Title: Provision of First-trimester Medication Abortion in 2019: Results from the Canadian Abortion Provider Survey.

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Structured abstract

Objective

To explore the Canadian first-trimester medication abortion (MA) workforce and their clinical care following the introduction of mifepristone in 2017, updated national clinical practice guidelines and government approval of nurse practitioners (NPs) as first-trimester MA providers.

Study Design

We conducted a national, self-administered, cross-sectional survey of abortion providers in 2019. Our bilingual (French/English) survey collected information on demographics, abortion number, and clinical care characteristics. The true number of abortion providers is unknown thus we cannot calculate a survey response rate. To maximize identification of possibly eligible respondents, we widely distributed the survey between July and December 2020 through health professional organizations, using a modified Dillman technique. We used descriptive statistics to characterize the workforce and clinical practices.

Results

Four-hundred-sixty-five clinicians responded, of whom 388 provided first-trimester MA. Physicians (n=358) and NPs (n=30) reported providing 13,429 first-trimester MAs in 2019 which represented 27.7% of all reported abortions in the survey. The majority of first-trimester MA respondents were primary care physicians (n=245, 63.1%), had less than five years' experience (n=223, 61.3%) and practiced outside of hospitals (n=228, 66.5%). Forty-three percent (n=165) practiced rurally, and 44.0% (n=136) used telemedicine for some abortion care. Ninety-nine percent (n=350) used a guideline-recommended mifepristone/misoprostol regimen while 14.5% (n=51) sometimes used methotrexate. Patients most commonly received mifepristone/misoprostol at community pharmacies (median 100.0%; interquartile range 50.0-100.0%).

Conclusion

Our results suggest that there are many new first-trimester MA providers, an increase in the proportion of MAs since 2012 and a shift to primary care settings. Respondents widely adopted mifepristone.

Implications statement

Our results highlight that, following mifepristone introduction, many new primary care practitioners started providing first-trimester medication abortion throughout Canada, including the first non-physicians. This increased access to abortion particularly in rural and underserved communities. These results could inform future directions in policy, guidelines, and abortion access initiatives.

Keywords: Abortion, Induced; Surveys and Questionnaires; Canada; Mifepristone; Workforce; trimester, first; Delivery of Health Care

1. Introduction

Abortion care is an essential health care service, with approximately 84,000 abortions provided in Canada annually [1]. In 2012, the first iteration of the Canadian Abortion Provider Survey (CAPS) highlighted that less than four percent of the 75,650 reported abortions were medication abortions (MA); as mifepristone was not available, clinicians provided MA with misoprostol and/or methotrexate [2]. Patients in rural areas had limited access, and fewer than 300 physicians reported providing abortion care in Canada [3]. Many of these physicians focused their clinical practice on abortion care. The majority of abortions were surgical, provided in high volume specialized clinics, and concentrated in urban areas [3]. The United Nations Human Rights Commissioner expressed concern over inequitable access to abortion across the country [4].

Since 2012, significant changes have occurred in provision of abortion services in Canada, including the 2017 availability of mifepristone. Later that year, Canada removed restrictive regulations similar to Risk Evaluation and Mitigation Strategy (REMS) regulations and allowed physicians and nurse practitioners (NPs), the latter group for the first time in Canadian history, to prescribe and pharmacists to dispense mifepristone like any other prescription drug [5, 6]. In the Canadian health care system, abortion care and any subsequent management, are provided free to residents [7]. However, like other medications in Canada mifepristone was initially primarily self-pay at a cost of CA $300-450 until provinces introduced cost coverage of the drug for their residents. By 2019, 5 out of 13 provinces and territories had full coverage [8]. The Society of Obstetricians and Gynaecologists of Canada (SOGC) published clinical practice guidelines for MA in 2016 [9]. Evidence assessing the impact of these changes on clinical practice is limited and the number of abortion providers in Canada in unknown.

We aimed to describe who provided first-trimester MA in 2019, their procedure volume and clinical care in the context of these regulatory changes and guideline revisions.

2. Material and methods

From July to December 2020, we conducted a pan-Canadian survey of clinicians who provided abortion services in 2019. We developed the Canadian Abortion Provider Survey (CAPS) by adapting previous instruments fielded by our team [2, 3, 10, 11], to consider the availability of mifepristone and new clinical guidelines. Our anonymized web-based survey was cross-

sectional, self-administered, and available in both English and French. CAPS included a consent statement, followed by survey sections exploring clinician demographics and clinical characteristics of abortion care. In the survey, we asked respondents to provide responses relative to care in 2019, prior to COVID-19. We used complex skip pattern logic so respondents only saw relevant questions, and programmed questions as mandatory if they were key for skip pattern logic or analysis. Respondents could request remuneration (CA $50 gift certificate). The survey was available through the British Columbia Children's Hospital Research Institute's Research Electronic Data Capture (REDCap) platform. The University of British Columbia Research Ethics Board approved this survey.

