Second- and Third-Trimester Medical Abortion Providers and Services in 2019: Results From the Canadian Abortion Provider Survey

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ABSTRACT

Objectives: Mifepristone became available in Canada in 2017. Updated national guidelines recommend its off-label use for second/third-trimester medical abortion (STMA/TTMA) by labour induction. The objective of this study was to explore STMA/TTMA provision in Canada and the role of mifepristone.

Methods: We conducted a national, cross-sectional, web-based, self-administered, anonymized survey, available in English and French. The survey was distributed through health professional organizations and recruited physicians who provided abortion care in 2019. We used a modified Dillman technique to maximize participation. The survey included sections on workforce and clinical care, including mifepristone use. We used R statistical software to produce descriptive statistics.

Results: Four hundred sixty-five clinicians responded to the survey, of whom 112 reported providing STMA and 63, TTMA, for a total of 115 respondents providing at least 1 of the 2 services. Two-thirds of respondents were general obstetrician–gynaecologists or family physicians and the remainder were maternal–fetal medicine subspecialists. The majority (64.7%) provided STMA/TTMA in an academic hospital, and 59.4% performed fewer than 5 STMAs (maximum 50) and 76.1%, fewer than 5 TTMA (maximum 15) in 2019. Fifty-nine percent of respondents reported having used mifepristone/misoprostol for STMA. Among mifepristone users, 48.6% used it for TTMA. Most required an indication beyond patient request to provide STMA/TTMA (82.1%/95.5%).

Conclusions: STMA/TTMA care is provided by multiple (sub-) specialties, and mifepristone has not yet been universally implemented. Our results will inform knowledge translation activities aimed at facilitating collaboration between STMA/TTMA providers and health policy and service delivery leaders and will further increase mifepristone use for STMA/TTMA in Canada.

Keywords: surveys and questionnaires; abortion, induced; pregnancy trimester, second; mifepristone; delivery of health care

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Disclosures: This work was supported by the Canadian Institutes of Health Research [PJT - 162201].

All authors have indicated they meet the journal's requirements for authorship.

Received on October 27, 2021

Accepted on January 19, 2022

Available online 17 February 2022

RÉSUMÉ

Objectifs : La mifépristone est arrivée sur le marché canadien en 2017. La mise à jour des lignes directrices nationales recommande son utilisation hors indication pour l'avortement médicamenteux au deuxième ou troisième trimestre (AMDT/AMTT) par déclenchement du travail. L'objectif de cette étude était d'explorer la prestation de services d'AMDT/AMTT au Canada et le rôle de la mifépristone.

Méthodologie : Nous avons mené un sondage national, transversal, en ligne, autonome et anonyme, disponible en anglais et en français. Le sondage a été distribué par l'intermédiaire d'associations de professionnels de la santé pour recruter des médecins ayant prodigué des soins d'avortement en 2019. Nous avons utilisé une méthode de Dillman modifiée pour maximiser la participation. Le sondage comprenait des sections sur le personnel et les soins cliniques, y compris l'utilisation de la mifépristone. Nous avons utilisé le logiciel de statistiques R pour produire des statistiques descriptives.

Résultats : Des 465 cliniciens ayant répondu au sondage, 112 ont déclaré fournir des services d'AMDT et 63, d'AMTT, pour un total de 115 répondants fournissant au moins l'un des deux services. Les deux tiers des répondants étaient des obstétriciens-gynécologues généraux ou des médecins de famille, et le reste étaient des surspécialistes en médecine fœto-maternelle. En 2019, la majorité des répondants (64,7 %) ont fourni des services d'AMDT/AMTT dans un hôpital universitaire, 59,4 % ont effectué moins de 5 AMDT (maximum de 50) et 76,1 %, moins de 5 AMTT

(maximum de 15). En tout, 59 % des répondants ont indiqué avoir utilisé la combinaison mifépristone-misoprostol pour l'AMDT. Parmi les utilisateurs de mifépristone, 48,6 % l'ont utilisée pour l'AMTT. La plupart ont fourni des services d'AMDT ou d'AMTT qu'en cas d'indication autre que la demande de la patiente (82,1 % et 95,5 %).

Conclusions : Les services d'AMDT/AMTT sont fournis dans plusieurs (sur)spécialités et la mifépristone ne fait pas encore l'objet d'une utilisation universelle. Nos résultats enrichiront les activités de transfert des connaissances visant à faciliter la collaboration entre les fournisseurs d'AMDT/AMTT et les responsables des politiques et de la prestation des services de santé ainsi qu'à augmenter l'utilisation de la mifépristone pour l'AMDT/AMTT au Canada.

