



Feasibility and Acceptability of At-Home Routine Pregnancy Testing in the United States: A Pilot Study

Natalie Morris, MPH, Katherine Ehrenreich, MSc, Tanvi Gurazada, MS,
Daniel Grossman, MD*

Advancing New Standards in Reproductive Health (ANSIRH), Bixby Center for Global Reproductive Health, Department of Obstetrics, Gynecology and Reproductive Sciences, University of California, San Francisco, Oakland, California

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ABSTRACT

Objectives: We aimed to investigate the acceptability of regular self-testing among people with increased risk for delayed pregnancy recognition when provided with free at-home pregnancy tests and to explore the feasibility of this intervention among a larger sample.

Materials and Methods: In 2019–2020, we recruited participants across the United States by using flyers posted online and in community settings and abortion clinics. We purposively sampled people with pregnancy capacity who were 18 to 24 years old, had irregular menses, or had a recent second-trimester abortion. Participants were mailed pregnancy tests and instructions. Participants received text message reminders to test monthly over a 3-month period and were asked to text back results. Participants also completed online surveys at baseline, after 1 month, and after 3 months. A purposive subsample of participants was selected to participate in semi-structured interviews. Interviews were analyzed using thematic analysis of interview guide topics and emergent themes.

Results: 61 participants were enrolled. Fifty-four participants (90%) responded to the text reminders and 52 (85%) reported testing in all 3 months. Fifty-eight (95%) said tests were easy to use, 59 (97%) said the results were clear, and all participants found it convenient to text their results. Fourteen participants completed qualitative interviews. All described continuing to test after the study and indicated high acceptability for text reminders. Interviewees described convenience and cost as primary benefits for preferring at-home pregnancy testing.

Conclusions: Regular self-testing and texting results is feasible and acceptable to participants provided with free at-home urine pregnancy tests. These results can inform future studies designed to investigate the effect of regular self-testing on timing of pregnancy detection to facilitate early entry to prenatal care or early abortion.

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Accessing care early in pregnancy is key to achieving good health outcomes and improving options available to pregnant people ([American Academy of Pediatrics & American College of Obstetricians and Gynecologists, 2017](#)). Early entry into prenatal care allows for more precise estimation of due date, timeliness of noninvasive genetic testing, and the opportunity to treat coexisting conditions that may affect the pregnancy, such as HIV

([American College of Obstetricians and Gynecologists, 2018; Practice Bulletin, 2016](#)). For patients seeking abortion, accessing care at or before 10 weeks' gestation typically allows for a choice between medication or aspiration abortion and is less costly for the patient (Dobbs v. Jackson [Women's Health Organization, 2022](#); [World Health Organization, 2012](#)). Many states have implemented bans on abortion beyond 15 weeks, and as early as 6 weeks in some places ([State Bans on Abortion Throughout Pregnancy, 2022](#)). Abortion may therefore no longer be an option for many who seek care after the first trimester.

Studies indicate that the longest time interval in the steps to obtaining an abortion is the period leading up to pregnancy confirmation ([Drey et al., 2006; Foster et al., 2008](#)). This delay can

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* Correspondence to: Daniel Grossman, Advancing New Standards in Reproductive Health, University of California, 1330 Broadway, Suite 1100, Oakland, CA 94612. Phone: +1 510 986 8941.

E-mail address: Daniel.Grossman@ucsf.edu (D. Grossman).

be especially long for those who are young or have irregular menstrual cycles (Branum & Ahrens, 2017; Harries et al., 2007; Kiley et al., 2010; McCarthy et al., 2018). One study found that more than 50% of patients obtaining a second-trimester abortion were already past 13 weeks' gestation when they confirmed pregnancy (Drey et al., 2006). Another study surveying 592 patients at abortion clinics across the United States found that 48% of those who presented for abortion care in the second trimester delayed pregnancy testing until 8 weeks' gestation or later (Swanson et al., 2014). In this same study, researchers found that 94% of study participants expressed interest in potential interventions that would help them recognize pregnancy earlier (Swanson et al., 2014). Interest in having access to less expensive pregnancy tests was significantly associated with delayed pregnancy testing (Swanson et al., 2014).