Physicians and NPs who provided abortion services in 2019 were eligible to participate. Canada does not systematically record the number of abortion providers. Therefore, we were unable to identify a comprehensive list of abortion providers to invite to the survey. To reach as many eligible clinicians as possible we distributed a generic survey link through multiple collaborating health care professional organizations and networks. Our partners included abortion associations, such as the National Abortion Federation (NAF) and professional organizations that are home to all family physicians, obstetricians/gynecologists and NPs, such as SOGC, the College of Family Physicians of Canada and the Canadian Nurses Association. We anticipated that all abortion providers would be affiliated with one of our partner organizations, although many of the recipients of our recruitment material would not have been abortion providers. We also recruited via publicly available sources such as abortion facilities advertised on the internet, hospital departments, and our web-based community of practice platform (www.caps-cpca.ubc.ca). We used a modified Dillman technique [12] in which partnering organizations sent an e-mail reminder one, two, and four-six weeks after the initial invitation.

We present respondents' reported demographics and clinical practice characteristics, including medication regimen, pre-and post-abortion care, telemedicine and special clinical situations, such as pregnancy of unknown location.

As this was an anonymized, web-based survey with a generic link invitation and offered remuneration, we screened incoming responses for fraud using nonsensical answer combinations. Once we suspected fraudulent responses, we adapted and combined several validated fraud detection components into a complex fraud detection algorithm, described in detail elsewhere

[13]. We used R statistical software to generate descriptive statistics, presenting proportions and medians with interquartile ranges (IQR), as appropriate [14].

3. Results

3.1. Provider Sample Description:

We included 465 clinician respondents who met eligibility criteria for final analyses, of which 388 (83.4%) reported providing first-trimester MA. We removed 415 fraudulent respondents as well as non-eligible respondents during data cleaning. Figure 1 depicts the respondent flow chart. Clinicians included 358 physicians (92.3%) and 30 NPs (7.7%). Respondents participated from every province and territory in Canada. The majority of clinicians were primary care physicians (63.1%), urban (56.9%), had less than five years of first-trimester MA experience (61.3%) and followed SOGC clinical care guidelines (94.2%). Table 1 shows first-trimester MA respondent demographics broken down by specialty. The most frequent first-trimester MA training modalities were an online SOGC module (80.3%) and a preceptorship/traineeship (25.1%). Most practiced at a non-hospital-based location (66.5%). Forty-four percent of respondents provided some components of first-trimester MA care by telemedicine in 2019.

3.2.Clinical Care Characteristics:

Tables 2 and 3 describe the clinical characteristics of our respondents by specialty and by rural urban status respectively. The majority of respondents provided exclusively first-trimester MA (53.4%).

Respondents reported 13,429 first-trimester MAs, 27.7% of all abortions reported by respondents for 2019, with 9587 (71.4%) by PCPs, including 327 (2.4%) by NPs (Table 2). Ontario (32.8%) and BC (30.1%) respondents reported most first-trimester MAs. Although Quebec respondents reported 31.6% of all first and second-trimester medication and surgical abortions, they only contributed 14.3% of first-trimester MAs.

Non hospital-based respondents reported a lower median number of abortions 5.0 (3.0-20.0) than hospital-based respondents (median of 20.0 and 10.0 for academic and community hospitals, respectively), but as a group contributed the highest proportion of first-trimester MAs (68.9%;

Appendix B). Urban respondents performed the majority of first-trimester MAs (82.6%), (Table 3). However, in rural settings, first-trimester MAs constituted 44.4% of all abortions, compared to 25.6% in urban areas.

Across specialities, regions, rural/urban areas, there was universal uptake of a mifepristone-misoprostol regimen (≥99.4%; Tables 2 and 3). Respondents gave misoprostol most frequently via the buccal (69.1%) followed by vaginal route (17.4%), and distribution of route was similar between specialities and respondents' rural versus urban status. Fifteen percent of respondents also used methotrexate-misoprostol, either in the case of suspected ectopic pregnancy (40.8%) or because the patient could not afford mifepristone (40.8%); i.e. lived in a province that did not cover the cost of mifepristone or was an out-of-province patient. If respondents selected multiple regimens, they used mifepristone/misoprostol in a median of 95% of patients (IQR 90.0 - 99.0). Appendix A shows a comprehensive list of respondents' clinical care characteristics and Appendix B provides further information on the breakdown by facility type (non-hospital based versus hospital based).

3.3 Indications:

Almost all respondents provided first-trimester MA upon patient request (99.4%), while the remainder provided for maternal medical indication. When asked about the minimum gestational dating criteria for providing mifepristone-misoprostol, 59.0% of respondents indicated they only required a positive pregnancy test (Table 2). For early pregnancies including pregnancies of unknown location with no clinical risks for ectopic pregnancy, 43.8% of respondents indicated they would not provide a mifepristone-misoprostol regimen abortion in the absence of yolk sac or embryo within an intrauterine gestational sac or in the absence of a gestational sac on ultrasound, while 38.8% indicated they would if ultrasound demonstrated a likely gestational sac without yolk sac and 36.2% would without a gestational sac if concurrent serum human chorionic gonadotropin (hCG) was <2000 mIU/mL. Fifty-two percent of respondents were willing to provide first-trimester MA for twin pregnancies. Sixty percent used off-label mifepristone-misoprostol for miscarriage management; 52.6% of these for missed abortions and 40.0% for incomplete abortions.

