

## Gay Community Periodic Survey: Queensland 2020

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2020

# Gay Community Periodic Survey

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# Glossary

**ART** antiretroviral treatment

**CAIC** condomless anal intercourse with casual partners

**CAIR** condomless anal intercourse with regular partners

**Cisgender** a term used to describe people whose gender identity matches the sex they were assigned at birth

**HIV** human immunodeficiency virus

**HIV status** a person's antibody status established by HIV testing, e.g. HIV-negative, HIV-positive, or unknown (untested)

**Non-binary** an umbrella term for any number of gender identities that sit within, outside of, across or between the spectrum of the male and female binary

**Non-HIV-positive** HIV-negative and untested/unknown status

**PEP** post-exposure prophylaxis—a course of antiretroviral drugs used to reduce the risk of HIV infection after potential exposure has occurred

**PrEP** pre-exposure prophylaxis—antiretroviral drugs used to reduce the risk of HIV infection before a potential exposure

**Seroconcordant** a relationship in which both partners are of the same HIV status, either HIV-positive or HIV-negative

**Serodiscordant** a relationship in which both partners are known (as a result of testing) to be of different HIV status, e.g. HIV-positive and HIV-negative

**Serononconcordant** a relationship in which the HIV status of at least one partner in the relationship is not known, e.g. HIV-positive and untested, HIV-negative and untested, or both untested

**Serosorting** choosing a sexual partner who shares the same HIV status

**STI** sexually transmissible infection

**Transgender** an umbrella term that describes people who identify their gender as different to what was assigned to them at birth

# Executive summary

## Background

The Queensland Gay Community Periodic Survey is a cross-sectional survey of gay and homosexually active men. The major aim of the survey is to provide data on sexual, drug use and testing practices related to the transmission of HIV and other sexually transmissible infections (STIs) among gay men. The most recent survey was conducted in September-December 2020 in the time period usually associated with Brisbane Pride and Cairns Tropical Pride (both festivals were disrupted or cancelled due to COVID-19). The survey is conducted annually. While participants are typically recruited face-to-face from a range of gay community sites across Queensland, in 2020, the survey was conducted solely online due to COVID-19 restrictions.

The COVID-19 pandemic emerged in the first half of 2020 and led to various health, social and economic impacts, including periods of government-mandated restrictions on freedom of movement, businesses and public gatherings. Because of this, the 2020 questionnaire included additional questions about participants' experiences of COVID-19 and how COVID-19 might have affected their HIV and STI-related behaviour.

Since 1997, the project has been funded by the Queensland Department of Health. The Centre for Social Research in Health coordinates the survey, with support from the Kirby Institute. In 2020, the Queensland Council for LGBTI Health (formerly the Queensland AIDS Council) conducted local advertising and promotion of the online survey rather than face-to-face recruitment. Queensland Positive People also support the survey through the project reference group and promotion of the survey.

## Respondents and recruitment

A total of 1,250 men participated in the 2020 survey. The response rate for online recruitment was 73.2%. Online advertising was mainly conducted through the social networking site Facebook. Advertisements were targeted to all men aged 16 and above who were resident in Queensland and whose Facebook profiles indicated any LGBTI related interests, such as 'same sex relationship', 'gay friendly', 'LGBT social movements', or 'LGBT culture'. Additional advertising of the online survey was placed in gay venues (using QR codes). Potential participants were directed to the study website (<http://gcpsonline.net>), which provided additional information about the study and links to the online version of the questionnaire.

## Key points

- The proportion of participants who reported ever being tested for HIV remained stable at 85% in 2020.
- The proportion of non-HIV-positive participants who reported an HIV test in the previous 12 months fell between 2019 and 2020 (to 63% in 2020). This is likely due to COVID-19.
- Similarly, the frequency of HIV testing fell between 2019 and 2020, with 20% of non-HIV-positive participants in the 2020 survey reporting three or more HIV tests in the previous year. Higher frequency testing remained concentrated among HIV-negative participants on pre-exposure prophylaxis (PrEP), with 75% of PrEP users reporting three or more HIV tests in the previous year compared to 7% of non-HIV-positive participants not on PrEP.
- The proportion of HIV-positive participants who were on HIV treatment remained stable at 98% in 2020. Among these participants, 97% reported an undetectable viral load.
- Mobile apps remained the most common way of meeting male sex partners in 2020, reported by 40% of participants.
- The proportion of participants with regular partners who reported any condomless anal intercourse with those partners (CAIR) increased to 74% in 2020.

- The proportion of participants with casual partners who reported any condomless anal intercourse with those partners (CAIC) increased to 63% in 2020. This increase is associated with the rapid uptake of PrEP.
- The proportion of non-HIV-positive participants using PrEP has increased over time but fell between 2019 and 2020 to 21%. This is likely due to COVID-19.
- The most common way to obtain PrEP in 2020 was from a chemist (84%), followed by buying it online from overseas (7%).
- PrEP remains the most commonly used HIV risk reduction strategy with casual male partners in Queensland.

## Demographic profile

As in previous surveys, the majority of the sample had an Anglo-Australian background (80.6%) and were born in Australia (81.1%). The most common overseas locations from which participants originated were high-income English-speaking countries (8.6%), followed by Asia (2.6%), Europe (1.6%) and Central/South America (0.9%). Among those born overseas (n=236), most had been living in Australia for more than five years (81.8%), with smaller proportions having lived in Australia for between two and five years (11.4%) or less than two years (6.8%).

In 2020, nearly half the participants lived in Greater Brisbane (47.1%), and had a university degree (43.1%). Most were in full-time employment (52.4%) and identified as gay (81.8%). Since 2016, the proportions of participants who had an Anglo-Australia background and who identified as bisexual have increased, while the proportions who had a university degree or identified as gay decreased. In 2020, 4.5% of the sample reported an Aboriginal or Torres Strait Islander background. The proportion of Aboriginal or Torres Strait Islander participants in the survey has remained stable over the last five years (Table 2).

In 2020, the majority of participants indicated that they were cisgender men (96.1%) with a small number of participants identifying as transgender (n=20, 1.6%) or non-binary (n=23, 1.8%; Table 2).

Between 2016 and 2020, the proportion of participants aged under 25 years decreased (from 21.8% to 15.9%) while the proportion of participants aged 50 and over increased (from 18.4% to 29.6%). The proportions of participants in the other age categories remained stable (Table 3).

## COVID-19

The 2020 survey was conducted in the context of continuing COVID-19 restrictions (although they had eased in Queensland since the first half of the year). We expected that a significant number of participants would have experienced disruptions to their employment or income, ability to socialise or travel, and capacity to meet sexual partners or engage with sexual health services because of the pandemic and related restrictions. COVID-19 is therefore likely to have influenced many of the key variables measured in the survey in 2020.

Nearly a quarter of participants (25.9%) reported that they had lost income or their job because of COVID-19, and 42.0% reported that COVID-19 had reduced the number of male sex partners they had had in the six months prior to the survey.

A third of participants (34.9%) reported having been tested for COVID-19. The majority of participants (87.0%) reported engaging in physical distancing (staying at home or avoiding contact with other people) during the six months prior to the survey as a result of COVID-19.

## HIV testing, status and treatment

In 2020, most participants (84.9%) reported ever having an HIV test, which has remained stable since 2016. Among non-HIV-positive participants, 62.7% reported having an HIV test in the 12 months prior to the 2020 survey. This proportion had been largely stable but fell markedly between 2019 and 2020 (Table 4), which is likely due to COVID-19.

In 2020, the most common place non-HIV-positive participants reported having their last test for HIV was a general practice (56.5%), followed by a sexual health clinic/hospital (31.7%). Among non-HIV-positive participants in 2020, 7.4% reported that their last test was at a community-based service. Between 2016-2020, the proportions of non-HIV-positive participants who tested at a general practice or somewhere else increased, while the proportion of non-HIV-positive participants who tested at a sexual health clinic/hospital decreased (Table 5).