J Obstet Gynaecol Can 2022;44(6):690-699

https://doi.org/10.1016/j.jogc.2022.01.016

INTRODUCTION

Approximately 84 000 medical and surgical abortions are provided in Canada each year,[1] and one-third of females will have an abortion in their lifetime.[2] In 2019, the Canadian Institute for Health Information[1] reported 1519 medical and surgical hospital-based abortions at 17 or more weeks gestation. Although second- and third-trimester medical abortions (STMA and TTMA, respectively), also referred to as *termination inductions of labour*, are less common than first-trimester abortions, they require time-sensitive, more complex, and often multidisciplinary care in the hospital.[3–7]

Little evidence has been published on the STMA/TTMA Canadian workforce or the care they provide. In 2015, 73.1% of obstetrics and gynaecology (OB-GYN) residents reported that STMA training was available, and 61.1% expected competency at the end of residency.[8] A 2012 survey focusing on recruitment of abortion clinics described fewer than 300 abortion providers in Canada,[9] with only 22 respondents providing STMA (unpublished data). Additionally, rural/urban abortion access disparities were reported.[9] The United Nations Human Rights commissioner expressed concern in 2016 over inequitable access to abortion services in Canada and called on the Canadian government to improve equitable access across the country.[10]

Several important health system and service changes have occurred since then in Canada. In 2017, mifepristone became available,[11] and in the following year the Society of Obstetricians and Gynaecologists of Canada (SOGC) issued evidence-based clinical practice guidelines on STMA, including a recommendation for off-label mifepristone use to shorten the labour induction time interval.[3] Evidence assessing the impact of these changes and their knowledge translation into practice is limited.[12,13]

We conducted a national survey of abortion providers in Canada to assess the characteristics and distribution of the health workforce and the services they provide.

METHODS

From July to December 2020, we recruited for a national survey of health care professionals who provided abortion services in the calendar year 2019.

Survey Instrument

The 2019 Canadian Abortion Provider Survey was developed by modifying our 2012 survey instrument,[9] incorporating the latest evidence and expert opinions, to explore our study aims and expand the STMA/TTMA section.[14]

Our national, cross-sectional, self-administered survey was web-based, anonymized, and available in both English and French. Our survey included a consent statement, followed by sections on provider demographics and clinical characteristics of abortion provision. This article includes the results of the survey for the STMA/TTMA workforce and the abortion care they provide.

We built in complex skip pattern logic so that respondents only saw relevant questions. The Canadian Abortion Provider Survey included mandatory questions when critical for skip pattern logic and data analysis. Respondents could request remuneration ($50 gift certificate) upon survey completion. We collected data through the secure server of the British Columbia Children's Hospital Research Institute Research Electronic Data Capture platform.[15] BC Children's and Women's University of British Columbia research ethics board approved this survey (H18-03313).

Recruitment

Physicians who provided abortion services in 2019 were eligible to participate. To reach potential participants for an exploratory sample of this unknown workforce, we distributed a generic survey link through multiple collaborating health care professional networks and organizations, including the SOGC and the Canadian Society for

Maternal Fetal Medicine. Additionally, we recruited via publicly available sources such as hospital departments of OB-GYN, as well as family medicine, Canadian abortion clinics, and our web-based community of abortion practice platform (www.caps-cpsa.ubc.ca). We employed a modified Dillman technique to maximize the response rate, which included recruitment partners emailing survey reminders 1, 2, and 4–6 weeks after the initial invitation.[16]

Data Cleaning and Analysis

Data cleaning included removing noneligible and fraudulent respondents (M. Ennis, unpublished data, September 2021). Using R Statistical Software, we generated descriptive statistics and report proportions or medians with interquartile ranges (IQR), where appropriate.[17]

RESULTS

Sample Description

The flow of respondents from recruitment to data analysis is depicted in Figure 1. Four hundred sixty-five clinician respondents reported providing medical or surgical abortions in 2019. Of these, 24.7% indicated in the demographic section that they provided STMA/TTMA and are included in the analysis of this manuscript. Sixty percent of them started the subsequent STMA/TTMA survey section, which included clinical care–related questions. The majority of those who exited (82.6%) were general OB-GYNs and family physicians (FPs) who provided multiple types of abortion care and therefore had more survey sections to complete before reaching the STMA/TTMA section. We found similar proportions of respondents exiting by geographic region, facility type, and rural versus urban status.