3.4 Pre-procedure characteristics:

The majority of respondents were able to identify contraindications for mifepristone-misoprostol as well as risk factors for ectopic pregnancies (Appendix A). Reported indications for dating ultrasounds included: in all patients (63.2%), if risk factors for ectopic pregnancy (34.8%), and if uncertainty about last menstrual period (34.0%). Respondents accessed ultrasounds most commonly through diagnostic imaging in their hospital or health region (75.1%) or within their clinic (28.9%), and performed 17.8% of them themselves. The majority of respondents (78.0%) ordered *Rhesus (Rh) testing* in all patients and 59.8% offered Anti-D (Rho) immunoglobulin to all Rh-negative patients rather than limit it to ≥7 weeks (15.4%) or ≥8 weeks' gestational age (16.6%). Pregnancy options counselling and consenting were usually provided to the patient by the respondent (79.2% and 85.9%) or a physician at their clinic (22.9% and 20.9%).

Most respondents reported an interval of ≤7 days between patients' first contact and prescription (87.3%), and 51.5% prescribed mifepristone-misoprostol during the first patient visit; an additional 45.5% during the second visit. Most commonly community pharmacies (median 100.0%; IQR 50.0-100.0) dispensed mifepristone-misoprostol. Respondents most frequently provided analgesia with non-steroidal anti-inflammatory drugs (93.1%), acetaminophen (69.5), and anti-emetics (54.2%). Less than half (43.1) prescribed opioids, most commonly codeine (53.5%), at a median of 6.0 pills (IQR 5.0-10.0). No one reported providing refills (Appendix A).

3.5 Post Abortion Assessment and Care:

Respondents assessed abortion completion most commonly by serum hCG (87.5%), telephone discussion (35.0%), and/or ultrasound (22.5%; Appendix A). They infrequently prescribed an additional dose of misoprostol (median 5.0%; IQR 0.0-10.0) and usually for either lack of vaginal bleeding 24-48hrs after misoprostol (60.9%) or for symptomatic retained products of conception (57.8%). The median (IQR) reported frequency of uterine evacuation was low after mifepristone-misoprostol (2.0%; 0.0-5.0) compared to after methotrexate-misoprostol (5.0%; 0.0-10.0) or misoprostol alone (10.0%; 2.5-15.0). Common indications were ongoing viable pregnancy, symptomatic retained products of conception, and heavy vaginal bleeding. All respondents reported providing *contraceptive counselling* to all their patients. They initiated

long-acting reversible contraception in a median (IQR) of 50.0% (25.0-50.0) patients and short acting reversible contraception in 40.0% (25.0-50.0).

4. Discussion

First-trimester MA respondents to the 2019 CAPS included 388 clinicians from all provinces and territories in Canada compared to 62 respondents in our 2012 survey [2]. The majority of respondents were in primary care practice and they provided 71.4% of the 13,429 reported first-trimester MAs.

Our results suggest substantial growth and rejuvenation among the first-trimester MA workforce, many of whom have less than 5 years' experience, including some older clinicians. Similarly, 46.5% of our respondents were less than 40 years of age, compared to 25.8% in 2012 [3]. Other evidence describing growth in the abortion workforce is emerging [15-18]. Our results indicate that Health Canada's approval for NPs to provide first-trimester MA has further contributed to this growth, as observed in other countries [19].

The majority of respondents reported clinical care characteristics in line with SOGC guidelines [9]. Following the introduction of mifepristone in Canada in 2017 [20], subsequent removal of restrictive regulations [5, 6, 16, 21], and coverage of mifepristone in some provinces [8, 16, 22], 99.4% of first-trimester MA respondents implemented mifepristone. In our current survey, 27.7% of all reported abortions were first-trimester MAs, compared to 3.6% in our 2012 survey. Our results are consistent with other Canadian publications [23], including one from Ontario where 31.4% of abortions were first-trimester MAs [18]. In the United States (U.S.), 18 years after mifepristone approval in 2000, 42.3% of all abortions were first-trimester MAs ≤9 weeks [24], a much lower proportion than those seen in Europe [25]. Mifepristone still being included in the U.S. Food and Drug Administration's REMS program [26], represents an important barrier [27].

Consistent with both a priori hypotheses and emerging evidence, we noted a shift from high volume abortion facilities into a primary and comprehensive reproductive/healthcare setting; most respondents, in both rural and urban areas, provided a low volume of abortions and practiced outside a hospital in a setting providing other health care services [16, 28, 29].

