questions but the indication, women could refer to the label while answering. We used descriptive, chi-square and regression analyses to assess comprehension of key concepts.

Results: 100 women aged 16-24 (26%), 25-34 (37%) and 35-45 (37%) years participated. Most were single (73%) or married (16%) with education: less than high school (20%), high school (43%), or university (16%). The majority reported prior sexual intercourse (91%), pregnancy (75%), and contraception (male condom, 45%). In terms of comprehension, the indication was reported 'to end a pregnancy' by 79% of participants (range: 43-85%, for low-high literacy). Most (74%) could report the maximum number of gestational weeks for use (range: 26-76% for low-high literacy). Participants (87%) identified incorrect use (taking only 2 misoprostol) but struggled to correctly identify timing (57% reported a 36-hourinterval between mifepristone and misoprostol as incorrect). Messages clear to participants (>90%) regardless of literacy were when to consult a doctor before use (history of anemia or ectopic), to respect the mifepristone-misoprostol interval, when to seek medical attention (heavy, prolonged or no bleeding) and that fertility returns quickly after abortion.

Conclusions: Our prototype over-the-counter label for a combined mifepristone-misoprostol product for medical abortion in early pregnancy was moderately understandable to participants. To demonstrate an understanding of at least 80% for all key concepts, the prototype label for a combined medical abortion product requires revision.

doi:10.1016/j.contraception.2019.03.010

Intrafetal digoxin as an adjuvant for dilation and evacuation at 20 to 24 weeks' gestation: a randomized, double-blind, placebo-controlled trial

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Introduction: The benefit of inducing fetal demise before dilation and evacuation (D&E) remains unclear. Although one study demonstrated no effect on procedure time, some providers believe that inducing fetal demise makes the D&E quicker and may lead to fewer complications. The safety of D&E without inducing fetal demise is well established and a digoxin injection may pose unnecessary risks. We sought to evaluate the effect of inducing fetal demise on procedure duration for D&Es at 20 to 24 weeks.

Method: We conducted a multi-center, randomized, double-blind, placebo-controlled trial of intrafetal digoxin versus placebo before D&E at 20 to 24 weeks. We enrolled subjects between February 2017 and May 2018 from four abortion clinics in San Francisco, CA, Long Beach, CA, Los Angeles, CA, and Portland, OR. Participants received a blinded intrafetal injection of either 1mg digoxin or an equivalent volume saline the day before D&E. We stratified randomization by gestational group (20-22 weeks, 22-24 weeks). Our primary outcome was procedure duration, measured as the time from first instrument in the uterus to last instrument out of the uterus. Secondary outcomes included total procedure duration, provider assessment of ease of procedure, achievement of fetal demise, measured blood loss, and complications. We used an intention to treat analysis.

Results: Of the 321 eligible patients, we enrolled 190 and randomized 178. Baseline characteristics were similar between groups. The difference in mean procedure time between digoxin and placebo was not significant either in the overall group (6.8 vs 7.2 minutes, p=0.70) or by gestational group: 5.5 vs 5.0 minutes for the 20-22 week group (p=0.48) and 11.7 vs 15.3 minutes for the 22-24 week group (p=0.11). Complications were similar between groups, as were nausea and vomiting, both post-injection and post-D&E.

Conclusions: Inducing fetal demise with digoxin does not shorten procedure duration overall but may shorten procedure duration for 22-24 week D&Es. Complications with digoxin were rare. D&E providers may consider offering digoxin to patients undergoing abortion at 22 to 24 weeks; patients' preferences should be considered in the decision to induce fetal demise.

doi:10.1016/j.contraception.2019.03.011

What happens beyond the clinic?: New data on home abortion providers and practices in North America

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Introduction: Recent political threats in the United States brought increased attention to abortions happening outside formal healthcare systems. Clinic-based recruitment presents methodological challenges when researching this topic, and literature on abortion provision by home abortion providers in North America is lacking. Surveying this population creates a unique opportunity to better understand these phenomena. This study describes: 1) current trends and scope of home abortion providers in North America; 2) their characteristics, practices, and experiences, and 3) the people who access their abortion services.

Method: In February 2018, we created and pilot-tested an anonymous online survey that collected data on the demographics and geographic location of home abortion providers and the people accessing their services, and home abortion providers' practices and experiences. We distributed the survey using community engagement with a home abortion provider network and established an anonymous phone line for questions and concerns. We downloaded data from REDCap and grouped and coded open-response survey questions, calculated categorical frequencies, and used descriptive statistics to identify trends and outliers in the data.

Results: We received 75 responses of which 68 (91%) were eligible after self-screening. The majority of respondents were located in the United States (73%) living in 19 states, and 24% were located in 4 Canadian provinces. Home abortion providers reported serving people across North America including 39 U.S. states and territories, and 8 Canadian provinces. Home abortion providers reported practicing for an average of 5 years and serving between 1 and 40 people in the past year. Herbs and misoprostol were used most frequently with reported effectiveness between 91-100%. Home abortion providers detailed a range of in-person and remote services, and 88% reported wanting to collaborate with clinics.

