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**Healthcare provider communication and current contraceptive use among transgender men and gender-diverse people: results from an online, cross-sectional survey in the United States**

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*Objectives:* To explore whether discussing contraceptive use with a healthcare provider is associated with current contraceptive use among transgender men and gender-diverse (TMGD) individuals.

*Study design:* In 2019, we conducted a cross-sectional survey among transgender men and gender-diverse adults in the United States who were assigned female or intersex at birth. We measured whether respondents had ever discussed contraception with a healthcare provider as well as current use of contraception, reasons for use, and barriers to use. We described frequencies and ranges for key variables and implemented a series of nested logistic regression models to evaluate the association between ever having spoken to a provider about contraception and current use of contraception for any reason, overall and by method type.

*Results:* Among 1,694 respondents, about half (48%) were currently using a method of contraception for any reason, most commonly barrier methods (17%) and long-acting-reversible-contraception (LARC) (17%). Compared to those who never had a conversation about contraception with a provider, respondents who spoke with a provider were more likely to be currently using contraception – particularly among those who self-initiated the conversation (aOR: 3.8, 95% CI: 2.5-5.6). Having discussed contraception with a healthcare provider was most strongly associated with current LARC use.

*Conclusions:* Having had a conversation with a provider about contraception use was positively associated with current contraception use among a large, national sample of transgender men and

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72 gender-diverse people. Facilitating patient participation in contraception counseling for  
73 transgender and gender-diverse patients should be emphasized in provider training.

74 *Implications:* Given formidable barriers to healthcare faced by TMGD people, training providers  
75 on how to initiate affirming and relevant conversations with TMGD patients about contraceptive  
76 needs and preferences is essential, as are efforts to educate and empower TMGD individuals to  
77 advocate for the information they need in these interactions.

78  
79 **Keywords:** Communication, Contraception, Gender-diverse, Gender minority, Healthcare  
80 providers, Patient-centered care

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## 1. Introduction

Transgender men and gender-diverse (TMGD) people use contraception for many reasons, including pregnancy and sexually transmitted infection (STI) prevention, for menstrual suppression to reduce gender dysphoria, and for other reasons[1,2]. However, research on contraception use and access among TMGD is limited[1-4]. Across studies, 33-70% of TMGD participants report negative healthcare experiences, such as poor and/or abusive communication, explicit discrimination based on their gender identity, denied or delayed healthcare service, and inconsistent levels of care[5-8]. Considering that over 1 million individuals in the United States are transgender and that access to contraception is a core indicator of healthcare quality, research is needed to understand how to facilitate access to contraception for TMGD people in the United States[5,6,8-10].

Research indicates that contraceptive counseling can positively affect long-term contraceptive use and achievement of reproductive goals[11-13]. Conversely, inadequate counseling and poor provider communication about contraception can lead to the use of misaligned methods given contraceptive goals or dissuade people from contraceptive use entirely[14]. Factors such as deterrence of patient advocacy (*i.e.*, disregarding patient preferences and values, passive provider listening, lack of respect for patient bodily autonomy, minimum or no discussion of options, discouraging informed choice, *etc.*) and lack of provider knowledge about contraceptive options can prevent patients from making informed decisions about their contraceptive needs[13,15-17]. These deficits in care are experienced more acutely by TMGD individuals and can be exacerbated by provider misconceptions, discrimination, and misinformation[18,19], as

111 well as exclusion from family planning research. In previous studies, 5.5% to 9% of transgender  
112 men believed testosterone had contraceptive benefits based on a healthcare provider's advice[2,3].  
113 This statistic highlights the role of inaccurate counseling by providers; while testosterone can  
114 induce hypothalamic-pituitary-gonadal suppression resulting in anovulation, the degree and  
115 duration of this anovulation is not fully understood and thus testosterone is not generally  
116 considered a fully reliable or primary form of contraception to prevent pregnancy[20-23].

117 A lack of national-level data on the experiences of TMGD people with contraceptive use,  
118 reasons for use, and if and how TMGD individuals talk with their healthcare providers about  
119 contraception limits evidence-based care. To address this gap, we analyzed survey data collected  
120 from a cross-sectional study that examined contraception care experiences of TMGD adults in the  
121 United States.

## 122 **2. Materials and Methods**

### 123 *2.1 Study recruitment*

124 Between May and September 2019, we recruited individuals for an online survey from (1)  
125 among enrolled participants of an existing panel of lesbian, gay, bisexual, transgender, queer,  
126 questioning, intersex, asexual and more (LGBTQIA+) adults, The Population Research in Identity  
127 and Disparities for Equality (PRIDE) Study, as well as (2) an anonymous study-specific website  
128 distributed to the public via community organizations, listservs, and in-person LGBTQIA+ health  
129 events. Eligible respondents identified as transgender men, nonbinary, and/or gender-diverse, some  
130 also identified as intersex, selected “Female” or “Not listed” for their sex assigned at birth, and  
131 were aged 18 years or older, resided in the US or its territories, and could read and write in

English. We excluded individuals who were assigned male at birth. We programmed the survey on the Qualtrics platform (Qualtrics LLC; Provo, UT), and implemented several custom and automated steps to prevent duplicate submissions from the same respondent. Respondents who completed the survey were entered in a raffle to win one of 100 \$50 electronic gift cards. Further details on recruitment and survey content, design, and format have been described previously[14,15].