The frequency of HIV testing had been increasing gradually over time, but fell between 2019 and 2020, with one-fifth of non-HIV-positive men (20.3%) reporting three or more HIV tests in the 12 months prior to the 2020 survey (compared with 33.9% in 2019; Table 6). Higher frequency testing remains concentrated among HIV-negative participants taking pre-exposure prophylaxis (PrEP), 75.0% of whom reported three or more HIV tests in the 12 months prior to the 2020 survey (compared with 6.6% of non-HIV-positive participants not on PrEP; Table 6).

Of the participants who had been tested, the majority (89.9%) reported that they were HIV-negative, which was an increase from 86.4% in 2019, although the proportion of HIV-negative participants has largely remained stable between 2016 and 2020. The proportion of participants who reported that they were HIV-positive decreased from 12.1% in 2019 to 9.0% in 2020, but was also stable between 2016 and 2020. A small proportion (1.1%) reported that they did not know their HIV status (Table 7).

In 2020, almost all HIV-positive participants reported taking combination antiretroviral treatment at the time of the survey (97.9%), which has remained stable since 2016 (Table 8). Almost all HIV-positive participants on treatment in 2020 reported an undetectable viral load (96.7%). This proportion has remained stable since 2016 (Table 9). The proportion of HIV-positive men who reported attending at least three clinical appointments in the 12 months before the survey remained stable at 51.1% in 2020, so it appears that COVID-19 did not affect HIV treatment or participation in care by HIV-positive participants.

## Sexual partnerships and practices

At the time of the 2020 survey just under one in seven participants reported having casual partners only (14.9%). There were larger proportions of participants who reported being in monogamous relationships (32.3%) or having both regular and casual male partners (27.7%). A quarter of the sample (25.0%) reported having no sexual relationships with men at the time of the survey. Between 2016 and 2020, the proportion of participants who had regular partners only increased (from 24.7% to 32.3%), while the proportion who had casual partners only decreased (from 24.0% to 14.9%; Table 10), which may reflect changes in sexual behaviour due to COVID-19 e.g. fewer casual sex partners while restrictions were in place.

The proportion of HIV-positive participants who reported more than 20 different male sex partners was relatively stable, and then decreased markedly between 2019 and 2020 from 20.5% to 6.3%, most likely due to COVID-19 (Table 11). Over the five year period, the proportion of HIV-positive participants who reported no male sex partners remained stable (Table 11). The proportion of HIV-negative participants on PrEP who reported more than 20 different male sex partners has declined from 2016 to 2020 with a marked decline particularly from 2019 to 2020 from 21.8% to 10.5%. The proportion of PrEP users who reported 2-5 different partners increased from 14.4% in 2016 to 37.7% in 2020 while the proportion who reported 6-20 partners remained stable (Table 11). The proportion of non-HIV-positive participants not on PrEP who reported having 6-20 different male sex partners has declined from 2016 to 2020 with a marked decline particularly from 2019 to 2020 from 14.0% to 7.0%. Similarly, the proportion of non-HIV positive participants not on PrEP who reported more than 20 different partners decreased from 6.1% in 2016 to 2.1% in 2020 (Table 11). It appears that non-HIV-positive participants

who report a higher number of male sex partners are increasingly taking PrEP. It should be noted, however, that in the 2020 survey 42.0% of participants reported that they had had fewer male sex partners in the previous six months than they had prior to the COVID-19 pandemic.

In 2020, mobile applications were the most common way that participants in Queensland met male sex partners (39.2%), followed by the internet (24.0%), gay saunas/sex venues (12.2%), and beats (10.3%). Other common methods included meeting while travelling in Australia (9.8%) and at gay bars (6.6%). Between 2016 and 2020, there were decreases in the proportions of participants who reported meeting male partners through most methods listed above, with more recent changes likely to have been accentuated by COVID-19 restrictions (Table 12).

In 2020, 22.8% of participants reported any group sex in the six months prior to the survey. This had been stable since 2016, but decreased significantly from 32.8% in 2019, which is likely due to COVID-19 (Table 26). A small proportion of participants (3.2%) said they had been paid for sex at least once in the 6 months prior to the 2020 survey. The proportion of participants reporting sex work has remained stable since 2016.

## Regular male partners

Among participants with regular partners in the six months prior to the 2020 survey, 62.5% reported an agreement with their regular partner about sex within the relationship and nearly 6 out of 10 (58.9%) reported an agreement about sex outside the relationship. In 2020, the most commonly held agreements about sex within a relationship specified that anal intercourse could occur without a condom (50.1%), or that condoms must always be used for anal intercourse (7.5%). Between 2016 and 2020, the proportion of participants in relationships who reported an agreement that anal intercourse could occur without a condom increased, with a marked increase from 2019 to 2020 (36.9% to 50.1%) likely due to COVID-19. The proportion who reported that condoms must always be used for anal intercourse within the relationship decreased (from 14.7% in 2016 to 7.5% in 2020; Table 13).

The most commonly held agreements about sex outside a relationship were that casual sex was not allowed (30.1%) or that condoms must always be used for anal intercourse with casual partners (14.4%). The proportion of participants reporting agreements that allowed condomless sex with casual partners increased from 6.7% in 2016 to 12.5% in 2020. The proportion of participants who reported that condoms must always be used for anal intercourse with casual partners decreased from 2016 to 2020 (20.2% to 14.4%; Table 14). The proportion of participants who had no agreement about casual sex had previously been increasing from 2016 but then decreased between 2019 and 2020 (from 53.1% to 41.1%). Between 2019 and 2020, there was a jump in the proportion of participants who reported an agreement that said no casual sex was allowed (from 19.5% in 2019 to 30.1% in 2020), likely due to COVID-19.

Among HIV-positive participants who had regular partners in the six months prior to the 2020 survey, 35.0% were in a seroconcordant relationship, 40.0% reported being in a serodiscordant relationship, and the remainder (25.0%) reported being in a serononconcordant relationship. Between 2016 and 2020, all these proportions remained stable (Table 15).

Compared with HIV-positive participants, HIV-negative participants with regular partners were more likely to be in seroconcordant relationships. In 2020, 76.1% of HIV-negative participants with regular partners were in seroconcordant relationships and 20.2% reported being in a serononconcordant relationship. In 2020, 3.7% of HIV-negative participants with a regular partner reported being in a serodiscordant relationship. The proportions of HIV-negative participants in each of these relationship types remained stable between 2016 and 2020 (Table 15).

In 2020, 73.8% of participants with a regular partner reported any condomless anal intercourse (CAIR) with their partner in the six months prior to the survey, while less than one fifth reported having no anal intercourse with their regular partner (18.2%). The proportion of participants who reported always using condoms for anal intercourse with their regular partner decreased from 17.9% in 2016 to 7.9% in 2020. The proportion reporting any

CAIR increased between 2016 and 2020 (from 62.0% to 73.8%). The proportion of participants reporting CAIR is the highest recorded in the Queensland surveys (Table 16), but should be understood in the context of rising PrEP use, a greater understanding of the benefits of undetectable viral load for HIV prevention, and a focus on sex with regular partners (and less casual sex) during COVID-19 restrictions.

Among participants who had HIV-negative regular partners in the six months prior to the 2020 survey (n=541), 19.6% reported that those partners were on PrEP. Among participants who had HIV-positive regular partners in the six months prior to the 2020 survey (n=49), 87.8% reported that those partners had an undetectable viral load, with the remainder indicating they did not know their partner's viral load (2.0%) or he had a detectable viral load (10.2%). The proportion of participants whose HIV-positive regular partners had an undetectable viral load has remained stable since 2016.

## Casual male partners

In 2020, more than three-fifths of participants with casual partners (63.0%) reported any condomless anal intercourse with casual partners (CAIC) in the six months prior to the survey, and less than one fifth (18.9%) reported consistent condom use. Between 2016 and 2020, the proportion of participants reporting any CAIC increased (from 45.2% to 63.0%), while the proportion who always used condoms for anal intercourse decreased (from 35.0% to 18.9%). The decline in condom use should also be understood in the context of rising PrEP use and a greater understanding of the benefits of undetectable viral load for HIV prevention.

