

Original research article

Abortion practice in Mexico: a survey of health care providers

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Abstract

Background: Little is known about abortion practice in Mexico postlegalization of abortion in Mexico City in 2007.

Study Design: In 2009, we anonymously surveyed 418 Mexican health care providers at the Colegio Mexicano de Especialistas en Ginecología y Obstetricia meeting using audio computer-assisted self-interview technology.

Results: The majority of respondents were obstetrician gynecologists (376, 90%), Catholic (341, 82%), 35–60 years old (332, 79%) and male (222, 53%) and worked with trainees (307, 74%). Prior to 2007, 11% (46) and 17% (71) provided medical and surgical abortions; now, 15% (62) and 21% (86) provide these services, respectively. Practitioners from Mexico City were more likely to provide services than those from other areas. Most medical abortion providers (50, 81%) used ineffective protocols. Surgical abortion providers mainly used either manual vacuum aspiration (39, 45%) or sharp curettage (27, 32%). Most abortion providers were trained in residency and wanted more training in medical (54, 87%) and surgical (59, 69%) abortion. Among nonproviders, 49% (175) and 27% (89) expressed interest in learning to perform medical and surgical abortion, respectively.

Conclusion: Given the interest in learning to provide safe abortion services and the prevalent use of ineffective medical abortion regimens and sharp curettage, abortion training in Mexico should be strengthened.

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1. Introduction

Increasing access to safe abortion care is an essential step in decreasing worldwide maternal morbidity and mortality and in improving the status of reproductive health care for women globally. The World Health Organization estimated that the incidence rate of unsafe abortion in Latin America, 29 per 1000 women, is among the highest in the world [1]. Abortion laws are greatly restrictive in this region, and 3.9 million of the 4.1 million abortions that occur in Latin American each year are unsafe [2]. In Mexico, unsafe abortion accounts for 8%–11% of maternal deaths and is a leading cause of maternal mortality [3,4]. In 2006, close to 150,000 women in Mexico were hospitalized for complications related to induced abortion, a 40% increase from 1990 [3].

Access to safe abortion services continues to be restricted throughout the majority of Mexico, and laws vary among the 32 states. Abortion is permitted nationwide when pregnancy results from rape. In 29 states, abortion is also permitted when the pregnancy threatens a woman's life. Abortion is additionally permitted in 10 states when the pregnancy poses a severe risk to a woman's health, in 13 states in cases of congenital malformations, in 11 states when the pregnancy is the result of artificial insemination without a woman's consent and only in 1 state for economic reasons. In April 2007, landmark legislation was passed making first-trimester abortion legal on maternal request in Mexico City.

Mexico City is the capital of the country of Mexico, has a population of close to 9 million people and is located in the Central Region, within the state of Mexico. However, Mexico City is called the Federal District as it is an independent federal entity within Mexico and is not truly part of any of the Mexican states. In this sense, Mexico City is similar to Washington, D.C., in the United States of

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America. Mexico City has its own public services system, health care system and government.

Physicians are key players in the provision of safe and legal abortion services, and the Ministry of Health in Mexico City recommends that abortions should be provided by obstetrician gynecologists (OB/GYNs) or general surgeons [5]. However, a study investigating medical education in Mexico revealed significant deficiencies in the reproductive health curriculum, particularly in the area of abortion [6]. Few studies have been published investigating the abortion-related practices and knowledge of Mexican health care providers. The largest study investigating the abortion-related attitudes and practices of Mexican health care providers was performed by the Population Council in 2002 [7,8]. The majority of respondents were general practitioners who believed abortion should be legal when pregnancy results from rape (86%) or a woman's life is in danger (93%); however, only 20% felt abortions should be legal whenever a woman requests the procedure. In addition, though 84% felt that legal abortion should be offered at all public medical facilities in Mexico, only 11% had ever performed an abortion. Fifty-six percent wanted more information about approved medical abortion regimens [7].

