education programs, corporate bodies and influential individuals. The physician-pharmacist relationship was highlighted as a key component for the success of mifepristone dispensing at the pharmacy.¹² Kaller et al.²² surveyed 72 pharmacists in the United States and assessed their knowledge, perspectives and experiences with mifepristone dispensing. The investigators found that most pharmacists were knowledgeable, were willing to be trained, were supportive of dispensing mifepristone and endorsed perceived benefits of pharmacist dispensing of mifepristone. Grossman et al.²³ assessed mail-order pharmacy dispensing of mifepristone following an in-person clinical assessment in American pharmacies and found that involving pharmacists in this capacity was effective, feasible and acceptable to patients. Finally, a successful model of pharmacist dispensing of mifepristone has been implemented in Australia since 2012, where there are currently more certified prescribers and pharmacist dispensers than facilities providing abortion care, thus increasing accessibility.²⁴ In Australia in 2018, medical abortion made up approximately one-third of all abortions performed,²⁵ and the rate of surgical abortion has declined by approximately 5% per year.²⁶

We found that the location of the pharmacy and the pharmacy business model played a key role in stocking the medication, receiving mifepristone prescriptions and dispensing the medication to the patient. Specifically, proximity to a hospital resulted in higher mifepristone dispensing reported. In addition, we observed that franchised community pharmacies (e.g., a well-known brand name pharmacy with ready access to an existing network of suppliers and a set business model) were significantly more likely to stock mifepristone and receive prescriptions for the medication. In contrast, department/mass merchandise stores, which have pharmacies that operate within a store selling mostly other products, were significantly less likely

to stock and receive a prescription for mifepristone. This may be due to business models and workflow policies implemented at the workplace and could potentially be addressed through education and advocacy.²⁷ With most participants reporting a travel distance of <30 km to fill a mifepristone prescription if not available in their pharmacy, dispensing mifepristone in local community pharmacies suggests improved accessibility for patients. Enhanced availability and convenience may translate into increased use of the clinical service, as reported by Schummers et al.,¹ who conducted a population-based administrative data study to examine trends in medical abortion use, safety and effectiveness in Ontario. The authors reported that following the availability of mifepristone, abortion rates remained stable. Nevertheless, the percentage of abortions conducted as a medical rather than surgical procedure increased rapidly from 2.2% to 31.4% over 2 years, with no significant changes in the incidence of severe adverse events, complications or detected ectopic pregnancy after abortion.¹

Although our results demonstrate successful implementation of mifepristone dispensing from the perspective of community pharmacists, our study did not assess perspectives of patients and prescribers. Rasmussen et al.²⁸ conducted a qualitative study of 19 primary care providers in the U.S. state of Illinois and asked them how allowing pharmacy dispensing of mifepristone would affect their ability to provide medical abortion. Participants were in support of pharmacists dispensing mifepristone, mentioning potential benefits such as normalization of medical abortion, reduction of implementation barriers in primary care and expansion of abortion access. Grossman et al.²⁹ conducted a prospective cohort study in the United States of 252 participants to assess patient experiences as well as abortion outcome and adverse events collected from medical records. The investigators reported that 91.3% of participants disclosed being satisfied with their pharmacy experience on day 2 following dispensing, and 84.4% were satisfied on day 14. Among participants who reported a prior medical abortion, 81.2% said the current experience was either the same as or better than receiving the medications in the clinic. In an open-response field, these participants wrote that they appreciated the ability to schedule when they would take the medications, which improved convenience and allowed them to have more control over when the abortion would take place. A significant association (adjusted odds ratio, 2.96; 95% confidence interval, 1.38-6.32) was reported between patients being very satisfied with the pharmacy experience and reporting overall satisfaction with medical abortion. From the prescriber's perspective, the initial Health Canada position that prescribers would be required to purchase, store and dispense the mifepristone had the potential to limit patient's access to mifepristone³⁰ and was considered by physicians to be "inconsistent with their scope of practice and that in their experience dispensing was the responsibility of pharmacists."¹⁴ As a rural family physician in British Columbia with previous medical and surgical abortion

experience noted, “I would definitely not have done this had they stuck to the original rules where we had to purchase, store all the products.”¹⁴ Subsequently, Health Canada removed this requirement in November 2017.