Table 17 provides additional details about the HIV statuses of participants who engaged in CAIC and the use of antiretroviral-based prevention (specifically HIV-positive participants having an undetectable viral load through HIV treatment and HIV-negative participants taking PrEP). There has been a large increase in the proportion of participants with casual partners who are HIV-negative, on PrEP and report CAIC (from 7.3% of participants with casual partners in 2016 to 27.4% in 2020). This reflects the increase in availability and use of PrEP, particularly since its listing on the Pharmaceutical Benefits Scheme in April 2018. HIV-positive participants who had an undetectable viral load and reported CAIC represented 7.9% of participants with casual partners in 2020 which has remained stable since 2016. In 2020, nearly three-quarters of participants with casual partners (72.4%) reported HIV prevention coverage or safe sex (i.e. avoiding anal sex, consistent condom use, PrEP, or undetectable viral load), which is an increase from 68.6% in 2016. The proportion of participants reporting the highest risk practice for HIV transmission (HIV-negative and untested participants not on PrEP engaging in receptive CAIC) decreased from 20.5% in 2016 to 17.2% in 2020.

In 2020, HIV-positive participants with casual partners remained the most likely to report any CAIC (79.3%), followed by HIV-negative participants (62.8%) and untested/unknown status participants (50.0%). Between 2016 and 2020, the proportions of HIV-positive, HIV-negative, and untested/unknown participants reporting CAIC all increased (Table 18).

In 2020, disclosure of HIV status before sex to casual partners continued to be more commonly reported by HIV-negative participants (69.6%) than by HIV-positive participants (67.2%). HIV-positive participants were less likely than HIV-negative participants to report disclosure from their casual partners in 2020 (62.1% and 69.8% respectively). Between 2016 and 2020, the proportions of HIV-negative and HIV-positive participants who disclosed their HIV status before sex to any casual partner remained stable (Table 19).

Among HIV-positive participants who reported CAIC in the six months prior to the 2020 survey (n=46), the most commonly used strategy to prevent HIV transmission was having an undetectable viral load (87.0%). More than one-third (39.1%) said that they frequently made sure that their partners were on PrEP before CAIC, and 23.9% ensured that their partners were HIV-positive before CAIC (serosorting). Smaller proportions of HIV-positive participants reported frequently taking the receptive role during CAIC (strategic positioning; 13.0%) or frequently withdrawing before ejaculation (2.2%). As undetectable viral load has become the most commonly used risk reduction strategy by HIV-positive participants who have CAIC, the proportion of HIV-positive participants who said they frequently relied on serosorting before CAIC has decreased significantly, from 31.3% in 2016 to 23.9% in 2020 (Table 20).

Among HIV-negative participants who reported CAIC in the six months prior to the 2020 survey (n=287), the most common HIV risk reduction practice was serosorting (60.6%), followed by taking PrEP before sex (53.3%) and knowing their partners were on PrEP before sex (53.3%). Smaller proportions of HIV-negative participants reported ensuring that HIV-positive partners had an undetectable viral load before sex (14.6%), taking the insertive role during nonconcordant CAIC (strategic positioning; 16.7%), or that their casual partners withdrew before ejaculation (6.6%). The proportions of HIV-negative participants who had CAIC and took PrEP or whose casual partners were on PrEP increased between 2016 and 2020. Over the same time period, the proportions of HIV-negative participants who had CAIC and reported strategic positioning or frequent withdrawal before ejaculation decreased, while the proportions who reported frequent serosorting or having HIV-positive casual partners with an undetectable viral load remained stable (Table 20).

## Sexual health

As in previous surveys, in 2020 a higher proportion of HIV-positive participants reported having had any sexual health test (including blood tests) in the 12 months prior to the survey (86.3%; Table 21), compared with HIV-negative participants (71.0%; Table 22).

The proportion of HIV-positive participants reporting each type of STI test (anal swab, throat swab, urine sample and blood tests) remained stable between 2016 and 2020, as did the proportion of HIV-positive men reporting any STI test (Table 21). The proportion of HIV-negative participants reported a blood test for syphilis had been increasing since 2016 but then decreased significantly between 2019 and 2020 (from 70.3% to 55.2%). While the proportion who received a blood test for other STIs increased from 58.6% in 2016 to 63.2% in 2020, this was a fall in the level of testing from 2019 (67.7%). The proportion of HIV-negative participants who reported having an anal swab, throat swab or urine sample had previously been increasing since 2016, but then decreased significantly from 2019 to 2020 likely due to COVID-19 (Table 22).

In 2020, one-eighth of participants (13.6%) reported an STI diagnosis in the 12 months prior to the survey. The most commonly diagnosed STI was chlamydia (7.7%), followed by gonorrhoea (6.5%). Smaller proportions of participants reported being diagnosed with syphilis (3.2%) or another STI (1.9%). The proportions of participants reporting chlamydia and gonorrhoea diagnoses decreased between 2017 and 2020. The proportions who reported syphilis and other STI diagnoses remained stable, as did the proportion who reported any STI diagnosis (Table 23). We note that there were significant decreases in all STI diagnoses from the previous year, nearly half the previous levels of STIs, which is likely due to the reduced number of sexual partners and lower testing frequency during COVID-19 restrictions.

We examined how STI diagnoses varied by HIV status, PrEP use and sexual behaviour. In 2020, 30.1% of HIV-positive participants, 35.1% of HIV-negative participants on PrEP and 6.3% of HIV-negative and untested participants not on PrEP reported a diagnosis with any STI other than HIV. In 2020, 31.4% of participants who had engaged in CAIC in the six months prior to the survey reported an STI diagnosis, compared with 6.0% of participants who had not engaged in CAIC. STI diagnoses remain concentrated among HIV-negative participants on PrEP (who typically engage in higher frequency STI testing) and participants who engage in condomless sex with casual partners (a higher risk practice for STI transmission).

In 2020, two-thirds of participants reported having been tested for hepatitis C (66.7%). Among them, the large majority reported that they did not have hepatitis C (97.7%) and 1.7% said they had hepatitis C. In 2020, three-quarters of participants had been vaccinated for hepatitis A (73.0%) and a slightly larger proportion (77.3%) had been vaccinated for hepatitis B, with 69.8% of participants being vaccinated for both.

## Recreational drug use

Recreational drug use remains common within the sample, with the most frequently used drugs being amyl/poppers (30.8%), cannabis (28.9%), and Viagra (20.4%; Table 24). Between 2016 and 2020, there have been increases in the use of cocaine, Viagra and ketamine. Over that time, the use of ecstasy, crystal methamphetamine and amphetamine have declined. The use of amyl/poppers, cocaine and GHB were increasing from 2016, but then decreased between 2019 and 2020. Similarly, ecstasy use was stable from 2016, but then decreased between 2019 and 2020 (14.8% to 9.4%). The proportion of participants reporting no drug use in the six months prior to the survey had fallen from 2016 to 2019 but then increased from 2019 to 2020 (39.3% to 45.4%). The changes between 2019 and 2020 are likely to be due to COVID-19 restrictions. In general, HIV-positive participants remained more likely to report any drug use (76.8%) compared with HIV-negative participants (54.4%). Since 2016, the proportion of HIV-positive participants reporting any drug use has remained stable, as did the proportion of HIV-negative participants reporting any drug use.

The proportion of participants reporting any injecting drug use in the six months prior to the survey remained stable at 2.4% in 2020. HIV-positive participants remain considerably more likely than HIV-negative participants to report any injecting drug use (9.7% and 1.0% respectively; Table 25). In 2020, 11.9% reported using party drugs for sex in the six months prior to the survey. This has remained stable since 2016 (Table 26).

In 2020, one-third of participants reported having more than four drinks at least weekly (30.5%), nearly one-quarter said they had more than four drinks at least monthly (22.3%), and one-quarter (24.8%) said they had had more than four drinks once or twice in the previous six months. The proportion of participants who reported having had more than four drinks at least monthly decreased from 26.6% in 2016 to 22.3% in 2020, while those who never had more than four drinks in the previous six months increased from 17.4% in 2016 to 22.4% in 2020. All other proportions remained stable between 2016 to 2020.

## Knowledge and use of PEP and PrEP

In 2020, 75.0% of all participants reported knowing that post-exposure prophylaxis (PEP) was available. PEP awareness has increased over time, from 71.6% in 2016 to 75.0% in 2020 with a peak of 85.6% in 2019. There has been an even bigger increase in awareness of PrEP from 64.2% in 2016 to 86.6% in 2020 with a peak of 92.3% in 2019 (Table 27).

