

## GYNECOLOGY

# Abortion experiences and preferences of transgender, nonbinary, and gender-expansive people in the United States

Heidi Moseson, PhD, MPH; Laura Fix, MSW; Sachiko Ragosta, BA; Hannah Forsberg, MPH; Jen Hastings, MD; Ari Stoeffler, BA; Mitchell R. Lunn, MD, MAS, FASN; Annesa Flentje, MD; Matthew R. Capriotti, PhD; Micah E. Lubensky, PhD; Juno Obedin-Maliver, MD, MPH, MAS

**BACKGROUND:** Transgender, nonbinary, and gender-expansive people who were assigned female or intersex at birth experience pregnancy and have abortions. Scarce data have been published on individual abortion experiences or preferences of this understudied population.

**OBJECTIVE:** This study aimed to fill existing evidence gaps on the abortion experiences and preferences of transgender, nonbinary, and gender-expansive people in the United States to inform policies and practices to improve access to and quality of abortion care for this population.

**STUDY DESIGN:** In 2019, we recruited transgender, nonbinary, and gender-expansive people who were assigned female or intersex at birth at the age of  $\geq 18$  years from across the United States to participate in an online survey about sexual and reproductive health recruited through The Population Research in Identities and Disparities for Equality Study and online postings. We descriptively analyzed closed- and open-ended survey responses related to pregnancy history, abortion experiences, preferences for abortion method, recommendations to improve abortion care for transgender, nonbinary, and gender-expansive people, and respondent sociodemographic characteristics.

**RESULTS:** Most of the 1694 respondents were  $< 30$  years of age. Respondents represented multiple gender identities and sexual orientations and resided across all 4 United States Census Regions. Overall, 210 respondents (12%) had ever been pregnant; these 210 reported 433 total

pregnancies, of which 92 (21%) ended in abortion. For respondents' most recent abortion, 41 (61%) were surgical, 23 (34%) were medication, and 3 (5%) were another method (primarily herbal). Most recent abortions took place at  $\leq 9$  weeks' gestation ( $n=41$ , 61%). If they were to need an abortion today, respondents preferred medication abortion over surgical abortion in a 3:1 ratio ( $n=703$  vs  $n=217$ ), but 514 respondents (30%) did not know which method they would prefer. The reasons for medication abortion preference among the 703 respondents included a belief that it is the least invasive method ( $n=553$ , 79%) and the most private method ( $n=388$ , 55%). To improve accessibility and quality of abortion care for transgender, nonbinary, and gender-expansive patients, respondents most frequently recommended that abortion clinics adopt gender-neutral or gender-affirming intake forms, that providers use gender-neutral language, and that greater privacy be incorporated into the clinic.

**CONCLUSION:** These data contribute substantially to the evidence base on individual experiences of and preferences for abortion care for transgender, nonbinary, and gender-expansive people. Findings can be used to adapt abortion care to better include and affirm the experiences of this underserved population.

**Key words:** abortion, abortion method preference, induced abortion, intersex, medication abortion, sexual and gender minorities, surgical abortion, transgender persons

## Introduction

Transgender, nonbinary, and gender-expansive (TGE) people experience pregnancy and need abortions.<sup>1–3</sup> Transgender is an umbrella term that describes a person whose gender identity (eg, man, nonbinary, woman) differs from the sex they were assigned at birth (ie, female, intersex, male), which is typically based on external genitalia.

Cisgender describes a person whose gender identity aligns with the gender identity commonly associated with the sex they were assigned at birth. Nonbinary and gender-expansive are also umbrella terms that describe gender identities that are not limited to man or woman—they could be a combination of both or neither. Transgender people are thought to make up at least 0.6% of the total United States population or 1.4 million people.<sup>4</sup> This proportion may be higher among younger people, especially when including nonbinary and gender-expansive identities: a recent study found that 2% of 18- to 34-year-olds identified as transgender; 8% identified as agender, bigender, genderfluid, or genderqueer; and another 2% identified as unsure or questioning.<sup>5</sup> In short, 12%

of those in this age group identified as transgender or gender nonconforming.<sup>5</sup> Population-level data do not exist on the number of TGE people in the United States capable of pregnancy. Most TGE individuals who were assigned female sex at birth do not have surgeries to remove their internal reproductive organs (ie, uterus, ovaries, and fallopian tubes),<sup>6,7</sup> and some report having sperm-producing sexual partners.<sup>3,8,9</sup> Therefore, a substantial proportion of TGE individuals who were assigned female sex at birth may need pregnancy and/or abortion care during their lives. Similarly, people with intersex conditions or differences in sex development—a heterogeneous group that may or may not also be TGE identified—may also need pregnancy and/or abortion care during their lives.<sup>10,11</sup>

**Cite this article as:** Moseson H, Fix L, Ragosta S, et al. Abortion experiences and preferences of transgender, nonbinary, and gender-expansive people in the United States. *Am J Obstet Gynecol* 2020;XX:x:ex–x.ex.

0002-9378

© 2020 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).  
<https://doi.org/10.1016/j.ajog.2020.09.035>

## AJOG at a Glance

**Why was this study conducted?**

This study aimed to fill gaps in the evidence base on abortion experiences of transgender, nonbinary, and gender-expansive (TGE) people.

**Key findings**

TGE people have abortions, and many prefer medication abortion over surgical abortion because medication is viewed as less invasive, offers greater privacy, and does not require anesthesia. Abortion providers can improve care for TGE people by adopting gender-neutral intake forms and inclusive language.

