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Dangers of Relaxed Restrictions on Mifepristone

Obstetricians and gynecologists have a duty to care for the lives of both the pregnant patients and their preborn children. Medication abortion using mifepristone not only ends the life of the preborn child but also poses significant risks to women, which vary according to the circumstances under which the drugs are administered. The current efforts to relax restrictions on medication abortions demand an outline of the dangers to women from the use of mifepristone and misoprostol without adequate medical supervision.

Background

Medication Abortion History

Medication abortion is accomplished with two medications: mifepristone (a potent progesterone receptor antagonist) and misoprostol (a prostaglandin uterotonic) one to two days later. The Food and Drug Administration (FDA) initially approved mifepristone for medication abortion in September 2000 under restricted distribution regulations to ensure the safe use of the product.[1] In 2011, the FDA instituted a Risk Evaluation and Mitigation Strategy (REMS) for mifepristone, which incorporated the 2000 restrictions.[2,3]

In 2016, the FDA changed the drug protocol, relaxed the prescribing requirements, and eliminated the adverse event reporting requirements unless the event was a maternal death (see Table 1 for a comparison of all changes in required safety measures). The FDA further relaxed the criteria in 2020 during the covid-19 pandemic, eliminating the requirement for any in-person interaction.[4] At the time of publication, medication abortion may be administered without a physical exam or ultrasound to confirm the location and age of the pregnancy, Rhesus antigen (Rh) status testing, or any interaction with a physician.

Apart from disagreeing with abortion in principle, the American Association of Pro-Life OB/GYNs (AAPLOG) is greatly concerned that the relaxed prescribing requirements and "hands-off" approach are hazardous to women's health.

AAPLOG Committee Opinion. This document was developed by five authors on the Research Committee. Committee Opinions summarize best practices that form an important part of pro-life practice.

Regardless of their view on the ethics of abortion, all healthcare providers should agree that abortion should be as safe as possible when it is performed.

REMS and Prescribing Requirements

When initially approved, medication abortion was approved up to 49 days of gestation using 600 milligrams (mg) of mifepristone orally, followed two days later by 400 micrograms (mcg) of misoprostol orally. The prescriber had to be a licensed physician who was required to sign and return a Prescriber Agreement Form to the manufacturer, and who was capable of ruling out ectopic pregnancy, dating pregnancy accurately, and could provide or arrange medical care including surgical treatment of incomplete abortion and blood transfusion.[1] There were three required office visits (days 1, 3, and 14), and providers were required to report any severe adverse event, including hospitalization, blood product transfusion, maternal death, or ongoing pregnancy.

In 2011, the FDA instituted a Risk Evaluation and Mitigation Strategy (REMS) for mifepristone, incorporating these restrictions.[2,3] In 2016, the FDA extended the gestational age limit from 49 days to 70 days, changed the mifepristone dose from 600 mg to 200 mg, changed the misoprostol dose from 400 mcg orally on Day 3 to 800 mcg buccally on Day 2 or Day 3, allowed non-physicians to become prescribers, reduced the number of required office visits from three to just one follow up office visit, and permitted a repeat dose of misoprostol for retained products of conception. Additionally, the abortion provider was not required to report any complications except maternal death. The timing of these changes is still visible on the package insert, since this was the last suite of sweeping changes.[5]

In July 2020, during the covid-19 pandemic, a federal judge suspended the requirement for in-person dispensing of mifepristone. In January 2021, the Supreme Court ordered that women visit a doctor's office, hospital, or clinic in person to obtain mifepristone.[6] However, in April 2021, the FDA informed the American College of Obstetricians and Gynecologists (ACOG) that in-person dispensing was not required.[4,7]

Complications

As with any medical intervention, complications can and do occur with medication abortion. The most common serious adverse events are retained products of conception, bleeding, infection, and ongoing pregnancy.[5] Missed ectopic pregnancy has also been documented.[8-10] There have been twenty-four deaths in the United States reported after medication abortion.[7] The rates of these complications is difficult to assess, as studies are

Table 1. Summary of the history of prescribing requirements.