Respondents provided electronic informed consent prior to starting the survey. The Institutional Review Boards of Stanford University School of Medicine and the University of California, San Francisco reviewed and approved this study and continuing review is now maintained additionally *via* WCG (WIRB-Copernicus Group, Inc).

## 2.2 Measures

The primary outcomes for this analysis included current use of contraception for any purpose and communication with healthcare providers about contraceptive use. We measured current contraceptive use with the following question: “Of the birth control methods you have ever used for ANY reason, please select below the method(s) you are currently using.” Respondents could select one or more of the 21 contraception options (described in detail) that were listed or could select that they were not currently using any method. Based on the descriptions of each contraceptive method, we categorized individual methods as: (1) long-acting reversible contraception (LARC) (hormonal intrauterine device (IUD), copper IUD, implant); (2) combined hormonal contraception (ring, patch, combined pill); (3) barrier methods (external condom, internal condom, diaphragm, cervical cap, sponge); (4) progestin-only methods (progestin pill,



153 shot); (5) permanent contraception (partner permanent contraception, respondent permanent  
154 contraception); or (6) other (abstinence, spermicide, emergency contraception, fertility awareness,  
155 withdrawal).

156 To assess patient-provider communication about contraception, respondents could select all  
157 that applied from: “Has a provider ever discussed birth control methods with you for the purposes  
158 of pregnancy prevention?”; “Yes, I brought it up”, “Yes, my provider brought it up”, “No”. We  
159 categorized respondents as having had provider communication that was patient-initiated,  
160 provider-initiated, both patient- and provider-initiated, or never had a conversation. We determined  
161 the timing of conversation about contraception relative to receipt of gender-affirming care with the  
162 question: “When did you and your provider discuss these birth control methods?”, for which  
163 respondents could select before and/or after pursuing gender-affirming hormone therapy and/or  
164 surgery. We also assessed respondent comfort: “How comfortable did you feel asking your  
165 provider all of the questions you had about birth control?” with answer choices that ranged from  
166 very comfortable to not at all comfortable.

167 To evaluate experiences trying to access contraception care, we asked: “Have any of the  
168 below difficulties ever made it HARDER for you to get birth control?” with a list of possible  
169 barriers. Respondents could also indicate their reasons for not using contraception: cost of  
170 contraception, cost of healthcare visit, time required, travel required, and difficulty finding  
171 affirming healthcare providers.

172 Sociodemographic characteristics measured included: age in years; race or ethnicity;  
173 gender identity (agender, cisgender man, cisgender woman, genderqueer, man, nonbinary,

174 transgender man, transgender woman, Two-Spirit, woman, another gender (specify if desired), and  
175 prefer not to say); intersex identification; sexual orientation (asexual, bisexual, gay, lesbian,  
176 pansexual, queer, questioning, same-gender-loving, straight/heterosexual, or another sexual  
177 orientation); relationship status; educational level; and health insurance coverage (yes, no). For  
178 racial or ethnic identity, sexual orientation, and gender identity, respondents could select multiple  
179 options. We also assessed the proportion of healthcare providers who were aware of the  
180 respondent's gender identity on a scale of 1 (out to 0% of providers) to 11 (out to 100% of  
181 providers). Respondents self-reported ZIP code, which we used to convert to US census region.

### 182 *2.3 Statistical analysis*

183 We described sociodemographic characteristics, reproductive history, and contraceptive  
184 use data with frequencies and ranges, overall and by history of provider communication. To  
185 evaluate differences across respondents who reported varying levels of provider communication  
186 about contraception, we conducted Kruskal-Wallis tests,  $\chi^2$  tests of independence and Fisher's  
187 exact tests.

188 Secondly, we also implemented a series of nested multivariate logistic regression models to  
189 examine the association between communication with a healthcare provider about contraception  
190 use and current contraception use. In these models, we categorized the exposure as (1) never had a  
191 conversation with a healthcare provider about contraception use (reference group), versus (2) had a  
192 patient-initiated conversation, (3) had a provider-initiated conversation, or (4) had both patient-  
193 and provider-initiated conversations with a healthcare provider about contraception use. We

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194 treated the outcome variable as binary: (1) any current use of a contraceptive method *versus* (2) no  
195 current use of a contraceptive method.

196 In the nested models, we adjusted for potential confounders of the communication and  
197 contraceptive use relationship (Supplemental Figure 1). In Model 1, we modeled the unadjusted  
198 association between having spoken to a healthcare provider about contraception and current use.  
199 Model 2 adjusted for the following covariates: age (continuous, centered on the mean), education  
200 (categorical: less than a college degree (reference), college degree/some graduate or professional  
201 study, or grad school degree), gender identity (transgender man/man only (reference), both  
202 transgender man + gender-diverse identities, gender-diverse identities only), gender identity  
203 outness (discrete: 0% (reference) up to 100%), health insurance coverage (categorical: yes, no  
204 (reference)), and due to limited racial diversity in the sample a crude binary measure of  
205 race/ethnicity as an imperfect proxy for experiences of racism in patient-provider interactions  
206 (binary; anyone who indicated any of the following identities (reference): American Indian/Alaska  
207 Native, Asian, Black/African American, Hispanic/Latinx, Middle Eastern/North African, or Native  
208 Hawaiian/Pacific Islander, versus people who selected White only). Model 3 adjusted additionally  
209 for a binary indicator of reasons for contraceptive use (for pregnancy prevention, versus any other  
210 reason (reference)). Given low levels of missingness across included covariates, we modeled  
211 associations among respondents with complete data.

