



A study about you and your experiences

COVID-19 Baseline Report 2020

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Executive summary

This is a report on the baseline data from the Flux Study 2020 COVID-19 Diary. The report summarises data collected during April 2020 on sexual behaviours, use of pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP), drug use, mental health, testing for COVID-19 and social connectedness among gay and bisexual men (GBM) in Australia.

Summary of data:

- In April 2020, 913 gay and bisexual men completed the COVID-19 baseline questionnaire.
- Almost all men reported avoiding close physical contact and group events with family and friends, and about almost two thirds had been avoiding casual sex and kissing.
- Two thirds of men reported they found it easy to always wash their hands and almost half reported they found it easy to have sex with just one partner.
- More than two thirds of men strongly agreed with the statement that group sex is a risk for COVID-19, and about half strongly agreed that casual sex is a risk for COVID-19 and kissing should be avoided.
- When asked how helpful a range of services, organisations and governments had been during the pandemic, overall, state/territory governments were seen as the most helpful. Mental health services were perceived to be the most unhelpful services, followed by gay community services.
- Any sex with fuckbuddies reduced by 74%, any sex with casual partners reduced by 84% and any group sex reduced by 88% compared to before COVID-19 restrictions.
- 'Avoiding sex in general' was the strategy adopted by the most men to reduce the risk of COVID-19 for sexual encounters, with almost two thirds of men indicating they were using this strategy.
- Just over half of men in Flux reported taking PrEP before COVID-19 restrictions and nearly 50% ceased taking it during restrictions.
- Most men indicated that their access to PrEP was about the same as before COVID-19 restrictions. However, about one in seven found it more difficult to access PrEP.
- Just over a third of men indicated they had been drinking more alcohol compared to before COVID-19 restrictions began.

- Among the men that used illicit drugs, between 32.8% to 50% were using illicit drugs about the same and between 38.1% to 64.1% were using illicit drugs less compared to before COVID-19 restrictions.
- Although between 73.5% to 99.1% of men reported no change or a reduction in their drug use, the greatest increases in drug use were reported for cannabis and crystal methamphetamine among a minority of men. About a quarter of cannabis users and about one in nine crystal methamphetamine users indicating their use had increased since COVID-19 restrictions.
- About a quarter of men indicated they reduced their drug use due to avoiding other people and about one in five indicated they had reduced their drug use as they were not partying or were having less sex.
- Almost half of men indicated they had experienced mental health problems regardless of whether they had consulted a health professional for diagnosis and/or treatment.
- Almost all (90.1%) men indicated that they could rely on friends and family for support.
- Almost two thirds of men also indicated that they felt lonely at least some of the time and just over half indicated they were lacking companionship at least some of the time.

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Background

The 2019 novel coronavirus, severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2), the virus causing coronavirus disease 2019 (COVID-19), was identified in December 2019.¹ Similar to other coronaviruses, COVID-19 is highly transmissible through close proximity and physical contact.^{2,3} Human-to-human transmission of COVID-19 occurs through contact with droplets,⁴ aerosols,⁵ and contact with infectious fomites (e.g., doorknobs, toilet seats, etc.).^{6,7} Without an effective treatment and while vaccines were being developed and rolled out, countries across the globe implemented public health and social measures to prevent further infection.⁸ These ranged from increased hand hygiene, respiratory etiquette, including the use of masks, travel-related measures, including border closures, and physical distancing. Physical distancing measures have been applied through isolating cases and quarantining contacts of positive cases with COVID-19, and asking the community to restrict mass gatherings, closing schools and workplaces, and maintaining personal distance in public spaces.⁸

From March 2020, Australian state, territory and federal governments responded to COVID-19 with escalating measures.⁹ These restrictions included requiring all travellers entering Australia to self-isolate for 14 days, restrictions on public gatherings and visitors to residences, prohibiting foreign nationals entering Australia, and closing borders to interstate travel.⁹

Although restrictions varied between jurisdictions, people were either prohibited or strongly discouraged from engaging in sex with partners they did not co-habit with.⁹ Specific messaging for different populations, including for gay and bisexual men (GBM) from HIV and gay community organisations, recommended community members focus on masturbation, sex toys, and virtual sex.^{10,11} It was noted that the likely reduction in casual sexual contacts due to physical distancing measures had the potential to substantially reduce HIV and STI transmission.¹²

The HIV epidemic in Australia remains concentrated among GBM, with an estimated prevalence of 8.1% in this population.¹³ GBM experience higher rates of other STIs compared to their heterosexual peers, and the incidence of STIs increased among GBM between 2014 and 2018.¹³ In 2019, 28.3% of HIV-negative men and 43.6% of HIV-positive GBM reported an STI diagnosis in the previous 12 months.¹⁴

The extent to which physical distancing measures have impacted on the lives of GBM is being explored, with differing results around the globe.^{12,15-26} Physical distancing due to COVID-19 reduces opportunities for physical contact with others, including for sexual and physical intimacy. The disruption of sexual contacts operates at both an interpersonal and network level, potentially eroding not only individual ties, but also those with the broader community. However, it also interrupts opportunities for sexually transmissible pathogens to spread.²⁷ Understanding how social distancing measures affect sexual behaviour among GBM is critical for monitoring trends in new HIV and STI notifications, both in the short and long term.

Yet physical distancing measures and restrictions on movement have the potential to impact GBM in other ways. Access to HIV/STI prevention technologies including condoms and PrEP could be reduced as well as access HIV/STI testing and treatment services, which may result in poorer sexual health outcomes among these men. Prolonged physical distancing measures could potentially impact negatively on the mental health and wellbeing of GBM given the restricted opportunities to connect with peers, wider LGBTQ community and receive support from these and other interpersonal connections.

This project was an on-line cohort study and provides longitudinal data on behaviour changes among GBM from before, throughout, and after the primary impact of COVID-19. Weekly diaries were used to collect short-term data trends in sexual and other risk behaviours. Six-monthly follow-ups provided more detailed contextual data on the overall impact of COVID-19 on personal relationships, social connectedness, and health-seeking behaviours.

Research aims

We monitored changes in sexual and other risk behaviours among GBM in the context of COVID-19, before, during, and after the pandemic.