The proportion of non-HIV-positive participants who reported taking a prescribed course of PEP in the six months prior to the survey had been increasing since 2016 but then decreased between 2019 and 2020 (6.6% to 1.3%), likely due to COVID-19. The proportion of non-HIV-positive participants who reported using PrEP in the six months prior to the survey had been increasing to 33.0% in 2019, but decreased significantly to 21.2% in 2020, likely due to the impact of COVID-19 (Table 27).

Among participants who reported taking PrEP in the six months prior to the 2019 survey, the majority used it daily or most days (77.9%), with an increasing proportion (22.1%) using PrEP around the time of sex but not daily (on demand or event-based dosing). Among current and former PrEP users (n=308), 66.2% reported that COVID-19 did not affect their PrEP use, while 15.6% (n=48) reported that they took PrEP less often and 18.2% (n=56) reported that they stopped PrEP due to COVID-19. The most common way to obtain PrEP was from a chemist (84.1%), followed by buying it online from overseas (6.4%). Participants who obtained PrEP from a chemist are assumed to have received a prescription for PrEP from their doctor, reflecting the listing of PrEP on the Pharmaceutical Benefits Scheme in 2018.

## Reporting

Data are shown for the period 2016–2020. Each table includes the statistical significance (p-value), if any, of the change between 2019 and 2020 and the trend over time (2016–2020). An alpha level of .05 was used for all statistical tests. Changes between 2019 and 2020 were assessed with logistic regression (comparing one category with all the others). The p-value of the logistic regression test (if shown) indicates a statistically significant change within that category compared with all the others. For statistically significant trends over time, also tested with logistic regression, the direction of the change (an increase or decrease) is indicated. Where there is no significant change, ns (non-significant) is shown. Where there are low frequencies or data over time are not comparable, tests have not been performed and are marked NA (not applicable). Please exercise caution when interpreting results where there are low frequencies. When data are missing or were not collected in a given year, this is indicated in the table by a dash (–).

Table 1: Recruitment source

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
Fair Day	449 (24.7)	444 (21.4)	571 (31.3)	363 (20.5)	3 (0.2)	NA	NA
Sexual health clinics	81 (4.5)	238 (11.5)	210 (11.5)	303 (17.1)	23 (1.8)	NA	NA
Social venues	640 (35.2)	819 (39.4)	473 (25.9)	516 (29.1)	17 (1.4)	NA	NA
Sex-on-premises venues	122 (6.7)	145 (7.0)	63 (3.5)	67 (3.8)	0	NA	NA
Online	527 (29.0)	433 (20.8)	509 (27.9)	523 (29.5)	1,207 (96.6)	NA	NA
<b>Total</b>	<b>1,819 (100)</b>	<b>2,079 (100)</b>	<b>1,826 (100)</b>	<b>1,772 (100)</b>	<b>1,250 (100)</b>		

Note: In 2020, peer-led recruitment was not allowed at venues and events, due to COVID-19 restrictions. Participants shown as completing the survey at venues and events in 2020 responded to posters and flyers placed at those locations, and completed the questionnaire online.

Table 2: Demographics

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
Anglo-Australian	1,384 (76.5)	1,507 (72.5)	1,310 (73.0)	1,299 (74.2)	1,004 (80.6)	Increase <.001	Increase <.05
Aboriginal or Torres Strait Islander	77 (4.3)	112 (5.4)	84 (4.7)	77 (4.4)	56 (4.5)	ns	ns
<b>Total</b>	<b>1,810 (100)</b>	<b>2,079 (100)</b>	<b>1,794 (100)</b>	<b>1,750 (100)</b>	<b>1,246 (100)</b>		
Born in Australia	1,418 (78.1)	1,616 (78.1)	1,355 (74.5)	1,340 (75.7)	1,013 (81.1)	Increase <.001	ns
<b>Total</b>	<b>1,815 (100)</b>	<b>2,069 (100)</b>	<b>1,820 (100)</b>	<b>1,770 (100)</b>	<b>1,249 (100)</b>		
Lives in Greater Brisbane	971 (53.4)	1,189 (57.2)	1,126 (61.7)	1,021 (59.2)	575 (47.1)	Decrease <.001	ns
<b>Total</b>	<b>1,819 (100)</b>	<b>2,079 (100)</b>	<b>1,826 (100)</b>	<b>1,726 (100)</b>	<b>1,221 (100)</b>		
University educated	739 (40.8)	857 (41.5)	805 (44.2)	836 (47.3)	538 (43.1)	Decrease <.05	Decrease <.01
<b>Total</b>	<b>1,810 (100)</b>	<b>2,066 (100)</b>	<b>1,823 (100)</b>	<b>1,766 (100)</b>	<b>1,248 (100)</b>		
Full-time employed	1,027 (56.7)	1,246 (60.1)	1,064 (58.4)	1,058 (59.8)	654 (52.4)	Decrease <.001	ns
<b>Total</b>	<b>1,811 (100)</b>	<b>2,074 (100)</b>	<b>1,823 (100)</b>	<b>1,769 (100)</b>	<b>1,249 (100)</b>		
Gay identity	1,587 (87.4)	1,805 (87.2)	1,577 (86.6)	1,514 (85.6)	1,019 (81.8)	Decrease <.01	Decrease <.001
Bisexual identity	138 (7.6)	154 (7.4)	175 (9.6)	162 (9.2)	162 (13.0)	Increase <.01	Increase <.001
<b>Total</b>	<b>1,815 (100)</b>	<b>2,071 (100)</b>	<b>1,821 (100)</b>	<b>1,768 (100)</b>	<b>1,246 (100)</b>		
Cisgender <sup>1</sup>	1,762 (97.5)	2,003 (96.4)	1,761 (96.7)	1,689 (95.5)	1,201 (96.1)	ns	ns
Transgender <sup>1</sup>	32 (1.8)	34 (1.6)	33 (1.8)	32 (1.8)	20 (1.6)	ns	ns
Non-binary <sup>1</sup>	-	27 (1.3)	21 (1.2)	34 (1.9)	23 (1.8)	ns	ns
<b>Total</b>	<b>1,808 (100)</b>	<b>2,078 (100)</b>	<b>1,821 (100)</b>	<b>1,768 (100)</b>	<b>1,250 (100)</b>		

<sup>1</sup> Questions related to gender were altered from 2017 onwards; therefore, trends over time have been calculated from 2017 onwards.

Table 3: Age

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
Under 25	395 (21.8)	407 (19.7)	392 (21.6)	295 (16.7)	198 (15.9)	ns	Decrease <.001
25–29	291 (16.1)	363 (17.6)	344 (18.9)	312 (17.7)	163 (13.1)	Decrease <.01	ns
30–39	467 (25.8)	531 (25.7)	458 (25.2)	422 (23.9)	291 (23.3)	ns	ns
40–49	324 (17.9)	385 (18.6)	280 (15.4)	298 (16.9)	226 (18.1)	ns	ns
50 and over	332 (18.4)	381 (18.4)	343 (18.9)	436 (24.7)	370 (29.6)	Increase <.01	Increase <.001
<b>Total</b>	<b>1,809 (100)</b>	<b>2,067 (100)</b>	<b>1,817 (100)</b>	<b>1,763 (100)</b>	<b>1,248 (100)</b>		

Table 4: HIV testing

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
<b>All participants</b>							
Ever tested	1,583 (87.0)	1,796 (86.4)	1,650 (90.4)	1,631 (92.0)	1,061 (84.9)	Decrease <.001	ns
Total	1,819 (100)	2,079 (100)	1,826 (100)	1,772 (100)	1,250 (100)		
<b>Non-HIV-positive participants</b>							
Tested in previous 12 months	1,083 (77.5)	1,262 (78.0)	1,161 (77.8)	1,112 (77.8)	605 (62.7)	Decrease <.001	Decrease <.001
<b>Total</b>	<b>1,398 (100)</b>	<b>1,618 (100)</b>	<b>1,493 (100)</b>	<b>1,430 (100)</b>	<b>965 (100)</b>		