There is little published evidence identifying successful interventions that improve early pregnancy recognition, although global evidence suggests that promotion of pregnancy testing facilitates more effective and comprehensive referral for abortion and prenatal services (Comfort et al., 2019; Constant et al., 2021; Jeffery et al., 2000; Morroni & Moodley, 2006). One study in South Africa suggested that access to urine pregnancy tests was associated with earlier presentation for prenatal care (Morroni & Moodley, 2006). A U.S. study found that availability of free pregnancy tests improved likelihood to test for pregnancy among a sample of women participating in a randomized controlled trial (Nettleman et al., 2009). Among the sample, those with access to free urine pregnancy tests tested 93% of the time they suspected pregnancy, compared with 64% among those who did not have access to free urine pregnancy tests. A similar study conducted in South Africa found that providing women with free pregnancy tests for routine testing could help improve early confirmation of pregnancy status (Constant et al., 2021).

Although it is clear that early pregnancy recognition is associated with better health outcomes (Foster et al., 2008; Jeffery et al., 2000; Morroni & Moodley, 2006; Swanson et al., 2014), additional research is needed to assess the effectiveness and acceptability of providing free at-home pregnancy tests to improve pregnancy recognition. To address this research gap, we explored whether routine pregnancy testing is feasible and acceptable to people when provided with free urine pregnancy tests in this mixed-methods pilot study. The results from this study will inform the development of a larger randomized controlled trial to assess whether regular at-home urine pregnancy testing leads to earlier pregnancy recognition and more timely entry to abortion or prenatal care.

Methods

Sample Size and Selection

For this pilot study, we purposively sampled people who were, according to published literature, at higher risk for delayed pregnancy recognition (Branum & Ahrens, 2017; Drey et al., 2006; Harries et al., 2007; Kiley et al., 2010; McCarthy et al., 2018). These purposive subgroups were young people (18–24 years old); people with irregular menses, defined as having periods more or less frequently than every 21 to 35 days or missing a period while not pregnant; and those who had had a second-trimester abortion within the past 3 years. We selected a 3-year timeframe to identify participants who had obtained second-trimester abortions relatively recently, and limiting it to

a shorter timeframe would have presented challenges given the low prevalence of second-trimester abortions.

Adherence to home pregnancy testing has been reported at 79% (Jeffery et al., 2000). We estimated that if 80% of participants used all of the tests within 5 days of the scheduled test dates, with alpha of 0.05 and precision at 10%, a sample size of 61 was needed. We aimed to recruit 76 participants to account for 25% loss to follow-up: 38 participants ages 18 to 24, 19 with irregular menses, and 19 who had a second-trimester abortion in the past 3 years.

Study Procedures

We recruited participants across the United States from July 2019 to August 2020 using English- and Spanish-language flyers posted online and in community settings and abortion clinics. We included the link for the eligibility survey in electronic study recruitment flyers on Craigslist, Reddit, and the MyChart patient communication platform of the University of California, San Francisco hospital system. We also posted paper flyers in hospitals in the San Francisco Bay Area and distributed them in two abortion clinics in New Jersey and Washington State. In addition, we recruited patients seeking second-trimester abortion from a clinic in Northern California. We e-mailed the eligibility survey to interested patients 3 days after their clinic visit to ensure participants had completed their abortion.

Potential participants were deemed eligible if they had a uterus and were not sterilized, were ages 18 to 35, able to speak and read English or Spanish, engaging in sexual activity that could result in pregnancy, were not pregnant and not desiring to be pregnant within the next year, were not using contraception or were using only short-term contraceptive methods (oral contraceptives, patch, vaginal ring, emergency contraception, or condoms), and had a working cell phone. Potential participants were deemed ineligible if they were using long-acting reversible contraception or 3-month injectable contraceptives, or if they or their sexual partner were sterilized. We additionally screened for those ages 18 to 24, with a history of irregular menses, or a history of second-trimester abortion. Recruitment for the identified sample groups ended on reaching target enrollment numbers. By March 2020, the study completed recruitment for those only eligible due to age (18–24 years) or irregular menses and focused on enrolling patients who had a recent second-trimester abortion until recruitment ended in August 2020.

