# The Impact of the COVID-19 Pandemic on STI Testing in King County, WA

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## Abstract

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*Background:* It is unclear whether the observed decrease in STI cases during the COVID-19 pandemic is due to declines in STI testing and/or decreases in sexual activity. In this study, we sought to describe the impact of the COVID-19 pandemic on STI testing among sexually active young adults. *Methods:* This cross-sectional internet survey, conducted in October-November 2020, ascertained individuals' healthcare utilization, STI testing, and sexual behavior before and after the implementation of COVID-19 mitigation strategies. Participants were ages 16-39, residing in King County, Washington. We defined "need for STI testing" as having been sexually active within the last year and having a new sex partner and/or had multiple partners since March 2020 or since their most recent STI test. *Results:* Among 1,368 respondents, 922 (67.4%) were categorized as needing STI testing. Of these, 11.7% of cisgender women and 5.9% of cisgender men who have sex with women (MSW) received testing since March 2020. Cis women and MSW primarily did not test due to being busy (48.4% and 41.7%, respectively), or not wanting to go to a facility (37.1% and 25.0%). Approximately 30% of cisgender women and MSW stated they preferred an at-home STI test over a clinic visit. *Discussion:* STI testing during the pandemic was suboptimal, notably in cisgender women, who are at high risk for morbidity. This lack of STI testing despite ongoing sexual activity may lead to undetected transmission of STIs and development of adverse reproductive tract sequalae. Our study suggests potential for expansion of at-home STI testing.

## Introduction

The prevalence of bacterial sexually transmitted infections (STIs) is high and increasing in the United States.[1] STIs can cause urethritis, epididymitis, and orchitis in the male reproductive tract, and can cause substantial morbidity in the female reproductive tract, including pelvic inflammatory disease, urethritis, ectopic pregnancy, and infertility.[2–4] STIs can also cause issues in pregnancy, including preterm labor, premature birth, low birthweight, and vertical transmission to the newborn.[5,6] While some infections cause overt symptoms, most STIs are asymptomatic and thus routine screening plays an essential role in detecting STIs.[7] Early detection and treatment are crucial to reducing both morbidity[8] and transmission,[9] and in addition to benefits to the screened persons, detecting and treating STIs in the sex partners of individuals who are female sex at birth can help prevent reproductive tract sequelae.[10]

The COVID-19 pandemic has led to substantial interruptions in healthcare services, including STI services.[11–14] Based on case reporting, it appears that STI rates have dropped since COVID-19 mitigation strategies have been in place,[12,15,16] but the reason for the decrease is unclear. The lack of detected cases could be due to an actual decrease in STIs resulting from decreased sexual activity, a decrease in STI testing, or some combination of the two. However, the relative contribution of STI testing and sexual behaviors on this apparent decrease in STI cases is unclear. There is some evidence that access to HIV prevention and treatment has been impacted by the COVID-19 pandemic, however those data are specific to men who have sex with men (MSM).[13,14] There is also evidence that many MSM experienced an initial decrease in sexual activity early in the pandemic, followed by an increase.[13] It is unknown to what degree people who are not MSM have continued to be sexually active during the COVID-19 pandemic, how often they are being tested for STIs during the pandemic, and whether or not those people who need STI testing are able to access those services. Additionally, populations at high risk for STIs may be disproportionally impacted by a lack of STI services, but it is unknown which populations these are or to what extent they are impacted.

While there has been a disruption in healthcare services during the COVID-19 pandemic, this has also presented an opportunity to expand at-home STI testing services. Previous studies have found that at-home STI testing is favorable across genders.[17–19] However, it is unknown what people's preferences are for at-home STI testing are in the context of limited healthcare services, such as during the COVID-19 pandemic.

In this study, we describe the impact of the COVID-19 pandemic on STI testing during the first 8 months of the pandemic among sexually active people ages 16-39 residing in King County, Washington. The objectives of this analysis were: (1) to examine the proportion of STI testing and reasons for not testing for STIs by sex assigned at birth and gender; (2) to describe the unmet needs for STI testing and openness to at-home STI testing; and (3) to explore the sociodemographic disparities in STI testing and unmet need for STI testing.