Canada has many rural and remote communities, and rural/urban abortion care disparities have been described [3, 4]. First-trimester MAs constituted 44.4% of reported abortions in rural areas, and 25.6% in urban areas. These findings and other emerging evidence suggest that mifepristone MA is increasing access to abortion in rural areas [7, 16]. In 2019, 44% of respondents indicated they provided some components of care via telemedicine. This has the potential to reach a wider geographical base of patients than in-person care, with high rates of efficacy and acceptability [30].

While Quebec respondents contributed 31.6% of all abortions reported in our survey, they only contributed 14.3% of reported first-trimester MAs. The majority of their abortions were surgical. Recent research described the lack of implementation of mifepristone abortion in Quebec, where restrictive provincial medical licensing body and facility policies, perceived vested interests in preserving surgical care, lack of interprofessional support, and uncertainty about regulations have inhibited uptake [31].

The key limitation of our survey is the limited ability to determine the representativeness of our sample. The number of abortion providers has never been systematically recorded in Canada. Moreover, since Health Canada removed the Canadian REMS-like restrictions on mifepristone in 2017, primary care clinicians and specialists are able to provide mifepristone MA in their community practice. Therefore, we were unable to assess a denominator for the target population, nor the denominator of eligible people who received an invitation to participate in our survey, and were unable to calculate a response rate. We aimed to mitigate this with our extensive recruitment method and by analysing our data focusing on internal consistency of the responses. As in our 2012 survey, the highest proportion of respondents were from the most populous provinces [3]. We detected fraudulent respondents in our survey and applied a rigorous fraud detection algorithm [13]. We are confident that our final sample includes valid respondents.

The main strength of our survey is the national sample, engaged using an extensive recruitment method. This included partnering with multiple national physician and NP organizations in Canada. Additionally, despite recruiting during the COVID-19 pandemic, we recruited more providers than in the 2012 CAPS including more first-trimester MA providers, consistent with the predicted increase in the workforce.

The availability of mifepristone as a regular prescription and recent changes in guidelines for MA, have been associated with an increase in proportion of abortions provided as first-trimester MAs, as well as increases in the number and dispersion of providers. Services have shifted to community-based and primary care settings in urban and rural areas. These results have the potential to inform policy decisions, future clinical care guidelines and are relevant to countries aiming to improve access to first-trimester MA.

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Appendix A- Clinical Characteristics of CAPS respondents	n (%)
Analgesic[1]	
Acetaminophen	232 (69.5)
NSAID	270 (80.8)
Opioid	144 (37.1)
Anti-emetic	208 (62.3)
Other	7 (2.1)
None	<5
If giving opioid, in which percent of patients	100.0 [82.5-100.0]
If giving opioid, which type of opioid	
Codeine	77 (53.5)
Number of pills	6 (5-10)
Refills, median	0
Percent of patients providers obtains dating ultrasound for	100.0 [90.0 – 100.0]
Percent of patients assessed for preferred contraception method	100.0 [100.0 - 100.0]
Percent of patients provider initiate SARC	40.0 [25.0 – 50.0]
Percent of patients provider initiate LARC	50.0 [25.0 – 50.0]
Abortion completion assessment[1]	
Telephone	115 (35.0)
Email	<5
Physical exam	17 (5.2)
Serum hCG	288 (87.5)
Urine hCG	22 (6.7)
Ultrasound	74 (22.5)
Other	18 (5.5)
Miscarriage management with mifepristone-misoprostol[1]	
Incomplete abortion	123 (40.0)
Missed abortion	163 (52.6)
Never	122 (39.4)
Other	16 (5.2)
Percent of mifepristone-misoprostol managed missed abortion	50.0 [25.0 – 100.0]
Circumstances in which services are offered[1]	
Patient less than 18 years old	196 (55.7)
Lives more than 2 hrs from emergency uterine evacuation	90 (25.6)
Lives more than 2 hrs from emergency department	46 (13.1)
Patient self-referred	284 (80.7)
Referred from outside clinic	240 (68.2)
Referred from inside clinic	216 (61.4)
Lives in another town	188 (53.4)
Traveling from far away	147 (41.8)
Ectopic risk factors[1]	
Previous ectopic	349 (99.1)
Previous tubal surgery	342 (97.2)