Research questions

This proposed study addressed a pivotal aspect of the pandemic to inform a better understanding of HIV and other STI epidemiological trends during and following the pandemic:

1. What is the impact of physical distancing requirements due to COVID-19 on sexual and other risk behaviours among GBM during and following the pandemic?
2. What is the potential impact on access to HIV/STI prevention technologies, and testing and treatment services during the COVID-19 pandemic among gay and bisexual men?
3. How do physical distancing and restrictions on movement change the availability of interpersonal connection, and how does this impact mental health and wellbeing among gay and bisexual men?

Methodology

Using a mixed methods approach, this project leverages the existing Flux cohort study infrastructure to investigate the experiences of the COVID-19 and its impact on pre-existing epidemics among GBM. In addition to current six-monthly follow-ups of the existing Flux cohort, we sought to enrol new participants, conduct weekly diaries among consenting participants, and conduct in-depth qualitative interviews with selected participants. This

report includes responses from participants in the Flux study to the questionnaire administered on entry to the new COVID-19 stage of the study.

RESULTS

Sample characteristics

A total of 913 GBM responded to a survey about the impact of the COVID-19 pandemic on their lives between April 4, 2020 and April 29, 2020.

The mean age for participants was 38.0 years (SD 12.4) with 16.1% under the age of 25. About one in 13 men indicated they were HIV positive and less than one percent had an unknown HIV status. Most (90%) men identified as gay, 5% as bisexual, and 5% reported another identity.

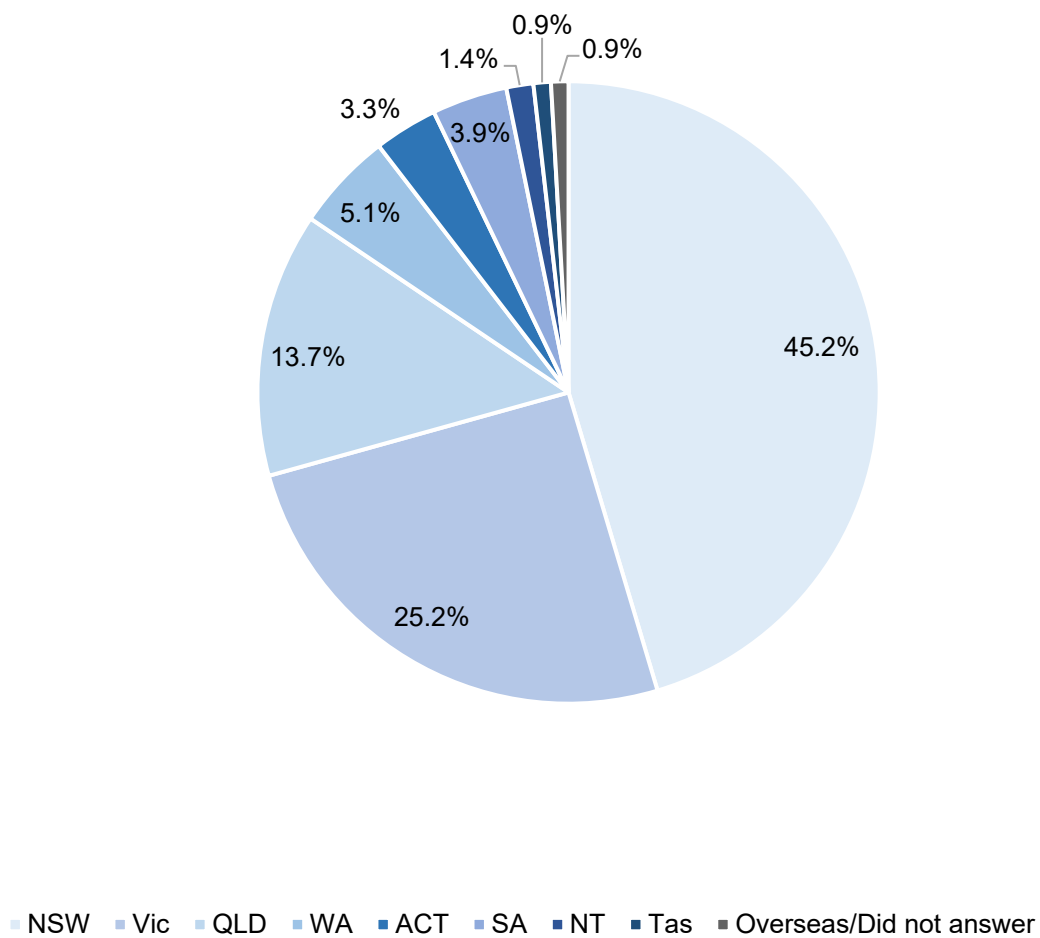
Most men were born in Australia or New Zealand and about 4.5% were born in Asia. About half of men (53%) had a boyfriend or husband and of these, 77% lived with this partner. More than half of men (59%) experienced changes to or loss of employment since the COVID-19 crisis began.

Table 1. Baseline sample characteristics (N=913)

Age		
Mean (SD)		38.0 (12.8)
Median		35
Under 25		16.1%
HIV Status		
Positive		70 (7.7)
Negative		790 (88.2)
Unknown		7 (0.8)
Untested		31 (3.4)
Sexuality		
Gay		824 (90.3)
Bisexual		46 (5.0)
Other		43 (4.7)
Relationship status		
Boyfriend/Husband		482 (52.8)
No primary partner		431 (47.2)
Household		
Boyfriend/Husband		371 (41.0)
Gay friends		66 (7.3)
Other friends		36 (4.0)
Family		124 (13.7)
Housemates		124 (13.7)
Live alone		235 (26.0)
Country of birth		
Australia/NZ		730 (80.0)
Asia		41 (4.5)
Other		142 (15.5)
Changes to employment		
Laid off temporarily		79 (8.7)
Laid off completely		42 (4.6)
Reduced hours		68 (7.4)
Working from home		
Redeployed due to COVID-19		17 (1.9)
Commenced new job		14 (1.5)
No changes		373 (40.9)
Not in workforce		5 (0.5)

The geographic distribution of participants across the country mostly does not reflect Australia's general population distribution. New South Wales and the Australian Capital Territory are over-represented in this sample, and Queensland, South Australia, Western Australia and Tasmania are under-represented compared to Australia's population distribution.