To our knowledge, the only published study on abortion practice postlegalization was conducted by IPAS Mexico in 2008 and focused on characterizing abortion services in the private sector in Mexico City [9]. The authors interviewed 135 physicians in Mexico City. Seventy-four percent of the respondents were male, the average age was 51 years, and most surveyed physicians only worked in a private setting. Just under half of the physicians were OB/GYNs, close to 26% were general practitioners, and 24% had other specialties. The authors found that over 70% performed surgical abortion via sharp dilation and curettage and less than one third offered vacuum aspiration or medical abortion. This study did not explore knowledge and attitudes toward abortion among providers and nonproviders or evaluate practitioners outside of Mexico City.

Our study seeks to add to the limited body of literature that describes the abortion-related knowledge, attitudes and practices of Mexican health care providers. In addition, we are interested in comparing health care providers based in Mexico City with those in areas where legal abortion is restricted. In order to capture women's health care providers from different regions of Mexico, we decided to survey participants at the Colegio Mexicano de Especialistas en Gynecologia y Obstetricia (COMEGO) National meeting. COMEGO is the largest professional organization for OB/GYNs in Mexico, and the COMEGO National meeting is comparable to the American Congress of Obstetricians and Gynecologists Annual Clinical meeting. While the majority of participants of the COMEGO National meeting are traditionally OB/GYNs, the meeting also draws other types of physicians and health care providers.

2. Materials and methods

2.1. Survey administration

An anonymous cross-sectional survey-based study was implemented at the COMEGO 60th National meeting in Cancun, Mexico, from November 1 to 5, 2009. The 20-min survey was administered in Spanish using audio computer-assisted self-interview (ACASI) technology. A variety of topics were covered including participant demographics, knowledge and opinions about the legality of abortion, abortion-related complications, medical and surgical abortion techniques and practice, and training in abortion provision.

During the COMEGO meeting, we rented a booth in the exhibition hall and administered our survey there to interested meeting attendees. Convenience sampling was used to identify participants at the COMEGO meeting. Trained research staff approached meeting attendees who were in the exhibition hall to inform them of our study, as well as interacted with attendees that visited our booth. We aimed to decrease selection bias by conducting our survey in the meeting exhibition hall rather than targeting particular lecture session. Survey participants were offered the opportunity to enter a raffle for an iPod Touch device as compensation for their time. We anticipated at least a 15% response rate in order to adequately sample meeting attendees. All health care providers who attended the meeting, practiced in Mexico, were Spanish speaking and provided health care to women were eligible to participate in our study. Providers were excluded if they were unwilling to give informed consent.

2.2. Data analysis

Survey data were obtained from a total of 424 subjects. Grossly incomplete surveys ($n=1$) and surveys obtained from subjects who did not provide clinical care ($n=5$) were excluded from analysis. Data from 418 surveys were analyzed using Stata Version 10.0 (Stata Corp, College Station, TX, USA). We performed descriptive analyses to characterize the demographics of our study population and to describe the abortion-related knowledge, attitudes and practices of health care providers in Mexico. Next, data were analyzed using the χ^2 test to compare health care providers in Mexico City with health care providers in surrounding regions where abortion is restricted. Finally, we adjusted a multivariate logistic regression model to identify factors associated with abortion provision postlegalization. A p value of $<.05$ was set as the threshold for statistical significance for all analyses.

2.3. Ethical considerations

This study received institutional review board approval from both the Mexican Institute of Public Health and the Brigham and Women's Hospital/Partners System. To maintain anonymity, informed consent was obtained

verbally prior to participation in the study, no identifying information was collected and the survey was administered using ACASI.

3. Results

3.1. Participant demographics

According to COMEGO, close to 2000 people were in attendance at the 60th COMEGO National meeting, and data from (21%) surveys were analyzed. The 418 subjects in our study hailed from every state in Mexico with the exception of the state of Chihuahua. The majority of participants (213, 51.0%) were from the Central Region of Mexico, 114 (27.3%) were from the Southern Region, and 91 (21.7%) were from the Northern Region. Around 11% (44) were from Mexico City. Demographic characteristics are reported in Table 1. Close to half of the participants were female (196, 46.9%), and slightly over half (222, 53.1%) were male. The majority of respondents were OB/GYNs (376, 90.0%), were Catholic (341, 81.6%), were aged 35–60 years (332, 79.4%), practiced in both private and public sectors (222, 53.1%) and worked with trainees (307, 73.4%). There were no statistically significant differences in the demographics of participants from Mexico City compared to the other participants.