**What does this add to what is known?**

Compared with cisgender women, TGE people may prioritize different factors in determining abortion method preference. With relatively simple changes to intake forms and staff and clinician language, providers can improve the accessibility and quality of abortion care for TGE people.

Although current studies estimate that one-quarter of all (presumably cisgender) women will have an abortion in the United States,<sup>12</sup> no corresponding population-level data exist on the abortion rate among TGE people who can get pregnant. The best approximation, from all known abortion-providing facilities in the United States, estimated that there were between 462 and 530 transgender and nonbinary abortion patients nationwide in 2017.<sup>2</sup> However, this incidence estimate is likely an underestimate because not all providers collected data on the patients' gender identities and/or sex assigned at birth—necessary to identify TGE people.<sup>2,13</sup>

Several studies have published data on abortions experienced by TGE people in the United States.<sup>1,14</sup> A survey of 450 transgender and gender nonconforming adults who were assigned female sex at birth found that 28 (6%) reported having at least 1 unplanned pregnancy, and of these, 10 (32%) ended in abortion.<sup>14</sup> In a mixed-methods study of 197 masculine identified people who were assigned female sex at birth, 32 participants (16%) reported 60 lifetime pregnancies, of which 7 (12%) ended in abortion.<sup>1</sup> We are not aware of any studies that describe the types of abortion that TGE patients have had, the gestational ages at which abortion care was accessed, or preferences for abortion care.

There are well-established barriers to general healthcare for TGE people,

including discrimination based on gender identity in clinics, limited provider knowledge, refusal of care provision, lower levels of insurance coverage than the general United States population, and frequent discrepancies between gender presentation/identity and sex/gender indicated on administrative documents.<sup>15–22</sup> These barriers result in delays, denials, and extra charges for care.<sup>17,20,21,23</sup> These same barriers likely hinder access to abortion care.<sup>7,23–27</sup> To begin addressing these barriers to care, foundational epidemiologic data on abortion—a major pregnancy and reproductive health outcome<sup>28</sup>—among TGE individuals are needed to inform the adaptation of abortion care. Stakeholders, including researchers, healthcare providers, and community members, have called for these data.<sup>23,29,30</sup> To address this gap, we conducted a national survey to measure experiences with, preferences for, and recommendations toward improved abortion care among TGE people who were assigned female or intersex at birth in the United States.

**Materials and Methods****Study population and recruitment**

From May to September 2019, we fielded an online quantitative survey about the sexual and reproductive health (SRH) experiences, needs, and preferences of TGE individuals who were assigned female or intersex at birth in the United

States. Participants were recruited from 2 populations: (1) the general public and (2) The Population Research in Identities and Disparities for Equality (PRIDE) Study, an online national prospective cohort study of sexual and gender minority adults. The PRIDE Study, community engagement research approach, demographics, and research platform have been described elsewhere.<sup>31,32</sup> The eligibility criteria for both populations included being at least 18 years of age, being of TGE experience, having been female or intersex assigned at birth, residence in the United States, and an ability to read and understand English. Participants from the general public were recruited through study advertisements posted in social media, shared via community email lists, and distributed at in-person community events and SRH conferences. Study advertisements provided a website where interested participants could be screened for eligibility and then directed to the online informed consent process and survey. Participants from The PRIDE Study were recruited through the display of a new SRH survey in their online participant dashboard, from which they could click through to be screened for eligibility and proceed to the survey if eligible. In addition to TGE respondents, cisgender sexual minority women within The PRIDE Study were also eligible to complete the survey, because data from cisgender sexual minority women are also underrepresented in SRH research. However, for the purposes of this analysis, we present only results from TGE respondents who were assigned female or intersex at birth.

**Survey instrument**

We administered a questionnaire using Qualtrics (Qualtrics, Provo, UT) that featured customizable words to enhance comfort and minimize gender dysphoria experienced by respondents.<sup>33</sup> Relevant survey domains for this analysis included pregnancy history, abortion history and preferences, and socio-demographic characteristics, including gender identity, sex assigned at birth, sexual orientation, and race/ethnicity. We developed and tested survey questions with an independent community

advisory team that comprised TGE individuals and the Research and Participant Advisory Committees of The PRIDE Study; the survey design and format have been described in detail elsewhere.<sup>33</sup> All survey questions allowed for a “Prefer not to say” or “I don’t know” response option to ensure completeness of responses. To reduce the risk of multiple responses from any participants, we enabled the “Prevent Ballot Box Stuffing” feature in Qualtrics. Participants who completed the survey were entered into a randomized drawing to win a \$50 electronic gift card (\$5000 in gift cards were distributed to TGE respondents in total).