We contacted eligible participants by phone or e-mail to schedule a video enrollment call, during which a study team member explained study procedures and consented participants. We mailed a discreet pregnancy test kit to each participant's preferred mailing address. The kit included six home urine pregnancy tests.

We asked participants to take a pregnancy test on the first day of each month for the 3 months they were enrolled in the study. We sent an automated text message survey on the first day of the month asking whether they tested, what their test result was, or why they did not test. We continued sending reminders for up to 5 days if the participant did not respond. We planned to follow up with any participants who reported a positive test result. We also asked each participant to complete an online survey at baseline before their first month of testing, a short survey after their first month, and a final follow-up survey after their third month. Participants received a gift card on completion of each of the three study surveys for up to \$70 in total.

Baseline Characteristics

We collected data on participant sociodemographic characteristics, reproductive history, and fertility awareness in the baseline survey. Sociodemographic characteristics included age, self-described race and ethnicity, education level, employment status, and living situation. For reproductive history, we asked participants about contraceptive methods they were using (if any), as well as their history of pregnancy, abortion, and birth. Participants were determined to have irregular menses if they reported having periods more or less frequently than every 21 to 35 days or missing a period while not pregnant. We collected data on participants' fertility awareness by asking if there was a time during the menstrual cycle when a person was more likely to become pregnant, and if so, at what point relative to the person's period. Participants were categorized as "not aware" if they responded "no" to the first question, "aware, wrong timing" if they answered "yes" to the first question but selected the incorrect time frame, and "aware, right timing" if they answered "yes" to the first question and selected the correct time frame ("about 2 weeks after the start of your period"). We also asked participants if they had used a pregnancy test in the past year.

Outcomes

Our primary study outcome was the proportion of participants who self-tested with a home urine pregnancy test at the beginning of each month, reported either in the text message responses or follow-up survey.

The secondary outcomes included the proportion of participants who responded to monthly text reminders with their test result, reported convenience of texting results, perceived ease of use of pregnancy test, and clarity of results. We collected data for these measures, as well as reasons for not testing, in both follow-up surveys. We also collected data on contraceptive use at baseline and follow-up, advantages and disadvantages of home testing as compared with clinic testing, and interest in participating in a year-long study of a similar model.

Qualitative Interviews

We recruited participants for semi-structured interviews between December 2019 and August 2020. We asked participants in their follow-up survey if they were interested and willing to be contacted by the study team to schedule an interview. We purposively selected interview participants to ensure each subgroup (young people, people with irregular menses, and people with a history of second-trimester abortion) was represented and to obtain a range of perspectives. We conducted interviews with a subset of participants about their experiences participating in the study and attitudes about the intervention using a semi-structured guide. We conducted all interviews over the phone after obtaining participants' verbal consent to be interviewed and digitally recorded. Although we intended to recruit both English and Spanish speakers, we conducted all interviews in English. Interviews were transcribed verbatim by a professional transcription service. Participants received a \$50 gift card for participating in the interview.

We coded interviews in Dedoose 8.0.35. Two coders developed the codebook based on deductive topics in the interview guide and other emergent themes. The coders independently applied codes to three interviews and then discussed discrepancies and revised the codebook. They then coded the remaining

interviews, producing thematic memos. The coders then performed sub-coding of larger deductive themes. We selected illustrative quotations for inclusion here, identifying participants by age and whether they have irregular menses or a history of second-trimester abortion.

Ethical Approval

We obtained approval for this study from the University of California, San Francisco, Institutional Review Board.

Results

The eligibility survey was taken 1,017 times. Repeat attempts were identified as those who took the survey multiple times in the same day under the same IP address. We excluded 76 repeat attempts, 99 incomplete surveys, and 703 ineligible surveys, leaving 139 eligible prospective participants (Figure 1). Among those, we did not follow-up with 38 people who were no longer eligible because recruitment goals for their purposively sampled subgroup had been met. We followed up with 101 individuals and successfully enrolled 61 total participants in the study. We purposively sampled for and enrolled 40 participants who were 18 to 24 years old, 34 with a history of irregular menses, and two who had had a second-trimester abortion in the past 3 years (participants could be in more than one group). Because of the difficulty meeting our recruitment target for second-trimester abortion patients, we completed recruitment after 61 participants were enrolled.