Survey participants who stocked mifepristone estimated that roughly 80% of family physicians knew that community pharmacies maintain mifepristone in the dispensary. Participants reported their own comfort providing comprehensive counselling to patients on this medication, considering it an essential component of their professional responsibilities. However, our qualitative assessment revealed that pharmacists report that patients often declined counselling, stating that their prescriber asked them not to be counselled, and in some cases a request “not to counsel” was written on the prescription. Others have demonstrated that pharmacist-led counselling has been associated with increased adherence, reduced adverse drug reactions, improved health outcomes, increased satisfaction with health care provided and reduced health care service use among patients.³¹ A recent systematic review investigating factors that may influence inter-professional collaboration between pharmacists and physicians stated that the key factors to enhance interprofessional collaboration were an environment that promotes effective communication, close proximity and understanding each other’s capabilities and roles.³² By collaboratively working together, pharmacists and physicians can further support patients who seek abortion care and improve their outcome and experience.

Our study has some limitations. Our low response rate and small sample size are unlikely to be representative and may be a result of selection bias. Although we had participating pharmacists from 10 of our 13 provinces and territories across Canada, with substantial representation from Ontario, Alberta, British Columbia and Nova Scotia, the smallest provinces and

territories had fewer than 10 participants. In addition, due to our small sample size, we were unable to compare responses between provinces. Because multiple pharmacists often work in a community pharmacy, the number of mifepristone doses dispensed may be underreported. Finally, reported results may be affected by social desirability bias. The strength of our study includes our pan-Canadian sample of pharmacist participants from diverse practice settings in both urban and rural communities. Our results are relevant to high-income countries where abortion medications are currently being dispensed at the pharmacy by community pharmacists or where transitioning to such a model is under consideration.

Future studies are needed to assess the long-term impact of pharmacist dispensing of abortion medication on the health care team, including how the dispensing of abortion medication affects daily activities within the pharmacy and how this new community practice-based model affects patients, including their lived experiences.

Conclusion

Canadian regulations allow pharmacists to dispense mifepristone without restriction and for distribution to pharmacies through the regular prescription medication supply chains. Participating Canadian pharmacists indicated that mifepristone is well accepted by pharmacists within the primary care system in Canada, and both urban and rural communities responded positively to enhanced access to mifepristone in their community pharmacy. Pharmacists reported very few barriers to stocking and dispensing mifepristone, while highlighting the importance of the physician-pharmacist relationship in the successful implementation of mifepristone in community pharmacies. ■

From the Contraception and Abortion Research Team of the Women’s Health Research Institute, UBC, and of the Collaboration for Outcomes Research and Evaluation (Zusman, Soon), the Department of Obstetrics and Gynecology (Zusman, Munro) and the Department of Family Practice (Norman, Soon), University of British Columbia, Vancouver; the Centre for Health Evaluation and Outcome Sciences (Munro), Providence Health Care Research, Vancouver, British Columbia; and the Faculty of Public Health and Policy (Norman), London School of Hygiene & Tropical Medicine, London, United Kingdom. Contact wendy.norman@ubc.ca.

Acknowledgments: *The authors extend sincere thanks to their study participants for their generosity with their time.*


Author Contributions: *All authors were involved in drafting the article or revising it critically for important intellectual content as well as approving the final version for publication. All authors take responsibility for the integrity of the data and the accuracy of the data analysis. J.A. Soon, W.V. Norman, and E.Z. Zusman participated in study conception and design.. J.A. Soon and E.Z. Zusman participated in acquisition of data.. E.Z. Zusman, J.A. Soon, S. Munro, and W.V. Norman participated in analysis and interpretation of data.*

Declaration of Conflicting Interests: *The authors declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.*