Date	2000, Confirmed 2011	2016	2020-2021
Regimen	Day 1: Mifepristone 600 mg orally Day 3 Misoprostol 400 mcg orally No repeat misoprostol dose	Day 1: Mifepristone 300 mg orally Day 2 or 3 Misoprostol 800 mcg buccally Additional dose misoprostol if expulsion has not occurred.	Day 1: Mifepristone 300 mg orally Day 2 or 3 Misoprostol 800 mcg buccally Additional dose misoprostol if expulsion has not occurred.
Maximum gestation	49 days	70 days	70 days
Prescriber	Physician • Ability to assess the duration of pregnancy accurately • Ability to diagnose ectopic pregnancies • Ability to provide surgical intervention in cases of incomplete abortion or severe bleeding, or to have made plans to provide care through others • Able to assure access to medical facilities equipped to provide blood transfusions and resuscitation if necessary. • Sign Prescriber agreement form	Healthcare provider • Same requirements as 2000, but no physician required	Healthcare provider • Same requirements as 2000, but no physician required
Agreement form	The patient must sign in person	The patient must sign in person	The patient does not need to sign in person
Required office visits	Three office visits (days 1,3,14)	One office visit (day 14)	No in-person interaction required during the COVID-19 pandemic
Dispensing location	Dispensed to patients in person only in clinics, medical offices, and hospitals by or under the supervision of a certified prescriber.	Dispensed to patients in person only in clinics, medical offices, and hospitals by or under the supervision of a certified prescriber.	May be dispensed by mail or through mail order pharmacy
Reporting requirements	Must report any serious adverse event, hospitalization, and ongoing pregnancy	Must report only deaths	Must report only deaths

conflicting. Still, complication rates in published papers generally fall within the range of 3-20%, depending on study design and inclusion criteria.[9,11,12]

There is reason to believe that adverse events are underreported. The FDA estimates that 3.7 million medication abortions occurred between 2000 and 2018.[10] If the rate of serious adverse events such as emergency room visit is posited to be a conservative 2%,[13] then approximately 74,000 complications would be documented. Two analyses examined the adverse event reports (AERs) between 2000 to 2019 and documented 607[14] and 3197[9] events. This total of 3804 AERs suggests that the FDA received only 5% of an estimated 74,000 serious adverse events. The reason for this underreporting is not known, but several possibilities may be considered.

First, reporting adverse events besides death is not required. Busy clinicians may opt not to report even serious adverse events when not required to do so.

Second, many complications from medication abortion are managed by clinicians other than the abortion provider. One study showed that less than 40% of unplanned dilation and curettage after medication abortion are done by abortion providers.[9] These other providers may be unaware of the relationship between medication abortion and the adverse event, and may be less likely to report it. As a corollary, abortion providers may be unaware that a complication occurred if they do not manage it.

Third, some advocates encourage patients with a possible adverse event to avoid disclosing their abortion.[15] This prevents clinicians from linking the adverse event to mifepristone.

Fourth, even providers who report adverse events do not always take time to include sufficient data, or data is not made available. An evaluation of the adverse event reports showed that 16% of reports since 2000 contained so little clinical data that severity of the AER could not be determined.[9] This suggests that the reporting portal may pose excessive administrative and time burden on providers treating a reportable event.

Clinical Questions and Answers

Q Don't current studies suggest that medication abortion is very safe?

The current studies on medication abortion are conflicting. A 2015 systematic review on this topic documented an efficacy rate of 96.6%, an ongoing pregnancy rate of 0.8%, a transfusion rate of 0.03% to 0.06%, and a hospitalization rate of 0.04 to 0.9%.[12] However, this review requires further examination. The complication rates for buccal misoprostol were obtained from only five studies, and 96% of the data was from only two

studies.[16,17] These two studies lost over 15% of patients to follow-up, and neither evaluated emergency room visits. The loss to follow-up rate and the failure to account for potential adverse events in emergency departments are serious weaknesses of these studies, and this weakens the claim of the systematic review that relies so heavily on their conclusions.