212 Additionally, we modeled the association between communication with a provider as  
213 described above in model 3 and the current use of specific method types (barrier, LARC, combined

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214 hormonal methods, progestin-only methods, permanent contraception, and other methods). All  
215 analyses were conducted in Stata version 18.0 (StataCorp, College Station, TX).

### 216 **3. Results**

#### 217 *3.1 Characteristics of the study population*

218 Over five months of data collection, 5,005 people initiated the study: 4,207 (84%) from  
219 among existing participants of The PRIDE Study (35.3% of likely eligible participants of The  
220 PRIDE Study at the time), and 798 (16%) from the study-specific website (an unknown proportion  
221 of those exposed to study information.) Among the 5,005 initiators, 1,694 (34%) expressed a  
222 gender identity that aligned with the broad umbrella of transgender or gender diverse and were  
223 female or intersex assigned at birth; 1281 (76%) were existing participants of The PRIDE Study  
224 who were invited to opt-in to this cross-sectional, stand-alone survey, and the remainder (n=413,  
225 24%) were recruited from the general population. Among these 1,694 TMGD respondents, over  
226 half (n=916, 54%) were between the ages of 20-29, had health insurance coverage (n=1512, 89%),  
227 and had completed a college or graduate degree (n=1054, 62%) (Table 1). A minority of  
228 respondents (n=322, 19%) identified as American Indian/Alaska Native, Asian, Black/African  
229 American, Hispanic/Latinx, Middle Eastern/North African, and/or Native Hawaiian/Pacific  
230 Islander, versus White only (n=1293, 76%). Most respondents endorsed multiple gender identities  
231 (n=1036, 61%), and multiple sexual orientations (n=1010, 57%).

#### 232 *3.2 Experiences talking to healthcare providers about contraception*

233 Most respondents (n = 973, 57%) reported a conversation with a provider about  
234 contraception use in their lifetime: 397 (23%) had a provider-initiated conversation, 357 (21%) had  
235 a patient-initiated conversation, and 219 (13%) had both a provider-initiated and patient-initiated  
236 conversation (Table 1-2). Among those who had a conversation with a provider, participants  
237 reported low comfort asking about contraception: 233 (24%) reported being not at all or only a  
238 little comfortable asking their provider all the questions they had about contraception use (Table  
239 2).

240 Among respondents who reported a history of gender-affirming hormone therapy, puberty  
241 blockers, and/or gender-affirming surgeries (n=879), 357 (41%) had a conversation about  
242 contraception with their provider before starting gender-affirming care, while 196 (22%) had a  
243 conversation after initiating gender-affirming care; 335 (38%) of respondents with a history of  
244 gender-affirming care reported no conversation about contraception with their provider (Table 2).

### 245 *3.3 Current contraception use for any reason*

246 Overall, 809 (48%) respondents were currently using any method of contraception for any  
247 reason, most commonly barrier (n=282, 17%) and LARC (n=279, 17%) methods (Table 3).  
248 Respondents who reported any prior conversation with a provider about contraception were  
249 currently using contraception at a higher proportion than were respondents who did not have a  
250 conversation: 78% among those with a patient-initiated conversation, 42% among those with a  
251 provider-initiated conversation, and 26% among those with no conversation (p<0.001). This  
252 pattern was most pronounced among LARC users.

### 253 *3.4 Reasons for using contraception and barriers to access*

254 Overall, the most common reasons for ever having used contraception were to prevent  
255 pregnancy (n=837, 70%), avoid period symptoms (n=662, 55%), stop menstruation (n=537, 45%),  
256 and protect against STIs (n=439, 36%) (Table 4). Respondents who self-initiated a conversation  
257 with a provider about contraception were more likely to use contraception to prevent pregnancy or  
258 to minimize and prevent menstruation and its symptoms than were respondents who only had  
259 provider-initiated conversations, or no conversation (Table 4). The most frequently reported  
260 barriers to contraceptive use included difficulty finding affirming healthcare providers (n=535,  
261 44%), the cost of contraception (n=379, 32%), and the cost of healthcare visits (n=357, 30%)  
262 (Table 4).

### 263 *3.5 Association between provider communication and current any contraception use*

264 In adjusted logistic regression analyses, TMGD respondents who had any conversation with a  
265 provider were more likely to currently use a contraceptive method than were respondents who had  
266 never had a conversation (Table 5). Across all models, this association was strongest for those who  
267 reported a patient-initiated conversation – these respondents had 3.8-11.9 times the odds of current  
268 contraception use compared to those who never had a conversation with their provider. However,  
269 the association between provider-initiated conversations and contraceptive use was strong as well.  
270 Adjusting for reasons for contraceptive use attenuated the association substantially across models.  
271 Communication with a healthcare provider was most strongly associated with LARC use.