Among respondents, 97.5% provided STMA and 54.8% TTMA. The respondents comprised 67 OB-GYNs (58.3%), 39 maternal-fetal medicine subspecialists (MFMs; 33.9%), and 9 FPs (7.8%). The majority of respondents were in urban centres (79.3%) and provided STMA/TTMA in an academic (64.7%) as opposed to a community hospital. Table 1 further describes demographics, including a breakdown by specialty.

Demographics by Specialty and by Rural Versus Urban Status

MFMs predominantly worked in academic hospitals (90.0%) and exclusively in urban centres, whereas OB-GYNs/FPs were more commonly in community hospitals (55.3%) and rural areas (31.1%). Exclusive STMA/TTMA provision was more common among urban (26.1%) than rural respondents (8.6%). Most respondents, regardless of rural versus urban status, reported that first-trimester surgical abortion was also provided in their facility (87.3%), whereas second-trimester surgical abortion was provided less frequently (61.3%).

Labour Induction Regimen

Labour induction regimens by specialty are presented in Table 2. A mifepristone-misoprostol regimen for STMA was reported by 58.5% of respondents. It was more frequently used by MFMs (75.0%) and in urban areas (66.0%). Among mifepristone users, 48.6% used it for TTMA. Respondents reported using a mifepristone-misoprostol regimen in most patients at <28 weeks gestation (median 80.0%, IQR 0%–100%), in 45.0% (0%–100%) at ≥28 to ≤31^{6} weeks, and in 25.0% (0%–100%) ≥32 weeks. The majority of respondents waited 24 hours between mifepristone and misoprostol administration (60.5%). Table 3 shows the breakdown of misoprostol regimen details (dose and frequency) by gestational age (GA) and by unscarred versus scarred uterus. Most respondents administered misoprostol vaginally (74.6%). Respondents used lower doses of misoprostol as GA increased and in the setting of a uterine scar, but 66.7% did not change use between patients with one versus multiple prior uterine surgeries/scars. Overall, 56.2% of respondents reported barriers to providing a mifepristone-misoprostol regimen. More urban than rural respondents reported barriers (61.7% and 40.0%, respectively). Barriers included lack of availability at the hospital or patients' local pharmacies and lack of financial coverage for mifepristone.