But what other data is available? In 2009, all women in Finland undergoing abortion before 63 days' gestation between 2000 and 2006 were followed up to 42 days postpartum using national health registries.[18] This study may be more accurate than U.S. studies because healthcare is centralized. The incidence of adverse events was four times higher among women who underwent medication abortion compared to women who underwent surgical abortion (20 vs. 5.6%, $p < 0.001$). This was largely driven by the higher rate of hemorrhage with medication abortion (15.6 vs. 2.1%, $p < 0.001$), but higher rates of incomplete abortion (6.7 vs. 1.6%, $p < 0.001$) and unplanned surgical evacuation (5.9 vs. 1.8%, $p < 0.001$) also contributed.

In 2013, a systematic review combined 87 trials utilizing mifepristone 200 mg followed by misoprostol at less than 63 days gestation, incorporating 45,528 abortion outcomes.[11] Treatment failure occurred in 4.8% of cases and ongoing pregnancy in 1.1%. Treatment failure was higher at higher gestational ages: specifically, treatment failure was higher in trials where at least one out of four women were more than 8 weeks' gestational age, or greater than 56 days' gestation (OR 1.5, 95% CI 1.1–2.0). Most of the studies were small studies, with only seven having more than 1000 patients. Almost 40% (46 of 119) of the hospitalizations occurred in a single trial from the United Kingdom (UK), which followed 4132 medication abortions from 1994 to 2001.[19] In this large trial from a developed country with centralized healthcare, about 1% of women undergoing medication abortion were hospitalized. The review, in contrast, concludes that only 0.3% of all women are hospitalized after medication abortion; this order of magnitude difference may represent dilution of good data (the U.K. study's 1% hospitalization rate) with missing or suboptimal data in smaller studies with less reliable follow-up.

In 2018, the National Academies of Sciences, Engineering, and Medicine published *The Safety and Quality of Abortion Care in the U.S.*, which asserted that abortion is extremely safe.[20] This report cites pro-choice funding sources without a conflict of interest statement, including the Susan Thompson Buffett Foundation, which alone has been estimated to have donated $1.2 billion to pro-abortion organizations.[21] This report excludes an large number of studies with findings that contradict its conclusion that serious complications after abortion are rare. As a result, the report concludes that abortions can be performed safely in an office-

based or telemedicine setting, that no special equipment or emergency arrangements are required, and that it can safely be performed by certified nurse midwives, nurse practitioners, and physician assistants.[20]

Some of the studies to which this report refers have flaws. One study in the National Academies report reported that 99.6% of medication abortions were successful, but also reported that 2.1% required surgical aspiration. The need for surgical intervention, by definition, makes these medication abortions unsuccessful.[22]

A second study[13] found that 6.4% of women have an emergency department visit within 6 weeks of medication abortion, but attributed only 0.87% of these to abortion in the abstract. A close reading of the text discloses that "40.5% [of the 3,531 emergency room visits] (n=1,431) were abortion-related," which represents 2.6% of the 54,911 abortions. The reason that the majority of these were dismissed was related to documentation: "Among abortion-related visits, two thirds (66.6%, n=953) were cases in which a patient presented with abortion-related symptoms but did not receive a pathologic diagnosis or treatment." The authors of the present document have grave concerns about treating emergency room documentation as equivalent to careful data safety monitoring documentation of the true nature of adverse events.