We conducted semi-structured interviews among a subset of participants. Among 60 who expressed interest, 18 were contacted, and 14 scheduled and completed an interview. Interviews ranged in length from 15 to 35 minutes, averaging 23 minutes. Interviews were conducted between 2 weeks and 6 months after participants completed testing for the study.

Participant Characteristics

Table 1 shows the demographic and other characteristics of enrolled participants. Among the 25 participants who had used a pregnancy test in the past year, most ($n = 20$) had purchased their test from a store or pharmacy, and three had tested more than 8 weeks after their last menstrual cycle (data not shown). Among the nine participants who had ever given birth, two were 13 to 16 weeks pregnant by the time they entered prenatal care. The vast majority of participants resided in California.

The 14 interview participants ranged in age from 20 to 35 years old. Six participants had given birth, and three had had an abortion.

Intervention Adherence

Among 61 participants, 52 (85%, 95% confidence interval: 74%–93%) reported taking a pregnancy test all 3 months of the study (Table 2). Of the nine participants who did not test in 1 or more months, the primary reason was that they knew they were not pregnant; when asked to describe how they knew, participants responded that they had not been sexually active that month and/or they got their period shortly before the test day (Table 2). Participants could select multiple reasons for why they did not test.

Most participants (89%) responded to the study's text message reminders all 3 months (Table 2). No participant reported a positive pregnancy test during the study. In addition to testing

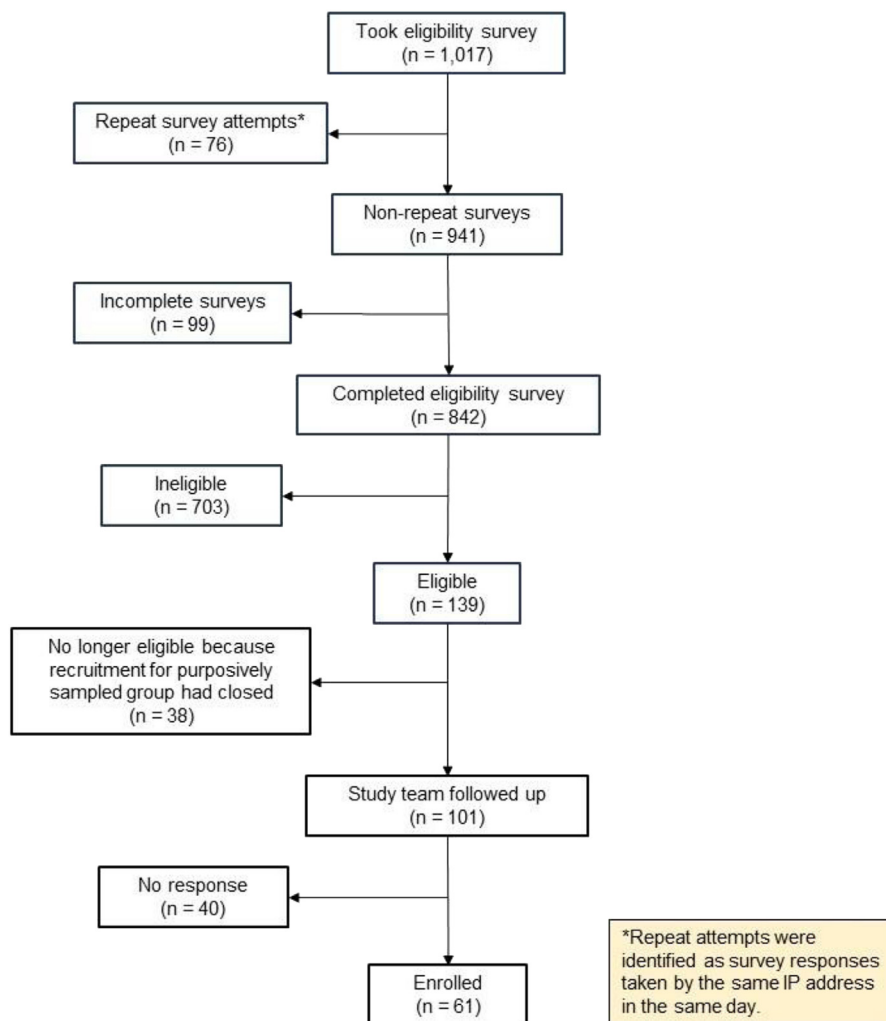


Figure 1. Recruitment, eligibility assessment, and enrollment of study participants.

once at the beginning of each month, 11 participants took more than three tests throughout the study period (Table 2). The primary reasons for taking multiple tests included wanting to make sure it was negative, thinking there was a problem with the first test, or having done the test incorrectly the first time.