3.2. Abortion law

While abortion is legal nationwide in cases of rape, only 54.3% (227) of participants correctly stated that abortion was legal in this circumstance. When asked in which circumstances abortion should be legal, only 30% (127) supported

Table 1
Participant demographics (N=418)

Characteristic	n	%	
Region	Northern	91	21.7
	Central	213	51.0
	Southern	114	27.3
Gender	Female	196	46.9
	Male	222	53.1
Age, years	22–34	86	20.6
	35–44	144	34.4
	≥45	188	45.0
Religion	Catholic	341	81.6
	Other	77	18.4
Profession	OB/GYN	376	90.0
	General practitioner	21	5.0
	Surgeon	8	2.0
	Family practitioner	5	1.2
	Internist	1	<1
	OB/GYN resident	2	<1
Type of practice	Nurse	5	1.2
	Private and public	222	53.1
	Private	112	26.8
	Public	78	18.6
	Not practicing	6	1.4
Works with residents/students	307	73.4	

Table 2
Opinions on the legality of abortion

Abortion should be legal when:	n	%
Pregnancy results from rape	349	83.5%
Pregnancy endangers the life of the mother	371	88.8%
Pregnancy endangers the health of the mother	263	62.9%
There are fetal anomalies	349	83.5%
Pregnancy results from artificial insemination without consent	175	41.9%
There are economic constraints	67	16%
The woman is single	32	7.7%
The woman is a minor	64	15.3%
The woman decides to terminate	127	30.4%
The contraceptive method fails	80	19.1%

legal abortion based on a woman's decision to terminate. Over 80% felt that abortion should be legal when pregnancy results from rape (349, 83.5%), when pregnancy endangers the life of the mother (371, 88.8%) and when there are fetal anomalies (349, 83.5%) (Table 2). Participants from Mexico City were more likely to support legal abortion services in all circumstances ($p < .05$).

3.3. Unsafe abortion

Around 85% (356) of all respondents noted complications from abortion to be a problem in their practice location. Significantly more participants (323/374, 86.4%) from abortion-restricted areas outside of Mexico City identified unsafe abortion to be a problem, compared with participants (33/44, 75%) from Mexico City ($p < .05$). Around 86% (360) of all respondents reported seeing patients in their practice with abortion-related complications, and generally, participants felt that women develop more complications from surgical abortion than medical abortion.

While the majority of participants referred patients with abortion complications to a hospital, around 42% (152) reported that they treat patients without hospitalization if they are stable. However, 396 providers stated that they had managed incomplete abortion, and 35.6% (149) reported managing incomplete abortion surgically, 2.5% (11) medically and 56.5% (236) surgically and medically. When asked specifically about their interest in learning about safely treating incomplete abortion, 30% (125) of participants reported that they knew how to safely treat incomplete abortion, 68% (284) of participants were interested in learning more, and 2% (10) stated that they were not interested. Practitioners from Mexico City reported managing more incomplete abortions per month than those based in other regions; over 20% (9) of respondents from Mexico City reported treating more than 25 cases of incomplete abortion per month compared to 11% (41) of respondents from other regions ($p \leq .05$).