### Study measures

Key variables included experiences with abortion, recommendations for improving abortion care, measures of abortion method preference, and respondent sociodemographic characteristics. To evaluate experiences of abortion, the survey included a pregnancy history module that prompted respondents to enter each pregnancy they had experienced. For each pregnancy, participants were asked whether they were trying to get pregnant and to indicate how each pregnancy had ended. For respondents that reported a previous abortion, survey questions assessed how many abortions and the types of abortions that they had experienced. For a respondent’s most recent abortion, additional survey questions inquired about the abortion type and gestational age at which the abortion took place. Among those who reported a previous abortion, respondents had the opportunity to indicate recommendations for improving abortion care from a list of 10 options, including the option to write in a recommendation. To measure abortion method preference, all respondents were asked “If you needed an abortion now, what type of abortion would you prefer?” The response choices included “medication abortion,” “surgical abortion,” “not listed” (with an option to write in a method), or “I don’t know.” The survey then prompted respondents to answer the question “What are the main reasons that this is your preferred method of

abortion?” Respondents could select up to 3 options from a multiple-choice list of reasons related to method privacy, cost, accessibility, pain, familiarity, and more, including a write-in response. The full text of the survey has been published elsewhere.<sup>33</sup> Specific sociodemographic characteristics included age at the time of survey initiation, gender identity, sex assigned at birth, intersex identity, sexual orientation, race/ethnicity, education level, health insurance coverage, and region of residence. For gender identity, sexual orientation, and race/ethnicity, respondents could select all options that applied or write in their own option. Region of residence is defined in accordance with the United States Census Bureau’s 4 regions.<sup>34</sup>

### Analysis

We analyzed respondent answers to closed-ended survey questions using Stata 15.1 (StataCorp LLC, College Station, TX). We calculated frequencies and percentages for all study measures defined earlier for the full study sample or among those who reported an abortion, as appropriate. We cataloged open-ended survey responses in Microsoft Excel to group similar write-in responses and to tabulate frequencies across groups.

### Ethical review

We obtained ethical review and approval for this study from the Institutional Review Boards of Stanford University and the University of California, San Francisco. Review and approval of this study were also provided by The PRIDE Study Research Advisory Committee and The PRIDE Study Participant Advisory Committee ([pridestudy.org](http://pridestudy.org)). All participants provided informed consent before beginning the survey.

## Results

### Characteristics of the study population

Overall, 5005 people initiated the survey: 798 from the general population (an unknown proportion of the total number exposed to study information) and 4207 from The PRIDE Study (35.3% of PRIDE participants were likely eligible

owing to reporting female sex assignment at birth or with missing data for the assigned sex at birth). In response to a question on the sex assigned at birth in this current survey, 2704 of these 4207 PRIDE participants reported having had female sex assigned at birth, 1400 reported male, 8 each reported neither or preferring not to say, and 87 did not respond to the question. Approximately half of the PRIDE participants who responded to this survey and reported having had female sex assigned at birth (50.8%) identified as cisgender sexual minority women, and thus, their results are not presented here. Among all respondents to the survey, 1694 expressed a gender identity that aligned with the larger umbrella of TGE and were female or intersex assigned at birth. Most of these participants (n=1281, 76%) were recruited through The PRIDE Study, and the rest from the general public (n=413, 24%). The details of study screening and recruitment are reported elsewhere.<sup>33</sup>

Among the 1694 participants, most were <30 years old (median, 27) (Table 1). The most common gender identity was nonbinary (51%), followed by transgender man (39%) and gender-queer (39%); 61% of respondents reported having >1 gender identity. Most respondents (99%) reported having had female sex assigned at birth, with 4% identifying as intersex. Respondents reported a range of sexual orientations, most frequently queer (68%), followed by bisexual (34%) and pansexual (25%). Respondents were primarily white (87%) and well educated, and most (89%) had health insurance coverage.

### Abortion experiences

For the 433 lifetime pregnancies reported across 210 respondents (12%), 233 (54%) were retrospectively reported as unintended. Of these 210 ever-pregnant respondents, 67 (32%) reported at least 1 pregnancy ending in abortion. These 67 respondents reported a total of 92 abortions. Notably, 52 respondents reported a single abortion, 9 reported 2 abortions, and 6 reported  $\geq 3$  abortions (Table 2). For respondents’ most recent abortion, 41 (61%) were surgical, 23 (34%) were medication, and

TABLE 1

**Respondent sociodemographic characteristics, overall and by abortion history among an online sample of transgender, nonbinary, and gender-expansive individuals who were assigned female or intersex at birth in the United States (N = 1694)**

Sample characteristics	All respondents (N=1694)		Respondents who reported an abortion (n=67)	
	n	%	n	%
Median age in y, IQR	27	23–33	33	27–41
Age categories, y				
18–19	150	9	2	3
20–24	469	28	7	10
25–29	447	26	15	22
30–34	284	17	12	18
35–39	149	9	12	18
40–44	88	5	7	10
45–49	38	2	3	5
50–54	31	2	3	5
55–59	20	1	3	5
60–78	18	1	3	5
Missing	0	0	0	0
Gender identities <sup>a</sup>				
Agender	226	13	16	24
Cisgender man	1	0	0	0
Cisgender woman	0	0	4	6
Genderqueer	655	39	34	51
Man	293	17	5	8
Nonbinary	868	51	42	63
Transgender man	662	39	26	39
Transgender woman	4	0	0	0
Two-spirit	26	2	1	2
Woman	204	12	4	6
Additional gender identity	197	12	7	10
Multiple gender identities	1036	61	42	63
Prefer not to say	2	0	0	0
Missing	0	0	0	0
Sex assigned at birth				
Female	1684	99	67	100
Not listed	10	0.6	0	0
Missing	0	0	0	0
Identifies as intersex				
Yes	69	4	1	2
Prefer not to say	21	1	2	3
Missing	0	0	0	0

Moseson et al. Abortion experiences and preferences of transgender and nonbinary people. Am J Obstet Gynecol 2020.