## 272 **4. Discussion**

273 In a cross-sectional survey of 1,694 TMGD people in the United States, we found notable  
274 gaps in communication with healthcare providers about contraception: one third had never had a

275 conversation about contraception with their provider, and among those who had, nearly one in four  
276 did not feel comfortable asking all their questions. These findings highlight a need for provider  
277 training on contraceptive counseling for TMGD people, and the importance of patient-initiation  
278 and advocacy during these conversations.

279 Indeed, previous research has noted that providers who encourage patient involvement and  
280 tailor their counseling to the patients' needs and preferences – patient centered and shared  
281 decision-making – are more likely to improve patient outcomes and long-term contraceptive  
282 adherence[11,24-28]. Additionally, considering half of our respondents disclosed their gender  
283 identity to their provider, provider knowledge and respect for gender identity may also influence  
284 comfort with self-advocacy[29,30].

285 This study is limited by several factors. One limitation is the potential for recall bias in the  
286 exposure, such that those who had a conversation with a provider that led to starting a  
287 contraceptive may be more likely to recall that conversation than those who did not go on to use a  
288 method. This could lead to misclassification of the exposure differentially by outcome, and thereby  
289 inflate the observed association. Similarly, it could be that those already using contraception are  
290 more likely to initiate a conversation with their provider to ask questions; due to the limitations of  
291 survey design, we cannot tease apart the direction of the association. Further, given that the  
292 exposure requires lifetime recall, it is possible that respondents might fail to recall conversations  
293 further in the past. An additional limitation is the difference in scope between our primary  
294 exposure of interest (a conversation about contraception use *for pregnancy prevention*) and our  
295 outcome (contraceptive use for *any reason*). Respondents may have had conversations with their

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providers about contraceptive use for other reasons, which could have resulted in some respondents reporting “no conversation” here, even if they had discussed contraception for OTHER reasons with a provider. This would result in misclassification of respondents by exposure and could conservatively bias our estimates toward an underestimation of the relationship. Another limitation is that the survey did not ascertain if there were intervals beyond the past 12 months in which the respondent engaged in sexual activity that could lead to pregnancy. Thus, it is likely that some respondents were incapable of pregnancy and thus unlikely to be interested in the use of contraception to prevent pregnancy.

General limitations include the racial and ethnic composition of the study population. Studies have demonstrated that marginalized racial and ethnic groups are more likely to experience barriers to healthcare access, receive unequal treatment, and are less likely to advocate for themselves due to racial bias[15,31-35]. Thus, the results from this study are unlikely to completely capture these disparities. Most of the sample also had at least some college education or had health insurance. Collectively, these advantages could bias the findings toward underestimation of barriers to contraceptive care among populations who must additionally navigate structural racism, underinsurance, and lack of education and/or health literacy. Further, we did not ascertain respondents’ gender identity, age, or other socio-demographic characteristics at the time of their conversations with their provider, nor the frequency of these conversations – these characteristics may moderate the relationship between communication and contraceptive use. Further, as most respondents found the survey through broad LGBTQIA+ related health events and organizations, the sample may not represent the full TMGD population. Despite these limitations, this research is one of few studies among a large sample of TMGD people assigned female or



318 intersex at birth from across the United States, conducted in a community-engaged approach, with  
319 detailed findings on contraceptive use, motivations, and barriers to care with a particular emphasis  
320 on provider communications.

321           Given formidable barriers to sexual and reproductive healthcare faced by TMGD people,  
322 training providers on how to initiate affirming and relevant conversations with TMGD patients  
323 about contraceptive needs and preferences is essential, as are efforts to educate and empower  
324 TMGD individuals to advocate for the information they need in these interactions. Future research  
325 should explore the relationship between health care provider communication and contraceptive use  
326 among TMGD people in longitudinal studies that allow for the establishment of temporality for  
327 new initiators of contraceptives and that capture accurate contemporaneous measures of gender,  
328 body parts, and sexual activity. This will enable better characterization of the role and influence of  
329 health care provider communication on contraceptive initiation and sustained use among TMGD  
330 people in the United States.

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**Table 1.** Sociodemographic characteristics and selected reproductive history of a sample of transgender men and gender-diverse (TMGD) people in the United States recruited online in 2019 for a survey of sexual and reproductive health (n=1,694). Characteristics are presented overall and by history of communication with a healthcare provider about contraceptive use.