## Methods

### *Study Design*

This was a cross-sectional internet survey designed to ascertain individuals' healthcare utilization, STI testing patterns, and sexual behavior before and after the implementation of COVID-19 mitigation strategies.

### *Study Subjects*

Individuals were eligible to participate in the survey if they indicated that they were sexually active, between 16 and 39 years old, and resided in King County, Washington. Although all genders and sexual orientations were able to participate in the survey, we targeted recruitment toward cisgender (cis) women and cis men who have sex with cis women (MSW), and thus the analysis focuses primarily on these populations.

*Study Setting*

We used two approaches to recruit participants. First, we recruited individuals via market research panels aggregated by Qualtrics. These panels include individuals who have agreed to be contacted by a market research service in order to respond to surveys. The panels that Qualtrics partners with recruit potential participants from various sources, including website intercept recruitment, member referrals, email lists, gaming sites, web portals, permission-based networks, and social media websites. We targeted this survey to panel members who were 16 to 39 years old and resided in King County. Because one of the purposes of the survey was to measure sexual behaviors and STI testing among cisgender heterosexual individuals, we set quotas for Qualtrics to ensure that at least 40% of our sample identified as cisgender women and at least 40% identified as cisgender men. We also set quotas to ensure that no more than 45% of respondents identified as white race alone, slightly lower than the Census estimate for the proportion of King County residents in our target age range who are white race.[20]

Second, we recruited individuals from the social media platforms Facebook and Instagram, as well as third-party apps and website with which Facebook partners. We placed image-based advertisements and text-based pop-up advertisements on these apps and sites, and we geo-targeted the advertisements to King County residents ages 16 to 39. Advertisements were displayed in English and Spanish. We targeted approximately 15% of our budget to advertisements in Spanish.

Upon clicking on the invitation to participate (Qualtrics recruitment) or the survey advertisement (social media recruitment), individuals were taken to a survey landing page which described the purpose of the survey, content, and estimated length of the survey. Individuals who chose to proceed in the survey were asked to complete a brief eligibility screener to ascertain their age and residence. We determined residence in King County by asking participants to provide their residential zip code. Individuals who did not know or wish to provide their zip code were asked to indicate their state of residence, and, if within Washington State,

their county of residence. Eligible individuals were taken to an electronic consent page; those who consented to participate were taken to the online survey. The survey landing page, screener, and consent page were available in English and Spanish.

Participants recruited via Qualtrics-managed panels received compensation for completing the survey from their panel provider, valued at approximately $3-$5. Participants recruited via social media who completed the survey had the option to select from a list of local COVID-19 relief organizations to which the study team donated $5. In total, we donated $3,870 to local COVID-19 relief organizations.

We initiated a soft-launch of the survey via Qualtrics for five hours on September 4, 2020. We launched the full recruitment campaign on Qualtrics on October 1, 2020 and recruited participants through November 16, 2020. We launched our Facebook and Instagram recruitment campaign on October 4, 2020 and completed it on October 21, 2020.

*Data Collection and Measures*

The survey was available in English and Spanish. The survey queried individuals about demographic and socio-contextual characteristics (e.g., age, race and ethnicity, birth sex and gender identity, household income, country of birth), healthcare utilization (e.g., having a medical appointment since March 2020, use of telehealth services since March 2020), STI testing (e.g., most recent STI testing, attempt to get STI testing since March 2020, use of at-home STI testing, etc.), and sexual behavior (e.g., number of sex partners, number of new sex partners, characteristics and behaviors with most recent partners). STI testing was defined as testing for chlamydia, gonorrhea, or syphilis, and did not include HIV or hepatitis. Participants were informed the survey would take approximately 10-15 minutes to complete.

We define “need for STI testing” as having been sexually active within the last year and having had a new sex partner and/or multiple partners since March 2020 or since their most recent STI test. We define “unmet need for STI testing” as individuals who met the definition for

needing STI testing but did not report getting tested for STIs. Men who have sex with men (MSM) were defined as cis men who have sex with cis men, regardless of whether they have sex with people of other genders. Men who have sex with women (MSW) were defined as cis men who have sex with cis women, excluding those who also have sex with cis men. Transgender women were defined as those who reported woman as their gender and were assigned male at birth. Transgender men were defined as those who reported man as their gender and were assigned female at birth. Non-binary people reported neither man nor woman as their gender, and were grouped by their sex assigned at birth.