(continued)

TABLE 1

**Respondent sociodemographic characteristics, overall and by abortion history among an online sample of transgender, nonbinary, and gender-expansive individuals who were assigned female or intersex at birth in the United States (N = 1694)** (continued)

Sample characteristics	All respondents (N=1694)		Respondents who reported an abortion (n=67)	
	n	%	n	%
<b>Sexual orientation<sup>a</sup></b>				
Asexual	252	15	5	8
Bisexual	571	34	24	36
Gay	348	21	16	24
Lesbian	218	13	6	9
Pansexual	418	25	29	43
Queer	1150	68	50	75
Questioning	69	4	3	5
Same-gender loving	111	7	2	3
Straight or heterosexual	61	4	1	2
Another sexual orientation	129	8	6	9
Multiple sexual orientations	1010	60	44	66
Missing	21	1	0	0
<b>Race/ethnicity<sup>a</sup></b>				
American Indian or Alaska Native	42	3	1	2
Asian, Central	0	0	0	0
Asian, East	41	2	3	5
Asian, South	19	1	1	2
Asian, Southeast	25	2	1	2
Black or African American	67	4	2	3
Hispanic or Latinx	101	6	6	9
Middle Eastern or North African	24	1	1	2
Native Hawaiian or Pacific Islander	5	0.3	0	0
White	1472	87	65	97
Unknown	12	1	1	2
Another race	41	2	2	3
Multiple racial and ethnic identities	202	12	13	19
None of these	4	0	0	0
Missing	79	5	1	2
<b>Education level</b>				
High school degree or less	141	8	6	9
Some college, trade or tech school	410	24	18	27
College degree	644	38	18	27
Graduate or professional degree	410	24	23	34
Missing	89	5	2	3
Health insurance coverage	1512	89	62	93

Moseson et al. Abortion experiences and preferences of transgender and nonbinary people. *Am J Obstet Gynecol* 2020.

(continued)

TABLE 1

**Respondent sociodemographic characteristics, overall and by abortion history among an online sample of transgender, nonbinary, and gender-expansive individuals who were assigned female or intersex at birth in the United States (N = 1694)** (continued)

Sample characteristics	All respondents (N=1694)		Respondents who reported an abortion (n=67)	
	n	%	n	%
US Census Region				
Midwest	304	18	13	19
Northeast	411	24	14	21
South	326	19	11	16
West	468	28	22	33
Missing	185	11	7	10
Ever pregnant	210	12	67	100
Is a parent	200	12	20	30

*IQR*, interquartile range.

<sup>a</sup> Participants could select >1 response.

Moseson et al. Abortion experiences and preferences of transgender and nonbinary people. *Am J Obstet Gynecol* 2020.

3 (5%) were another method (primarily herbal). Nearly two-thirds of respondents' most recent abortions took place at  $\leq 9$  weeks' gestation (n=41, 61%) (Table 2).

### Respondent's recommendations to improve abortion care

The 67 respondents who reported a pregnancy ending in abortion offered gender-related recommendations to improve the abortion care experience as a TGE person. In particular, respondents most frequently recommended that clinics adopt gender-neutral intake forms that are gender and sexual orientation affirming and that the staff use gender-neutral language (Table 3). Other recommendations were related to specific ideas for increasing the availability of affirming abortion care and increasing patient privacy within and outside of abortion facilities.

### Abortion method preference

When asked about the abortion method preference, 703 respondents (42%) preferred medication abortion over surgical (n=217, 13%) or an unlisted method (n=28, 2%) (Figure), whereas 514 respondents (30%) did not know

what type of abortion they would prefer. Among the 28 respondents who wrote in an unlisted method, 12 indicated that they would never get an abortion because of their opposition to abortion or inability to get pregnant; 5 indicated that they would base the decision on the provider's recommendation; 2 stated that either method was fine; and 2 indicated a preference for an herbal method. Although medication abortion was the most preferred method among both those who had experienced an abortion and those who had not (45% vs 41%, respectively), a higher proportion of respondents who had experienced abortion reported a preference for surgical abortion than among respondents who had not experienced abortion (28% vs 12%), whereas a lower proportion of those who had experienced abortion did not know what type they would prefer (13% vs 31%). Among the 67 most recent abortions, 89% of people who preferred surgical abortion had obtained a surgical abortion, whereas only 50% of those who preferred medication abortion had obtained a medication abortion.

Overall, the most common reasons given for preferring medication abortion

included "This method is the least invasive" (n=553, 79%); "This method feels the most private" (n=388, 55%); and "This method does not require anesthesia" (n=231, 33%) (Table 4). A total of 31 respondents wrote in a reason for preferring medication abortion, which included a desire to avoid interactions with medical providers where they could be misgendered or traumatized (n=9, 1.3%) and the ability to manage the abortion themselves in the privacy of their own homes without having to face protestors (n=6, 0.8%).

Among the 217 respondents who indicated a preference for surgical abortion, the most common reasons included "I feel most comfortable with the type and number of medical staff present for this option" (n=105, 48%); "This method would take the least amount of time (is fastest)" (n=88, 41%); and "The method is the least painful" (n=40, 18%) (Table 4). Write-in responses from 38 participants who preferred surgical abortion included an aversion to the hormones contained in medication abortion (n=10, 5%), a greater certainty that the abortion would be a success (n=7, 3%), a desire to avoid passing the pregnancy at home (n=7,

3%), and a sense that surgical would be less traumatizing than medication abortion (n=6, 3%).