Feasibility and Acceptability of Intervention

At the 3-month follow-up, 95% of participants ($n = 58$) said the tests were very easy to use and 97% ($n = 59$) said the results were very clear (Table 3). Similar findings were reported in the short survey sent after the first month of testing. All participants reported it was very convenient to text their test results to the study team.

Among 61 participants, 82% said they would definitely or probably continue testing if given free pregnancy tests, and 90% said they would definitely or probably recommend monthly testing to a friend (Table 3). Reasons for not continuing to test included low risk of pregnancy, regular menstrual cycle, and excess waste from the pregnancy test packaging; reasons given for continuing to test included additional reassurance, cost, and convenience (data not shown).

Most (85%) had no concerns about privacy, and 97% did not experience any privacy issues. Participants who had privacy concerns or problems reported having to hide the tests from people they lived with or needing to dispose of the tests discreetly; some reported that family members found their pregnancy tests (data not shown).

Interview participants often expressed that having the tests available at home offered “peace of mind” or “reassurance.” When describing her experience being in the study, one interviewee said:

I try not to buy [pregnancy tests] that frequently because they are kind of expensive. I think this just gave me the peace of mind that I had those tests available [from the study]. (27 years old, irregular menses)

Another participant said that the monthly cost of tests can be “more than some prescriptions.” Similarly, another interviewee said:

People don’t always have the budget for paying for [pregnancy tests]. Going to the store, it also helps that you don’t have to go out every single time and interact with people. So COVID prevention in that way. (35 years old, irregular menses)

Table 1
Characteristics, Reproductive History, and Fertility Awareness of Study Participants (*n* = 61)

Characteristics	<i>n</i>	%
Age (y)		
18–24	40	66
25–30	13	21
31–35	8	13
Race		
Asian/Asian American	18	30
Black/African American	3	5
Hispanic/Latina	11	18
Middle Eastern/North African	1	2
Multiracial	5	8
Pacific Islander/Filipino/Native Hawaiian	3	5
White	19	31
Missing	1	2
Education		
High school degree/GED or some college	20	33
College degree or some professional school	32	52
Professional or advanced degree	9	15
Employment status		
Employed full-time	20	33
Employed part-time	15	25
Homemaker	5	8
Unemployed	15	25
Other (student, per diem)	6	10
Household (lives with)		
Family (parents, siblings, grandparents, etc.)	11	18
Spouse/boyfriend/partner	20	33
Own children	9	15
Other people's children	3	5
Roommates	26	43
Alone	8	13
Contraceptive method		
Withdrawal	19	31
Rhythm method	1	2
Condoms	29	48
Oral contraceptive pills	29	48
Vaginal ring	3	5
No method	5	8
Ever been pregnant	11	18
Ever had an abortion		
Yes, first trimester	2	3
Yes, second trimester	2	3
Parity		
0	52	85
1	6	10
2+	3	5
Irregular menses*	34	56
Fertility awareness		
Not aware	3	5
Aware, wrong timing	14	23
Aware, right timing	44	72
Used a pregnancy test in the past year		
Yes	25	41
No	36	59

* Irregular menses was defined as having periods more or less frequently than every 21–35 days or missing a period while not pregnant.

The benefit of avoiding the store was a common theme among other interviewees who were interviewed during the COVID-19 pandemic.