Figure 1. Participants place of residence.



Restrictions in place and changes at baseline

The baseline questionnaire opened 4 April 2020 and closed 29 April 2020. At the beginning of this period there were uniform restrictions in place across the country informed by the Australian Health Protection Principal Committee (AHPPC) and endorsed by National Cabinet. These restrictions included:

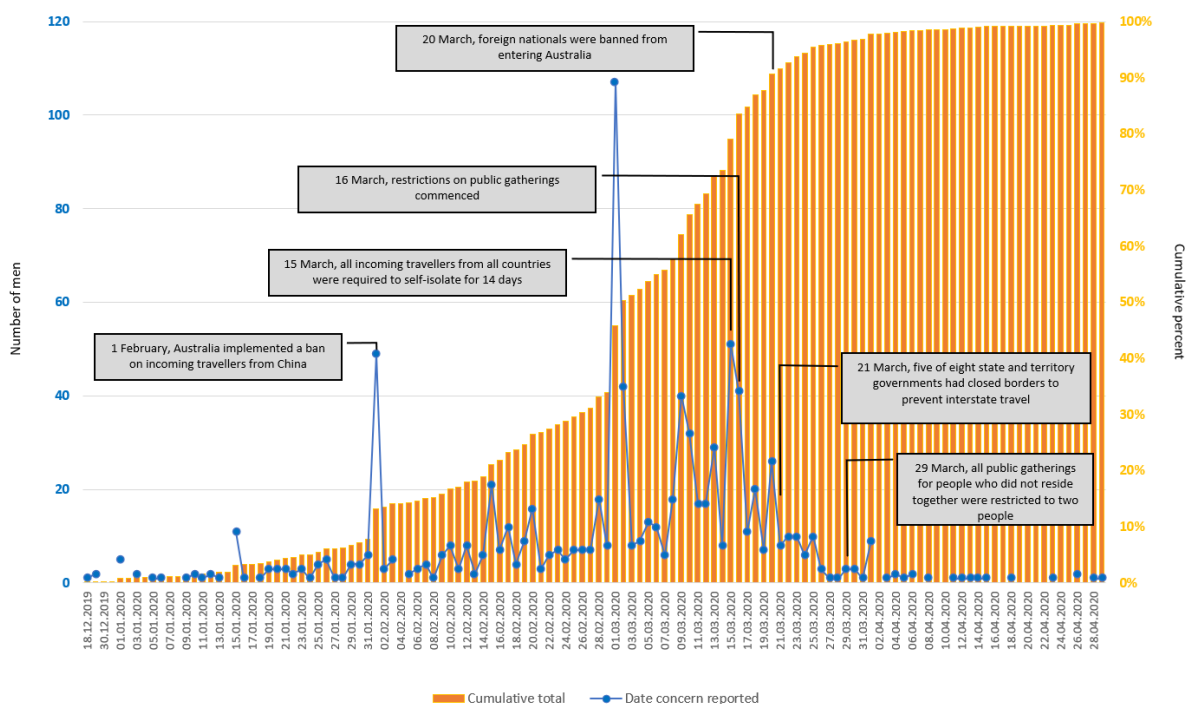
- Australians banned from travelling internationally.
- Australian borders closed to all non-citizens and non-residents.
- All international arrivals required to undertake mandatory 14-day hotel quarantine.
- States and territories had mandated quarantine periods for some domestic arrivals.
- Queensland, Western Australia, South Australia, Tasmania and the Northern Territory closed their interstate borders.
- The Biosecurity Act was mobilised to restrict movement in and out of remote Indigenous communities.
- Schools moved to remote learning with schools remaining open for children where no suitable care arrangements were available.
- All hotels (excluding accommodation), registered and licensed clubs, cinemas, entertainment venues, casinos, nightclubs, religious gatherings and places of worship, indoor sporting venues and gyms were closed. Restaurants, cafes and food courts were able to offer takeaway and home delivery services.
- Auction houses and open house inspections were prohibited.
- All non-urgent elective surgery was suspended. Only Category 1 (procedures that need to be performed within 30 days) and some exceptional Category 2 surgeries (procedures that need to be performed within 90 days) continued.
- Indoor and outdoor gatherings were limited to two persons only. Exceptions included:
 - People of the same household out together.
 - Funerals up to a maximum of 10 people.
 - Weddings up to a maximum of five people.
 - Family units.

- Strong guidance to stay at home unless for:
 - Shopping for essentials.
 - Medical or health care need including compassionate care.
 - Exercise (complying with public gathering restrictions).
 - Work and study if these could not be done remotely.
- Strong advice for self-isolation at home for the following categories of Australians:
 - People over 70 years of age
 - People over 60 years of age who have existing health conditions or comorbidities
 - Indigenous Australians over the age of 50 who have existing health condition or comorbidities.
- The following visitors and staff were not permitted to enter aged care facilities:
 - People returned from overseas in the last 14 days.
 - People who had been in contact with a confirmed case of COVID-19 in the last 14 days.
 - People with fever or any symptoms, even if mild, of acute respiratory infection including cough, sore throat, runny nose, and shortness of breath.
 - People that had not had the 2020 seasonal influenza vaccine.
- From 27 April 2020, Category 2 and some important Category 3 (procedures that need to be performed within 360 days) elective surgeries recommenced.

Personal concern about the COVID-19 pandemic

GBM were asked to identify/nominate the date they became concerned about the COVID-19 pandemic. Figure 1 shows the date concern started and the cumulative percentage of men who were concerned. The implementation of restrictions around the country by date is also noted.