### Comment

These results demonstrate that TGE people who were assigned female or intersex at birth in the United States have medication, surgical, and herbal abortions. Respondents reported nearly 1 in 5 abortions occurring past the gestational limits for medication abortion (10 weeks),<sup>35</sup> which may account for the higher number of surgical abortions reported than medication abortions, despite a 3:1 preference for medication abortion. Notably, nearly one-third of respondents did not know what type of abortion they would prefer if they were to need 1 today. To improve abortion care for TGE patients, respondents recommended that abortion providers incorporate affirming intake forms into clinics and that staff and clinicians use gender-inclusive language.

### Strengths and limitations

The primary limitation of this study is the lack of representativeness of the study population. Because no known sampling frame exists for recruiting TGE people who were assigned female or intersex at birth, we relied on convenience sampling. The extent to which these findings are generalizable to all TGE people who were assigned female or intersex at birth is unknown. In addition, although 381 respondents (22%) indicated a race or ethnicity other than “white,” some racial and ethnic groups had low representation, and more specific studies focused on the experiences of TGE people of color and the intersection of various socio-demographic characteristics is warranted. The lower number of participants from multiple racial groups precluded our ability to assess whether and how these abortion experiences and preferences represent a diversity of experiences—particularly when disparities in abortion care along racial lines are well established.<sup>36</sup>

These limitations are balanced by strengths. This quantitative study reports on abortion experiences and preferences of TGE people in the United

**TABLE 2**

**Abortion experiences reported among an online sample of transgender, nonbinary, and gender-expansive individuals who were assigned female or intersex at birth in the United States (N = 1694)**

	n	%
Ever had an abortion	67	4
Number of abortions		
0	1627	96
1	52	3
2	9	0.5
3	4	0.2
4	1	0.1
6	1	0.1
Lifetime abortions		
Medication abortion	27	40
Surgical abortion	45	67
Another method	3	5
Most recent abortion		
Medication abortion	23	34
Surgical abortion	41	61
Not listed	3	5
Gestational age at most recent abortion, <sup>a</sup> wk		
<6	11	16
6–9	30	45
10–12	9	13
13–15	4	6
16–20	0	0
21–24	1	2
Do not know	12	18

<sup>a</sup> Measured from the last menstrual period.

Moseson et al. Abortion experiences and preferences of transgender and nonbinary people. *Am J Obstet Gynecol* 2020.

States. Furthermore, the large number of respondents, which is several orders of magnitude larger than previous SRH studies among this population,<sup>1,14,27,37</sup> provides more descriptive information than previously available. The study was performed in a community-dwelling sample rather than a clinical sample. The survey instrument and recruitment efforts were cocreated by our interdisciplinary research team in close collaboration with a community advisory team<sup>33</sup>; community engagement was essential to reaching respondents and to ensuring that the survey centered the experiences of the target populations.

### Clinical implications

The implications of these findings are that people of various gender identities and experiences have abortions, and thus, abortion providers must ensure that systems serve the abortion needs of people with varying gender identities and experiences. Revising clinic intake forms to assess capacity and desires for pregnancy in a gender-neutral way and systematically incorporating similar questions into conversations between providers and patients may help to identify patients capable of pregnancy and prompt pregnancy options counseling.<sup>38,39</sup> Several studies evaluating

TABLE 3

**Recommendations for improving abortion care, from an online sample of transgender, nonbinary, and gender-expansive individuals who had  $\geq 1$  abortions in the United States (n = 67)**

Is there anything you would recommend to improve the abortion care that you received? Select all that apply.	Respondents who reported an abortion (n=67)	
	n	%
Intake forms that are gender-neutral or gender-affirming	35	52
Gender-neutral language used by staff	32	48
Intake forms that are affirming of all sexual orientations	24	36
Closer clinic/office location to my home	20	30
More privacy outside of the clinic	16	24
More support from the clinic staff	10	15
More privacy within the clinic	9	13
More support from my provider	9	13
Better pain management during abortion	1	2
More time in recovery	1	2
None of these	14	21

Moseson et al. Abortion experiences and preferences of transgender and nonbinary people. *Am J Obstet Gynecol* 2020.

clinician knowledge and comfort with care provision for TGE populations found self-identified gaps in provider knowledge about TGE healthcare,<sup>40</sup> and a lack of confidence, sense of preparedness, or experience with providing care to these populations.<sup>41–43</sup> Therefore, clinicians should seek out training on how to provide gender-affirming sexual and reproductive healthcare for TGE

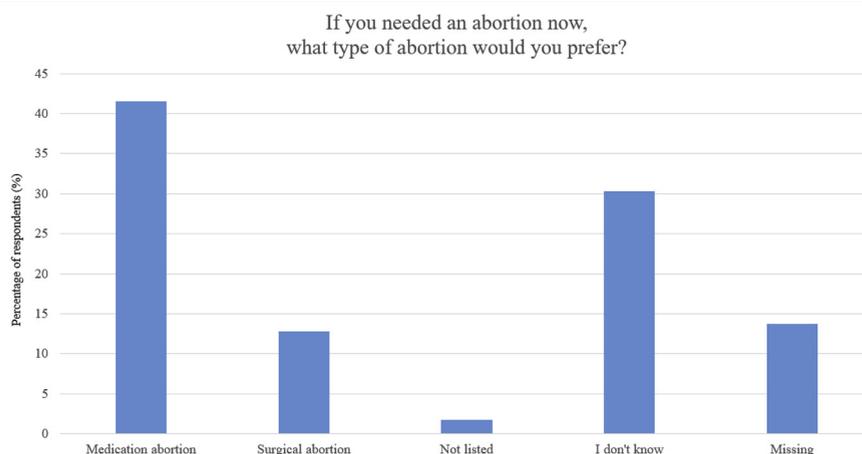
patients to improve the appropriateness and quality of care. Perhaps relatedly, many respondents in this study did not know which abortion type they preferred, suggesting that clinicians and counselors should incorporate more information about abortion options in conversations with TGE patients, including advocating for and distributing abortion education materials that