Conclusions: This is the first survey to our knowledge to collect data on a home abortion provider network in North America. Participants and the people accessing their services represented a wide geographic range, and home abortion providers reported providing individualized and comprehensive abortion care in safe and effective ways. Home abortion providers are providing important routes of access to abortion across North America, and collaboration with clinical abortion advocates could strengthen these critical safety nets.

doi:10.1016/j.contraception.2019.03.012

Using placental proteins in urine and serum to assess gestational age: A new purpose for an old idea

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Introduction: Clinicians commonly use ultrasound or pelvic exam to confirm that the duration of a pregnancy is below the accepted limit of 70 days before providing medical abortion. These methods are expensive and invasive, and they require an in-person visit to a facility with trained personnel and requisite equipment. A blood or urine test for estimation of gestational age (GA) would be highly beneficial, particularly in low resource settings or when providing abortion care remotely through telemedicine. In this exploratory study, we aimed to determine whether selected placental proteins could serve as the basis of such a test.

Method: We collected blood and urine samples from 245 healthy pregnant women presenting for abortion services or prenatal care across the gestational age spectrum, oversampling between 5-15 weeks. We assayed each serum specimen for seven different placental proteins and urine samples for two. We also tested urine specimens for hCG using commercially available point-of-care pregnancy tests with sensitivities from 25 to 10,000 mIU/ml. We examined the data to determine whether we could identify serum or urine concentrations that would reliably rule out late pregnancies.

Results: Serum concentrations of some proteins rose continuously over pregnancy. For two compounds, we noted a clear concentration threshold that distinguished pregnancies of >70 days from earlier gestations. Similarly, we noted concentration thresholds for two other compounds that identified most pregnancies with GAs of >104 days. None of the urine pregnancy tests differentiated women with GAs above or below 70 days.

Conclusions: Two compounds tested showed promise as serum markers to identify pregnancies ≤70 days gestation. If these results are validated by further research, these markers, alone or in combination with other markers, could be the basis of a test that could enhance access to abortion by screening out advanced gestations. Point of care urine hCG tests do not appear to be useful indicators of gestational age.

doi:10.1016/j.contraception.2019.03.013

Intrafetal Injection of Lidocaine to Induce Fetal Demise

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Introduction: We perform transvaginal intrafetal injections at the time of dilator insertion to reduce the need for transabdominal intracardiac injections. We sought to examine the efficacy of transvaginal intrafetal lidocaine compared to transabdominal intracardiac lidocaine to achieve fetal demise.

Method: We reviewed all charts at the DuPont Clinic in Washington, DC, from June 2017 through August 2018. We recorded relevant patient characteristics, clinical data, and outcome data. Ethical approval was obtained by the Stanford IRB. We performed transabdominal intracardiac injection with a 15-cm 20-gauge echotip needle under ultrasound guidance. We performed transvaginal intrafetal lidocaine injection after placement of the paracervical block for osmotic dilator insertion, using a 3.5-inch 20-gauge needle under ultrasound guidance. If unsuccessful, we performed a transabdominal injection, typically 30-60 minutes later.

Results: We performed injections for 114 fetuses in 112 patients. In all but 4 injections, we used 20-24 mL of lidocaine. Transabdominal intracardiac injections were effective in 75 of 75 cases (100%). Transvaginal intrafetal injections were effective in 38 of 62 cases (61%), with an efficacy rate of 82% and 57% for gestations at 22-23 weeks and at 24 weeks or more, respectively. For intrafetal injections, the average time to demise was 21 minutes, with a range from 0 to 40 minutes. Unsuccessful transvaginal intrafetal injections at 23 weeks or more were followed by successful transabdominal intracardiac injections in all cases (N=23). Of all 112 patients, one patient reported transient mild tinnitus after a transvaginal injection, and we observed no other adverse events.

Conclusion: Transabdominal intracardiac lidocaine injection is an effective method to achieve fetal demise with no adverse events observed. Transvaginal injection is a feasible method and can decrease the need for transabdominal injections. Further research is needed to define the efficacy of injections by gestational age and by injection location.

doi:10.1016/j.contraception.2019.03.014

Partisanship, Anecdotes, and Evidence in State Legislators' Policymaking on Abortion

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Introduction: Implicit in policy-relevant abortion research is the assumption that findings will influence policy outcomes. Yet many states continue to pass abortion restrictions in contravention of evidence. This raises questions about whether and how state lawmakers use evidence when deciding abortion policy, including how lawmakers balance evidence with other factors such as anecdotes, values, and politics. This study explores these issues through a qualitative study of legislators in three U.S. states.

Method: We conducted in-depth semi-structured interviews with state legislators and their aides in Maryland, North Carolina, and Virginia. We recruited members from all health-related committees