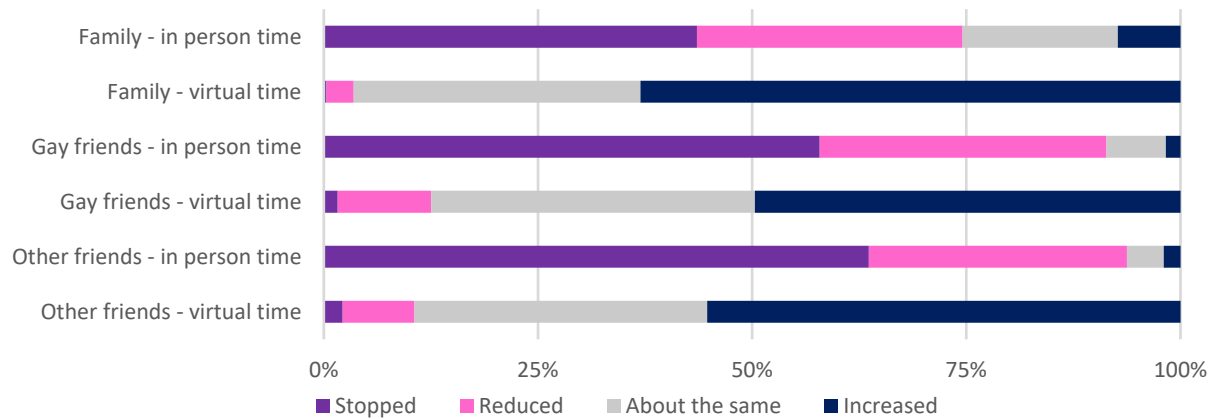
Figure 1. Date Dates of first becoming personally concerned about the COVID-19 pandemic (N=913)



Changes in social connection

At the time of the survey (April 2020), almost three quarters of men had either stopped or reduced seeing family in person and almost all had stopped or reduced seeing gay male and other friends in person. Physical time was substituted with increased virtual time by about half to almost two thirds of men.

Figure 2. Proportion of men engaging in person compared with virtual time with family, gay friends and other friends (N=913)



Technologies to compensate for in-person socialising

To compensate for the loss of in-person socialising, men indicated they were using Messenger, WhatsApp, and similar apps, with almost a quarter using them often or very often, and text messages with almost two thirds using them often or very often. The use of hook-up apps to compensate for in-person socialising was uncommon, with about two thirds of men indicating that rarely used them for this purpose. Responding to a free-text question in the baseline questionnaire, a 25-year-old man from Victoria highlighted the value of technology, specifically the use of video chat services, to stay connected with his social networks:

My social life has become interesting. I miss physically spending time with friends, but I've managed to find some good alternatives. I lead a fetish-oriented munch (a social (not sexual) gathering for people who share the same fetish). Typically, this is a physical event; however, I've made this online via Zoom in the past month. I find it easier to digitally keep in contact with people I might not have actively contacted beforehand, because everyone is bored at home

However, participants who described using digital technologies to stay connected to friends and family in their free-text responses most commonly asserted that although such technologies were valuable, they could not replace face-to-face connection: *I miss catching up with friends socially. Online interactions, although still valuable, are not the same* (33, Victoria).

Table 3. Frequency of technologies used to compensate for physical distancing (N=913)

Hook-up apps	425 (46.5)	158 (17.3)	152 (16.6)	96 (10.5)	50 (5.5)	32 (3.5)
Group chat	222 (24.3)	95 (10.4)	205 (22.5)	225 (24.6)	143 (15.7)	23 (2.5)
Video chat	101 (11.1)	104 (11.4)	232 (25.4)	298 (32.6)	164 (18.0)	14 (1.5)
Phone calls	42 (4.6)	117 (12.8)	320 (35.0)	312 (34.2)	111 (12.2)	11 (1.2)
Messenger, WhatsApp, etc	46 (5.0)	34 (3.7)	161 (17.6)	363 (39.8)	295 (32.3)	14 (1.5)
Text messages	31 (3.4)	56 (6.1)	235 (25.7)	330 (36.1)	252 (27.6)	9 (1.0)

Impact of COVID-19

Avoiding activities due to COVID-19

At the time of the survey (April 2020), almost all participants said they had been avoiding close physical contact and group events with family and friends, and about two thirds had been avoiding casual sex and kissing. Other activities that were being avoided were using public transport, going to shopping centres and leaving the house. Many men who provided a free-text response described in detail the activities they were avoiding in their day-to-day life.

I am a little concerned about becoming ill but more afraid of passing it on. We do not know who has it, as people may be asymptomatic. As such I am avoiding physical contact with everyone. I am calling more on the telephone. My hobbies and activities have virtually all ceased. I love cinema, galleries, museums, outings, and theatre. All of these [are] curtailed (56, Victoria)

While some of the free text responses simply stated the activities men were avoiding or the strategies they had adopted to reduce COVID-19 transmission, these responses were often expressed with a feeling of loss in relation to the activities they enjoyed prior to COVID-19 restrictions, including entertainment, sex, socialising, sport, gym, and hobbies.

Table 4. Proportion of men from the total sample avoiding different activities due to COVID-19 (N=913)

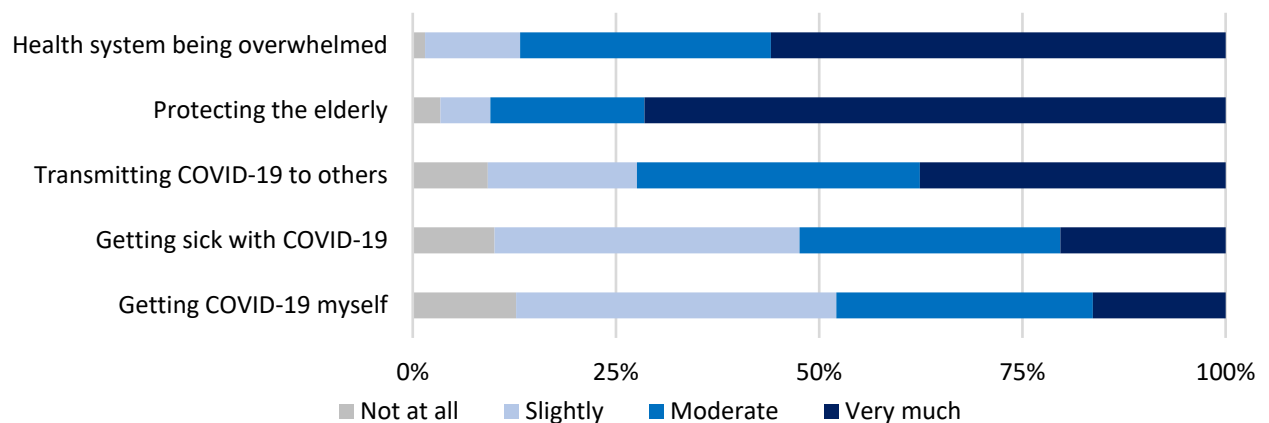
Group events with family & friends	862 (94.4)
Close physical contact	642 (90.9)
Casual sex	568 (62.2)
Kissing	554 (60.7)
Sex with boyfriend/husband	111 (12.2)
Other	72 (7.9)