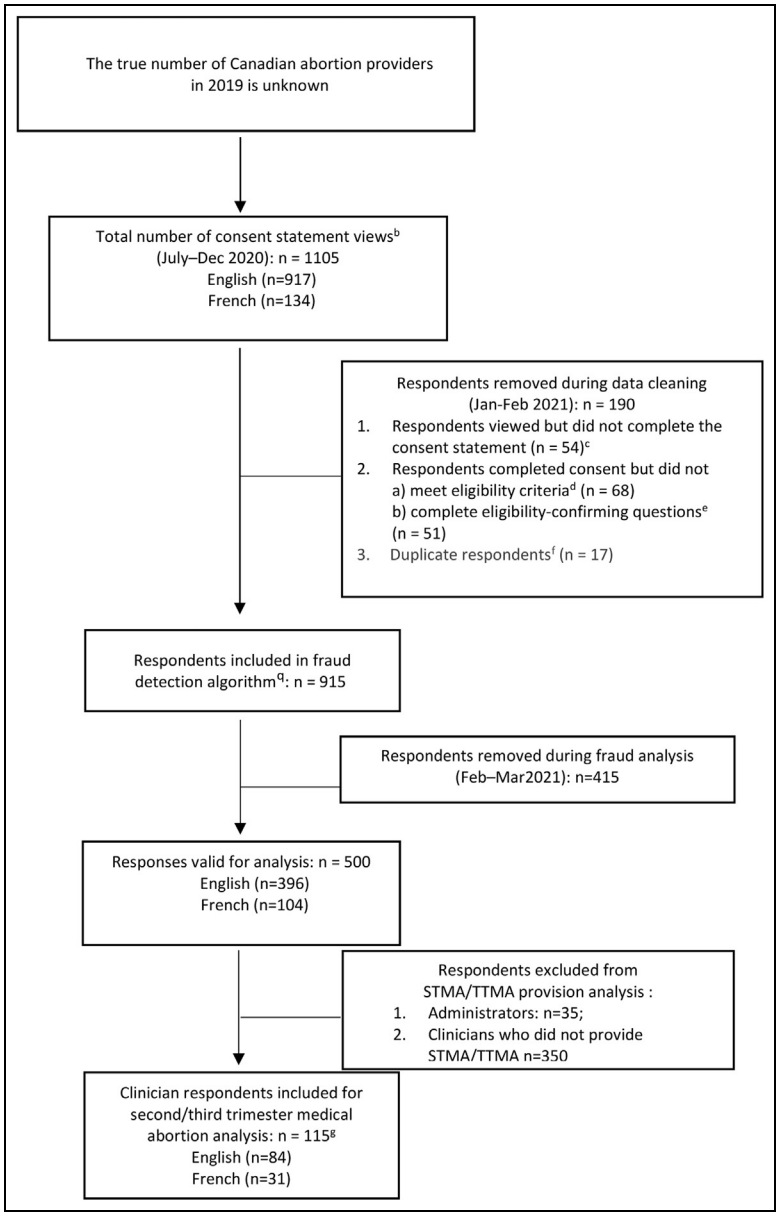
Indications

Figure 2 depicts abortion indications among all STMA/TTMA respondents. OB-GYNs/FPs more often reported offering an abortion by patient request alone (21.6% for STMA, 5.4% for TTMA) compared with MFMs (13.3% for STMA, 3.3% for TTMA). Among respondents under 50 years old, 26.3% offered STMA for any indication, whereas 4.8% of those aged ≥50 provided it for any indication; respective percentages for TTMA were 8.1% and 0%. Facility regulations were the most commonly reported reason for maximum GA (86.7%). Table 2 shows a further breakdown for maximum GA by indication.

Clinical Care Characteristics

Table 2 includes additional clinical care characteristics such as consultation services, ultrasound access, and feticidal injection. The majority of MFMs reported use of a feticidal injection before 24 weeks gestation based on patient

Figure 1. Respondent flow chart for second/third-trimester medical abortion (STMA/TTMA) providers. This flow chart is informed by the Checklist for Reporting Results of Internet E-Surveys (CHERRIES).[28]



[a]Consent statement view recorded on Research Electronic Data Capture (REDCap) platform.[15]
[b]The participation rate was 95.1%.
[c]The initial mandatory survey questions verified respondents' eligibility. If responses did not match the eligibility criteria, respondents were automatically exited from the survey. This included a question confirming that they had not taken the survey before.
[d]Manual removal of respondents who exited the survey prior to completing mandatory eligibility questions.
[e]Duplicate analysis was conducted using R Statistical software, flagging matching demographics, followed by manual review of all flagged respondents. We did not collect IP addresses or use cookies, as per our research ethics board request, to maintain respondents' anonymity.
[f]Completed the survey (n = 64), defined as completing the last survey section. Completing the survey took 30–80 minutes, depending on the range of abortion services respondents provided, programmed using skip pattern logic based mostly on mandatory questions. Respondents could change answers on their current screen but could not go back to prior screens. The completion rate was 55.7%. The completion rate among respondents who started the second/third-trimester medical abortion section (n = 69) was 92.8%. The survey contained mandatory and nonmandatory questions (to increase the survey completion rate). We included questions with missing responses in the analysis.
STMA: second-trimester medical abortion; TTMA: third-trimester medical abortion.

Table 1. Demographics of second/third-trimester medical abortion respondents by specialty

	Group, no. (%)		
	MFM subspecialists; n = 39 (33.9%)	General OB-GYNs and FPs[a]; n = 76 (66.1%)	Total; n = 115 (100%)
Sex			
Male	12 (30.8)	11 (14.5)	23 (20)
Female	27 (69.2)	65 (85.5)	92 (80)
Age group, y			
<40	<5	24 (33.3)	—
40–49	17 (50)	23 (31.9)	40 (37.7)
50>	13 (38.2)	25 (34.7)	38 (35.8)
Region[b]			
British Columbia[b]	9 (23.1)	9 (11.8)	18 (15.7)
Prairie provinces[c]	<5	11 (14.5)	—
Ontario	11 (28.2)	18 (23.7)	29 (25.2)
Québec	12 (30.8)	30 (39.5)	42 (36.5)
Atlantic Provinces[d]	<5	6 (7.9)	—
Territories[e]	0	<5	—
Type of abortion care[f]			
STMA	38 (97.4)	74 (97.4)	112 (97.5)
TTMA	33 (84.6)	30 (39.4)	63 (54.8)
Exclusively STMA/TTMA	24 (61.5)	<5	—
Combined with other types of abortion care			
First-trimester medical abortion	7 (18)	56 (73.7)	63 (54.8)
First-trimester surgical abortion	11 (28.2)	65 (85.6)	76 (66.2)
Second-trimester surgical abortion	10 (25.6)	44 (57.9)	54 (47.0)
All types of care	<5	15 (19.7)	—
STMA/TTMA experience, y			
<5	7 (23.3)	7 (23.3)	15 (22.1)
5–10	7 (23.3)	7 (23.3)	—
11–15	<5	<5	—
16–20	<5	<5	8 (11.8)
>20	9 (30)	9 (30)	17 (25)
Guidelines[f]			
SOGC	36 (100)	68 (98.5)	104 (99.1)
NAF	5 (13.9)	28 (40.5)	33 (31.5)