A second study in the National Academies report documented a very low incidence of serious abortion complications by reviewing Planned Parenthood health centers' data.[23] However, abortion providers do not provide the majority of the care of abortion complications,[9] nor do all of them maintain hospital privileges with which to do so, as was seen when the number of abortion providers dropped precipitously in Texas following passage of a hospital privilege requirement in 2014.[24]

Q *How are women who seek medication abortion evaluated for ectopic pregnancy?*

Ruling out an ectopic pregnancy is important, as mifepristone (with or without misoprostol) is not an acceptable treatment for ectopic pregnancy when used alone.[7] Providers cannot screen for ectopic pregnancy by risk factors alone (such as prior ectopic pregnancy), since half of women with ectopic pregnancies have no risk factors for it.[25,26] Ectopic implantation causes about 6% of maternal deaths when untreated, but when treated, this figure drops to 0.05%.[27,28] Thus, recognition and treatment are key in preventing mortality.

Mortality from ectopic pregnancy is already higher in women seeking abortion.[29] The rate of mortality associated

with ectopic pregnancy was 1.3 times higher in these patients; in at least 60% of the deaths, care was delayed because of the failure to recognize the diagnosis of ectopic pregnancy. The current relaxation of restrictions on medication abortion mean that there is no required exam or ultrasound. There is also no opportunity to assess for chorionic villi as in surgical abortion. This abandonment of the responsibility to patients at risk of death from ectopic pregnancy is unacceptable.

Q *How can gestational age be determined without an ultrasound or exam? What are the risks of inaccurate gestational age?*

Higher gestational age is associated with higher failure rates of medication abortion, as noted above, even within the 70 day FDA-approved window, with failure rates rising after week 8,[10] approaching 7% at 10 weeks,[12] and reaching 40% in the second trimester.[30]

Relying on women's reported LMP may be inaccurate due to faulty recollection, irregular menses, or implantation bleeding—as many as 40% of women are redated using first trimester ultrasound.[31]

Accurate confirmation of gestational age reduces the potential for taking medication abortion pills outside of recommended window or giving the patient falsely elevated chances of a successful abortion with this technique. Informed consent is a professional obligation, and it would be impossible to tailor counseling about medication abortion to each patient if gestational ages are not confirmed.

Q *Should women undergoing medical abortion undergo evaluation for Rh status and Rh D immune globulin administration?*

Evaluation of Rhesus antibody status ("Rh status") and provision of Rhogam, if indicated, can prevent a mother from mounting an immune response to her future unborn children.[32] ACOG recommends that "Rh D immune globulin ... be given to Rh D-negative women who have a pregnancy termination, either medical or surgical."[33] ACOG further states that "Rh testing is standard of care in the U.S. and Rh immunoglobulin should be administered if indicated."[33]

There are no studies that specifically address the risk of alloimmunization to Rh-negative women during medication abortions. However, the risk of alloimmunization during 1st-trimester surgical abortion is 4.6% without Rh D immune globulin.[34] Giving Rh D immune globulin to at-risk women decreases the risk of alloimmunization from 13-16% to 0.5 – 1.8%.[35,36] Ignoring these recommendations may have significant consequences since 14% of untreated alloimmunized infants will be

stillborn, and half will suffer neonatal death or brain injury.[37] Failure to document Rh status with bloodwork is lowering the standard of care to that of a country without a prophylaxis program.

Q What do the studies on telemedicine abortion show?

A retrospective cohort study by a consultant for Planned Parenthood showed that few adverse events were reported to the manufacturer after telemedicine distribution of medication abortion pills.[38] As already noted, the rate of adverse events are vulnerable to the deficiencies in this data.[9]

But missing data is not the only concern with applying studies like this to exclusively virtual telemedicine visits. In this study, "telemedicine" abortions included a physical exam, ultrasound, and on-site labs. The only "telemedicine" was a video consultation with an off-site physician. This study cannot be used to show the safety of no-contact abortions.

Likewise, a 2019 paper studying almost 6000 abortions claimed that telemedicine abortions were safe compared to in-person.[39] However, women in the telemedicine group and in the in-person groups all had in-person ultrasounds, labwork, counseling, and consent. The only difference between groups was in the distribution of the pills.