Concerns about COVID-19

Almost all men had some level of concern about the impacts of COVID-19 on their own health, the health of others and the impacts on the health system. Almost three quarters of men were very concerned about protecting the elderly and over half were concerned about the health system being overwhelmed. Similarly, men who provided free-text responses identified concerns about others whom they believed were at greater risk of COVID-19 or whose wellbeing they believed might be undermined during restrictions. This concern was often expressed in terms of empathy e.g., worrying how other people would cope if they got COVID-19, or how they would be affected by restrictions. Concern was expressed at a personal level about elderly family members or at-risk partners, and at a social level about those working in healthcare, people facing financial pressures or increased risk to mental wellbeing.

My partner's grandma is now living with us as we did not want her to go back to America as she lives on her own, and the healthcare system there sucks. Hence grandma is now stuck here with us indefinitely. Life feels upside down. We are not having casual sex with anyone, so we don't get Covid [sic] and we need to protect my partner's grandma and my elderly parents (52, New South Wales)

Figure 3. Participants level of concern about aspects of COVID-19 (N=913)



Difficulties since COVID-19

About three quarters of men reported some difficulty stopping kissing and hugging family and friends due to COVID-19 and two thirds had some difficulty stopping going out for entertainment. Two thirds of men did not find it at all difficult to always wash their hands and almost half did not have any difficulty limiting sex to one partner. In their free-text responses, many men indicated they found it more difficult to engage in activities they enjoyed prior to restrictions, as well as socially and intimately connecting with their networks, friends, family,

and sexual partners. This was often expressed as feelings of loss of valued things. Several respondents specifically identified missing their gay social and sexual networks and gay venues/events.

I have drastically reduced my social life and sex life. My entire sex life is now limited to sending photos and videos and webcams. The absence of physical contact with other people is a huge burden for me, especially my gay sex buddies because they make me feel so comfortable. I feel a little lost without them, I am a very sexual person and not having the intimacy that goes with it is making me very sad and depressed at times. The thought of not being able to see my friends and family, and to not be able to be physically intimate with my partners for many more months is something that makes me very sad and also scared. I'm worried about the emotional toll this is taking on me (34, New South Wales)

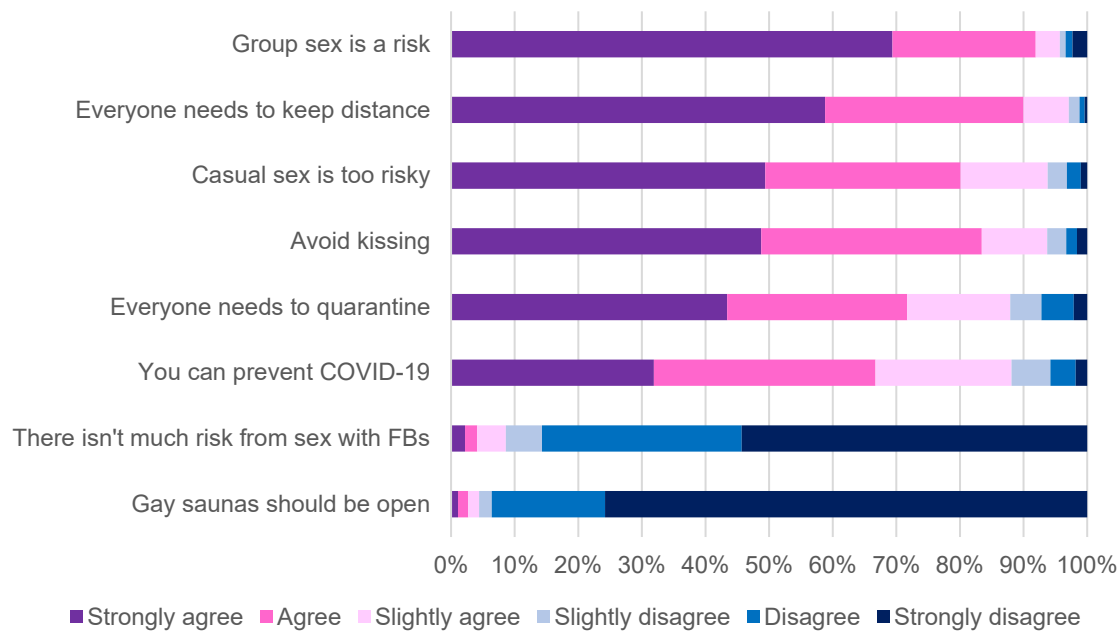
Table 5. Level of difficulty changing behaviours (N=913)

	Not at all	Somewhat	Very
Stopping sex altogether	189 (20.7)	143 (15.7)	238 (26.1)
Fewer sex partners	315 (34.5)	189 (20.7)	145 (15.9)
No kissing or spitting during sex	320 (35.0)	112 (12.3)	177 (19.4)
Avoid all casual sex	258 (28.3)	196 (21.5)	207 (22.7)
No sex with new partners	261 (28.6)	192 (21.0)	184 (20.2)
Sex with just one partner	412 (45.1)	125 (13.7)	95 (10.4)
Stop kissing & hugging friends and family	191 (20.9)	325 (35.6)	354 (38.8)
Stop going out for entertainment	269 (29.5)	325 (35.6)	277 (30.3)
Always wash hands	617 (67.6)	244 (26.7)	49 (5.4)
Keeping distance from people I meet	358 (39.2)	414 (45.3)	123 (13.5)
Work from home	297 (32.5)	220 (24.1)	80 (8.8)

Attitudes since COVID-19

Attitudes towards different statements about COVID-19 generally elicited very high levels of agreement or disagreement from GBM in the sample i.e., participants were relatively uniform in their responses and high levels of agreement with each other. Almost all disagreed with the statement that gay saunas should remain open during COVID-19 and that there was not much risk of COVID-19 transmission from sex with fuckbuddies. More than two thirds of men strongly agreed with the statements that group sex is a risk for COVID-19 and about half strongly agreed that casual sex is a risk for COVID-19 and kissing should be avoided.