are inclusive of many genders, not only cisgender women.<sup>29</sup>

Clinicians should also consider that the reasons for preferring 1 method of abortion over another may differ for TGE patients compared with cisgender women patients. Previous studies of abortion method preference among (presumably) cisgender women, although most were published soon after the introduction of medication abortion in the United States, found that women's preferences for abortion method were motivated primarily by fears of bleeding, complications, or anesthesia, beliefs about which method was more "natural," and the time involved for either method.<sup>44</sup> Although TGE respondents shared some reasons consistent with those reported by cisgender women previously, the importance of privacy and minimizing the invasiveness of the experience emerged more strongly among those who preferred medication abortion—considerations central to TGE patients, a community commonly subjected to unnecessary medical questioning, examinations, or even assault on the part of providers.<sup>15</sup> That medication abortion does not require a physical procedure, can be offered via

FIGURE

**Abortion method preference among transgender, nonbinary, and gender-expansive people (N = 1694)**



Moseson et al. Abortion experiences and preferences of transgender and nonbinary people. *Am J Obstet Gynecol* 2020.

TABLE 4

**Reasons given for abortion method preference among an online sample of transgender, nonbinary, and gender-expansive individuals who were assigned female or intersex at birth in the United States (N = 1694)**

What are the main reasons this is your preferred method of abortion?	Overall <sup>a</sup>		Medication		Surgical	
	n	%	n	%	n	%
This method is the least invasive	556	33	553	79	1	1
This method feels the most private	422	25	388	55	32	15
This method does not require anesthesia	233	14	231	33	1	1
I feel most comfortable with the type and number of medical staff present for this option	227	13	122	17	105	48
This method would take the least amount of time (is fastest)	157	9	69	10	88	41
This method costs the least amount of money	143	8	138	20	3	1
This method is the least painful	123	7	83	12	40	18
This method is easier to schedule	101	6	84	12	17	8
This method is the only method with which I am familiar	93	6	56	8	36	17
This method requires the fewest visits	90	5	61	9	28	13
Only method known	48	3	10	1	38	18
I have had this type of abortion before and know what to expect	32	2	15	2	17	8
This method does require anesthesia	22	1	6	1	16	7
This is the only method available in my area	5	0	3	0	1	1
None of the above capture my reasons for preferring this method	27	2	1	0	1	1
Write-in option specified	93	6	31	4	53	24

Respondents could select up to 3 reasons.

<sup>a</sup> The overall total includes responses from 28 respondents who indicated a preference for a method other than medication or surgical; thus, the overall total does not always equal the sum of the medication and surgical responses.

Moseson et al. Abortion experiences and preferences of transgender and nonbinary people. *Am J Obstet Gynecol* 2020.

telemedicine, and can be completed privately, at home, or in other preferred setting may add to the appeal as an abortion method of choice for TGE people. Furthermore, recent shifts in the United States toward “no-test” medication abortion protocols in response to the novel coronavirus disease 2019 reduce or remove the requirement for in-person clinic visits and physical examinations,<sup>45</sup> experiences known to be dysphoria inducing for some TGE patients.<sup>23</sup>

### Research implications

Despite a strong preference for medication abortion, more than twice as many respondents had accessed surgical abortion than medication abortion. These data highlight a gap between preferred abortion method and obtained abortion method—a gap that future research should explore. Furthermore, although most respondents obtained an abortion

before 10 weeks’ gestation, 1 in 5 obtained an abortion at 10 weeks’ gestation or later. Future research should explore barriers and facilitators to abortion care generally and potential delays throughout the process of obtaining an abortion. Finally, most abortion care research in the United States focuses almost exclusively on the experiences of cisgender women, despite these and other recent findings<sup>2</sup> that demonstrate that TGE people want, seek, and obtain abortions. These results emphasize the need for greater awareness and sensitivity to the inclusion of TGE people in the research on abortion preferences and experiences, and there is growing operational guidance toward these aims.<sup>29,33</sup>

### Conclusions

These data provide much needed insight into the abortion experiences and preferences of TGE people—a population that has been excluded from or

marginalized in most research on abortion. These findings offer insight into how abortion care, an essential component of comprehensive reproductive healthcare, can be improved to be inclusive of their needs and preferences. ■

### Acknowledgments

We wish to thank Avery Lesser-Lee, Anei Reyes, Laz Letcher, Eli Goldberg, Mary Durden, Anna Katz, and Lyndon Cudlitz for their thoughtful contributions to this work. We also wish to thank The PRIDE Study, a community-engaged research project. We acknowledge The PRIDE Study participants and the PRIDENet Participant Advisory Committee, Ambassadors, and Community Partners for their contributions to this work. For more information, please visit <https://pridestudy.org/pridenet>.

### References

1. Light A, Wang LF, Zeymo A, Gomez-Lobo V. Family planning and contraception use in transgender men. *Contraception* 2018;98:266–9.