**Table 5: Where non-HIV-positive participants were last tested for HIV**

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
General practice	729 (52.5)	790 (49.1)	729 (49.4)	736 (51.8)	540 (56.5)	Increase <.05	Increase <.05
Sexual health clinic/hospital	510 (36.7)	656 (40.7)	588 (39.8)	492 (34.6)	303 (31.7)	ns	Decrease <.05
At home	9 (0.6)	11 (0.7)	14 (0.9)	9 (0.6)	8 (0.8)	NA	NA
Community-based service	117 (8.4)	124 (7.7)	120 (8.1)	163 (11.5)	71 (7.4)	Decrease <.01	ns
Somewhere else	24 (1.7)	29 (1.8)	25 (1.7)	22 (1.5)	33 (3.5)	Increase <.01	Increase <.05
<b>Total</b>	<b>1,389 (100)</b>	<b>1,610 (100)</b>	<b>1,476 (100)</b>	<b>1,422 (100)</b>	<b>955 (100)</b>		

Table 6: Number of HIV tests in the previous 12 months

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
<b>All non-HIV-positive participants</b>							
None	511 (31.3)	591 (31.1)	470 (28.2)	416 (26.5)	529 (45.8)	Increase <.001	Increase <.001
One	415 (25.4)	411 (21.6)	323 (19.4)	326 (20.8)	238 (20.6)	ns	Decrease <.01
Two	327 (20.0)	370 (19.4)	309 (18.5)	297 (18.9)	154 (13.3)	Decrease <.001	Decrease <.001
3 or more	380 (23.3)	531 (27.9)	565 (33.9)	532 (33.9)	234 (20.3)	Decrease <.001	ns
<b>Total</b>	<b>1,633 (100)</b>	<b>1,903 (100)</b>	<b>1,667 (100)</b>	<b>1,571 (100)</b>	<b>1,155 (100)</b>		
<b>HIV-negative participants on PrEP<sup>1</sup></b>							
None	1 (1.0)	2 (0.7)	1 (0.3)	2 (0.5)	2 (0.9)	NA	NA
One	3 (3.1)	11 (3.7)	8 (2.2)	19 (4.3)	18 (7.9)	NA	NA
Two	12 (12.2)	33 (11.0)	37 (9.9)	65 (14.8)	37 (16.2)	ns	Increase <.05
3 or more	82 (83.7)	253 (84.6)	326 (87.6)	354 (80.5)	171 (75.0)	ns	Decrease <.01
<b>Total</b>	<b>98 (100)</b>	<b>299 (100)</b>	<b>372 (100)</b>	<b>440 (100)</b>	<b>228 (100)</b>		
<b>Non-HIV-positive participants not on PrEP</b>							
None	394 (31.1)	449 (35.1)	401 (37.9)	355 (38.5)	494 (56.4)	Increase <.001	Increase <.001
One	359 (28.3)	337 (26.3)	272 (25.7)	261 (28.3)	210 (24.0)	Decrease <.05	ns
Two	269 (21.2)	289 (22.6)	217 (20.5)	183 (19.9)	114 (13.0)	Decrease <.001	Decrease <.001
3 or more	247 (19.5)	205 (16.0)	169 (16.0)	123 (13.3)	58 (6.6)	Decrease <.001	Decrease <.001
<b>Total</b>	<b>1,269 (100)</b>	<b>1,280 (100)</b>	<b>1,059 (100)</b>	<b>922 (100)</b>	<b>876 (100)</b>		

Note: This table only contains data from non-HIV-positive participants.

<sup>1</sup> From 2019, 'participants on PrEP' includes both regular (daily) and on demand (event-based) users. Prior to 2019, regular and on demand users could not be differentiated.

Table 7: HIV test result

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
HIV-positive	178 (11.3)	172 (9.6)	155 (9.4)	197 (12.1)	95 (9.0)	Decrease <.05	ns
HIV-negative	1,379 (87.3)	1,596 (89)	1,473 (89.3)	1,409 (86.4)	954 (89.9)	Increase <.01	ns
Unknown status	23 (1.5)	26 (1.4)	21 (1.3)	24 (1.5)	12 (1.1)	ns	ns
<b>Total</b>	<b>1,580 (100)</b>	<b>1,794 (100)</b>	<b>1,649 (100)</b>	<b>1,630 (100)</b>	<b>1,061 (100)</b>		

Note: This table only includes data from participants who have been tested for HIV.

Table 8: Use of combination antiretroviral treatment among HIV-positive participants

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
On treatment	170 (95.0)	165 (96.5)	149 (96.1)	182 (93.3)	92 (97.9)	ns	ns
<b>Total</b>	<b>179 (100)</b>	<b>171 (100)</b>	<b>155 (100)</b>	<b>195 (100)</b>	<b>94 (100)</b>		

Table 9: Undetectable viral load among HIV-positive participants using antiretroviral treatment

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
Undetectable viral load	157 (92.4)	159 (96.4)	144 (96.6)	173 (95.1)	89 (96.7)	ns	ns
<b>Total</b>	<b>170 (100)</b>	<b>165 (100)</b>	<b>149 (100)</b>	<b>182 (100)</b>	<b>92 (100)</b>		

Table 10: Current relationships with men

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
None	379 (21.4)	392 (19.4)	329 (18.5)	332 (19.2)	310 (25.0)	Increase <.001	ns
Casual only	424 (24.0)	442 (21.9)	407 (22.8)	398 (23.0)	185 (14.9)	Decrease <.001	Decrease <.001
Regular plus casual	529 (29.9)	642 (31.8)	565 (31.7)	575 (33.2)	344 (27.7)	Decrease <.01	ns
Regular only (monogamous)	436 (24.7)	546 (27.0)	481 (27.0)	425 (24.6)	401 (32.3)	Increase <.001	Increase <.01
<b>Total</b>	<b>1,768 (100)</b>	<b>2,022 (100)</b>	<b>1,782 (100)</b>	<b>1,730 (100)</b>	<b>1,240 (100)</b>		

Table 11: Number of different male sex partners in the six months prior to the survey, by HIV status of participants

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
<b>HIV-positive participants</b>							
None	30 (16.5)	24 (14.0)	24 (15.2)	28 (14.0)	26 (27.4)	Increase <.01	ns
One	25 (13.7)	26 (15.2)	25 (15.8)	31 (15.5)	16 (16.8)	ns	ns
2-5	38 (20.9)	38 (22.2)	39 (24.7)	53 (26.5)	22 (23.2)	ns	ns
6-20	52 (28.6)	42 (24.6)	49 (31.0)	47 (23.5)	25 (26.3)	ns	ns
More than 20	37 (20.3)	41 (24.0)	21 (13.3)	41 (20.5)	6 (6.3)	Decrease <.01	Decrease <.05
<b>Total</b>	<b>182 (100)</b>	<b>171 (100)</b>	<b>158 (100)</b>	<b>200 (100)</b>	<b>95 (100)</b>		
<b>HIV-negative participants on PrEP<sup>1</sup></b>							
None	2 (2.1)	7 (2.4)	11 (3.0)	12 (2.7)	14 (6.1)	Increase <.05	Increase <.05
One	4 (4.1)	18 (6.1)	19 (5.1)	34 (7.7)	28 (12.3)	ns	Increase <.01
2-5	14 (14.4)	72 (24.3)	90 (24.2)	118 (26.8)	86 (37.7)	Increase <.01	Increase <.001
6-20	41 (42.3)	115 (38.9)	162 (43.5)	180 (40.9)	76 (33.3)	ns	Ns
More than 20	36 (37.1)	84 (28.4)	90 (24.2)	96 (21.8)	24 (10.5)	Decrease <.01	Decrease <.001
<b>Total</b>	<b>97 (100)</b>	<b>296 (100)</b>	<b>372 (100)</b>	<b>440 (100)</b>	<b>228 (100)</b>		
<b>Non-HIV-positive participants not on PrEP</b>							
None	210 (16.7)	204 (16.2)	195 (18.5)	195 (21.2)	258 (29.5)	Increase <.001	Increase <.001
One	354 (28.2)	404 (32.0)	349 (33.1)	317 (34.5)	346 (39.5)	Increase <.05	Increase <.001
2-5	366 (29.2)	365 (28.9)	319 (30.2)	240 (26.1)	192 (21.9)	Decrease <.05	Decrease <.001
6-20	247 (19.7)	214 (17.0)	149 (14.1)	129 (14.0)	61 (7.0)	Decrease <.001	Decrease <.001
More than 20	77 (6.1)	75 (5.9)	43 (4.1)	38 (4.1)	18 (2.1)	Decrease <.05	Decrease <.001
<b>Total</b>	<b>1,254 (100)</b>	<b>1,262 (100)</b>	<b>1,055 (100)</b>	<b>919 (100)</b>	<b>875 (100)</b>		

1 From 2019, 'participants on PrEP' includes both regular (daily) and on demand (event-based) users. Prior to 2019, regular and on demand users could not be differentiated.