Figure 4. Level of agreement with statements about COVID-19 (N=913)



Contact with COVID-19

About one in six men reported personally knowing someone who tested positive for COVID-19 and had been told to isolate from others to prevent COVID-19 transmission respectively. This appears unlikely to be the case given the relatively low rates of COVID-19 in Australia at the time the survey was open. It is possible participants misinterpreted being told to isolate as meaning they were in general lockdown (as implemented country-wide at the time) and not specifically isolating because they were a possible contact of a positive COVID-19 case. A smaller proportion, about one in 12, had seen a doctor about COVID-19, and about one in 18 had been tested for COVID-19.

Table 6. Participants contact with COVID-19 (N=913)

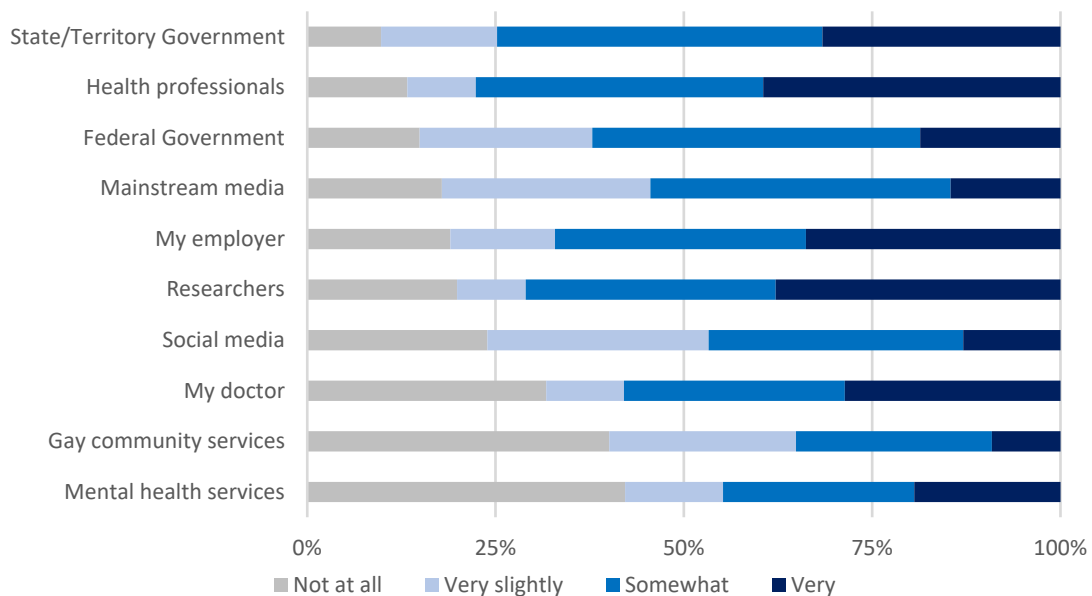
Been told to isolate from others to prevent transmitting COVID-19	143 (15.7)
Knows someone personally who has tested positive for COVID-19	141 (15.4)
Seen a doctor about COVID-19	77 (8.4)
Been tested for COVID-19	52 (5.7)
Told been in contact with someone who tested positive for COVID-19	25 (2.7)

Sources of help and support during COVID-19

Participants were asked how helpful certain people, professions, services, organisations, researchers, media platforms/outlets or governments had been during the pandemic so far (in April 2020, the time of the survey). Over a third of men agreed that health professionals and researchers had been very helpful since COVID-19. Men indicated that mental health services were the least helpful with almost half of men indicating they were not helpful at all, followed by gay community services with almost one in three indicating they were not helpful at all. Overall, state/territory governments were perceived as the most helpful with almost all men indicating they were helpful on some level. However, some free-text responses indicated a concomitant sense of frustration with governmental and workplace institutions, which they believed were inadequately responding to COVID-19. One respondent believed that governments were taking too long to respond to the virus, implementing unsuitable or impractical policy that did little to stop transmission, or were not providing clear and easily accessible information.

The messaging coming out of NSW Health and the Federal Government is confusing and makes me doubt and mistrust them. Which further fuels my anxiety. Entering flu season, how can I tell if I have a cold, a flu or COVID-19? People on the streets are anxious and they are becoming aggressive. (41, New South Wales)

Figure 5. Level of helpfulness since COVID-19 by sector and professional occupation (N=913)



Changes in sexual partnering

Regular partner – boyfriend/husband

At the time of the survey (April 2020), about half of participants had a regular partner they regarded as a boyfriend or husband. About half of these men had been with their regular partner for more than five years and about three quarters lived with them. Most of these men were still having sex with their regular partner and about two thirds were having about the same amount of sex with them as before COVID-19 restrictions. Many of the men in relationships that provided free-text responses described restricting sex to their boyfriend instead of sex with casual partners, marking an at least temporary transition from an open to a closed relationship for some men: *My boyfriend and I usually have an open relationship but have closed it off during the current climate and are avoiding contact with all people*”(31, New South Wales). Many of these respondents indicated that they were grateful not just to be in a relationship in which they could continue to have sex, but to have a person they loved around while their movement was restricted. Some saw the restrictions as an opportunity to reconnect with their boyfriend.

Table 7. Sex with regular partner (N=913)

Regular partner regarded as BF/husband	482 (52.8)
More than 5 years with him	262 (54.4)
Live with him	356 (74.2)
Having sex with him	238 (85.3)
Having about the same amount of sex with him	300 (62.2)

Regular partners – fuckbuddies/friends with benefits

About one in seven men reported having sex with a fuckbuddy/friend with benefits following the beginning of COVID-19 restrictions. About one in eight were living with their fuckbuddies/friends with benefits and almost three quarters of the whole sample were having less sex with fuckbuddies/friends with benefits following the introduction of COVID-19 restrictions.