Interestingly, despite no practical difference in the provision of abortion between groups, there was a disparity in incomplete abortions: 1.4% of telemedicine abortions failed and required dilation and curettage, compared to 4.5% of standard medication abortions. The reason for this is likely related to the 40% loss to follow-up rate in this study (compared to 23% loss to follow-up in standard care patients). This demonstrates vividly one of the significant problems with remotely prescribed abortions. Once a woman receives the pills, she may be left to deal with complications on her own.

Removing all testing recommendations (that were previously considered standard of care) is such a new approach that studies do not exist to demonstrate the full range of adverse events. As noted above, complications will undoubtedly be higher. However, a small study of over-the-counter provision of medical abortion in India suggests that complications from unsupervised distribution will be distressingly frequent.[40] Of 40 patients, 27% consumed the pills after the gestational age limit, 77% presented with excessive bleeding, 12% presented with severe anemia, and 5% presented in shock. Surgical evacuation was required in 2/3 (67%) of these women, 12% required transfusion, and 7% experienced sepsis. No

medication with this side effect panel should be permitted without careful supervision.

Q *What data did the FDA use to justify removing the REMS restrictions?*

In her letter justifying the removal of these restrictions, acting FDA commissioner Janet Woodcock referenced only four studies. The first was a small Hawaiian study (334 patients), which suggested that women receiving mifepristone and misoprostol by mail had lower failure rates (2.9%) than those cared for in the clinic (6.4%).[41] The authors of the present document are concerned that this is related to loss to follow-up after remote prescribing, just as in other studies cited above.[11,39]

The second study referenced by the FDA letter was a larger U.S-based study that documented telemedicine medication abortion during the covid-19 pandemic. The original protocol required a facility-based test of eligibility for medication abortion, such as a physical exam or ultrasound and a determination by a clinician that the patient was of less than 70 days' gestation and did not have an ectopic pregnancy. However, 64.1% of women did not have a facility-based test, attributed to the pandemic.[42] In the study population taken as a whole, 6% of women had emergency room visits related to abortion after medication abortion, and 5% required a surgical procedure; these adverse events were not examined separately among women who did or did not receive a facility-based test, making this study unable to comment on the safety of this approach. 13% of outcomes were unknown; separate loss to follow-up rates were not published for women who did or did not receive a facility-based test.

The third study was UK-based and reported almost 30,000 tele-abortions without ultrasound, compared to a similar number of women who received in-person ultrasound and screening.[43] The study cited its own main weakness as "actively to follow up patients after their abortion," and did not specify the number of women lost to follow-up in either group. However, the National Health Service (NHS) is a robust backup mechanism given its centralized record-keeping, and the UK also has a reporting system in place for adverse events.

The fourth study was a Scottish study of 663 patients who received medication abortions without ultrasound or Rh testing.[44] Of these, 8.4% sought in-person care after their telemedicine abortion, and 8.7% presented to in-person care for contraception shortly afterwards. One ectopic pregnancy was caught because this

woman happened to have an ultrasound prior to her telemedicine management.

In her letter, Woodcock also stated that the small number of adverse events reported to the FDA during the COVID-19 pandemic does not indicate that any deviation or non-compliance with the REMS program contributed to the adverse events. As noted previously, currently reporting of adverse events (other than death) is not required. It is unclear how any conclusion about the safety of mifepristone can be drawn from voluntary reporting.

These are not the only studies of telemedicine abortion, but special attention has been paid to these, given their role in changing the FDA's approach to mifepristone.

Q *What are additional factors to consider about the dangers of remote prescription of medical abortion without standard testing?*

First, mandatory provider training and patient consent help ensure that the provider and patient are both aware of the unique risks of medication abortion. This measure contributes to informed consent.