2. Jones RK, Witwer E, Jerman J. Transgender abortion patients and the provision of transgender-specific care at non-hospital facilities that provide abortions. *Contracept X* 2020;2:100019.
3. Cipres D, Seidman D, Cloniger C 3rd, Nova C, O'Shea A, Obedin-Maliver J. Contraceptive use and pregnancy intentions among transgender men presenting to a clinic for sex workers and their families in San Francisco. *Contraception* 2017;95:186–9.
4. Flores AR, Herman JL, Gates GJ, Brown TNT. How many adults identify as transgender in the United States?. Los Angeles CA: The Williams Institute; 2016.
5. Accelerating Acceptance 2017: a Harris Poll survey of Americans' acceptance of LGBTQ people. Gay & Lesbian Alliance Against Defamation. 2017. Available at: [https://www.glaad.org/files/aa/2017\\_GLAAD\\_Accelerating\\_Acceptance.pdf](https://www.glaad.org/files/aa/2017_GLAAD_Accelerating_Acceptance.pdf). Accessed Nov. 3, 2020.
6. Beckwith N, Reisner SL, Zaslow S, Mayer KH, Keuroghlian AS. Factors associated with gender-affirming surgery and age of hormone therapy initiation among transgender adults. *Transgend Health* 2017;2:156–64.
7. Harb CYW, Pass LE, De Soriano IC, Zwick A, Gilbert PA. Motivators and barriers to accessing sexual health care services for transgender/genderqueer individuals assigned female sex at birth. *Transgend Health* 2019;4:58–67.
8. Reisner SL, Perkovich B, Mimiaga MJ. A mixed methods study of the sexual health needs of New England transmen who have sex with nontransgender men. *AIDS Patient Care STDS* 2010;24:501–13.
9. Bauer GR, Redman N, Bradley K, Scheim AI. Sexual health of trans men who are gay, bisexual, or who have sex with men: results from Ontario, Canada. *Int J Transgend* 2013;14:66–74.
10. Van Batavia JP, Kolon TF. Fertility in disorders of sex development: a review. *J Pediatr Urol* 2016;12:418–25.
11. Rowlands S, Amy JJ. Preserving the reproductive potential of transgender and intersex people. *Eur J Contracept Reprod Health Care* 2018;23:58–63.
12. Jones RK, Witwer E, Jerman J. Abortion incidence and service availability in the United States, 2017. New York, NY: Guttmacher Institute; 2019.
13. Tate CC, Ledbetter JN, Youssef CP. A two-question method for assessing gender categories in the social and medical sciences. *J Sex Res* 2013;50:767–76.
14. Abern L, Nippita S, Maguire K. Contraceptive use and abortion views among transgender and gender-nonconforming individuals assigned female at birth. *Contraception* 2018;98:337.
15. James SE, Herman JL, Rankin S, Keisling M, Mottet L, Anafi M. The report of the 2015 U.S. Transgender survey. Washington, DC: National Center for Transgender Equality; 2016.
16. Scheim AI, Perez-Brumer AG, Bauer GR. Gender-concordant identity documents and mental health among transgender adults in the USA: a cross-sectional study. *Lancet Public Health* 2020;5:e196–203.
17. The Lancet Public Health. Transgender health, identity, and dignity. *Lancet Public Health* 2020;5:e177.
18. Coleman E, Bockting W, Botzer M, et al. Standards of care for the health of transsexual, transgender, and gender-nonconforming people, version 7. *Int J Transgend* 2012;13:165–232.
19. Safer JD, Tangpricha V. Care of the transgender patient. *Ann Intern Med* 2019;171:775–6.
20. Safer JD, Coleman E, Feldman J, et al. Barriers to healthcare for transgender individuals. *Curr Opin Endocrinol Diabetes Obes* 2016;23:168–71.
21. Rodriguez A, Agardh A, Asamoah BO. Self-reported discrimination in health-care settings based on recognizability as transgender: a cross-sectional study among transgender U.S. citizens. *Arch Sex Behav* 2018;47:973–85.
22. Kates J, Ranji U, Beamesderfer A, Salganicoff A, Dawson L. Health and access to care and coverage for lesbian, gay, bisexual, and transgender individuals in the U.S. 2016. Available at: <http://files.kff.org/attachment/Issue-Brief-Health-and-Access-to-Care-and-Coverage-for-LGBT-Individuals-in-the-US>. Accessed August 3, 2018.
23. Fix L, Durden M, Obedin-Maliver J, et al. Stakeholder perceptions and experiences Regarding access to contraception and abortion for transgender, non-binary, and gender-expansive individuals assigned female at birth in the U.S. *Arch Sex Behav* 2020;49:2683–702.
24. Hoffkling A, Obedin-Maliver J, Sevelius J. From erasure to opportunity: a qualitative study of the experiences of transgender men around pregnancy and recommendations for providers. *BMC Pregnancy Childbirth* 2017;17(Suppl2):332.
25. Klein DA, Berry-Bibee EN, Keglovitz Baker K, Malcolm NM, Rollison JM, Frederiksen BN. Providing quality family planning services to LGBTQIA individuals: a systematic review. *Contraception* 2018;97:378–91.
26. Lowik AJ. Trans-inclusive abortion care: a manual for operationalizing trans-inclusive policies and practices in an abortion setting, United States. 2019. Available at: <https://www.ajlowik.com/publications#/transinclusive-abortion>. Accessed Feb. 10, 2020.
27. Light AD, Obedin-Maliver J, Sevelius JM, Kerns JL. Transgender men who experienced pregnancy after female-to-male gender retransitioning. *Obstet Gynecol* 2014;124:1120–7.
28. Roberts SCM, Fuentes L, Berglas NF, Dennis AJ. A 21st-century public health approach to abortion. *Am J Public Health* 2017;107:1878–82.
29. Moseson H, Zazanis N, Goldberg E, et al. The imperative for transgender and gender nonbinary inclusion: beyond women's health. *Obstet Gynecol* 2020;135:1059–68.
30. Obedin-Maliver J. Time for OBGYNs to care for people of all genders. *J Womens Health (Larchmt)* 2015;24:109–11.
31. Lunn MR, Capriotti MR, Flentje A, et al. Using mobile technology to engage sexual and gender minorities in clinical research. *PLoS One* 2019;14:e0216282.
32. Lunn MR, Lubensky M, Hunt C, et al. A digital health research platform for community engagement, recruitment, and retention of sexual and gender minority adults in a national longitudinal cohort study—the PRIDE Study. *J Am Med Inform Assoc* 2019;26:737–48.
33. Moseson H, Lunn MR, Katz A, et al. Development of an affirming and customizable electronic survey of sexual and reproductive health experiences for transgender and gender nonbinary people. *PLoS One* 2020;15:e0232154.
34. U.S. Census Bureau. Census regions and divisions of the United States. 2020. Available at: [https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us\\_regdiv.pdf](https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf). Accessed April 28, 2020.
35. The American College of Obstetricians and Gynecologists. ACOG statement on medication abortion. 2016. Available at: <https://www.acog.org/news/news-releases/2016/03/acog-statement-on-medication-abortion>. Accessed May 18, 2020.
36. Dehlendorf C, Harris LH, Weitz TA. Disparities in abortion rates: a public health approach. *Am J Public Health* 2013;103:1772–9.
37. Light A, Wang L, Gomez-Lobo V. The family planning needs of young transgender men. *J Pediatr Adolesc Gynecol* 2017;30:274.
38. Krempasky C, Harris M, Abern L, Grimstad F. Contraception across the trans-masculine spectrum. *Am J Obstet Gynecol* 2020;222:134–43.
39. Bonnington A, Dianat S, Kerns J, et al. Society of Family Planning clinical recommendations: Contraceptive counseling for transgender and gender diverse people who were female sex assigned at birth. *Contraception* 2020;102:70–82.
40. Paradiso C, Lally RM. Nurse practitioner knowledge, attitudes, and beliefs when caring for transgender people. *Transgend Health* 2018;3:47–56.
41. Davidge-Pitts C, Nippoldt TB, Danoff A, Radziejewski L, Natt N. Transgender health in endocrinology: current status of endocrinology fellowship programs and practicing clinicians. *J Clin Endocrinol Metab* 2017;102:1286–90.
42. White W, Brenman S, Paradis E, et al. Lesbian, gay, bisexual, and transgender Patient Care: medical students' preparedness and comfort. *Teach Learn Med* 2015;27:254–63.
43. Dy GW, Osburn NC, Morrison SD, Grant DW, Merquerian PA; Transgender Education Study Group. Exposure to and attitudes regarding transgender education among urology residents. *J Sex Med* 2016;13:1466–72.
44. Kanstrup C, Mäkelä M, Hauskov Graungaard A. Women's reasons for choosing abortion method: a systematic literature review. *Scand J Public Health* 2018;46:835–45.