Table 8. Sex with fuckbuddies following COVID-19 restrictions (N=913)

Sex with fuckbuddies/friends with benefits	127 (13.9)
Live with some or all fuckbuddies/friends with benefits	16 (12.8)
Having less sex with fuckbuddies/friends with benefits	665 (72.9)

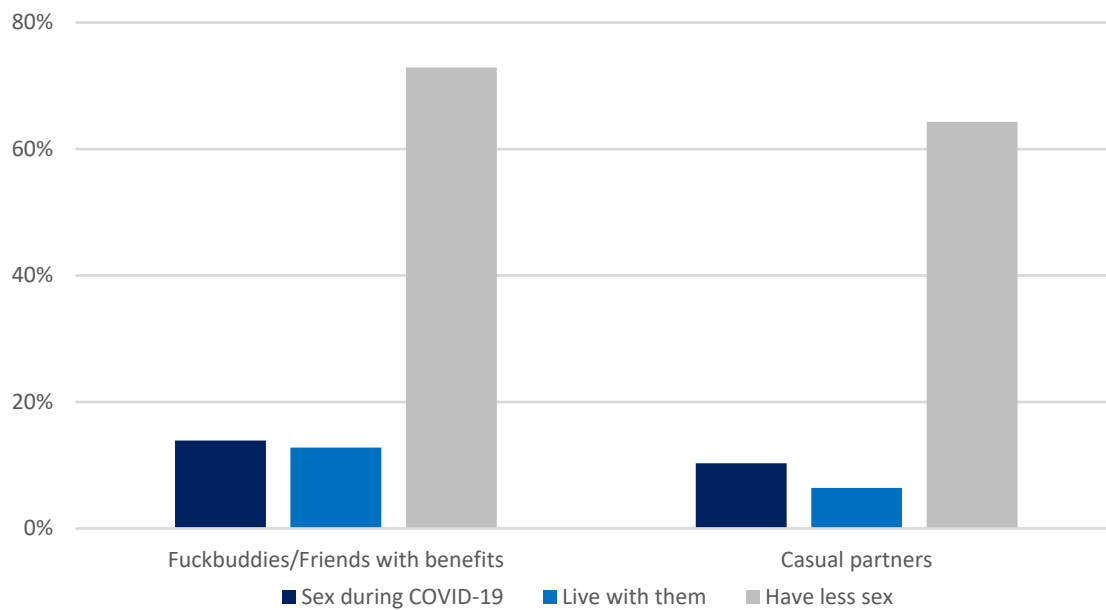
Casual partners

About one in nine men reported sex with casual partners following the introduction of COVID-19 restrictions. About one in 16 men lived with their casual partners and about two thirds of men who had previously had sex with casual partners reported having less sex with casual partners following the introduction of COVID-19 restrictions.

Table 9. Sex with casual partners following COVID-19 restrictions (N=913)

Sex with CPs before COVID-19 restrictions	577 (63.2)
Sex with CPs following COVID-19 restrictions	94 (10.3)
Having less sex with CPs	587 (64.3)

Figure 6. Changes in participants sexual partnering (N=913)



Group sex

One in eleven had reported engaging in group sex and about two thirds of men reported they were having less group sex following the introduction of COVID-19 restrictions.

Table 10. Group sex following COVID-19 restrictions (N=913)

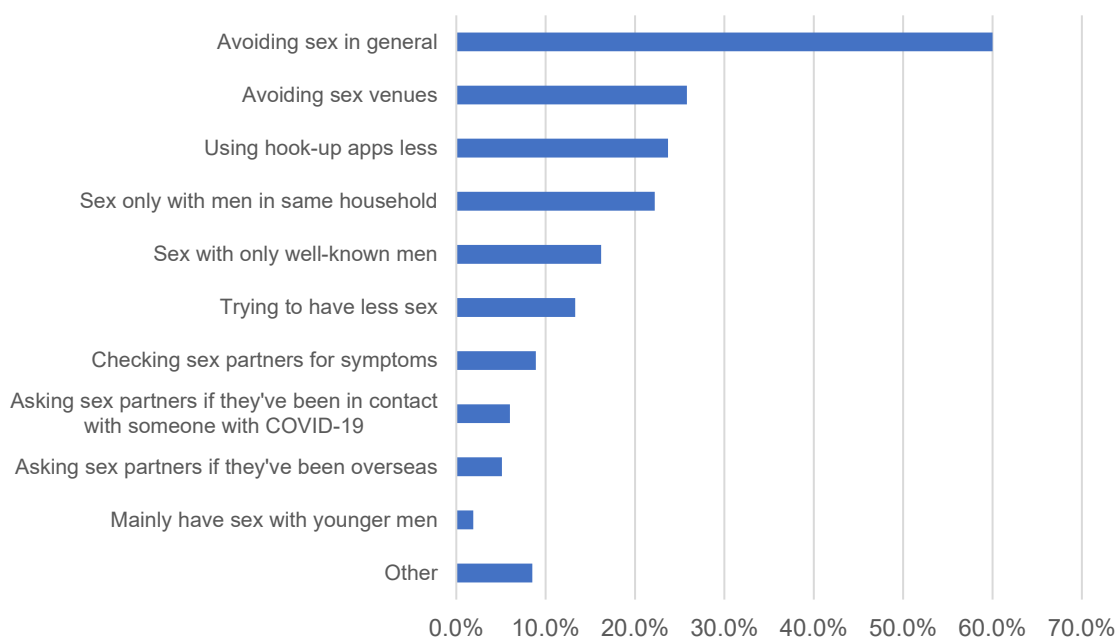
Any group sex with any men before COVID-19 restrictions	302 (33.1)
Any group sex with any men following COVID-19 restrictions	36 (3.9)
Having less group sex	573 (62.8)

Changes in partner number

Sex with men since COVID-19 (strategies to reduce risk)

At the time of the survey (April 2020), the most reported strategy to reduce the risk of COVID-19 transmission during sex was avoiding sex with just under two thirds of men indicating they were doing this. The next most common strategies were avoiding sex venues and using hook-up apps less often with about a quarter of men using each.

Figure 8. Proportion of the total sample using strategies to reduce the risk of COVID-19 transmission during sex



Men reporting sex with non-relationship partners

The most commonly reported strategy to reduce the risk of COVID-19 among men who continued to have sex with fuckbuddies or casual partners was limiting sex to men in their household with almost half using this strategy, but about one in ten men reported having stopped having altogether with fuckbuddies and casual partners. Men whose behavior indicated having stopped sex with fuckbuddies and casual partners also confirmed this as a strategy to avoid COVID-19. On the other hand, less than half of men who continued sex with fuckbuddies and casual partners reported that avoiding or reducing sex was a chosen strategy for them. A few men outlined in their free-text responses how they had negotiated strategies with their non-relationship partners to continue having sex. Most of these partners were regular and well-known.