Funding: *This work was supported by a Canadian Institutes of Health Research, Partnerships for Health System Improvement grant (PHE148161), in partnership with the Michael Smith Foundation for Health Research (Award #16743). S. Munro is and W.V. Norman was supported as a Scholar of the Michael Smith Foundation for Health Research (Award #18270, Award #2012-5139 [HSR]). W.V. Norman is an Applied Public Health Research Chair supported by the Canadian Institutes of Health Research (CPP-329455-107837, 2014-2024). E.Z. Zusman is supported by a Vanier Canada Graduate Scholarship from the Canadian Institutes of Health Research (CIHR) and a UBC Killam Doctoral Scholarship. This study did not receive industry sponsorship.*

ORCID iDs: Enav Z. Zusman  <https://orcid.org/0000-0002-1321-5022>

Wendy V. Norman  <https://orcid.org/0000-0003-4340-7882>

Judith A. Soon  <https://orcid.org/0000-0002-5274-3223>

References

1. Schummers L, Darling EK, Dunn S, et al. Abortion safety and use with normally prescribed mifepristone in Canada. *N Engl J Med* 2021;386(1):57-67.
2. MacKinnon B-J. Abortion pill now available for free to women in New Brunswick. *CBC News*, July 10, 2017. Available: <https://www.cbc.ca/news/canada/new-brunswick/abortion-pill-mifegymiso-new-brunswick-free-1.4194436> (accessed Mar. 27, 2020).
3. Taylor S. "Equity issue:" Saskatchewan to fully cover cost of abortion drug Mifegymiso. *The Canadian Press*, June 7, 2019. Available: <https://www.ctvnews.ca/health/equity-issue-saskatchewan-to-fully-cover-cost-of-abortion-drug-mifegymiso-1.4456532> (accessed Mar. 27, 2020).
4. CAPS CPCA. *CAPS CPCA forum*; 2020. Available: https://www.caps-cpca.ubc.ca/index.php/Main_Page (accessed Mar. 27, 2020).
5. Rebic N, Munro S, Norman WV, Soon JA. Pharmacist checklist and resource guide for mifepristone medical abortion: user-centred development and testing. *Can Pharm J Rev Pharm Can* 2021;154(3):166-74.
6. Rebić N, Gilbert K, Soon JA. "Now what?!" A practice tool for pharmacist-driven options counselling for unintended pregnancy. *Can Pharm J Rev Pharm Can* 2021;154(4):248-55.
7. Dunn S, Munro S, Devane C, et al. A virtual community of practice to support physician uptake of a novel abortion practice: mixed methods case study. *J Med Internet Res* 2022;24(5):e34302.
8. Zusman EZ, Munro S, Norman WV, Soon JA. Pharmacist direct dispensing of mifepristone for medication abortion in Canada: a survey of community pharmacists. *BMJ Open* 2022;12(10):e063370.
9. Dillman DA, Smyth JD, Christian LM. *Internet, phone, mail, and mixed-mode surveys: the tailored design method*. 4th ed. Hoboken (NJ): John Wiley & Sons, Inc.; 2014.
10. Dillman D. *Mail and internet surveys: the tailored design method*. New York (NY): John Wiley & Sons Inc.; 2000.
11. Norman WV, Munro S, Brooks M, et al. Could implementation of mifepristone address Canada's urban-rural abortion access disparity: a mixed-methods implementation study protocol. *BMJ Open* 2019;9(4). Available: <https://bmjopen.bmj.com/content/9/4/e028443> (accessed Dec. 26, 2019).
12. Munro S, Wahl K, Soon JA, et al. Pharmacist dispensing of the abortion pill in Canada: diffusion of innovation meets integrated knowledge translation. *Implement Sci* 2021;16(1):76.
13. Devane C, Renner RM, Munro S, et al. Implementation of mifepristone medical abortion in Canada: pilot and feasibility testing of a survey to assess facilitators and barriers. *Pilot Feasibility Stud* 2019;5(1):126.