*Data Analysis*

All analyses are descriptive, and were completed using both R (version 4.0.3) and STATA (version 16.0, StataCorp, College Station, TX) software. We first present an overall description of the study population as a whole and stratified by cis women and MSW (Table 1). We calculated the proportion of STI testing overall and stratified by cis women, MSW, MSM, transgender (trans) men and nonbinary people assigned female at birth (AFAB), and trans women and nonbinary people assigned male at birth (AMAB) (Table 2). Among cis women and MSW who did not test for STIs, we present the frequency (i.e., percent) of attempts to get tested for STIs, reasons for not testing, and interest in at-home test kits (Table 3). Among cis women and MSW in need of STI testing, we describe the proportion of STI testing by race, ethnicity, place of birth (US- versus foreign-born), income level, and age (Table 4).

**Results**

A total of 3,750 respondents clicked past the first page. Of those, 1,734 were ineligible or did not consent, and an addition 247 only answered the first few questions or were deemed to be invalid responses. Of the remaining 1,769 complete responses, 401 (22%) respondents did

not report any sexual activity in the last year and were excluded from this analysis, leaving 1,368 respondents in the final analytic sample.

Of the 1,368 participants, 766 (56%) were cisgender women, 505 (37%) were cisgender men – including 82 MSM and 406 MSW – 68 (5%) were transgender men or nonbinary and assigned female at birth (AFAB), and 17 (1%) were transgender women or nonbinary and assigned male at birth (AMAB). About half of participants were less than 30 years old, 70% reported white race, and 11% reported Hispanic/Latinx ethnicity (Table 1). In our sample, MSM tended to be older and more highly educated compared to both cis women and MSW. A higher proportion of cis women were younger and reported an income of less than $40,000 compared to MSW.

Among the entire study population, 15.6% of cis women and 7.6% of MSW reported receiving STI testing since March 2020 (Table 2). In total, 922 respondents (67.4%) were categorized as needing STI testing. Among those in need of STI testing, 11.7% of cis women and 5.9% of MSW received STI testing since March 2020. Although the numbers were small, receipt of STI testing was highest among MSM and trans women/nonbinary people AMAB in need of testing (30.5% and 25.0%, respectively).

Table 3 describes STI testing attempts and interest in at-home testing among all respondents and among those in need of STI testing. Among individuals who were in need of testing but did not get tested for STIs since March 2020, approximately 84% of cis women and MSW reported that they had planned to get tested but did not (Table 3). Very few respondents (<4%) reported being unable to get testing if they tried. Among all respondents who planned or tried to get STI tested but did not, the most common reasons were being too busy (about 40-50% of respondents), not wanting to go to a facility to get tested (approximately 25-37% of respondents), or reporting that STI testing was not available to those without symptoms. The latter was more commonly reported among MSW (approximately 30% of respondents) compared to cis women (approximately 8-12% of respondents).

We queried respondents about their interest in at-home STI testing. Approximately 30% of cis women and MSW stated they preferred an at-home STI test over a clinic visit, while approximately 12-13% stated that they would only be interested in at-home STI testing if they were unable to visit a clinic (Table 3). Of cis women and MSW who we defined as being in need of testing, 45.0% and 46.0%, respectively, stated the reason for lack of interest in an at-home testing kit was a perception of not needing testing at this time.

Table 4 describes the receipt of STI testing among those in need of testing by sociodemographic factors. There were few consistent patterns in the sociodemographic characteristics of respondents when comparing cis women and MSW. Among cis women and MSW, Black respondents reported a higher proportion of testing compared to other races. Among cis women, those aged <35 years old had a higher prevalence of STI testing compared to those ≥ 35 years old, but the opposite was true for MSW.