Participants had positive reactions to the text message reminders. Eighty-seven percent of participants indicated that the text reminders were not bothersome (Table 3). Interviewees overwhelmingly expressed their satisfaction with receiving the text message reminders, and many said they “appreciated” the reminders. One interviewee said:

The text message came pretty consistently [around] my period. I had never tracked my period. And so it was like, oh, I

Table 2
Monthly Home Urine Pregnancy Testing Practices and Response to Text Message Reminders Among Study Participants (*n* = 61)

Variables	<i>n</i>	%
Responded to text reminder		
Month 1	61	100
Month 2	56	92
Month 3	59	97
All 3 months	54	89
Took a pregnancy test		
All 3 months	52	85
Month 1	59	97
Month 2	55	90
Month 3	58	95
Reasons for not testing	9	
I knew I wasn't pregnant	6	
I did not have sex this month	5	
My period came shortly before the test day	3	
I did not have the tests with me on those days	3	
Other (did not receive reminder)	1	
Use of additional pregnancy tests		
Used more than 3 tests during the study period	11	18
Tested another time of the month, without a reminder	8	13
Took multiple tests in a day	5	8

like that these text messages are coming so now I know that my period is coming and I can plan for it. Or, if I need to take a pregnancy test if it doesn't come. (24 years old)

She went on to say that she downloaded an app onto her phone after the study to track her periods, so she could be aware as soon as possible if her period was late.

Some preferred the text messages over other forms of reminders, such as smart phone apps or calendar reminders. One interviewee said, “I do like the text message system. I think it holds you a little bit more accountable than, say, an app reminder because everybody has so many apps on their phone” (25 years old). Similarly, another participant thought that text messages were “more engaging” than the calendar reminders she uses for other tasks (23 years old).

While participants overwhelmingly liked the text message reminders, very few continued testing on their own. A small number of interviewees said they bought pregnancy tests in bulk at discount stores to continue regular testing. When describing her continued routine to test, one participant said:

It makes me feel just more sure of knowing that I'll never be caught with too much time in between my options. And it is, unfortunately, a little expensive... But it's something I'd rather know at least on a monthly basis. And it's worth checking to me now. (24 years old, irregular menses, history of second-trimester abortion)

Perceived Advantages and Disadvantages of Home Pregnancy Testing Compared With Clinic Testing

Participants indicated greater convenience (95%), ability to use the test at any time (93%), and greater privacy (92%) as the primary advantages of home testing, as compared with clinic testing (Table 4).

Interviewees elaborated on the broader benefits of at-home testing with no-cost pregnancy tests, beyond the comparison of going to a clinic. Participants pointed out that going to a drug store to purchase a test was still a barrier. The key advantages of the study model identified by interviewees were being able to

Table 3
Acceptability Indicators of Monthly Home Urine Pregnancy Testing at 3-Month Follow-Up Survey (n = 61)

Variables	n	%
How easy or difficult were the tests to use?		
Very easy	58	95
Somewhat easy	3	5
Somewhat difficult	0	0
Very difficult	0	0
Was it clear to you what your test results were?		
Very clear	59	97
Somewhat clear	2	3
Somewhat unclear	0	0
Very unclear	0	0
How convenient was it to text the study team your test result?		
Very convenient	61	100
Somewhat convenient	0	0
Somewhat inconvenient	0	0
Very inconvenient	0	0
How bothersome were the text messages reminding you to test and asking for your result?		
Not bothersome at all	53	87
Not too bothersome	7	11
Somewhat bothersome	1	2
Very bothersome	0	0
Were you concerned about your privacy by participating in this study?		
Yes/Sometimes	9	15
Had concerns about someone at home finding the pregnancy tests	7	11
Had concerns about someone seeing the text messages with the test result	1	2
Other concerns	2	3
No	52	85
Did you experience any privacy problems doing the pregnancy tests for this study?		
Yes	1	2
I'm not sure	1	2
No	59	97
Would you continue testing if you had access to free tests?		
Definitely yes	35	57
Probably yes	15	25
Probably not	7	11
Definitely not	0	0
I don't know	4	7
Would you recommend monthly testing to a friend?		
Definitely yes	38	62
Probably yes	17	28
Probably not	3	5
Definitely not	0	0
I don't know	3	5
Would you be willing to participate in a year-long study with monthly pregnancy testing?		
Definitely yes	43	70
Probably yes	16	26
Probably not	0	0
Definitely not	0	0
I don't know	2	3

test immediately on suspecting pregnancy and being able to test frequently even when pregnancy was not suspected, both of which would help discover pregnancy sooner.