Second, mifepristone must be dispensed directly to the woman seeking an abortion. This requirement prevents use in reproductive coercion, a type of abuse to which women seeking abortion are particularly vulnerable.[45,46] Intimate partner violence is associated with abortion and with repeat abortions,[47] and this is particularly true of adolescents[48] and women being trafficked for sex.[49] This is a concern that bridges gaps and is seen in heartfelt documents from ACOG and the National Abortion Federation.[50,51] Interaction with the health care system is an opportunity for these women to be identified and helped, but availability of medication abortion to abusers removes this opportunity.

Third, removal of in-person interaction brings into question the adequacy of informed consent. As with any medical procedure or intervention, a thorough discussion of the advantages, disadvantages, risks, and alternatives is essential. Reducing a significant life decision like abortion to a remote interaction is a disservice. Any woman seeking an abortion deserves to be afforded adequate counseling and discussion with her physician before proceeding.

Fourth, currently, an abortion provider must intentionally register to prescribe mifepristone; removing this restriction may create pressure on other healthcare providers and pharmacists to provide mifepristone. Currently, most physicians do not perform abortions.

Fifth and finally, a provider is obligated to provide surgical intervention in the 5-8% of cases where medical abortion fails.

Without a robust physician-patient relationship or proximity to emergency care, a woman experiencing a complication will be on her own to seek out care. This is suggested by the disparate follow-up rates and rates of adverse outcomes in the telemedicine groups in several studies cited above.

Summary of Recommendations and Conclusion

The following recommendations are based on good and consistent scientific evidence (Level A):

1. Ultrasound and exam before medication abortion to confirm gestational age and evaluate for ectopic pregnancy are important to maternal safety.
2. All pregnant women undergoing medication abortion or otherwise should be evaluated for Rh status and offered Rh D immune globulin if indicated.

The following recommendations are based on limited and inconsistent scientific evidence (Level B):

1. Consultation with a physician is essential before medication abortion to provide counseling and discuss risks and alternatives, including surgical abortion, which is safer.
2. The Food and Drug Administration should restore the 2011 REMS and add requirements for ultrasound , physical exam, and labwork.

The following recommendations are based primarily on consensus and expert opinion (Level C):

1. In-person follow-up after medication abortion is essential to ensure maternal safety.
2. A registry should be established to track complications of medication abortion prospectively.

References

1. 20687 App letter. In: Research CfDEa, ed2000.
2. Risk Evaluation and Mitigation Strategy (REMS) single shared system for mifepristone 200mg. In:2011.
3. MIFEPREX (mifepristone) Tablets, 200 mg: Risk Evaluation and Mitigation Strategy (REMS). In:2011:1-11.
4. Woodcock J. Letter to Maureen G. Phipps. In: Research CfDEa, ed. Silver Spring, MD2021:1-2.
5. Danco Laboratories L. Highlights of prescribing information: mifeprex (mifepristone) tablets for oral use. In. New York2016:1-19.
6. Ollstein AM. Supreme Court reinstates restrictions on abortion pill. 2021. doi:https://www.politico.com/news/2021/01/12/supreme-court-restrictions-abortion-pill-458436#. Published 12 Jan 2021. Accessed 28 Oct 2021.