**Table 12: Where participants met their male sex partners in the six months prior to the survey**

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
Mobile app, e.g. Grindr	855 (47.0)	1026 (49.4)	959 (52.5)	919 (51.9)	490 (39.2)	Decrease <.001	Decrease <.05
Internet	601 (33.0)	675 (32.5)	551 (30.2)	550 (31.0)	300 (24.0)	Decrease <.001	Decrease <.001
Gay sauna/sex venue <sup>1</sup>	416 (22.9)	499 (24.0)	389 (21.3)	415 (23.4)	153 (12.2)	Decrease <.001	Decrease <.001
Beat	244 (13.4)	304 (14.6)	267 (14.6)	252 (14.2)	129 (10.3)	Decrease <.01	ns
Travelling in Australia <sup>2</sup>	402 (22.1)	436 (21.0)	321 (17.6)	281 (15.9)	123 (9.8)	Decrease <.001	Decrease <.001
Gay bar	390 (21.4)	500 (24.1)	413 (22.6)	406 (22.9)	83 (6.6)	Decrease <.001	Decrease <.001
Private sex parties	123 (6.8)	147 (7.1)	108 (5.9)	124 (7.0)	57 (4.6)	Decrease <.01	Decrease <.05
Overseas	268 (14.7)	310 (14.9)	356 (19.5)	329 (18.6)	56 (4.5)	Decrease <.001	Decrease <.001
Sex workers	51 (2.8)	70 (3.4)	49 (2.7)	69 (3.9)	47 (3.8)	ns	ns
Dance party	141 (7.8)	203 (9.8)	204 (11.2)	212 (12.0)	38 (3.0)	Decrease <.001	ns
<b>Total (not mutually exclusive)</b>	<b>1,819</b>	<b>2,079</b>	<b>1,826</b>	<b>1,772</b>	<b>1,250</b>		

1 Prior to 2018, the questionnaire listed gay saunas and sex venues as separate items. They have been combined here.

2 Prior to 2018, the questionnaire listed meeting men 'In other Australian cities' and 'Elsewhere in Australia' as separate items. They have been combined here.

**Table 13: Agreements with regular male partners about sex *within* the relationship**

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
No agreement about sex within the relationship	548 (46.6)	687 (48.4)	619 (49.6)	585 (49.9)	307 (37.5)	Decrease <.001	Decrease <.05
No sex within the relationship permitted	41 (3.5)	46 (3.2)	38 (3.0)	28 (2.4)	22 (2.7)	ns	ns
No anal intercourse permitted	26 (2.2)	26 (1.8)	22 (1.8)	27 (2.3)	18 (2.2)	ns	ns
Anal intercourse permitted only with a condom	173 (14.7)	163 (11.5)	121 (9.7)	99 (8.4)	61 (7.5)	ns	Decrease <.001
Anal intercourse permitted without a condom	388 (33.0)	498 (35.1)	448 (35.9)	433 (36.9)	410 (50.1)	Increase <.001	Increase <.001
<b>Total</b>	<b>1,176 (100)</b>	<b>1,420 (100)</b>	<b>1,248 (100)</b>	<b>1,172 (100)</b>	<b>818 (100)</b>		

Note: This table only includes data from participants who reported that they had a regular male partner in the six months prior to the survey.

**Table 14: Agreements with regular male partners about sex *outside* the relationship**

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
No agreement about casual sex	574 (48.8)	739 (52.0)	638 (51.1)	622 (53.1)	336 (41.1)	Decrease <.001	Decrease <.05
No sex with casual partners permitted	252 (21.4)	300 (21.1)	262 (21.0)	229 (19.5)	246 (30.1)	Increase <.001	Increase <.01
No anal intercourse with casual partners permitted	33 (2.8)	27 (1.9)	37 (3.0)	22 (1.9)	16 (2.0)	ns	ns
Anal intercourse with casual partners permitted only with a condom	238 (20.2)	234 (16.5)	174 (13.9)	168 (14.3)	118 (14.4)	ns	Decrease <.001
Anal intercourse with casual partners permitted without a condom	79 (6.7)	120 (8.5)	137 (11.0)	131 (11.2)	102 (12.5)	ns	Increase <.001
<b>Total</b>	<b>925 (100)</b>	<b>1,062 (100)</b>	<b>961 (100)</b>	<b>881 (100)</b>	<b>725 (100)</b>		

Note: This table only includes data from participants who reported that they had a regular male partner in the six months prior to the survey.

Table 15: Match of HIV status between regular partners

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
<b>HIV-positive participants</b>							
Seroconcordant	39 (35.1)	38 (31.4)	41 (36.6)	32 (26.0)	21 (35.0)	ns	ns
Serodiscordant	39 (35.1)	47 (38.8)	42 (37.5)	59 (48.0)	24 (40.0)	ns	ns
Serononconcordant	33 (29.7)	36 (29.8)	29 (25.9)	32 (26.0)	15 (25.0)	ns	ns
<b>Total</b>	<b>111 (100)</b>	<b>121 (100)</b>	<b>112 (100)</b>	<b>123 (100)</b>	<b>60 (100)</b>		
<b>HIV-negative participants</b>							
Seroconcordant	665 (69.8)	825 (73.2)	726 (69.7)	683 (70.3)	515 (76.1)	Increase <.01	ns
Serodiscordant	51 (5.4)	53 (4.7)	51 (4.9)	59 (6.1)	25 (3.7)	Decrease <.05	ns
Serononconcordant	237 (24.9)	249 (22.1)	264 (25.4)	230 (23.7)	137 (20.2)	ns	ns
<b>Total</b>	<b>953 (100)</b>	<b>1,127 (100)</b>	<b>1,041 (100)</b>	<b>972 (100)</b>	<b>677 (100)</b>		

Note: This table only includes data from participants who reported that they had a regular male partner in the six months prior to the survey.

Table 16: Anal intercourse and condom use with regular partners

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
No anal intercourse	237 (20.2)	320 (22.5)	214 (17.1)	222 (18.9)	149 (18.2)	ns	Decrease <.05
Always uses a condom	210 (17.9)	174 (12.3)	151 (12.1)	121 (10.3)	65 (7.9)	ns	Decrease <.001
Sometimes does not use a condom	729 (62.0)	926 (65.2)	883 (70.8)	829 (70.7)	604 (73.8)	ns	Increase <.001
<b>Total</b>	<b>1,176 (100)</b>	<b>1,420 (100)</b>	<b>1,248 (100)</b>	<b>1,172 (100)</b>	<b>818 (100)</b>		

Note: This table only includes data from participants who reported that they had a regular male partner in the six months prior to the survey.