Percentages were calculated based on the total number of respondents for the individual variable (based on skip pattern logic and nonmandatory questions). A dash indicates that totals are not reported to maintain respondents' anonymity.

[a]Due to the small number of FPs, we combined them with OB-GYNS when reporting results by specialty in this table.

[b]To maintain respondent anonymity, we reported geographic results by regions (British Columbia, the Prairies, Ontario, Quebec, the Atlantic Provinces, and the Territories), combining some low respondent number provinces.

[c]Prairies include Alberta, Manitoba, and Saskatchewan.

[d]Atlantic Provinces include New Brunswick, Nova Scotia, Newfoundland and Labrador, and Prince Edward Island. We defined urban providers and facilities as those located within Statistics Canada's defined census metropolitan areas[27].

[e]Territories include North West Territories, Yukon, and Nunavut.

[f]Respondents could select more than 1 answer option.

FP: family physician; MFM: maternal–fetal medicine; NAF: National Abortion Federation; OBGYN: obstetrician-gynaecologist; SOGC: Society of Obstetricians and Gynaecologists of Canada; STMA: second-trimester medical abortion; TTMA: third-trimester medical abortion.

preference (75%), whereas the majority of OB-GYNs/FPs reported never recommending injection at that GA (53.8%). Beyond 24 weeks gestation, the majority of both MFMs and OB-GYNs/FPs always recommended feticidal injection (70.8% and 69.2%, respectively). The most frequently used feticidal agent by MFMs (70.3%) was

Table 2. Clinical care characteristics by specialty

	Group, no. (%)[a]		
	MFM subspecialists; n = 31 (44.9%)[b]	General OB-GYNs and FPs[b,c]; n = 38 (55.1%)	Total; n = 69[d] (100%)
STMA regimen[e]			
Mifepristone-misoprostol	21 (75.0)	17 (45.9)	38 (58.5)
Misoprostol	12 (42.9)	31 (83.8)	43 (66.2)
Prostaglandin E_2	0	<5	—
Oxytocin drip	5 (17.9)	11 (29.7)	16 (24.6)
Osmotic dilators	<5	7 (20.0)	—
Intracervical catheter[f]	<5	<5	7 (10.8)
Intra-amniotic saline/urea	<5	0	—
Rupture membranes[f]	<5	5 (14.3)	—
Maximum GA for mifepristone-misoprostol			
Patient request			
Do not provide	24 (82.8)	25 (73.5)	49 (77.8)
No limit	<5	0	—
Up to certain GA	<5	9 (26.5)	—
Median (IQR), wk	24.0 (23.9–26.0)	23.9 (20.0–24.0)	
Maternal medical indication			
Do not provide	0	<5	—
No limit	22 (75.9)	19 (54.3)	41 (64.1)
Up to certain GA	7 (24.1)	14 (40)	21 (32.8)
Median (IQR), wk	25.0 (24.4–25.0)	23.9 (23.9–24.0)	
Fetal indication			
Do not provide	0	<5	—
No limit	24 (82.8)	23 (63.9)	47 (72.3)
Up to certain GA	5 (17.2)	11 (30.6)	16 (24.6)
Median (IQR), wk	24.9 (24.9–25.0)	23.9 (23.9–23.9)	
Consult services[e]			
Ethics	5 (16.7)	6 (16.2)	11 (16.4)
Social work	22 (73.3)	21 (56.8)	43 (64.2)
Specialists for newborn	22 (73.3)	17 (45.9)	39 (58.2)
Genetic counsellor	25 (83.3)	28 (75.7)	53 (79.1)
Psychiatry	<5	<5	4 (6)
Psychology	5 (16.7)	10 (27)	15 (22.4)
Other[g]	<5	7 (18.9)	—
None	<5	<5	—
Ultrasound access[e]			
Diagnostic imaging	<5	27 (75)	—
MFM/perinatology	26 (89.7)	23 (63.9)	49 (75.4)
In clinic	7 (24.1)	6 (16.7)	13 (20.0)