7. Administration FaD. Questions and Answers on Mifeprex. Published 2021. Updated 13 Apr 2021. Accessed 28 Oct 2021, 2021.
8. Schaff EA, Fielding SL, Eisinger S, Stadalius L. Mifepristone and misoprostol for early abortion when no gestational sac is present. *Contraception.* 2001;63(5):251-254.
9. Aultman K, Cirucci CA, Harrison DJ, Beran BD, Lockwood MD, Seiler S. Deaths and Severe Adverse Events after the use of Mifepristone as an Abortifacient from September 2000 to February 2019. *Issues Law Med.* 2021;36(1):3-26.
10. Mifepristone U.S. Post-Marketing Adverse Events Summary through 12/31/2018. In:2018.
11. Raymond EG, Shannon C, Weaver MA, Winikoff B. First-trimester medical abortion with mifepristone 200 mg and misoprostol: a systematic review. *Contraception.* 2013;87(1):26-37.
12. Chen MJ, Creinin MD. Mifepristone With Buccal Misoprostol for Medical Abortion: A Systematic Review. *Obstet Gynecol.* 2015;126(1):12-21.
13. Upadhyay UD, Desai S, Zlidar V, et al. Incidence of emergency department visits and complications after abortion. *Obstet Gynecol.* 2015;125(1):175-183.
14. Gary MM, Harrison DJ. Analysis of severe adverse events related to the use of mifepristone as an abortifacient. *Ann Pharmacother.* 2006;40(2):191-197.
15. What to do in case of emergency? Women Help Women. Accessed 29 Oct, 2021.
16. Gatter M, Cleland K, Nucatola DL. Efficacy and safety of medical abortion using mifepristone and buccal misoprostol through 63 days. *Contraception.* 2015;91(4):269-273.
17. Goldstone P, Michelson J, Williamson E. Early medical abortion using low-dose mifepristone followed by buccal misoprostol: a large Australian observational study. *Med J Aust.* 2012;197(5):282-286.
18. Niinimäki M, Pouta A, Bloigu A, et al. Immediate complications after medical compared with surgical termination of pregnancy. *Obstet Gynecol.* 2009;114(4):795-804.
19. Ashok PW, Templeton A, Wagaarachchi PT, Flett GM. Factors affecting the outcome of early medical abortion: a review of 4132 consecutive cases. *Bjog.* 2002;109(11):1281-1289.
20. National Academies of Sciences E, Medicine. *The Safety and Quality of Abortion Care in the United States.* Washington, DC: The National Academies Press; 2018.
21. Skop I. Medical abortion: what physicians need to know. *Journal of American Physicians and Surgeons.* 2019;24(Winter):109-113.
22. Ireland LD, Gatter M, Chen AY. Medical Compared With Surgical Abortion for Effective Pregnancy Termination in the First Trimester. *Obstet Gynecol.* 2015;126(1):22-28.
23. Cleland K, Creinin MD, Nucatola D, Nshom M, Trussell J. Significant adverse events and outcomes after medical abortion. *Obstet Gynecol.* 2013;121(1):166-171.
24. Baum SE WK, Hopkins K, Potter JE, Grossman D. Impact of admitting privilege requirement on abortion providers in Texas. *Contraception.* 2016;94:390.
25. Dart RG, Kaplan B, Varaklis K. Predictive value of history and