<b>Participant Characteristics</b>	<b>All TGE Participants (n=1,694) n (%)</b>	<b>Both provider- and patient-initiated conversations (n=219) n (%)</b>	<b>Only patient-initiated conversations (n=357) n (%)</b>	<b>Only provider-initiated conversations (n=397) n (%)</b>	<b>No conversations (n=603) n (%)</b>	<b>p-value</b>
<b>Age</b>						
Median age (IQR)	27.1 (23-33)	28.9 (24-35)	27.3 (23-33)	27.9 (24-33)	26 (22-32)	<0.001
18-19	150 (8.9)	16 (7.3)	17 (4.8)	22 (5.5)	85 (14.1)	<0.001
20-24	469 (27.7)	45 (20.5)	102 (28.6)	103 (25.9)	190 (31.5)	
25-29	447 (26.4)	66 (30.1)	113 (31.7)	116 (29.2)	129 (21.4)	
30-34	284 (16.8)	40 (18.3)	50 (14.0)	74 (18.6)	97 (16.1)	
35-39	149 (8.8)	23 (10.5)	37 (10.4)	36 (9.1)	40 (6.6)	
40-44	88 (5.2)	16 (7.3)	12 (3.4)	29 (7.3)	21 (3.5)	
45-49	38 (2.2)	5 (2.3)	9 (2.5)	7 (1.8)	12 (2.0)	
50-79	69 (4.1)	8 (3.7)	17 (4.8)	9 (2.3)	29 (4.8)	
<b>Race/ethnicity*</b>						
American Indian or Alaska native	42 (2.5)	8 (3.7)	14 (3.9)	6 (1.5)	12 (2.0)	0.098
Asian	77 (4.5)	7 (3.2)	23 (6.4)	19 (4.8)	21 (3.5)	0.134
Black/African American	67 (4.0)	4 (1.8)	12 (3.4)	17 (4.3)	30 (5.0)	0.199
Hispanic/Latinx	101 (6.0)	19 (8.7)	19 (5.3)	14 (3.5)	42 (7.0)	0.038
Middle Eastern/North African	24 (1.4)	2 (.9)	4 (1.1)	3 (0.8)	14 (2.3)	0.218
Native Hawaiian/Pacific Islander	5 (0.3)	0 (0)	2 (0.6)	2 (0.5)	1 (0.2)	0.58
White	1472 (86.9)	200 (91.3)	320 (89.6)	354 (89.2)	536 (88.9)	0.786
Another race	41 (2.4)	7 (3.2)	8 (2.2)	11 (2.8)	11 (1.8)	0.629
Unknown	12 (0.7)	3 (1.4)	1 (0.3)	5 (1.3)	2 (0.3)	0.131
More than one race/ethnicity	202 (11.9)	27 (12.3)	49 (13.7)	37 (9.3)	75 (12.4)	0.278
None of these	4 (0.2)	1 (0.5)	0 (0)	1 (0.3)	1 (0.2)	0.659
Missing	79 (4.7)	3 (1.4)	6 (1.7)	8 (2.0)	13 (2.2)	0.882
<b>Gender Identity*</b>						
Agender	226 (13.3)	41 (18.7)	54 (15.1)	49 (12.3)	67 (11.1)	0.027
Cisgender man <sup>a</sup>	1 (0.1)	0 (0)	0 (0)	0 (0)	0 (0)	-

Cisgender woman	94 (5.5)	20 (9.1)	23 (6.4)	23 (5.8)	24 (4.0)	0.038
Genderqueer	655 (38.7)	109 (49.8)	160 (44.8)	153 (38.5)	199 (33.0)	<0.001
Man	293 (17.3)	24 (11.0)	45 (12.6)	73 (18.4)	133 (22.1)	<0.001
Non-binary	868 (51.2)	127 (58.0)	199 (55.7)	202 (50.9)	279 (46.3)	0.005
Transgender man	662 (39.1)	66 (30.1)	109 (30.5)	159 (40.1)	279 (46.3)	<0.001
Transgender woman <sup>a</sup>	4 (0.2)	0 (0)	0 (0)	0 (0)	2 (0.3)	0.634
Two-spirit	26 (1.5)	4 (1.8)	7 (2.0)	4 (1.0)	7 (1.2)	0.579
Woman	204 (12.0)	32 (14.6)	51 (14.3)	45 (11.3)	67 (11.1)	0.302
Additional gender	197 (11.6)	33 (15.1)	52 (14.6)	39 (9.8)	60 (10.0)	0.029
Multiple gender identities	1036 (61.2)	141 (64.4)	229 (64.1)	241 (60.7)	360 (59.7)	0.16
Prefer not to answer	2 (0.1)	0 (0)	0 (0)	0 (0)	2 (0.3)	0.634
<b>Gender Identity Outness to Healthcare Providers</b>						0.05
0%	340 (20.1)	49 (22.4)	76 (21.3)	78 (19.6)	131 (21.7)	
10-40%	327 (19.3)	46 (21.0)	84 (23.5)	73 (18.4)	102 (16.9)	
50-90%	495 (29.1)	65 (29.5)	96 (26.8)	124 (31.4)	189 (31.4)	
100%	357 (21.1)	42 (19.2)	71 (19.9)	93 (23.4)	137 (22.7)	
I don't know	94 (5.5)	13 (5.9)	21 (5.9)	19 (4.8)	35 (5.8)	
Missing	81 (4.8)	4 (1.8)	9 (2.5)	10 (2.5)	9 (1.5)	
<b>Sex assigned at birth</b>						0.573
Female	1684 (99.4)	219 (100.0)	355 (99.4)	395 (99.5)	598 (99.2)	
Not listed	10 (0.6)	0 (0)	2 (0.6)	2 (0.5)	5 (0.8)	
<b>Identifies as intersex</b>						0.435
Yes	69 (4.1)	9 (4.1)	10 (2.8)	16 (4.0)	31 (5.1)	
Prefer not to answer	21 (1.2)	2 (0.9)	2 (0.6)	4 (1.0)	10 (1.7)	
<b>Sexual Orientation*</b>						
Asexual	252 (14.9)	27 (12.3)	38 (10.6)	58 (14.6)	113 (18.7)	0.004
Bisexual	571 (33.7)	117 (53.4)	165 (46.2)	113 (28.5)	151 (25.0)	<0.001
Gay	348 (20.5)	48 (21.9)	64 (17.9)	87 (21.9)	130 (21.6)	0.484
Lesbian	218 (12.9)	17 (7.8)	36 (10.1)	63 (15.9)	89 (14.8)	0.006
Pansexual	418 (24.7)	78 (35.6)	121 (33.9)	85 (21.4)	116 (19.2)	<0.001
Queer	1150 (67.9)	178 (81.3)	254 (71.1)	267 (67.3)	381 (63.2)	<0.001
Questioning	69 (4.1)	14 (6.4)	11 (3.1)	7 (1.8)	32 (5.3)	0.006
Same gender loving	111 (6.6)	20 (9.1)	20 (5.6)	22 (5.5)	44 (7.3)	0.268
Straight/heterosexual	61 (3.6)	2 (0.9)	7 (2.0)	11 (2.8)	39 (6.5)	<0.001
Another sexual orientation	129 (7.6)	19 (8.7)	24 (6.7)	25 (6.3)	51 (8.5)	0.503
Multiple selected	1010 (56.9)	168 (76.7)	231 (64.7)	218 (54.9)	343 (56.9)	<0.001
Missing	21 (1.2)	0 (0)	0 (0)	0 (0)	1 (0.2)	
<b>Education level</b>						<0.001
Less than a college degree	551 (32.5)	68 (31.1)	104 (29.1)	119 (30.0)	239 (39.6)	