**Discussion**

Among this population of over 1,300 sexually active young adults in King County, the proportion of respondents who were STI tested during the COVID-19 pandemic was suboptimal, ranging from 5.9 to 30.5% in different groups defined by gender and gender of sex partners. Only 11.7% of cis women who we defined as needing STI testing during the COVID pandemic were tested, which is concerning given the implications of reproductive tract morbidity resulting from STIs. Of those who did attempt to get STI testing, the vast majority were able to. The most common reasons for not getting tested for STIs included being too busy and not wanting to go to a facility to get tested. About one quarter of cis women and MSW in our study reported that they would prefer at-home STI testing instead of a clinic visit, but almost half of respondents stated that they did not need an at-home STI test because they were not at risk of STIs, despite having new or multiple sex partners. Our findings indicate a major lack of STI testing during the COVID-19 pandemic among young people who should have been STI tested. The

consequences of this decreased utilization of sexual health services remains to be seen, but may indicate future increases in STI transmission and adverse reproductive health outcomes.

Our findings add to recent and growing body of literature on access to and use of sexual healthcare during the COVID-19 pandemic. We found that STI testing was low during the COVID-19 pandemic, which is consistent with studies in MSM which found that access to HIV testing and prevention has decreased during the pandemic.[13,14] In a study of 56 MSM in the Southern United States, Pampati et al. found that a quarter of their study population described difficulty in accessing HIV or STI testing, or PrEP.[13] Rao et al. similarly found, in a much larger study of 10,654 MSM in 20 countries, that there were substantial perceived interruptions to in-person testing, HIV self-testing, PrEP, and condom access.[14] Additionally, a 55% decrease in clinical encounters for STIs has been documented in King County, WA during the early pandemic (January – July) compared to the same time period in 2019.[21] Our study – which focused on a general population – suggest that these decreases in sexual healthcare access have happened across all population groups.

Although our study and those mentioned above have highlighted reductions in STI and HIV testing during the COVID-19 pandemic, it has been unclear whether or not the decreased utilization of sexual health services is a result of people not needing STI screening (i.e., people have not had new or multiple sex partners during the pandemic), or people being reluctant to or unable to get tested despite ongoing sexual activity with new or multiple partners.[16,21] Among respondents in our study, 67% had new or multiple sex partners during the COVID-19 pandemic, indicating that young people have continued to be sexually active with new or multiple partnerships during this time. This is consistent with a national online study of MSM early in the pandemic, which found that nearly half of respondents had a similar number of sex partners after the onset of the pandemic compared to before.[22]

The reduction in STI testing during the COVID-19 pandemic despite ongoing sexual activity may lead to ongoing but undetected transmission of STIs. This has implications for STI

transmission in the population, which is particularly alarming during an era of record-high STI rates.[1] Indeed, mathematical modeling estimates suggest that COVID-19-related decreases in STI testing concurrent with ongoing sexual behavior would result in increases in STI transmission among MSM.[23–25] However, these modeling data were not based on empiric findings, nor did they include cisgender women and MSW, so the true impact of COVID-19 on STI transmission remains to be seen. Importantly, undetected STIs are particularly worrisome for the health of those assigned female at birth, as the asymptomatic nature of gonorrhea and chlamydia may result in the development of reproductive health sequalae, which may go undetected.

Our study found that at-home STI testing is desirable across gender and sexual orientation. Previous studies on at-home STI testing in cis women and MSW have primarily indicated broad interest in at-home testing,[26–30] but show mixed results when looking at the rate of testing uptake among those who were offered at-home testing.[26,27,31–33] Our data on at-home STI testing preferences indicate a potential for expansion of at-home STI testing services for cis women and MSW, both of whom exhibited concerningly low rates of STI testing during the pandemic. Although previous studies indicated mixed levels of at-home STI testing uptake, our study indicated that about a quarter of cis women and MSW would prefer at-home STI testing to clinic-based testing, and about a third of those who did not get tested stated it was because they did not want to go to a facility for testing. Interruptions in access to or hesitancy around receiving in-person healthcare services, such as during a pandemic, may lead to greater testing uptake than seen in previous studies.