physical examination in patients with suspected ectopic pregnancy. *Ann Emerg Med.* 1999;33(3):283-290.
26. Buckley RG, King KJ, Disney JD, Gorman JD, Klausen JH. History and physical examination to estimate the risk of ectopic pregnancy: validation of a clinical prediction model. *Ann Emerg Med.* 1999;34(5):589-594.
27. Barnhart KT. Clinical practice. Ectopic pregnancy. *N Engl J Med.* 2009;361(4):379-387.
28. Khan KS, Wojdyla D, Say L, Gülmezoglu AM, Van Look PF. WHO analysis of causes of maternal death: a systematic review. *Lancet.* 2006;367(9516):1066-1074.
29. Atrash HK, MacKay HT, Hogue CJ. Ectopic pregnancy concurrent with induced abortion: incidence and mortality. *Am J Obstet Gynecol.* 1990;162(3):726-730.
30. Mentula MJ, Niinimäki M, Suhonen S, Hemminki E, Gissler M, Heikinheimo O. Immediate adverse events after second trimester medical termination of pregnancy: results of a nationwide registry study. *Hum Reprod.* 2011;26(4):927-932.
31. Bennett KA, Crane JM, O'Shea P, Lacelle J, Hutchens D, Copel JA. First trimester ultrasound screening is effective in reducing postterm labor induction rates: a randomized controlled trial. *Am J Obstet Gynecol.* 2004;190(4):1077-1081.
32. L D. Blood Groups and Red Cell Antigens. In: *Chapter 7, The Rh blood group.* Bethesda (MD): National Center for Biotechnology Information; 2005.
33. Practice Bulletin No. 181: Prevention of Rh D Alloimmunization. *Obstet Gynecol.* 2017;130(2):e57-e70.
34. Fiala C, Fux M, Gemzell Danielsson K. Rh-prophylaxis in early abortion. *Acta Obstet Gynecol Scand.* 2003;82(10):892-903.
35. Bowman J. Thirty-five years of Rh prophylaxis. *Transfusion.* 2003;43(12):1661-1666.
36. de Haas M, Finning K, Massey E, Roberts DJ. Anti-D prophylaxis: past, present and future. *Transfus Med.* 2014;24(1):1-7.
37. Zipursky A, Paul VK. The global burden of Rh disease. *Arch Dis Child Fetal Neonatal Ed.* 2011;96(2):F84-85.
38. Grossman D, Grindlay K. Safety of Medical Abortion Provided Through Telemedicine Compared With In Person. *Obstet Gynecol.* 2017;130(4):778-782.
39. Kohn JE, Snow JL, Simons HR, Seymour JW, Thompson TA, Grossman D. Medication Abortion Provided Through Telemedicine in Four U.S. States. *Obstet Gynecol.* 2019;134(2):343-350.
40. Nivedita K, Shanthini F. Is It Safe to Provide Abortion Pills over the Counter? A Study on Outcome Following Self-Medication with Abortion Pills. *J Clin Diagn Res.* 2015;9(1):Qc01-04.
41. Kerestes C, Murayama S, Tyson J, et al. Provision of medication abortion in Hawai'i during COVID-19: Practical experience with multiple care delivery models. *Contraception.* 2021;104(1):49-53.
42. Chong E, Shochet T, Raymond E, et al. Expansion of a direct-to-patient telemedicine abortion service in the United States and experience during the COVID-19 pandemic. *Contraception.* 2021;104(1):43-48.
43. Aiken A, Lohr PA, Lord J, Ghosh N, Starling J. Effectiveness, safety and

acceptability of no-test medical abortion (termination of pregnancy) provided via telemedicine: a national cohort study. *Bjog.* 2021;128(9):1464-1474.
44. Reynolds-Wright JJ, Johnstone A, McCabe K, Evans E, Cameron S. Telemedicine medical abortion at home under 12 weeks' gestation: a prospective observational cohort study during the COVID-19 pandemic. *BMJ Sex Reprod Health.* 2021;47(4):246-251.
45. Miller E, Jordan B, Levenson R, Silverman JG. Reproductive coercion: connecting the dots between partner violence and unintended pregnancy. *Contraception.* 2010;81(6):457-459.
46. ACOG Committee opinion no. 554: reproductive and sexual coercion. *Obstet Gynecol.* 2013;121(2 Pt 1):411-415.
47. Hall M, Chappell LC, Parnell BL, Seed PT, Bewley S. Associations between intimate partner violence and termination of pregnancy: a systematic review and meta-analysis. *PLoS Med.* 2014;11(1):e1001581.
48. Bourassa D, Bérubé J. The prevalence of intimate partner violence among women and teenagers seeking abortion compared with those continuing pregnancy. *J Obstet Gynaecol Can.* 2007;29(5):415-423.
49. Laura J. Lederer CAW. The health consequences of sex trafficking and their implications for identifying victims in healthcare facilities. *Annals of Health Law.* 2014;23(1):61-87.
50. ACOG Committee Opinion No. 390, December 2007. Ethical decision making in obstetrics and gynecology. *Obstet Gynecol.* 2007;110(6):1479-1487.
51. Ethical principles for abortion care. National Abortion Federation. Published 2011. Accessed2021.