College degree	644 (38.0)	88 (40.2)	153 (42.9)	165 (41.6)	210 (34.8)	
Graduate/professional degree	410 (24.2)	58 (26.5)	94 (26.3)	101 (25.4)	137 (22.7)	
Missing	89 (5.3)	5 (2.3)	6 (1.7)	12 (3.0)	17 (2.8)	
<b>Health insurance coverage</b>	1512 (89.3)	205 (93.6)	340 (95.2)	357 (89.9)	542 (89.9)	0.209
Missing	80 (4.7)	2 (0.9)	6 (1.7)	9 (2.3)	13 (2.2)	
<b>US Census Region</b>						0.869
Midwest	304 (17.9)	45 (20.5)	71 (19.9)	67 (16.9)	108 (17.9)	
Northeast	411 (24.3)	60 (27.4)	84 (23.5)	98 (24.7)	149 (24.7)	
South	326 (19.2)	39 (17.8)	68 (19.0)	83 (20.9)	124 (20.6)	
West	468 (27.6)	61 (27.9)	113 (31.7)	111 (28.0)	162 (26.9)	
Missing	185 (10.9)	14 (6.4)	21 (5.9)	38 (9.6)	60 (10.0)	

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\* Respondents could select more than one option for these variables. For gender identity option, despite all respondents broadly falling under the TMGD umbrella, some also additionally selected other identities. We allowed respondents to select multiple gender identity options as this is established best practice for research with sexual and gender minority subjects [36]

\*\* n=118 respondents did not provide data on whether they'd spoken with a healthcare provider about contraception

476 **Table 2.** Comfort asking about birth control and timing of conversations with healthcare providers about contraceptive use  
 477 relative to gender affirming hormone initiation or surgery among a sample of transgender men and gender-diverse (TMGD)  
 478 people in the United States who had ever discussed contraception with a health care provider. Respondents were recruited online  
 479 in 2019 for a survey of sexual and reproductive health (n=973). Experiences are presented overall, and by types of  
 480 communication with a healthcare provider about contraceptive use.  
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	<b>Overall</b> <i>n (%)</i>	<b>Both provider- and patient- initiated conversations</b> <b>(n=219)</b> <i>n (%)</i>	<b>Only patient- initiated conversations</b> <b>(n=357)</b> <i>n (%)</i>	<b>Only provider- initiated conversations</b> <b>(n=397)</b> <i>n (%)</i>	<b>p- value</b>
<b>Comfort asking about birth control (n=973)^</b>					<0.001
Very comfortable	278 (29)	87 (40)	117 (33)	74 (19)	
Somewhat comfortable	326 (34)	83 (38)	138 (39)	105 (26)	
A little comfortable	134 (14)	28 (13)	55 (15)	51 (13)	
Not at all comfortable	99 (10)	16 (7)	34 (10)	49 (12)	
I did not have any questions about birth control	128 (13)	4 (2)	11 (3)	113 (29)	
Missing	8 (1)	1 (1)	2 (1)	5 (1)	
<b>Among only those who had received gender affirming (GA) hormones or surgeries (n=879)^ ^</b>					
Any conversation about contraception	<i>n=544</i>	<i>n=105</i>	<i>n=160</i>	<i>n=213</i>	
Before respondent began GA hormone therapy and/or surgery	357 (41)	84 (80)	115 (72)	158 (74)	<0.001
After respondent began GA hormone therapy and/or surgery	196 (22)	54 (51)	53 (33)	89 (42)	<0.001
I don't remember	18 (2)	2 (2)	2 (1)	14 (7)	<0.001
^ among people who had a conversation with a provider about contraception					
^^ among people who had a conversation with a provider about contraception AND had ever had gender affirming hormone therapy or surgeries (respondents could select more than one option for conversation timing)					