Strengths of our study include the use of two different recruitment strategies to reach a more representative population, and our large sample size of 1,368. There are several limitations in our study. First, the study population is not a representative sample of King County residents. There is likely bias in who received the internet ads, who is signed up for market research panels, and in who decided to take the survey. Those who are more willing to take a

survey about sexual behaviors and sexual health may be more sexually active, or may be more aware of their sexual healthcare needs. Also, the proportion of non-white participants in this study was somewhat low (25%), though our study population is representative of the racial and ethnic makeup of King County, WA.[20] Second, this study was designed to target only those age 16-39 in King County, Washington, and is thus not generalizable to other ages or settings; however, it may provide insight into similar counties across the US. Third, although the focus of our study was on cisgender women and MSW, we did not limit participation to those who identify as a member of those two groups. As a result, there were few respondents who identify as LGBTQ. Fourth, this cross-sectional survey examines sexual behavior and sexual healthcare needs since March 2020, but does not allow us to determine a causal relationship between the onset of COVID-19 restrictions and subsequent behaviors. Fifth, our definition of who should have been STI tested may not fully capture everyone who needs STI testing. For example, sexually active cisgender women under age 25 should be screened for chlamydia or gonorrhea annually, but some of these women may not have fit our definition of who should have been tested since we only included people who had new or multiple sex partners since the last time they were tested. Thus, we believe our denominator of who should have been STI tested is an underestimate, resulting in an overestimate of the proportion of people who were STI-tested. Additionally, our definition of who should have been tested did not capture someone who tested for STIs during the pandemic but subsequently had a new sex partner. Again, we believe this would have resulted in an underestimate of the number of people who should have been tested. Finally, the survey questions queried respondents about sensitive topics (e.g., sexual behavior during a period of recommended social distancing) and specific dates that events occurred. Thus, our findings are subject to social desirability bias and recall bias, respectively.

In conclusion, STI testing during the COVID-19 pandemic has been low among young people who should have been tested for STIs. These findings underscore the potential for increases in reproductive tract sequelae, and also implicate the need to carefully interpret STI

case counts and consider the role of limited access to STI testing when examining STI trends during the pandemic. At the same time, the COVID-19 pandemic has also highlighted the opportunity to explore the expansion of at-home STI testing services to a broad population who may now be more accustomed to at-home healthcare services (e.g., telehealth).

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## Tables and Figures

**Table 1.** Demographics of cisgender women and cisgender men participating in internet survey, October – November 2020, King County, WA (N = 1,368)

| | Total (N = 1,368) | Cisgender Women (n = 766) | MSW[1] (n = 406) |
|---|---|---|---|
| | N (%) | n (%) | n (%) |
| **Age** | | | |
| 16 – 24 | 333 (24.3) | 204 (26.6) | 86 (21.2) |
| 25 – 29 | 354 (25.9) | 221 (28.9) | 80 (19.7) |
| 30 – 34 | 343 (25.1) | 166 (21.7) | 117 (28.8) |
| 35 – 39 | 338 (24.7) | 175 (22.8) | 123 (30.3) |
| **Race[2]** | | | |
| White | 994 (72.7) | 550 (71.8) | 293 (72.2) |
| Black | 84 (6.1) | 53 (6.9) | 21 (5.2) |
| Asian | 223 (16.3) | 128 (16.7) | 70 (17.2) |
| American Indian or Alaska Native | 27 (2.0) | 14 (1.8) | 6 (1.5) |
| Native Hawaiian or Pacific Islander | 29 (2.1) | 15 (2.0) | 9 (2.2) |
| Middle Eastern or North African | 23 (1.7) | 18 (2.3) | 3 (0.7) |
| **Ethnicity** | | | |
| Hispanic/Latinx | 154 (11.3) | 91 (11.9) | 39 (9.6) |
| Non-Hispanic/Latinx | 1214 (88.7) | 675 (88.1) | 367 (90.4) |
| **Place of birth** | | | |
| United States (US) | 1070 (78.2) | 608 (79.4) | 309 (76.1) |
| Outside the US | 173 (12.6) | 100 (13.1) | 55 (13.5) |
| *Missing* | *125 (9.1)* | *58 (7.6)* | *42 (10.3)* |
| **Education[3]** | | | |
| < High School | 40 (2.9) | 19 (2.5) | 14 (3.4) |
| High School or GED | 479 (35.0) | 273 (35.6) | 140 (34.5) |
| 4-Year College Degree | 491 (35.9) | 272 (35.5) | 148 (36.5) |
| > 4-Year College Degree | 348 (25.4) | 198 (25.8) | 100 (24.6) |
| **Income ($)** | | | |
| 0 - 19,999 | 144 (10.5) | 83 (10.8) | 40 (9.9) |
| 20,000 - 39,999 | 178 (13.0) | 107 (14.0) | 37 (9.1) |
| 40,000 - 74,999 | 267 (19.5) | 165 (21.5) | 66 (16.3) |
| ≥ 75,000 | 578 (42.3) | 303 (29.6) | 208 (51.2) |
| *Missing* | *201 (14.7)* | *108 (14.1)* | *55 (13.5)* |