Table 17: Anal intercourse and condom use with casual partners

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
No anal intercourse	217 (19.8)	223 (17.7)	173 (15.3)	173 (15.9)	106 (18.2)	ns	ns
Always uses a condom	383 (35.0)	333 (26.4)	282 (24.9)	210 (19.3)	110 (18.9)	ns	Decrease <.001
Sometimes does not use a condom	495 (45.2)	704 (55.9)	677 (59.8)	707 (64.9)	367 (63.0)	ns	Increase <.001
<b>Subcategories of men who did not always use condoms:</b>							
HIV-positive on treatment with undetectable viral load	76 (6.9)	98 (7.8)	81 (7.2)	107 (9.8)	46 (7.9)	ns	ns
HIV-negative on PrEP <sup>1</sup>	80 (7.3)	225 (17.9)	290 (25.6)	310 (28.4)	160 (27.4)	ns	Increase <.001
HIV-positive not on treatment or detectable viral load	6 (0.5)	3 (0.2)	4 (0.4)	12 (1.1)	0	NA	NA
HIV-negative/untested not on PrEP (only insertive anal intercourse)	108 (9.9)	98 (7.8)	87 (7.7)	80 (7.3)	61 (10.5)	Increase <.05	ns
HIV-negative/untested not on PrEP (any receptive anal intercourse)	225 (20.5)	280 (22.2)	215 (19.0)	198 (18.2)	100 (17.2)	ns	Decrease <.05
<b>Total</b>	<b>1,095 (100)</b>	<b>1,260 (100)</b>	<b>1,132 (100)</b>	<b>1,090 (100)</b>	<b>583 (100)</b>		

Note: This table only includes data from participants who reported that they had any casual male partners in the six months prior to the survey.

<sup>1</sup> From 2019, 'men on PrEP' includes both regular (daily) and on demand (event-based) users. Prior to 2019, regular and on demand users could not be differentiated.

Table 18: Any condomless anal intercourse with casual partners (CAIC), by HIV status of participants

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
HIV-positive participants	83 (61.9)	103 (79.2)	85 (75.9)	122 (83.0)	46 (79.3)	ns	Increase <.01
<b>Total</b>	<b>134 (100)</b>	<b>130 (100)</b>	<b>112 (100)</b>	<b>147 (100)</b>	<b>58 (100)</b>		
HIV-negative participants	383 (44.0)	536 (54.0)	559 (58.8)	545 (61.9)	287 (62.8)	ns	Increase <.001
<b>Total</b>	<b>871 (100)</b>	<b>993 (100)</b>	<b>951 (100)</b>	<b>881 (100)</b>	<b>457 (100)</b>		
Untested/unknown status men	30 (33.0)	67 (48.2)	33 (47.8)	43 (66.2)	34 (50.0)	ns	Increase <.01
<b>Total</b>	<b>91 (100)</b>	<b>139 (100)</b>	<b>69 (100)</b>	<b>65 (100)</b>	<b>68 (100)</b>		

Note: This table only includes data from participants who reported that they had any casual male partners in the six months prior to the survey. Untested and unknown status includes participants who have never been tested for HIV and participants who have been tested but do not know their results.

Table 19: Disclosure of HIV status to or from casual partners, by HIV status of participants

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
<b>HIV-positive participants</b>							
Told casual partners	100 (74.6)	109 (83.8)	82 (73.2)	105 (71.4)	39 (67.2)	ns	ns
Told by casual partners	87 (64.9)	95 (73.1)	74 (66.1)	88 (59.9)	36 (62.1)	ns	ns
<b>Total (not mutually exclusive)</b>	<b>134</b>	<b>130</b>	<b>112</b>	<b>147</b>	<b>58</b>		
<b>HIV-negative participants</b>							
Told casual partners	596 (68.4)	675 (68.0)	673 (70.8)	591 (67.1)	318 (69.6)	ns	ns
Told by casual partners	600 (68.9)	671 (67.6)	674 (70.9)	598 (67.9)	319 (69.8)	ns	ns
<b>Total (not mutually exclusive)</b>	<b>871</b>	<b>993</b>	<b>951</b>	<b>881</b>	<b>457</b>		

Note: This table only includes data from participants who reported that they had any casual male partners in the six months prior to the survey.

**Table 20: Participants who frequently used risk reduction strategies when engaging in condomless anal intercourse with casual partners (CAIC), by HIV status of participants**

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
<b>HIV-positive participants</b>							
Ensured partners were seroconcordant before CAIC (serosorting)	26 (31.3)	45 (43.7)	27 (31.8)	27 (22.1)	11 (23.9)	ns	Decrease <.05
Took receptive position during CAIC when partners were not concordant	25 (30.1)	16 (15.5)	18 (21.2)	22 (18.0)	6 (13.0)	ns	ns
Participant withdrew before ejaculation when he was insertive	12 (14.5)	7 (6.8)	6 (7.1)	6 (4.9)	1 (2.2)	NA	NA
Participant knew he had an undetectable viral load before having sex	62 (74.7)	78 (75.7)	68 (80.0)	98 (80.3)	40 (87.0)	ns	ns
Participant knew partner was on PrEP before sex	-	33 (32.0)	28 (32.9)	43 (35.2)	18 (39.1)	ns	ns
<b>Total (not mutually exclusive)</b>	<b>83</b>	<b>103</b>	<b>85</b>	<b>122</b>	<b>46</b>		
<b>HIV-negative participants</b>							
Ensured partners were seroconcordant before CAIC (serosorting)	208 (54.3)	271 (50.6)	289 (51.7)	290 (53.2)	174 (60.6)	Increase <.05	ns
Took insertive position during CAIC when partners were not concordant	94 (24.5)	113 (21.1)	104 (18.6)	106 (19.4)	48 (16.7)	ns	Decrease <.05
Partner withdrew before ejaculation when participant was receptive	54 (14.1)	48 (9.0)	42 (7.5)	45 (8.3)	19 (6.6)	ns	Decrease <.01
Ensured HIV-positive partner had an undetectable viral load before having sex	69 (18.0)	105 (19.6)	129 (23.1)	111 (20.4)	42 (14.6)	Decrease <.05	ns
Participant took PrEP before sex	85 (22.2)	227 (42.4)	308 (55.1)	299 (54.9)	153 (53.3)	ns	Increase <.001
Participant knew partner was on PrEP before sex	-	198 (36.9)	284 (50.8)	294 (53.9)	153 (53.3)	ns	Increase <.001
<b>Total (not mutually exclusive)</b>	<b>383</b>	<b>536</b>	<b>559</b>	<b>545</b>	<b>287</b>		

Note: This table only includes data from participants who reported having CAIC in the six months prior to the survey. Participants who reported 'often' or 'always' using each strategy were classified as 'frequently' using the strategy.

**Table 21: STI testing among HIV-positive participants in the 12 months prior to the survey**

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
Anal swab	132 (72.1)	127 (73.0)	117 (74.1)	152 (76.0)	59 (62.1)	Decrease <.05	ns
Throat swab	133 (72.7)	128 (73.6)	114 (72.2)	158 (79.0)	62 (65.3)	Decrease <.05	ns
Urine sample	152 (83.1)	140 (80.5)	131 (82.9)	169 (84.5)	77 (81.1)	ns	ns
Blood test for syphilis	140 (76.5)	137 (78.7)	121 (76.6)	161 (80.5)	71 (74.7)	ns	ns
Other blood test	141 (77.0)	134 (77.0)	121 (76.6)	155 (77.5)	74 (77.9)	ns	ns
Any STI test (not including blood tests)	155 (84.7)	147 (84.5)	132 (83.5)	171 (85.5)	78 (82.1)	ns	ns
Any STI test (including blood tests)	164 (89.6)	155 (89.1)	141 (89.2)	180 (90.0)	82 (86.3)	ns	ns
<b>Total (not mutually exclusive)</b>	<b>183</b>	<b>174</b>	<b>158</b>	<b>200</b>	<b>95</b>		

**Table 22: STI testing among HIV-negative participants in the 12 months prior to the survey**

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
Anal swab	661 (47.6)	865 (53.9)	842 (56.7)	833 (59.0)	407 (42.3)	Decrease <.001	ns
Throat swab	709 (51.1)	935 (58.3)	888 (59.8)	897 (63.5)	456 (47.4)	Decrease <.001	ns
Urine sample	867 (62.5)	1,090 (67.9)	1,013 (68.2)	1,000 (70.8)	567 (58.9)	Decrease <.001	ns
Blood test for syphilis	904 (65.1)	1,073 (66.9)	990 (66.7)	993 (70.3)	531 (55.2)	Decrease <.001	Decrease <.05
Other blood test	814 (58.6)	945 (58.9)	861 (58.0)	956 (67.7)	608 (63.2)	Decrease <.05	Increase <.001
Any STI test (not including blood test)	909 (65.5)	1,129 (70.3)	1,056 (71.1)	1,020 (72.2)	596 (62.0)	Decrease <.001	ns
Any STI test (including blood tests)	1,061 (76.4)	1,259 (78.4)	1,161 (78.2)	1,115 (79.0)	683 (71.0)	Decrease <.001	ns
<b>Total (not mutually exclusive)</b>	<b>1,388</b>	<b>1,605</b>	<b>1,485</b>	<b>1,412</b>	<b>962</b>		