(continued)

Table 2. *(Continued)*

	Group, no. (%)[a]		
	MFM subspecialists; n = 31 (44.9%)[b]	General OB-GYNs and FPs[b,c]; n = 38 (55.1%)	Total; n = 69[d] (100%)
Feticidal injection			
Never performed	<5	24 (64.9)	28 (43.1)
Starting at specific GA	24 (85.7)	13 (35.1)	37 (56.9)
Injection GA, wk, median (IQR)	20.5 (20.0–23.0)	20.0 (20.0–22.0)	20.0 (20.0–23.0)

Percentages were calculated based on the total number of respondents for the individual variable (based on skip pattern logic and nonmandatory questions). A dash indicates that totals are not reported to maintain respondents' anonymity.

[a]Unless otherwise specified.

[b]The reported sample size in this table is based on the respondents who started the STMA/TTMA survey section.

[c]Due to the small number of FPs, we combined them with OB-GYNs when reporting results by specialty in this table.

[d]Denominator is based on the respondents who started the STMA/TTMA clinical care section.

[e]Respondents could select more than one answer option.

[f]Use only reported after 32 weeks.

[g]Most often reported consulting MFM subspecialists.

FP: family physician; GA: gestational age; IQR: interquartile range; MFM: maternal-fetal medicine; OB-GYN: obstetrician-gynaecologist; STMA: second-trimester medical abortion; TTMA: third-trimester medical abortion.

potassium chloride. Most OB-GYNs/FPs did not provide feticidal injections (71.6%), and less than 10% used digoxin. More rural than urban respondents (75.0 vs. 31.9%) reported never having provided a feticidal injection.

In the setting of placenta praevia, 57.4% of respondents offered STMA and 22.2% TTMA. Pain management usually included an opioid; 85.9% reported using regional anaesthesia, 64.1% intravenous opioids, 59.4% patient-controlled analgesia, and 51.6% each oral and intramuscular opioids.

Oxytocin was the most commonly reported prophylactic uterotonic agent used in the third stage of labour (56.5% at 14–23^6 weeks gestation, 68.4% at 24–27^6 weeks, and 82.5% at ≥28 weeks). Misoprostol for that indication was reported by 42.0%, 31.5%, and 24.6%, respectively. Approximately half (54.8%) of respondents waited >120 minutes for delivery of the placenta in the third stage of labour before intervening with a manual removal or dilation and curettage rather than intervening earlier. More urban than rural respondents reported having an STMA/TTMA protocol (86.7% vs. 64.3%). Most respondents offered insertion of a postplacental intrauterine device after STMA/TTMA (78.9%).

Number of STMA/TTMAs

Twenty-four MFMs reported 222 (56.4%) of the overall 394 STMA deliveries (median number of deliveries per respondent 10.0; IQR 4.5–15.0), whereas 33 OB-GYNs/FPs reported 172 (median 3.0; IQR 2.0–5.0) for the year of 2019. Twenty-one MFMs reported 110 of 160 TTMA deliveries (median 5.0; IQR 3.0–6.0), whereas 13 OB-GYNs/FPs reported 50 (median of 3.0; IQR 1.0–5.0). Urban respondents reported a higher median of STMA deliveries (5.0; IQR 3.0–10.0) than rural respondents (2.0; IQR 1.0–3.0). Respondents reported the percentage of their practice focused on contraception and abortion care as a median of 10.0% (IQR 5.0%–20.0%).

DISCUSSION

Respondents to our national survey on STMA and TTMA consisted of 115 clinicians from across Canada. Years of experience were evenly distributed among the workforce, suggesting ongoing rejuvenation. Although the majority of respondents were OB-GYNs/FPs, the 33.9% of MFM respondents provided 59.9% of all STMA/TTMAs. In our 2012 survey, 91% of STMA providers were OB-GYNs and reported that 31% of their facilities had MFMs and 14% had family planning subspecialists providing this type of care (unpublished data). The difference in specialty distribution likely reflects the change in our recruitment strategy to invite MFMs to participate in the survey. We were unable to identify other published data on this topic.