3.4. Impact of legalization

Prior to the legalization of abortion in Mexico City in 2007, 11% (46) and 17% (71) of the participants provided

Table 3
Self-reported abortion provision pre- and postlegalization

	Provider location	Before legalization	After legalization
Medical abortion	All (N=418)	11% (46)	14.8% (62)
	Mexico City (n=44)	20.4% ^a (9)	36.4% ^a (16)
Surgical abortion	All (N=418)	17% (71)	20.6% (86)
	Mexico City (n=44)	29.5% ^a (13)	45.5% ^a (20)

^a Significantly higher compared with providers who are not based in Mexico City ($p < .05$); χ^2 analysis.

medical and surgical abortions nationwide, respectively. Now, approximately 15% (62) and 21% (86) provide medical and surgical abortion services, respectively. Both pre- and postlegalization, significantly more practitioners from Mexico City reported providing medical and surgical abortions compared to practitioners from other regions ($p < .05$) (Table 3). In addition, 30% (125) of all respondents and 36% (16) of respondents from Mexico City reported being more interested in learning about abortion provision since the legalization. Overall, abortion providers ($n=101$) were more likely to be from Mexico City than elsewhere [odds ratio (OR) 3.7, 95% confidence interval (CI) 1.8–7.5], in a joint public/private practice than in a solely public or private practice (OR 2.1, 95% CI 1.2–3.6) and more interested in safe abortion provision since legalization than prior to legalization (OR 2.1, 95% CI 1.2–3.5).

3.5. Medical abortion

Ninety-five percent of respondents (397) recognized misoprostol as an effective abortifacient, 30% (125) identified that methotrexate and mifepristone are also effective agents, and 8% (33) incorrectly cited a combined estrogen–progestin injection as an abortifacient. When participants were asked why women may prefer to undergo medical abortion as opposed to surgical abortion, 90% (376) reported that it is easier for women to access medical abortion, 72% (303) stated that it is cheaper, 68% (284) stated that medical abortion is more private, and 65% (273) noted that it is hard to find someone who performs surgical abortion. In fact, when asked where women obtain misoprostol, 86% (359) stated that women obtain the drug from pharmacies without a prescription.

Medical abortion providers ($n=62$) were more likely to be female than male (OR 3.4, 95% CI 1.4–8.5), be OB/GYNs with specialist training (OR 2.9, 95% CI 1.1–7.3), have recently finished residency (OR 3.5, 95% CI 1.0–12.2), hail from Mexico City (OR 2.9, 95% CI 1.1–7.8), not have a strong religious affiliation (OR 4.2, 95% CI 1.1–15.1) and believe that surgical abortion results in more complications than medical abortion (OR 2.8, 95% CI 1.2–6.6). Those practitioners who provided medical abortion reported that they offer the service as it increases access to abortion (36, 58%), their patient's prefer medical abortion over surgical

evacuation (26, 42%) and medical abortion is more cost-effective in their practice (22, 35%).

Mifepristone is not available in Mexico, and 95% (397) of medical abortion providers used misoprostol to induce medical abortion. However, when medication abortion providers were asked to complete a fill-in-the-blank question with their preferred medication, dose, route and schedule, only 19% (12) administered potentially effective regimens (600–800 mcg misoprostol po/pv, repeated as needed). Bivariate analysis revealed that a significantly higher proportion of providers prescribing effective regimens lived in Mexico City than elsewhere (36, 58%), recently finished residency (26, 42%) and were trained by a reproductive health organization (36, 58%) ($p \leq .05$). All providers indicated that they required follow-up visits after a medical abortion, which included follow-up ultrasounds (55, 88%), physical exams (50, 80%) and contraceptive counseling (51, 82%).

As shown in Table 4, most medical abortion providers reported that they were trained in residency (40, 65%), followed by training in postgraduate courses (19, 31%) and from reproductive health organizations (21, 34%). Interestingly, the majority of medical abortion providers (87%) stated that they would like more training in medical abortion provision. Medical abortion providers reported training colleagues (10, 16%), residents (27, 43%) and students (7, 11%) in medical abortion.