**Table 23: STI diagnoses in the 12 months prior to the survey**

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
Chlamydia	-	219 (11.6)	243 (14.4)	237 (14.2)	91 (7.7)	Decrease <.001	Decrease <.05
Gonorrhoea	-	212 (11.2)	191 (11.3)	229 (13.7)	77 (6.5)	Decrease <.001	Decrease <.05
Syphilis	-	93 (4.9)	87 (5.2)	108 (6.5)	38 (3.2)	Decrease <.001	ns
Other STI	-	51 (2.7)	55 (3.3)	62 (3.7)	23 (1.9)	Decrease <.01	ns
Any STI diagnosis <sup>1</sup>	259 (15.2)	389 (20.6)	385 (22.9)	419 (25.1)	161 (13.6)	Decrease <.001	ns
<b>Total (not mutually exclusive)</b>	<b>1,709</b>	<b>1,885</b>	<b>1,684</b>	<b>1,672</b>	<b>1,185</b>		

<sup>1</sup> Due to a change in questions regarding STI diagnoses, trends over time have been calculated from 2017 onwards.

**Table 24: Recreational drug use among all participants in the six months prior to the survey**

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
Amyl nitrite (poppers)	581 (31.9)	714 (34.3)	687 (37.6)	684 (38.6)	385 (30.8)	Decrease <.001	ns
Cannabis	557 (30.6)	669 (32.2)	601 (32.9)	535 (30.2)	361 (28.9)	ns	ns
Viagra	338 (18.6)	382 (18.4)	344 (18.8)	396 (22.3)	255 (20.4)	ns	Increase <.01
Ecstasy	253 (13.9)	313 (15.1)	278 (15.2)	262 (14.8)	117 (9.4)	Decrease <.001	Decrease <.01
Cocaine	153 (8.4)	251 (12.1)	245 (13.4)	260 (14.7)	146 (11.7)	Decrease <.05	Increase <.001
Crystal methamphetamine	162 (8.9)	173 (8.3)	139 (7.6)	125 (7.1)	61 (4.9)	Decrease <.05	Decrease <.001
GHB	80 (4.4)	109 (5.2)	88 (4.8)	102 (5.8)	43 (3.4)	Decrease <.01	ns
Amphetamine (speed)	129 (7.1)	124 (6.0)	109 (6.0)	94 (5.3)	40 (3.2)	Decrease <.01	Decrease <.001
Ketamine (special K)	46 (2.5)	75 (3.6)	67 (3.7)	70 (4.0)	47 (3.8)	ns	Increase <.05
Other drugs <sup>1</sup>	139 (7.6)	162 (7.8)	142 (7.8)	130 (7.3)	90 (7.2)	ns	ns
<b>Total (not mutually exclusive)</b>	<b>1,819</b>	<b>2,079</b>	<b>1,826</b>	<b>1,772</b>	<b>1,250</b>		
<b>Number of drugs used</b>							
None	804 (44.2)	895 (43.1)	745 (40.8)	697 (39.3)	567 (45.4)	Increase <.01	ns
One or two drugs	683 (37.6)	752 (36.2)	700 (38.3)	691 (39.0)	482 (38.6)	ns	ns
More than two drugs	332 (18.3)	432 (20.8)	381 (20.9)	384 (21.7)	201 (16.1)	Decrease <.001	ns
<b>Total</b>	<b>1,819 (100)</b>	<b>2,079 (100)</b>	<b>1,826 (100)</b>	<b>1,772 (100)</b>	<b>1,250 (100)</b>		

<sup>1</sup> Prior to 2019, heroin and steroids were listed as individual response items. They have been combined with 'Other drugs' here.

Table 25: Injecting drug use in the six months prior to the survey, by HIV status of participants

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
All participants	78 (4.6)	72 (3.7)	63 (3.7)	78 (4.7)	30 (2.4)	Decrease <.01	ns
<b>Total</b>	<b>1,703 (100)</b>	<b>1,928 (100)</b>	<b>1,723 (100)</b>	<b>1,679 (100)</b>	<b>1,174 (100)</b>		
HIV-positive participants	29 (16.2)	26 (15.5)	22 (15.1)	34 (18.2)	9 (9.7)	ns	ns
<b>Total</b>	<b>179 (100)</b>	<b>168 (100)</b>	<b>146 (100)</b>	<b>187 (100)</b>	<b>93 (100)</b>		
HIV-negative participants	43 (3.2)	39 (2.5)	37 (2.6)	36 (2.7)	9 (1.0)	Decrease <.01	Decrease <.01
<b>Total</b>	<b>1,340 (100)</b>	<b>1,545 (100)</b>	<b>1,413 (100)</b>	<b>1,353 (100)</b>	<b>910 (100)</b>		

Table 26: Party drug use for sex and group sex in the six months prior to the survey

	2016 n (%)	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	Change from 2019 (p-value)	Trend over time (p-value)
Used party drugs for sex	252 (14.8)	331 (17.0)	288 (16.8)	260 (15.6)	130 (11.9)	Decrease <.01	ns
<b>Total</b>	<b>1,700 (100)</b>	<b>1,944 (100)</b>	<b>1,717 (100)</b>	<b>1,670 (100)</b>	<b>1,095 (100)</b>		
Engaged in group sex	531 (30.0)	658 (32.8)	601 (33.2)	572 (32.8)	280 (22.8)	Decrease <.001	Decrease <.01
<b>Total</b>	<b>1,771 (100)</b>	<b>2,004 (100)</b>	<b>1,811 (100)</b>	<b>1,746 (100)</b>	<b>1,230 (100)</b>		

Table 27: Knowledge and use of pre- and post-exposure prophylaxis

	2016 <i>n</i> (%)	2017 <i>n</i> (%)	2018 <i>n</i> (%)	2019 <i>n</i> (%)	2020 <i>n</i> (%)	Change from 2019 ( <i>p</i> -value)	Trend over time ( <i>p</i> -value)
Belief that PEP is available now	1,192 (71.6)	1,495 (78.6)	1,416 (82.5)	1,441 (85.6)	881 (75.0)	Decrease <.001	Increase <.001
<b>Total</b>	<b>1,665 (100)</b>	<b>1,901 (100)</b>	<b>1,717 (100)</b>	<b>1,683 (100)</b>	<b>1,175 (100)</b>		
Belief that PrEP is available now	1,060 (64.2)	1,538 (81.5)	1,533 (89.7)	1,541 (92.3)	1,040 (86.6)	Decrease <.001	Increase <.001
<b>Total</b>	<b>1,652 (100)</b>	<b>1,888 (100)</b>	<b>1,709 (100)</b>	<b>1,670 (100)</b>	<b>1,201 (100)</b>		
Use of PEP by non-HIV-positive participants in the six months prior to the survey	62 (4.5)	81 (5.0)	82 (5.6)	91 (6.6)	14 (1.3)	Decrease <.001	ns
<b>Total</b>	<b>1,391 (100)</b>	<b>1,618 (100)</b>	<b>1,467 (100)</b>	<b>1,388 (100)</b>	<b>1,086 (100)</b>		
Use of PrEP by non-HIV-positive participants in the six months prior to the survey <sup>1</sup>	100 (7.3)	306 (19.0)	377 (25.9)	455 (33.0)	235 (21.2)	Decrease <.001	Increase <.001
<b>Total</b>	<b>1,375 (100)</b>	<b>1,610 (100)</b>	<b>1,458 (100)</b>	<b>1,378 (100)</b>	<b>1,111 (100)</b>		

1 From 2019, 'participants on PrEP' includes both regular (daily) and on demand (event-based) users. Prior to 2019, regular and on demand users could not be differentiated.