Artificial reproductive technology	301 (85.5)
Previous tubal ligation	320 (90.9)
IUD	332 (94.3)
Salpingitis or pelvic inflammatory disease	336 (95.5)
First-trimester abdominal pain	315 (89.5)
First-trimester vaginal bleeding	286 (81.3)
Indication (analyzed as mutually exclusive)	
By patient request	350 (99.4)
Maternal indication	<5
Ultrasound indication[1]	
For all patients	223 (63.2)
For unsure LMP	120 (34.0)
Discrepancy between physical and LMP	93 (26.3)
Risk factors or symptoms of ectopic	123 (34.8)
Ultrasound access location[1]	
Diagnostic imaging in hospital or health region	265 (75.1)
In respondents' clinic	112 (28.9)
Who performed the Ultrasound[1]	
Ultrasound technologist	251 (71.3)
Physician non radiologist	46 (13.1)
Physician radiologist	59 (16.8)
Respondent themselves	98 (27.8)
Provision of mife in setting of PUL	
>2000 hCG	27 (7.8)
<2000 hCG	125 (36.2)
Likely gestational sac, no yolk sac	134 (38.8)
Do not provide	151 (43.8)
Contraindications for mifepristone[1]	
Ectopic	338 (98.8)
Renal failure	289 (84.5)
Inherited porphyria	268 (78.4)
Asthma	298 (87.1)
Hypersensitivity to product	325 (95.1)
Patient ambivalence	327 (95.6)
Uncertain GA	322 (94.5)
IUD	320 (93.6)
Corticosteroid therapy	282 (82.5)
Haemorrhagic disorder	332 (97.1)
Misoprostol Route	
Buccal	235 (69.1)
Vagina	59 (17.4)
Methotrexate indications[1]	
PUL without ectopic symptoms	13 (26.5)
PUL with ectopic symptoms	20 (40.8)
Suspected ectopic	18 (36.7)
Patient cannot afford mife	20 (40.8)
Misoprostol indication	
Patient cannot afford mife	10 (62.5)
Willing to provide for twins	177 (52.1)

Counselling[1]	
Respondent themselves	271 (79.5)
Physician	78 (22.9)
Consent[1]	
Respondent themselves	291 (85.6)
Physician	71 (20.9)
Pre-abortion testing	
Serum hCG	100 [100-100]
Medical history	100 [100-100]
Rh	100 [100-100]
Sexually transmitted infections	100 [50-100]
Rh testing	
All patients	263 (78.0)
≥ 8wks	35 (10.4)
≥ 7wks	21 (6.2)
Offering AntiD	
All	202 (59.8)
≥ 8wks	56 (16.6)
≥ 7wks	52 (15.4)
Antibiotics Prophylaxis	
Never	220 (66.5)
Based on risk	101 (30.5)
Repeat misoprostol post mifepristone-misoprostol[1]	
Never	36 (11.0)
No bleeding 24-48hrs	199 (60.9)
Symptomatic retained POC	189 (57.8)
Asymptomatic retained POC	146 (44.6)
Frequency of repeating misoprostol after mifepristone-misoprostol	5.0 [0 – 10.0]
Frequency of repeating misoprostol after methotrexate	10.0 [0 – 22.5]
Frequency of repeating misoprostol after misoprostol	20.0 [7.5 - 22.5]
Repeat mifepristone-misoprostol post mifepristone-misoprostol[1]	
Never	188 (58.6)
Ongoing viable IUP	86 (26.8)
Indications for evacuation post mifepristone-misoprostol	
Heavy vaginal bleeding	161 (50.6)
Prolonged bleeding	120 (37.7)
Symptomatic retained POC	247 (77.7)
Asymptomatic retained POC	161 (50.6)
Ongoing viable pregnancy	271 (85.2)
Frequency of uterine evacuation after mifepristone-misoprostol	2.0 [0-5.0]
Frequency of uterine evacuation after methotrexate-misoprostol	5.0 [0-10.0]
Frequency of uterine evacuation after misoprostol	10.0 [2.5-15.0]
Wait time between first contacts and prescription; ≤7 days	274 (87.3)

All data presented as n (%) or as median (interquartile range)
[1]Respondents could select more than 1 answer option
Often largest proportion is the only answer option presented.
Percentages were calculated based on the total number of respondents for the individual variable (based on skip pattern logic and non-mandatory questions)
CAPS: Canadian Abortion Provider Survey; IQR: Interquartile range; SARC: Short-acting reversible contraception; LARC: Long-acting reversible contraception; hCG: Human chorionic gonadotropin; IUD: Intrauterine device; LMP: Last menstrual period; POC: Products of conception; IUP: Intrauterine pregnancy.