The main reasons practitioners cited for not providing medical abortion included lack of support for abortion rights (198, 55.6%) and illegality (158, 44.4%). Of those providers that cited illegality as a reason for not providing medical abortion, 99% (157) were practicing outside of Mexico City where abortion on demand is illegal. Significantly more practitioners in Mexico City cited preference to provide surgical abortion, expense and political nature of medical abortion as reasons they do not provide medical abortion ($p < .05$). When asked what these practitioners do when faced with a patient who is requesting a medical abortion, 53%

Table 4
Training in medical and surgical abortion

Medical abortion	Desire more training	Providers: 87.1% (54/62) Nonproviders: 49.2% (175/356)
	Providers received training from: ($n=62$)	<ul style="list-style-type: none"> • Residency 64.5% (40) • Reproductive health org 33.9% (21) • Postgrad training 30.7% (19) • Medical school 17.7% (11) • Journals and/or Internet 17.7% (11) • Colleague 8.1% (5)
Surgical abortion	Desire more training	Providers: 68.8% (59/86) MVA 64.5% (20/86), EVA 85.1% (63/86) Nonproviders: 26.8% (89/332)
	Providers received training from: ($n=86$)	<ul style="list-style-type: none"> • Residency 94.2% (81) • Postgrad training 26.7% (23) • Reproductive health org 10.5% (9) • Medical school 81% (7) • Colleague 5.8% (5)

(190) felt comfortable referring the patient to someone who performs abortions. In addition, 49.2% (175) of nonproviders reported being interested in learning medical abortion provision, while 24% (85) stated they already knew how to induce a medical abortion.

3.6. Surgical abortion

When asked where women go to seek surgical abortions, 87% (364) responded that women go to doctors. When participants were asked why women may prefer to undergo surgical abortion as opposed to medical abortion, 83% (347) reported that surgical abortion is a faster process, 47% (196) reported that the patients undergoing surgical abortion are wealthy, and 37% (155) felt that surgical abortion is easier to conceal. Interestingly, 54% (226) felt that surgical abortion is more effective than medical abortion.

Providers of surgical abortion ($n=86$) reported offering the procedure as they felt their patients preferred the surgical procedure (38, 44%), surgical abortion increased access to abortion services (34, 40%) and it was more cost-effective in their practice (20, 24%). Surgical abortion providers were more likely to be male than female (OR 2.8, 95% CI 1.4–5.6). Nearly all providers (98.8%) required follow-up after a surgical procedure, including ultrasound (63, 74%), physical examination (68, 80%), contraceptive counseling (73, 86%) and serum pregnancy test (22, 26%).

To perform surgical abortion, abortion providers used either manual vacuum aspiration (MVA) (47, 54.7%) or sharp curettage alone (27, 31.4%), while only 4.6% (4) used electric vacuum aspiration (EVA) (Fig. 1). The two main reasons cited for not using MVA were lack of access to the devices (21, 68%) and the belief that manual vacuum was not as effective as electric vacuum (6, 19%). However, the majority of those performing surgical abortions without the manual aspirator (20, 64.5%) were interested in learning to use the device. Surgical abortion providers who did not use

electric vacuum cited lack of equipment (52, 70%) and lack of training (37, 50%) as common reasons for not using electric vacuum. The majority of abortion providers (63, 85%) indicated an interest in learning how to use electric suction to perform an abortion.

Most surgical (81, 94%) abortion providers both nationwide and in Mexico City reported that they were trained in residency. In addition to training in residency, close to one third (23) of surgical abortion providers cited learning techniques in postgraduate courses (Table 4). Surgical abortion providers reported training colleagues (16, 19%), residents (67, 79%) and medical students (17, 20%) in surgical abortion techniques. Of note, the majority (59, 69%) of surgical abortion providers stated that they would like more training in surgical abortion techniques.

The main reasons for not performing surgical abortion included lack of support for abortion rights (201, 61%) and illegality (162, 49%). Significantly more practitioners in Mexico City (2, 8%) cited that they support abortion, but do not perform surgical abortion as they do not know how to do so, compared with providers outside of Mexico City (3, 1%) ($p<.05$). When nonproviders were asked what they would do if a patient requested surgical abortion, 52% (173) stated they would refer the patient to someone who provided abortions. In addition, close to a third of nonproviders (89) were interested in learning surgical abortion techniques, and 46% (152) stated they already knew how to perform surgical abortion.