Although our data indicate that rural respondents provided multiple types of abortion care as part of comprehensive reproductive care, there was a concentration of STMA/TTMA services in urban areas. Our survey further included surgical abortion providers, and 55 respondents reported providing second-trimester surgical abortion but not STMA/TTMA. Their detailed characteristics will be

Table 3. Misoprostol dose and frequency of administration

	Gestational age, no. (%)		
	<24^6 wk	25–27^6 wk	≥28 wk
Unscarred uterus			
Misoprostol dose, μg			
400	47 (77.0)	19 (31.7)	9 (15.3)
200	12 (19.7)	27 (45.0)	17 (28.8)
100	0	<5	19 (32.2)
50	<5	<5	6 (10.2)
Not used	0	7 (11.7)	8 (13.6)
Frequency, h			
3	14 (23.0)	9 (15.3)	7 (12.1)
4	45 (73.8)	38 (64.4)	36 (62.1)
6	<5	5 (8.5)	7 (12.1)
Not used	0	7 (11.7)	8 (13.6)
Scarred uterus			
Misoprostol dose, μg			
400	21 (35.0)	<5	<5
200	25 (41.7)	18 (30.5)	7 (11.7)
100	10 (16.7)	24 (40.7)	19 (31.7)
50	<5	<5	9 (15.0)
Not used	<5	8 (13.6)	22 (36.7)
Frequency, h			
3	13 (21.7)	7 (12.1)	6 (10.2)
4	38 (63.3)	32 (55.2)	24 (40.7)
6	7 (11.7)	8 (13.8)	8 (13.6)
Not used	<5	11 (19.0)	21 (35.6)

Table results are based on the 69 respondents who started the STMA/TTMA clinical care section. Percentages were calculated based on the total number of respondents for the individual variable (based on skip pattern logic and nonmandatory questions).

STMA: second-trimester medical abortion; TTMA: third-trimester medical abortion.

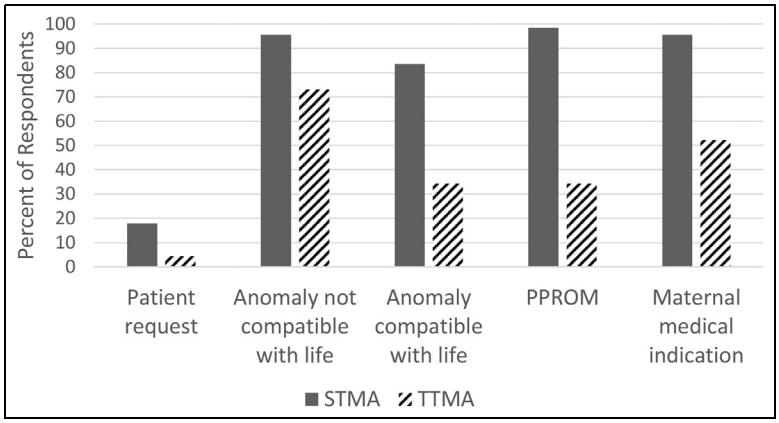
described in a separate manuscript on surgical abortion (R. Renner, unpublished data, 2022). None were MFMs. They had a rural/urban (29.0%/71.1%) distribution similar to that of the STMA/TTMA respondents. These findings highlight the concentration of more complex care in academic and urban centres and suggest that patients may not be able to access second- or third-trimester abortion in their home community or with their prenatal care provider. Such access disparities have been described for other types of abortion care and are compounded by the large rural areas of Canada's geography.[9,10]

As described in other Canadian surveys,[6,7] most respondents used multidisciplinary consultation services. However, little is known about the detailed pathway of patients through the health care system when seeking an STMA/TTMA or the determinants of high-quality care. Second-trimester surgical abortion (dilation and evacuation [D&E]) training and services are not available in all academic hospitals,[4,5,8] a finding we confirmed in our survey, limiting patients' choice on how to terminate a pregnancy. Twenty-nine percent of our survey respondents who provided D&Es without offering STMA/TTMA were non–hospital based, which might have improved patient access in some cities where hospitals did not provide D&E (R. Renner, unpublished data, 2022).