Appendix B- Characteristics of First-trimester MA Provider Practice by Practice Location among CAPS respondents in 2019			
	Academic hospital n=53	**Community hospital n=69**	**Non hospital-based n=242**
Types of abortion care[1]			
Exclusively first-trimester MA	11 [5.5]	27 [13.4]	163 [81.1]
First-trimester MA and first trimester surgical abortion	41 [26.5]	38 [24.5]	76 [49.0]
First-trimester MA and first and second-trimester surgical abortion or second or third-trimester MA	34 [40.5]	15 [17.9]	35 [41.7]
Number of first-trimester MAs			
First-trimester MA	2,829 [21.1]	1,350 [10.1]	9,250 [68.9]
First-trimester MA - Physicians	2,829 [21.6]	1,170 [8.9]	9,103 [69.5]
First-trimester MA - NPs	0	180 [55.0]	147 [45.0]
Number of first-trimester MAs per respondent			
First-trimester MA	20.0 (10.0-70.0)	10.0 (3.0-16.0)	5.0 (3.0-20.0)
First-trimester MA – Physicians	30.0 (15.0-77.5)	10.0 (4.2-15.8)	6.0 (3.0-25.0)
First-trimester MA - NPs	0	13.5 (2.0-43.8)	3.0 (1.2-10.0)
Regimen[1]			
Mifepristone-misoprostol	49 (98.0)	67 (98.5)	234 (100.0)
Methotrexate-misoprostol	10 (20.0)	10 (14.7)	31 (13.2)
Misoprostol	7 (14.0)	<5	7 (3.0)
Maximum GA (days) for mifepristone-misoprostol eligibility	63.0 (63.0-70.0)	63.0 (63.0-70.0)	68.0 (63.0-70.0)
Minimum dating criteria for mifepristone-misoprostol eligibility			
Positive pregnancy test	24 (50.0)	29 (44.6)	151 (64.8)
Yolk sac or **embryonic** pole observed	21 (43.8)	28 (43.1)	65 (27.9)
Specific gestational age	<5	<5	7 (3.0)
Abortion completion assessment[2]			
Ultrasound	9 (17.9)	18 (26.1)	47 (19.4)
Serum hCG	40 (75.5)	56 (81.2)	192 (79.3)

All data presented as n (%) per column, n [%] per row, or as median (interquartile range).
[1]Respondents could select more than 1 answer option
Percentages were calculated based on the total number of respondents for the individual variable (based on skip pattern logic and non-mandatory questions).
This represents primary location of practice only
CAPS: Canadian Abortion Provider Survey; MA: Medication Abortion; NP: Nurse Practitioner; GA: Gestational Age; IQR: Interquartile Range; hCG: Human Chorionic Gonadotropin

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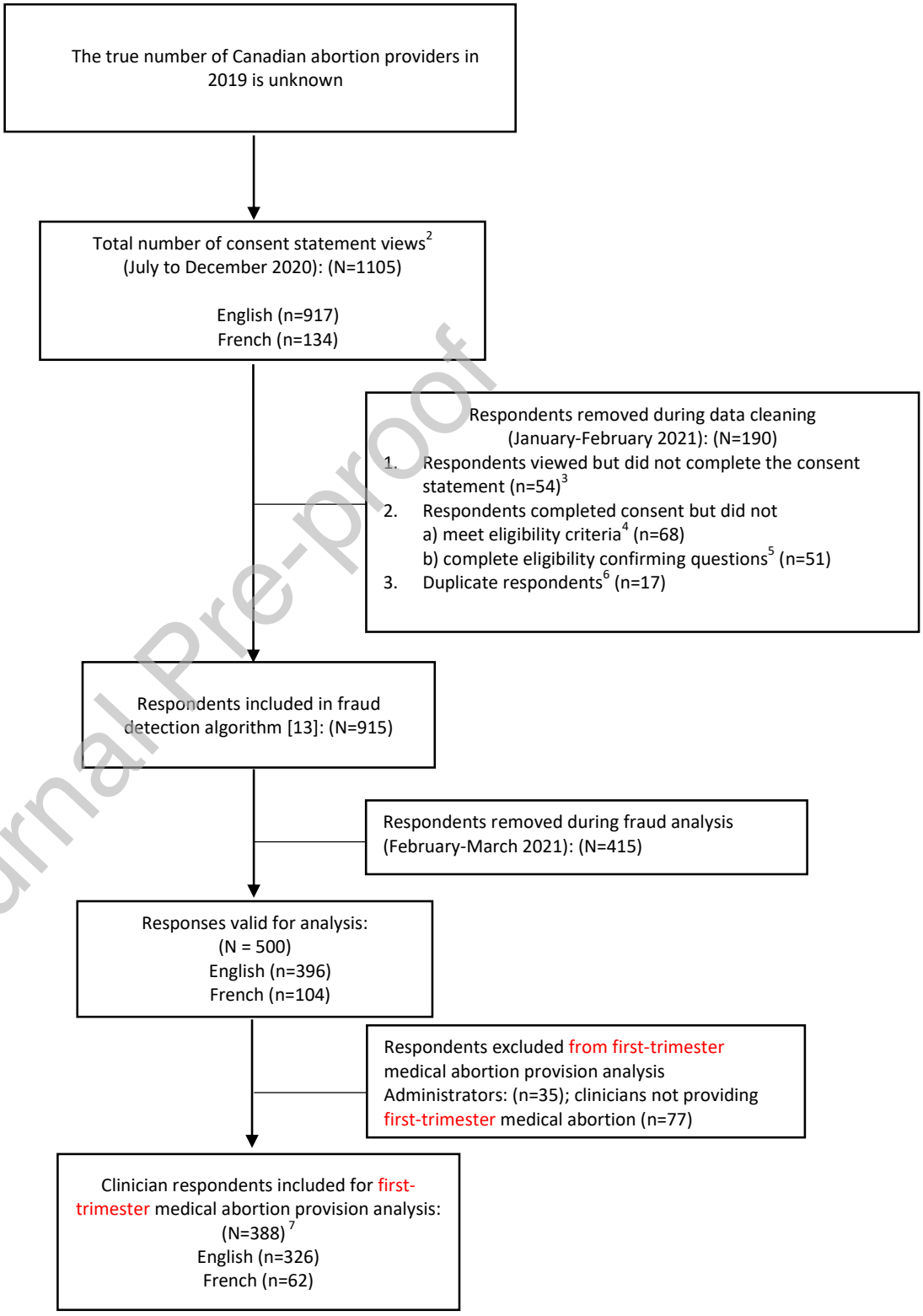
Figure 1: Respondent flow chart for first-trimester medical abortion providers who participated in CAPS 2019[1]