Interviewees illustrated how this model may facilitate earlier confirmation of pregnancy, which could improve the options available to pregnant people. One participant was interviewed 5 months after her study participation ended. At the time of her interview, she was approximately 13 weeks pregnant and had discovered her pregnancy 1 month prior. When she suspected she could be pregnant, she was unable to get to a drug store to buy a pregnancy test. She said:

Table 4
Advantages and Disadvantages of Monthly Home Urine Pregnancy Testing as Compared With In-Clinic Testing at 3-Month Follow-Up Survey (n = 61)

Variables	n	%
Advantages		
More convenient	58	95
Can use test at any time	57	93
More private	56	92
Less waiting time	55	90
Less expensive	46	75
Other (improving access, reassurance)	2	3
None	0	0
Disadvantages		
No doctor or nurse to give information	26	43
Not sure I read the test correctly	12	20
Don't trust test results	10	16
Cost	3	5
Lack of privacy	3	5
Other (question accuracy, results not always clear)	2	3
None	22	36

I actually was trying to look for some pregnancy tests left over from the study and I didn't have any more. Because I had thought I was pregnant about a month or two earlier, and I remember using the last one for that.... [Then] I ordered [a pregnancy test] off of Amazon and it finally came in. (24 years old)

She said that buying a test online was her only choice because the cost of transportation to a drug store would have been an "unnecessary expense."

One interviewee commented on how routine testing could have helped her discover her previous pregnancy sooner. She had attended several weeks of doctor's appointments with chronic symptoms before her health care provider conducted a pregnancy test. She was approximately 24 weeks pregnant by the time she was able to schedule an abortion. She said about being in the study:

Mostly I liked knowing that...even if one of them became positive, I knew I'd only be a month away from my last negative test... It reassured me that I would have options to work with, versus the situation kind of being forced to one or two drastic options.... So, the main two options being deciding to terminate or keep. And then in terms of terminating, there's usually more options [earlier in pregnancy], like the pill [medication abortion]. (24 years old, irregular menses, history of second-trimester abortion)

Similarly, another participant described that having access to a test sooner would mean she could have more time to "figure out what next steps I was going to take" (35 years old, irregular menses). She elaborated that during the COVID-19 pandemic, "doctors are trying to get you to not come in," which could delay confirming pregnancy if a person has to wait for an appointment. Several other interview participants commented that they were glad to have the leftover pregnancy tests from the study at home during the pandemic.

In the follow-up survey, 36% of participants reported no disadvantages to monthly at-home testing, and 43% reported not having a doctor or nurse to provide information as the main disadvantage. Interview participants supported this concern and elaborated that someone can always see a health care provider after testing at home. The main disadvantage reported by interviewees was the amount of packaging and waste that each pregnancy test uses, which would deter them from wanting to test frequently.

Interest in Year-Long Randomized Controlled Trial

When asked if they would be willing to participate in a year-long study that included monthly testing with free pregnancy tests, participants said they definitely (70%) or probably (26%) would (Table 3). Interview participants also overwhelmingly said they would be interested in a future year-long study. However, one participant said she thought testing monthly for 1 year was too frequent.

Discussion

We found that when given free home test kits and monthly text reminders, the vast majority of participants consistently performed monthly home pregnancy tests over the 3-month study period. All participants found the pregnancy tests easy to use and clear to read. Most participants responded to text reminders each month and all participants responded that it was very convenient to text results. Participants also named greater advantages of at-home testing as compared with clinic testing, and almost all indicated interest in participating in a year-long trial. Interviewees illustrated how this model is not only advantageous in comparison with going to a clinic once pregnancy is suspected, but it further caters to their personal needs by normalizing regular testing, even when pregnancy is not suspected.

Our results demonstrate the potential for home pregnancy testing with text reminders and reporting to be highly acceptable and feasible to scale for a larger randomized controlled trial (RCT). A similar feasibility study in South Africa also found that most participants tested in all 3 months of their study period and reported self-testing was easy to do (Constant et al., 2021). An RCT powered to evaluate the effectiveness of the intervention to facilitate earlier pregnancy recognition and entry into prenatal or abortion care would require approximately 2,000 participants testing monthly for 1 year (Constant et al., 2021). Given our low enrollment of second-trimester abortion patients and the study's highly specific eligibility criteria, reaching this sample size would require scaling up recruitment locations and using more active recruitment methods, such as in-person recruiters at clinics and community events.