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484 **Table 3.** Types of contraception currently used for any purpose among an online sample of transgender men and gender-diverse  
 485 people assigned female or intersex at birth in the United States (n=1,694), overall and by history of communication with  
 486 healthcare providers about contraception.

<b>Current contraceptive method use for ANY reason<sup>a</sup></b>	<b>All TMGD Respondents (n=1694)</b>	<b>Both provider- and patient-initiated conversations (n=219)</b>	<b>Only patient-initiated conversations (n=357)</b>	<b>Only provider-initiated conversations (n=397)</b>	<b>No conversations (n=603)</b>	<b>p-value</b>
	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	<b>n (%)</b>	
<b>Current use of any method</b>	809 (47.8)	169 (77.2)	278 (77.9)	167 (42.1)	158 (26.2)	<0.001
<b>Barrier</b>	282 (16.6)	68 (31.1)	104 (29.1)	48 (12.1)	51 (8.5)	<0.001
External condom	282 (16.6)	68 (31.1)	104 (29.1)	48 (12.1)	51 (8.5)	<0.001
Internal condom	22 (1.3)	9 (4.1)	8 (2.2)	2 (0.5)	2 (0.3)	<0.001
Diaphragm	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	--
Cervical cap	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	--
Sponge	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	--
<b>Long Acting Reversible Contraceptive (LARC)</b>	279 (16.5)	64 (29.2)	139 (38.9)	40 (10.1)	26 (4.3)	<0.001
Hormonal IUD	184 (10.9)	41 (18.7)	91 (25.5)	28 (7.1)	18 (3)	<0.001
Implant	55 (3.2)	13 (5.9)	25 (7)	8 (2)	6 (1)	<0.001
Copper IUD	41 (2.4)	10 (4.6)	23 (6.4)	5 (1.3)	2 (0.3)	<0.001
<b>Combined hormonal contraception</b>	117 (6.9)	19 (8.7)	41 (11.5)	28 (7.1)	26 (4.3)	<0.001
Combined pill	106 (6.3)	17 (7.8)	34 (9.5)	27 (6.8)	26 (4.3)	0.012
Ring	8 (0.5)	3 (1.4)	3 (0.8)	1 (0.3)	0 (0)	0.012
Patch	4 (0.2)	0 (0)	4 (1.1)	0 (0)	0 (0)	0.005
<b>Permanent contraception</b>	119 (7)	24 (11)	44 (12.3)	22 (5.5)	21 (3.5)	<0.001

Respondent permanent contraception	94 (5.5)	18 (8.2)	33 (9.2)	17 (4.3)	20 (3.3)	<0.00 1
Partner permanent contraception	33 (1.9)	7 (3.2)	17 (4.8)	6 (1.5)	1 (0.2)	<0.00 1
<b>Progestin only methods</b>	54 (3.2)	9 (4.1)	20 (5.6)	11 (2.8)	9 (1.5)	0.004
Progestin pill	32 (1.9)	6 (2.7)	10 (2.8)	8 (2)	7 (1.2)	0.215
Shot	23 (1.4)	4 (1.8)	10 (2.8)	3 (0.8)	2 (0.3)	0.004
<b>Other</b>	267 (15.8)	50 (22.8)	78 (21.8)	70 (17.6)	58 (9.6)	<0.00 1
Abstinence	192 (11.3)	40 (18.3)	43 (12)	52 (13.1)	50 (8.3)	<0.00 1
Withdrawal	74 (4.4)	13 (5.9)	35 (9.8)	15 (3.8)	7 (1.2)	<0.00 1
Fertility awareness	26 (1.5)	5 (2.3)	10 (2.8)	5 (1.3)	4 (0.7)	0.038
Emergency Contraception	8 (0.5)	1 (0.5)	3 (0.8)	1 (0.3)	2 (0.3)	0.596
Spermicide	1 (0.1)	0 (0)	1 (0.3)	0 (0)	0 (0)	0.365
<b>Not listed</b>	10 (0.6)	1 (0.5)	3 (0.8)	3 (0.8)	3 (0.5)	0.887