4. Discussion

The legalization of first-trimester abortion services in Mexico City in 2007 continues to be a topic of debate. As we have witnessed in South Africa and Nepal, the legalization of abortion can lead to decreased maternal mortality and morbidity through the implementation of safe abortion services [10]. While the majority of Mexican health care providers in our study noted that unsafe abortion continues to be a problem in their practice location, it is interesting to note that significantly more participants from abortion-restricted regions outside of Mexico City identified unsafe abortion to be an issue compared with Mexico City. Practitioners from Mexico City, however, reported treating more cases of incomplete abortion than those from other regions, perhaps signifying Mexico City as a referral center, highlighting the need for more training in effective abortion techniques and/or reflecting the large population base in the city.

Since the legalization of abortion, there has been an increase in the interest in and provision of abortion services. In 2002, Garcia et al. [7] surveyed over 1200 physicians working at randomly chosen urban medical institutions in Mexico and found that only 11% had ever performed an abortion. In our study, 24% of the providers surveyed reported that they currently perform abortion services. Of note, the majority of physicians in our study were OB/GYNs

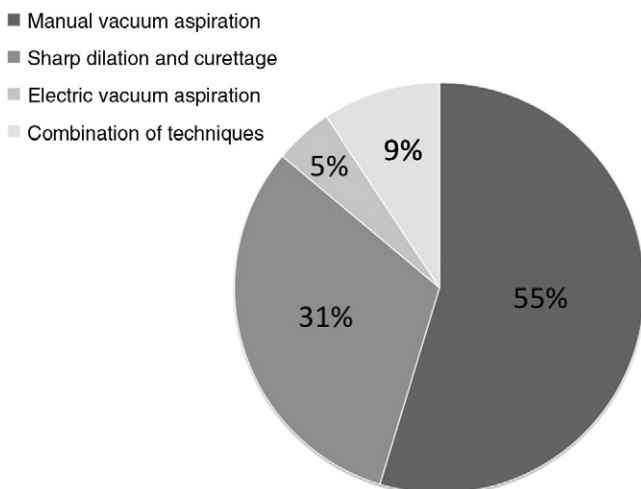


Fig. 1. Surgical abortion techniques ($n=86$).

and thus may be more inclined to provide reproductive health services than general practitioners, who were predominantly captured by the Garcia study. Further, self-reported medical abortion provision increased from 11% to 15% postlegalization, and self-reported surgical abortion provision increased from 17% to 21% postlegalization in our study. Not surprisingly, significantly more practitioners based in Mexico City than elsewhere reported providing both medical and surgical abortions (Table 3). Additionally, close to one third of all respondents reported being more interested in providing safe abortion, and two thirds were more interested in learning about treating incomplete abortion. This increased interest among practitioners to provide safe abortion and to treat potential complications may reflect a political shift nationwide.

Support for legal abortion in various circumstances (Table 2) did not substantially differ in most cases from data collected by the Population Council in 2002 [7]. The majority of practitioners continued to support legal abortion in cases of rape, endangerment of maternal health and fetal anomalies. However, more practitioners (30% vs. 20%) reported supporting legal abortion based on a woman's decision to terminate a pregnancy. Of interest, in both our study and the study conducted by Garcia et al. in 2002 [7], only half of the respondents correctly identified that abortion is legal nationwide in cases of rape. Given that the majority of participants were physicians attending an academic meeting, we feel this highlights the need for more medical education around state-specific abortion laws and practice in Mexico.

Close to 90% of the respondents were OB/GYNs, and the majority reported learning how to provide medical (65%) and surgical (94%) abortion in residency training. Further, close to one third of those providing medical abortion sought out additional training from reproductive health organizations and postgraduate courses (Table 4). Despite this formal training, a striking 81% of those providing medical abortion were prescribing ineffective regimens. Interestingly, nearly two thirds of the medical abortion providers who were actually prescribing effective regimens received some training from reproductive health organizations.