Provision of free home urine pregnancy tests is a critical component of supporting routine testing. Most study participants expressed interest in continuing to test if given free pregnancy tests and some reported continuing to test regularly after the study had ended. Qualitative interviews describing these self-led testing behaviors highlighted barriers caused by the COVID-19 pandemic. Prior studies have shown that people with readily available home pregnancy tests are more likely to suspect and test for pregnancy (Constant et al., 2021; Nettleman et al., 2009). Young people and those who experience structural barriers to accessing health care often present for pregnancy-related services later and may benefit most from free pregnancy tests (Aruda, 2011; Gadson et al., 2017; Kiley et al., 2010). The COVID-19 pandemic has caused in-person clinic visit restrictions, economic challenges, and transportation barriers (Updated Interim Recommendations for Contraceptive Provision, 2020) that further demonstrate the need for provision of free home pregnancy tests as an alternative to in-clinic testing or purchasing tests at a drug store on an as-needed basis.

The limitations of this study include the small sample size and short time frame of the intervention. Due to recruitment challenges, our sample also lacked greater representation of second-

trimester abortion patients, a group at higher risk of delayed pregnancy recognition. Many second-trimester abortion patients approached at clinics declined screening or were ineligible because they were older than 35 years or were using long-acting contraceptive methods. Furthermore, we did not collect data on reason for abortion. Some second-trimester abortion patients approached for our study may have had an abortion due to fetal anomaly, and therefore were not necessarily at risk for delayed recognition of pregnancy. Despite these limitations, the results of this study indicate high feasibility and acceptability to scale the study model to an RCT among a larger and more diverse sample to examine how routine home testing affects entry into related reproductive care services.

Implications for Practice and/or Policy

In July 2022, the Supreme Court of the United States eliminated federal protections for abortion access in *Dobbs v. Jackson Women's Health Organization, 2022*. Several states have now banned abortion altogether or implemented highly restrictive policies that limit access past 6 weeks' gestation. Routine pregnancy testing may be a useful strategy for early entry into abortion care, particularly in contexts in which individuals have a very limited window to confirm pregnancy and obtain the care they need, or for patients who need to travel out of state for their care. Financial challenges often delay care for patients who must also raise funds to pay for their abortion (Higgins et al., 2021). Our study underscores the need for provision of free home pregnancy tests to eliminate additional economic barriers for pregnant individuals. Public insurance programs, such as Medicaid, should cover home pregnancy tests without cost-sharing for those with the capacity to become pregnant to ensure more equitable access to abortion services.

Conclusions

Regular self-testing is feasible and acceptable to individuals when provided with free at-home urine pregnancy tests. Although more rigorous research may be needed to support advocacy efforts aimed at mandating insurance coverage of over-the-counter pregnancy tests, these findings and those from prior research support integrating routine testing with monthly reminders into practice, particularly for those at risk of late recognition of pregnancy or living in a state with an early abortion ban. Clinicians should be attuned to the issue of cost and, if possible, provide free pregnancy tests in advance to those who need them.

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Author Descriptions

Natalie Morris, MPH, is a Project Manager at the Advancing New Standards in Reproductive Health (ANSIRH) program at the University of California, San Francisco. Her research focuses on alternative models of abortion care provision in the United States.

Katherine Ehrenreich, MSc, is a Senior Project Manager at the Advancing New Standards in Reproductive Health (ANSIRH) program at the University of California, San Francisco. Her research interests focus on people's experiences accessing abortion services and new models to improve abortion access.

Tanvi Gurazada, MS, is a project manager with the Advancing New Standards in Reproductive Health (ANSIRH) program at the University of California, San Francisco. She works on projects evaluating the effectiveness of alternative methods of medication abortion provision. Her research interests include increasing abortion access and availability.

Daniel Grossman, MD, is an obstetrician-gynecologist and researcher based at the University of California, San Francisco, where he is the Director of Advancing New Standards in Reproductive Health (ANSIRH). His research includes both clinical and social science studies aimed at improving access to contraception and abortion in the United States, Latin America, and sub-Saharan Africa.