Despite respondents following SOGC national and international guidelines recommending a mifepristone-misoprostol regimen, because it safely leads to significant reductions in time to expulsion by 2 to 10 hours,[3,18] only 58.5% adopted mifepristone-misoprostol for STMA. This was associated with the majority reporting barriers to providing this regimen, including lack of coverage. Since 2019, changing provincial regulations have likely improved the cost coverage in the community.[19] Although more urban than rural respondents reported using a protocol, they reported more barriers than their rural counterparts, indicating that a protocol is only one component of the knowledge translation of guideline recommendations into practice. Only half of mifepristone users used it in TTMA, likely associated with the SOGC guideline[3] not including TTMA-specific recommendations. However, its use in TTMA is recommended in the Royal College of Obstetricians and Gynaecologists guideline, and the World Health Organization also does not define an upper GA limit for mifepristone use.[18,20] Consistent with national and international guidelines[3,18] respondents decreased misoprostol dose in patients with increasing GA, especially in the setting of a uterine scar. However, not all respondents used the recommended 400 μg dose at <24^6 weeks gestation, which can be given independent of uterine scar status.[3,18]

Our data and prior publications indicate heterogeneous use of feticidal injection.[3,21] Similar to a national survey in France, it was more commonly used after 20 weeks.[21] Efficacy, safety, and acceptability of feticidal injections provided by multiple physician specialties, including those in training and using digoxin, is supported by evidence.[22–24] Some providers offer feticide based on their or patient preferences to avoid a live birth, especially in the later second and the third trimester.[3] However, feticidal injection has not been consistently shown to decrease the length of time for labour induction and might increase the risk for a retained placenta, requiring a dilation and curettage.[3,25] The SOGC guideline states that more evidence is required to determine if feticide prior to STMA confers benefit.[3] Use of analgesics increased (85.9% regional, 64.1% intravenous analgesics) compared with our 2012 survey (69% and 57%, respectively; unpublished data).

Figure 2. Reported indications for second/third-trimester medical abortion providers.



Anomaly refers to both genetic and congenital fetal anomalies.
PPROM: preterm premature rupture of membranes; STMA: second-trimester medical abortion; TTMA: third-trimester medical abortion.

Although Canada does not have a law restricting abortion access,[13] the majority of respondents required a maternal or fetal indication to offer STMA/TTMA. These restrictions on indications are consistent with other reports,[7] including an estimate of at least 150 people per year traveling from Canada to the United States to access abortion at ≥21 weeks gestation.[26] Facility regulations were the most commonly stated reason for GA limits, but details on GA limits and other reasons for limiting patient access to STMA/TTMA, such as societal values, are poorly understood.

The main limitation of our study is the limited ability to determine the representativeness of our exploratory sample. Owing to the sensitive nature of this work and lack of systematic recording, the true number of abortion providers in Canada is unknown. Therefore, we do not know the denominator of eligible respondents from which to calculate a response rate. We mitigated this with our broad recruitment strategy and by interpreting our data focusing on the internal consistency of the responses of our exploratory sample. Additionally, because of attrition, the clinical data are based on only the 60% of respondents who indicated they provided STMA/TTMA and started the subsequent STMA/TTMA survey section, with an overrepresentation of MFMs. Of these, however, 92.8% completed the STMA/TTMA section. This was likely due to survey fatigue, as more respondents who provided multiple types of services did not start the section. We detected fraudulent respondents in our survey and applied a rigorous fraud detection algorithm (M. Ennis, unpublished data, September 2021). We are confident that our final sample includes valid respondents. The strength of our study is the national sample collected by our extensive recruitment strategy engaging the key professional physician and nurse practitioner organizations in Canada, many of which collaborated on our study. Despite the unanticipated impact of coronavirus disease 2019, we recruited more providers than in our 2012 survey.

CONCLUSION

Access to high-quality STMA in Canada is limited by the lack of universal mifepristone implementation. Based on international guidelines, this applies to TTMA as well; however, more research on the benefits of mifepristone in TTMA would strengthen an argument for universal use in Canada. Knowledge translation activities aimed at facilitating collaboration and education among STMA/TTMA providers, health policy leaders, and service delivery leaders are needed to further improve STMA/TTMA care in Canada, including mifepristone use and access to D&E as an alternative.

Disparities between rural and urban regions, as well as the importance of collaboration among multiple (sub-) specialties, health system managers, and patients are a call for qualitative research on abortion providers and patients to better understand service gaps, facilitators, and barriers to equitable access to high-quality abortion care regarding STMA and TTMA. Additionally, the use of large health administrative data can provide more complete data on the number of abortion providers and distribution of health services in Canada.

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