| | | | |
|---|---|---|---|
| **Gender & gender of sexual partners** | | | |
| Cisgender women | 766 (56.0) | 766 (100) | -- |
| Cisgender men | 505 (36.9) | -- | -- |
| Men who have sex with women[1] | 406 (29.7) | -- | 406 (100) |
| Men who have sex with men[4] | 82 (6.0) | -- | -- |
| Transgender men or non-binary AFAB[5] | 68 (5.0) | -- | -- |
| Transgender women or non-binary AMAB[6] | 17 (1.2) | -- | -- |

[1]Cisgender men who have sex with cisgender women, excluding those who also have sex with cisgender men
[2]Race was collected in a question where respondents were instructed to “select all that apply”, thus each racial category is not mutually exclusive, and the groups will not total to 100%
[3]Highest completed education. Those who have completed a 2-year associates degree are grouped with those who have completed high school.
[4]Cisgender men who have sex with cisgender men
[5]Assigned female at birth
[6]Assigned male at birth

**Table 2.** Percent of respondents who received STI testing[1] among all respondents and those in need of STI testing, by respondent gender, King County, WA, October – November 2020 (N = 1,368)

| | Among all respondents (N = 1,368) | Among respondents in need of STI testing[2] (N = 922) |
|---|---|---|
| **Population** | **n/N (%)** | **n/N (%)** |
| Cisgender women | 117/766 (15.3) | 54/461 (11.7) |
| MSW[3] | 31/406 (7.6) | 19/321 (5.9) |
| MSM[4] | 27/82 (32.9) | 18/59 (30.5) |
| Transgender men or non-binary AFAB[5] | 12/68 (17.6) | 5/49 (10.2) |
| Transgender women or non-binary AMAB[6] | 6/17 (35.3) | 3/12 (25.0) |

[1]STI testing was defined as testing for chlamydia, gonorrhea, or syphilis, and did not include testing for HIV or hepatitis.
[2]Those in need of STI testing is defined as anyone who has been sexually active within the last year and had a new sex partner and/or has had multiple partners since March 2020 or since their most recent STI test.
[3]Cisgender men who have sex with cisgender women, excluding those who also have sex with cisgender men
[4]Cisgender men who have sex with cisgender men
[5]Assigned female at birth
[6]Assigned male at birth

**Table 3.** Attempts to get STI testing[1], and reasons for not testing among cisgender women and MSW who did not get tested for STIs since March 2020, King County, WA, October – November 2020 (N = 1,172)