14. Munro S, Guilbert E, Wagner MS, et al. Perspectives among Canadian physicians on factors influencing implementation of mifepristone medical abortion: a national qualitative study. *Ann Fam Med* 2020;18(5):413-21.
15. Guilbert E, Wagner MS, Munro S, et al. Slow implementation of mifepristone medical termination of pregnancy in Quebec, Canada: a qualitative investigation. *Eur J Contracept Reprod Health Care* 2020;25(3):190-8.
16. Government of Canada SC. *Focus on Geography Series, 2011 Census*. 2012. Available: <https://www12.statcan.gc.ca/census-recensement/2016/as-sa/fogs-spg/select-Geo-Choix.cfm?Lang=Eng&GK=CMA&TOPIC=1> (accessed Mar. 3, 2020).
17. Research Data Capture REDCap. BCCHR. *REDCap*; 2014. Available: <https://rc.bcchr.ca/> (accessed May. 4, 2021).
18. Chun Tie Y, Birks M, Francis K. Grounded theory research: a design framework for novice researchers. *SAGE Open Med* 2019;7. Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6318722/> (accessed Jul. 6, 2020).
19. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3(2):77-101.
20. Thomas DR. A general inductive approach for analyzing qualitative evaluation data. *Am J Eval* 2006;27(2):237-46.
21. Canadian Pharmacists Association. *Patient populations. Women's health*; 2021. Available: <https://www.pharmacists.ca/advocacy/practice-development-resources/patient-populations/> (accessed Dec. 16, 2021).
22. Kaller S, Morris N, Biggs MA, et al. Pharmacists' knowledge, perspectives, and experiences with mifepristone dispensing for medication abortion. *J Am Pharm Assoc* 2021;61(6):785-794.e1.
23. Grossman D, Raifman S, Morris N, et al. Mail-order pharmacy dispensing of mifepristone for medication abortion after in-person clinical assessment. *Contraception* 2021;107:36-41. Available: <https://www.sciencedirect.com/science/article/pii/S001078242100384X> (accessed Dec. 12, 2021).
24. Grossman D, Goldstone P. Mifepristone by prescription: a dream in the United States but reality in Australia. *Contraception* 2015;92(3):186-9.
25. ABORT73.COM. *Australian abortion statistics*; 2021. Available: https://abort73.com/abortion_facts/australian_abortion_statistics/ (accessed Jun. 28, 2022).
26. Keogh LA, Gurrin LC, Moore P. Estimating the abortion rate in Australia from National Hospital Morbidity and Pharmaceutical Benefits Scheme data. *Med J Aust* 2021;215(8). Available: <https://www.mja.com.au/journal/2021/215/8/estimating-abortion-rate-australia-national-hospital-morbidity-and> (accessed Jun. 28, 2022).
27. Dobson RT, Perepelkin J. Pharmacy ownership in Canada: implications for the authority and autonomy of community pharmacy managers. *Res Social Adm Pharm* 2011;7(4):347-58.
28. Rasmussen KN, Janiak E, Cottrill AA, Stulberg DB. Expanding access to medication abortion through pharmacy dispensing of mifepristone: primary care perspectives from Illinois. *Contraception* 2021;104(1):98-103.
29. Grossman D, Baba CF, Kaller S, et al. Medication abortion with pharmacist dispensing of mifepristone. *Obstet Gynecol* 2021;137(4):613-22.
30. Norman WV, Soon JA. Requiring physicians to dispense mifepristone: an unnecessary limit on safety and access to medical abortion. *CMAJ* 2016;188(17-18):E429-30.
31. Okumura LM, Rotta I, Correr CJ. Assessment of pharmacist-led patient counseling in randomized controlled trials: a systematic review. *Int J Clin Pharm* 2014;36(5):882-91.
32. Bollen A, Harrison R, Aslani P, van Haastregt JCM. Factors influencing interprofessional collaboration between community pharmacists and general practitioners—a systematic review. *Health Soc Care Community* 2019;27(4):e189-212.