45. Raymond EG, Grossman D, Mark A, et al. Commentary: no-test medication abortion: a sample protocol for increasing access during a pandemic and beyond. *Contraception* 2020;101:361–6.

### Author and article information

From the Ibis Reproductive Health, Oakland, CA (Dr Moseson and Mxs Ragosta and Forsberg); Ibis Reproductive Health, Cambridge, MA (Mx Fix); Department of Family and Community Medicine (Dr Hastings) and Department of Community Health Systems and Alliance Health Project, Department of Psychiatry (Dr Flentje), University of California, San Francisco, San Francisco,

CA; Planned Parenthood League of Massachusetts, Boston, MA (Mx Stoeffler); Division of Nephrology, Department of Medicine (Dr Lunn), and Department of Obstetrics and Gynecology (Dr Obedin-Maliver), Stanford University School of Medicine, Stanford, CA; The Population Research in Identities and Disparities for Equality Study, PRIDEnet, Stanford University, Stanford, CA (Drs Lunn, Flentje, Capriotti, Lubensky, and Obedin-Maliver); and Department of Psychology, San José State University, San Jose, CA (Dr Capriotti).

Received May 20, 2020; revised Aug. 18, 2020; accepted Sept. 22, 2020.

J.O.M. has consulted for Sage Therapeutics (May 2017) in a 1-day advisory board, Ibis Reproductive Health

(a nonprofit research group; March 2017 to May 2018), Hims, Inc (2019–present), and Folx Health, Inc (2020–present). M.R.L. has consulted for Hims, Inc (2019–present) and Folx Health, Inc (2020–present). None of these roles present a conflict of interest with this work as described here. The other authors report no conflict of interest.

This research was funded by a grant from the Society of Family Planning (SFPRF11-II1). The funder had no role in the study design; in the collection, analysis, or interpretation of data; in the writing of this manuscript; or in the decision to submit the article for publication.

Corresponding author: Heidi Moseson, PhD, MPH. [hmoseson@gmail.com](mailto:hmoseson@gmail.com)