| | Among all respondents | | Among respondents in need of STI testing[2] | |
|---|---|---|---|---|
| | Cisgender Women (n = 766) | MSW[3] (n = 406) | Cisgender Women (n = 461) | MSW[3] (n = 321) |
| **Planned or tried to get tested since March 2020** | | | | |
| No | 563 (86.7) | 317 (84.5) | 344 (84.5) | 253 (83.8) |
| Yes, planned but did not get tested | 71 (10.9) | 43 (11.5) | 57 (14.0) | 38 (12.6) |
| Yes, tried but was unable | 9 (1.4) | 13 (3.5) | 5 (1.2) | 10 (3.3) |
| **Reason for not testing[4, 5]** | | | | |
| STI testing not available for those without symptoms | 10 (12.5) | 19 (33.9) | 5 (8.1) | 15 (31.2) |
| Did not want to go to a facility to get tested | 29 (36.2) | 15 (26.8) | 23 (37.1) | 12 (25.0) |
| Too busy | 34 (42.5) | 21 (37.5) | 30 (48.4) | 20 (41.7) |
| Changed mind | 5 (6.2) | 6 (10.7) | 4 (6.5) | 5 (10.4) |
| No insurance coverage for STI testing or uninsured | 5 (6.2) | 5 (8.9) | 3 (4.8) | 5 (10.4) |
| Other | 12 (15.0) | 1 (1.8) | 10 (16.1) | 1 (1.2) |
| **Interest in at-home STI test kit** | | | | |
| Prefer over clinic visit | 174 (26.8) | 105 (28.0) | 123 (30.2) | 81 (26.8) |
| Interested only if unable to visit clinic | 79 (12.2) | 46 (12.3) | 54 (13.3) | 38 (12.6) |
| Not interested | 39 (6.0) | 26 (6.9) | 22 (5.4) | 24 (7.9) |
| Do not need STI testing right now | 322 (49.6) | 174 (46.4) | 183 (45.0) | 139 (46.0) |
| Not sure | 34 (5.2) | 20 (5.3) | 24 (5.9) | 16 (5.3) |

[1]STI testing was defined as testing for chlamydia, gonorrhea, or syphilis, and did not include testing for HIV or hepatitis.
[1]Those in need of STI testing is defined as anyone who has been sexually active within the last year and had a new sex partner and/or has had multiple partners since March 2020 or their most recent STI test, whichever was earlier.
[3]Cisgender men who have sex with cisgender women, excluding those who have sex with cisgender men
[4]Responses are not mutually exclusive. Respondents were instructed to select all that apply.
[5]Question was only asked of those who responded that they either planned or tried to get tested since March 2020.

**Table 4.** Proportion of STI testing[1] among cisgender women and MSW[2] who were in need of STI testing[3], across sociodemographic factors, King County, WA, October – November 2020 (N = 782)

| | Cisgender Women (n = 461) | MSW[2] (n = 321) |
|---|---|---|
| | Prevalence of STI Testing (n/N[4] (%)) | |
| **Overall** | **54/461 (11.7)** | **19/321 (5.9)** |
| **Race[5]** | | |
| White | 37/307 (12.1) | 16/288 (7.0) |
| Black | 7/38 (18.4) | 1/10 (10.0) |
| Asian | 7/90 (7.8) | 3/60 (5.0) |
| Another race not listed | 5/38 (13.2) | 0/1 (0.0) |
| **Ethnicity** | | |
| Hispanic/Latinx | 8/52 (15.4) | 1/35 (2.9) |
| Non-Hispanic/Latinx | 46/409 (11.2) | 18/286 (6.3) |
| **Place of birth** | | |
| United States | 47/355 (13.2) | 14/243 (5.8) |
| Outside the US | 7/73 (9.6) | 3/48 (6.2) |
| **Income** | | |
| < 39,999 | 21/118 (17.8) | 4/60 (6.7) |
| ≥ 40,000 | 31/279 (11.1) | 13/222 (5.9) |
| **Age** | | |
| 16 – 24 | 16/130 (12.3) | 3/71 (4.2) |
| 25 – 34 | 28/230 (12.2) | 8/148 (5.4) |
| 35 – 39 | 10/101 (9.9) | 8/102 (7.8) |

[1]STI testing was defined as testing for chlamydia, gonorrhea, or syphilis, and did not include testing for HIV or hepatitis.
[2]Cisgender men who have sex with cisgender women, excluding those who also have sex with cisgender men.
[3]Those in need of STI testing is defined as anyone who has been sexually active within the last year and had a new sex partner and/or has had multiple partners since March 2020 or since their most recent STI test.
[4]n/N represents the number who were tested out of the number in the given sub-population. For example, out of a total 307 white cisgender women who were in need of testing, 37 were tested for STIs since March 2020.
[5]Categories are not mutually exclusive. Respondents were asked to select all that apply.