<sup>a</sup> respondents could select more than one contraceptive method

IUD: intrauterine device

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489 **Table 4.** Reasons for and barriers to contraceptive use among a sample of transgender men and gender-diverse (TMGD) people  
 490 in the United States recruited online in 2019 for a survey of sexual and reproductive health (n=1,694). Experiences are presented  
 491 overall, and by history of communication with a healthcare provider about contraceptive use.  
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	<b>All TMGD Respondents (n=1694) n (%)</b>	<b>Both provider- and patient- initiated conversations (n=219) n (%)</b>	<b>Only patient- initiated conversations (n=357) n (%)</b>	<b>Only provider- initiated conversations (n=397) n (%)</b>	<b>No conversations (n=603) n (%)</b>	<b>p- value</b>
<b>Ever use of contraception</b>	1203 (71)	211 (96)	345 (97)	294 (74)	284 (47)	<0.001
<b>Reasons for using contraception<sup>a,b</sup></b>						
Prevent pregnancy	837 (70)	197 (93)	318 (92)	178 (61)	97 (34)	<0.001
Avoid period symptoms	662 (55)	122 (58)	199 (58)	144 (49)	162 (57)	0.1
Stop period	537 (45)	101 (48)	173 (50)	110 (37)	125 (44)	0.012
Avoid getting STIs	439 (36)	100 (47)	154 (45)	108 (37)	59 (21)	<0.001
Reduce pelvic pain/endometriosis	210 (17)	48 (23)	56 (16)	55 (19)	43 (15)	0.13
Affirm gender	167 (14)	25 (12)	58 (17)	31 (11)	42 (15)	0.1
Treat medical condition	160 (13)	41 (19)	31 (9)	41 (14)	43 (15)	0.005
Avoid spreading STIs	53 (4)	17 (8)	17 (5)	14 (5)	4 (1)	0.006
Prevent hair growth	47 (4)	12 (6)	14 (4)	12 (4)	9 (3)	0.58
Not listed	90 (7)	10 (5)	18 (5)	32 (11)	23 (8)	0.018
<b>Barriers to access<sup>a,b</sup></b>						
Difficulty finding affirming HCP	535 (44)	98 (46)	159 (46)	113 (38)	145 (51)	<0.001
Cost of contraception	379 (32)	98 (46)	112 (32)	75 (26)	85 (30)	<0.001
Cost of healthcare visit	357 (30)	88 (42)	106 (31)	72 (24)	84 (30)	<0.001
Time required to obtain contraception	321 (27)	77 (36)	117 (34)	54 (18)	64 (23)	<0.001
Travel required to obtain contraception	227 (19)	52 (25)	72 (21)	44 (15)	53 (19)	0.02
Not listed	152 (13)	24 (11)	34 (10)	28 (10)	57 (20)	0.27

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<sup>a</sup> respondents could select more than one option  
<sup>b</sup> among people who ever used contraception for any reason  
HCP: healthcare provider

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**Table 5.** Crude and adjusted odds ratios for the association between types of provider communication about contraception use and current contraception use for any reason, overall and by method type, among a sample of transgender men and gender-diverse (TMGD) people in the United States recruited online in 2019 for a survey of sexual and reproductive health (n=1,694).

	Ref	Never had a conversation about contraceptive use (n=603)			Had both a provider-initiated and patient-initiated conversation about contraceptive use (n=219)			Only had a patient-initiated conversation about contraceptive use (n=357)			Only had a provider-initiated conversation about contraceptive use (n=397)		
		OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value	OR	95% CI	p-value
<b>Use of any method</b>													
Model 1 <sup>^</sup> (n=1,576)	Ref	9.5	6.6-13.7	<0.001	9.9	7.3-13.5	<0.001	2.0	1.6-2.7	<0.001			
Model 2 <sup>^^</sup> (n=1,383)	Ref	9.8	6.6-14.6	<0.001	11.9	8.3-16.9	<0.001	2.0	1.5-2.7	<0.001			
Model 3 <sup>^^^</sup> (n=1,383)	Ref	3.0	1.9-4.7	<0.001	3.8	2.5-5.6	<0.001	1.1	0.8-1.6	0.43			
<b>Method specific<sup>^^^</sup> (n=1,473)</b>													
Barrier method	Ref	1.6	0.9-2.6	0.08	1.4	0.9-2.3	0.12	0.8	0.5-1.3	0.46			
LARC Method	Ref	4.7	2.6-8.4	<0.001	7.0	4.1-12.1	<0.001	1.8	1.0-3.1	0.04			
Combined Hormonal	Ref	0.9	0.4-1.9	0.70	1.3	0.6-2.5	0.49	1.1	0.6-2.2	0.75			
Progestin Only method	Ref	2.9	0.9-9.7	0.08	4.5	1.6-12.7	0.005	2.0	0.7-5.4	0.17			
Permanent contraception	Ref	1.3	0.6-2.8	0.44	1.7	0.9-3.3	0.12	1.1	0.6-2.2	0.75			
Use of other methods	Ref	1.3	0.8-2.2	0.29	1.1	0.7-1.8	0.62	1.3	0.9-2.0	0.19			

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<sup>^</sup> unadjusted

<sup>^^</sup> adjusted for gender identity, age, education, insurance coverage, gender identity outness, race/ethnicity

<sup>^^^</sup> adjusted for gender identity, age, education, insurance coverage, gender identity outness, race/ethnicity, reasons for contraceptive use

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