[1]This flow chart is informed by the Checklist for Reporting Results of Internet E-Surveys (CHERRIES) [32].
[2]Consent statement view recorded on Research Electronic Data Capture (REDCap) platform.
[3]The participation rate was 95.1%
[4] 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.
[5]Manual removal of respondents who exited the survey prior to completing mandatory eligibility questions
[6] 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 (REB) request, to maintain respondents' anonymity.
[7]Completed the survey (n=306), defined as completing the last survey section. Completing the survey took between 30 and 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 not go back to prior screens. The completion rate was 78.9% The survey contained mandatory and non-mandatory questions (in order to increase survey completion rate). We included questions with missing responses in the analysis.
CAPS: Canadian Abortion Provider Survey

Table 1 - Demographics of First-trimester MA CAPS Respondents by Specialty				
	Primary Care Physicians[1] n=245	**Specialists[2] n=113**	**Nurse Practitioners n=30**	**Total N=388**
Region				
British Columbia	61 (24.9)	17 (15.0)	0	78 (20.1)
Prairies[3]	31 (12.7)	12 (10.6)	7 (23.3)	50 (12.9)
Ontario	87 (35.5)	38 (33.6)	11 (36.7)	136 (35.1)
Quebec	37 (15.1)	34 (30.1)	<5	*
Atlantic Provinces[4]	19 (7.8)	12 (10.6)	9 (30.0)	40 (10.3)
Territories[5]	10 (4.1)	0	<5	*
Urban vs. Rural[6]				
Urban	134 (55.4)	72 (64.9)	12 (40.0)	218 (56.9)
Rural	108 (44.6)	39 (35.1)	18 (60.0)	165 (43.1)
Age				
<40	109 (46.8)	50 (46.7)	12 (42.9)	171 (46.5)
40-49	71 (30.5)	28 (26.2)	5 (17.9)	104 (28.3)
≥50	53 (22.7)	29 (27.1)	11 (39.3)	93 (25.3)
Gender				
Woman	211 (86.1)	96 (85.0)	30 (100.0)	337 (86.9)
Man	34 (13.9)	17 (15.0)	0	51 (13.1)
First-trimester MA years' experience				
<5	152 (64.1)	52 (52.5)	19 (67.9)	223 (61.3)
5-10	34 (14.3)	20 (20.2)	6 (21.4)	60 (16.5)
11-15	26 (11.0)	15 (15.2)	<5	43 (11.8)
16-20	11 (4.6)	7 (7.1)	<5	19 (5.2)
>20	14 (5.9)	5 (5.1)	0	19 (5.2)
Guidelines[7]				
SOGC	211 (91.3)	105 (100.0)	28 (96.6)	344 (94.2)
NAF	111 (48.1)	40 (38.1)	11 (37.9)	162 (44.4)

All data presented as n (%).
[1]Primary care physicians includes family physicians and emergency medicine physicians who all had family medicine certification
[2]Specialists included obstetricians and gynaecologists as well as maternal-fetal-medicine subspecialists
[3]Prairies include Alberta, Manitoba, and Saskatchewan
[4]Atlantic Provinces includes New Brunswick, Nova Scotia, Newfoundland & Labrador, and Prince Edward Island
[5]Territories includes North West Territories, Yukon, and Nunavut
[6]We defined urban providers and facilities as those located within Statistics Canada's defined census metropolitan areas (CMA). All other providers and facilities were classified as rural. In order 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. For the same reason, we grouped family physicians (FPs), emergency medicine physicians (EMs) into a "primary care physician" category when reporting results by specialty in this table.
[7]Respondents could select more than 1 answer option.
*Did not report totals to maintain respondents' anonymity.
Percentages were calculated based on the total number of respondents for the individual variable (based on skip pattern logic and non-mandatory questions).
CAPS: Canadian Abortion Provider Survey; NAF: National Abortion Federation; SOGC: Society of Obstetricians and Gynaecologists of Canada; NPAC: Nurse Practitioners Association of Canada; CNA: Canadian Nurses Association; MA: Medication Abortion.