Further, while a little over half of surgical abortion providers were using MVA, close to one third were performing sharp dilation and curettage to induce abortion. In support, a recent study by Schiavon et al. [9] from Ipas Mexico identified that over 70% of private surgical abortion providers in Mexico City are primarily using sharp dilation and curettage. This technique can be associated with more potential complications and has not traditionally been the standard of care for surgical abortion. Our study population differed from that of the Schiavon et al. study, as we captured providers from all over the country and the majority of respondents in our study practiced in both private and public sectors and were OB/GYNs. These factors may account for the difference in reported use of sharp dilation and curettage between the two studies. The two main reasons cited by abortion providers in our study for not using MVA were lack

of access to equipment and belief that MVA was not as effective as EVA. In addition, less than 5% of abortion providers were using electric vacuum aspiration and cite lack of equipment and lack of training as barriers. Not only does this highlight the need for evaluating safe abortion education and training in the medical curriculum, but it also underscores the importance of concurrent training endeavors by organizations focused on safe abortion provision.

The prevalent use of dilation and curettage and the general trend toward surgical abortion provision over medical abortion provision in the private sector highlight the possible role of economic driving forces in determining technique and type of abortion provision. In our study, over half of the participants practiced in both the public and private sectors, and close to 25% of those providing surgical abortion cited that they offered the service as it was cost-effective for their practice. Given that 86% of participants stated that women most commonly acquire misoprostol from a pharmacy without a prescription, medical abortion may not generate as much revenue for a provider as surgical abortion. Schiavon et al. [9] found that private providers in Mexico City often required overnight stays, performed unnecessary ultrasounds and used general anesthesia when performing surgical abortion. All these factors contribute to high fees. Further, providers in their study charged the most for sharp dilation and curettage, followed by MVA and medical abortion. Thus, particular surgical abortion technique used may also hinge on economic reimbursement. It is possible that some abortion providers performing dilation and curettage may be reinforcing the impression that this technique is safer and/or more effective than other surgical abortion techniques and medical abortion in order to maintain their income.

Unsafe abortion will continue to be a source of maternal hospitalization and morbidity until safe, legal abortion services are available. Close to 90% of medical abortion providers desired more training, as did around 70% of surgical abortion providers. Nearly 50% of nonproviders desired training in medical abortion; and 27%, in surgical abortion. Given this strong interest, future endeavors to increase access to safe abortion services should include focused training initiatives for health care providers, particularly OB/GYN physicians.

This cross-sectional study primarily captured the abortion-related practices of OB/GYN physicians and may not be generalizable to other groups of health care providers. In addition, the participants in our study were practitioners that chose to attend an academic meeting and thus may hold different views and/or have varying practice styles compared to providers who do not routinely attend conferences. While one opinion may be that most conference participants tend to be more up to date on medical topics, it is interesting to note that study respondents were not well informed about abortion law, were not prescribing effective medical abortion regimens and were using sharp dilation and curettage to induce surgical abortion.

Further, potential subjects may have had particular views on abortion that either encouraged or discouraged them from participating, and thus our study may be subject to selection bias. As previously stated, we aimed to decrease selection bias by conducting our survey in the meeting exhibition hall where we could approach all comers to the conference, rather than administering our survey during particular lecture sessions. In addition, participants self-reported on their practice techniques and abortion rates, thus introducing the possibility of reporting/recall bias. It is possible that participants were concerned to answer that they provided abortion services, especially prelegalization, and that more participants are performing abortion than reported. We aimed to decrease bias and encourage enrollment by preserving anonymity through the use of ACASI. Participants reported that ACASI was easy to use, more acceptable than a paper survey and encouraged more honest answers when asking about the topic of abortion (publication in revision). This method of data collection seems to be highly effective when conducting abortion research.

Our findings support the need for more training and education on abortion among health care providers, particularly OB/GYNs. Further investigation is needed on the role of legalization on abortion rates, abortion complications and the role of economic reimbursement in surgical and medical abortion provision.

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