Table 2 - Clinical Care Characteristics of First-trimester MA CAPS Respondents by Specialty in 2019

	Primary Care Providers[1] n=275	Specialists[2] n=113	Total N=338
Types of abortion care[3]			
Exclusively first-trimester MA	196 (71.3)	11 (9.7)	207 (53.4)
First-trimester MA and surgical abortion	78 (28.4)	94 (83.2)	172 (44.3)
First-trimester MA and post-first trimester MA or surgical abortion	36 (13.1)	60 (53.1)	96 (24.7)
Number of first-trimester MAs			
First-trimester MA	9587 [71.4]	3842 [28.6]	13,429 [100.0]
Percent focus of practice on contraception and abortion care[4]	15.0 (5.0-30.0)	10.0 (5.0-20.0)	10.0 (5.0-25.0)
Number of first-trimester MAs per respondent			
First-trimester MA	5.0 (2.0-23.5)	9.0 (1.0-30.0)	6.5 (2.0-25.0)
Regimen[3]			
Mifepristone-misoprostol	254 (99.6)	96 (99.0)	350 (99.4)
Methotrexate-misoprostol	31 (12.2)	20 (20.6)	51 (14.5)
Misoprostol	7 (2.7)	11 (11.3)	18 (5.1)
Maximum GA (days) for mifepristone-misoprostol eligibility	63 (63-70)	63 (63-70)	63 (63-70)
Minimum dating criteria for mifepristone-misoprostol eligibility			
Positive pregnancy test	155 (61.5)	49 (52.1)	204 (59.0)
Yolk sac or embryonic pole observed	77 (30.6)	37 (39.4)	114 (32.9)
Specific gestational age	10 (4.0)	<5	*

All data presented as n (%) per column, n [%] per row, or as median (interquartile range).
[1]Primary care providers includes family physicians, emergency medicine physicians who have family medicine certification, and nurse practitioners
[2]Specialists included obstetricians and gynaecologists as well as maternal-fetal-medicine subspecialists
[3]Respondents could select more than 1 answer option
Percentages were calculated based on the total number of respondents for the individual variable (based on skip pattern logic and non-mandatory questions).
[4]Percent of respondent practice focused on abortion and contraception care
* Did not report totals to maintain respondents' anonymity.
CAPS: Canadian Abortion Provider Survey; MA: Medication Abortion; NP: Nurse Practitioner; GA: Gestational Age; IQR: Interquartile Range

Table 3 - Characteristics of First-trimester MA Provider Practice by Rural vs Urban among CAPS respondents[1] in 2019		
	Rural n=165	**Urban n=218**
Types of abortion care[2]		
Exclusively first-trimester MA	100 (60.6)	106 (48.6)
First-trimester MA and first-trimester surgical abortion	63 (38.2)	105 (48.2)
First-trimester MA and first and second-trimester surgical abortion or second or third-trimester MA	24 (14.5)	71 (32.6)
Number of first-trimester MAs		
First-trimester MA, n [%]	2,334 (17.4)	11,067 (82.6)
Number of first-trimester MAs per respondent		
First-trimester MA	5.0 (2.0-13.0)	10.0 (2.0-50.0)
Regimen[2]		
Mifepristone-misoprostol	153 (99.4)	194 (99.5)
Methotrexate-misoprostol	21 (13.6)	51 (26.2)
Misoprostol	5 (3.2)	13 (6.7)
Miscarriage management with mifepristone-misoprostol[2]		
Incomplete abortion	60 (42.3)	61 (36.7)
Missed abortion	74 (52.1)	87 (52.4)
Never	56 (39.4)	66 (39.8)
Maximum GA (days) for mifepristone-Misoprostol eligibility	69.0 (63.0-70.0)	63.0 (63.0-70.0)
Minimum dating criteria for mifepristone-misoprostol eligibility		
Positive pregnancy test	86 (56.6)	117 (61.3)
Yolk sac or **embryonic** pole observed	55 (36.2)	58 (30.4)
Specific gestational age	<5	7 (3.7)
Ultrasound barriers		
Experienced barriers	21 (13.6)	30 (15.3)
Didn't experience barriers	133 (86.4)	166 (84.7)
Percent of patients providers obtains dating ultrasound for	100.0 (90.0-100.0)	100.0 (90.0- 100.0)
Abortion completion assessment[2]		
Serum hCG	139 (94.6)	147 (82.1)
Urine hCG	5 (3.4)	17 (9.5)
Ultrasound	29 (19.7)	46 (25.7)
Emergency uterine evacuation following mifepristone-misoprostol medication abortion	2.0 (0.0-5.0)	4.0 (0.0-5.0)

All data presented as n (%) per column, n [%] per row, or as median (interquartile range).
[1]We defined urban providers and facilities as those located within Statistics Canada's defined census metropolitan areas (CMA) [33]. All other providers and facilities were classified as rural. In order 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.
[2]Respondents could select more than 1 answer option.
Percentages were calculated based on the total number of respondents for the individual variable (based on skip pattern logic and non-mandatory questions).
CAPS: Canadian Abortion Provider Survey; MA: Medication Abortion; NP: Nurse Practitioner; GA: Gestational Age; IQR: Interquartile Range, hCG: Human Chorionic Gonadotropin