There's one buddy I massage about three weeks out of four - no kissing, no cum, no genital play and he lays on his belly. I trust him, he's aware of the issues, doesn't use public transport and is very ethical. Otherwise we stay a metre apart or more. When he arrives we both wash our hands and do so as needed after (71, Victoria)

Table 11. Strategies used to reduce COVID-19 risk by men who continued sex with FBs/CPs and those that stopped sex with FBs/CPs (n = 640)

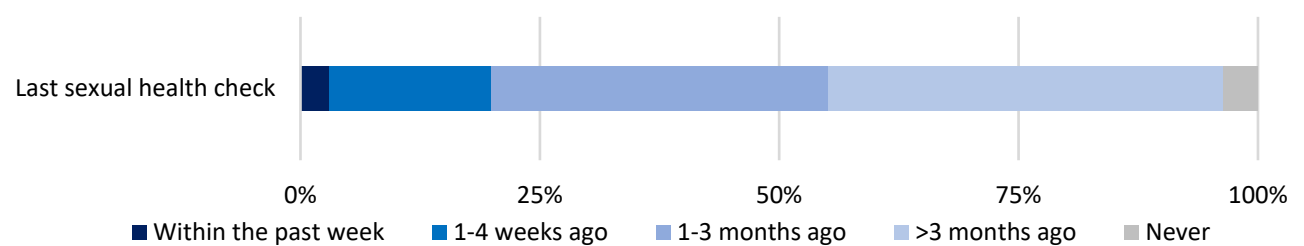
Avoiding sex in general	64 (38.6)	368 (77.6)
Restricting sex to only well-known men	84 (50.6)	70 (14.8)
Trying to have sex less often	75 (45.2)	43 (9.1)
Using hook-up apps or cruise sites less often	55 (33.1)	138 (29.1)
Sex with men in household only	17 (10.2)	87 (18.4)

Sexual health/HIV testing

Sexual health check

At the time of the survey (April 2020), about a third of men had their last sexual health check one to three months prior to completing the questionnaire. Just under one in two men reported that their last test was more than three months before completing the questionnaire and less than five percent had never had a sexual health check.

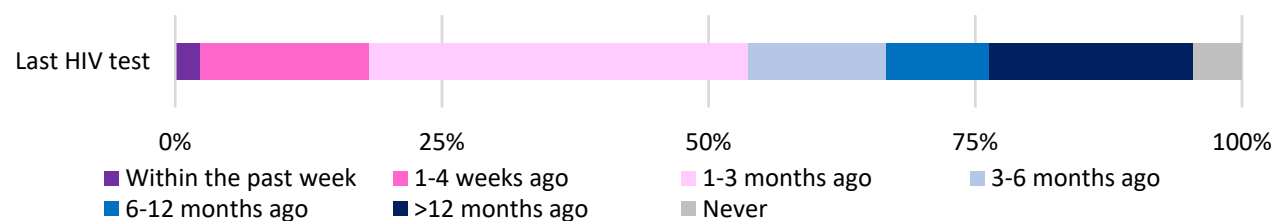
Figure 9. Time since participants last sexual health check



HIV testing

Among non-HIV positive men, about two thirds of men indicated they had been tested for HIV in the six months prior to completing the questionnaire. About one in five men had been tested for HIV more than 12 months before completing the questionnaire and less than five percent had never been tested.

Figure 10. Time since participants last HIV test



PrEP use

At the time of the survey (April 2020), just under half of non-HIV positive men reported taking PrEP before COVID-19 restrictions and close to 60% of these participants continued taking PrEP during restrictions. A small proportion (n = 11) of men reported initiating PrEP following the introduction of COVID-19 restrictions.

Table 12. PrEP use before and since COVID-19 restrictions (n = 805)

Taking PrEP before restrictions	385 (42.2)
Continued PrEP during restrictions	226 (28.1)

Reasons why men stopped or reduce taking PrEP because COVID-19

Of the reasons related to stopping or reducing PrEP use during COVID-19 restrictions, most men (84.7%) who responded to the question indicated their reason was because they were not having sex.

Table 13. Reasons why men stopped or reduced taking PrEP because COVID-19 (total n = 170)

I'm not having sex	144 (84.7)
Unable to get a doctor's appointment	9 (5.3)
I'm avoiding doctor's clinics	14 (8.2)
It's hard to buy PrEP	6 (3.5)
Other reasons not related to COVID-19	33 (19.4)

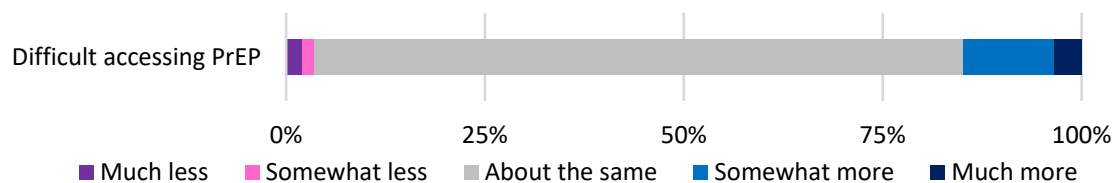
Other reasons why men stopped or reduced taking PrEP

Only a small number of men indicated other reasons for stopping or reducing their PrEP use. The most common of these was that they had started a monogamous relationship.

PrEP access

Most non-HIV positive men indicated that access to PrEP was about the same as before COVID-19 restrictions. However, about one in seven found it more difficult to access PrEP. Reasons were not sought for why men found it more difficult.

Figure 12. Difficulty accessing PrEP since COVID-19 restrictions



Alcohol, tobacco and other drug use

Tobacco

At the time of the survey (April 2020), 149 men reported smoking tobacco. About one in ten (10.5%) of the men who smoked reported smoking less amount of tobacco as they were before COVID-19 restrictions. Just under two thirds of men had never smoked.

Alcohol

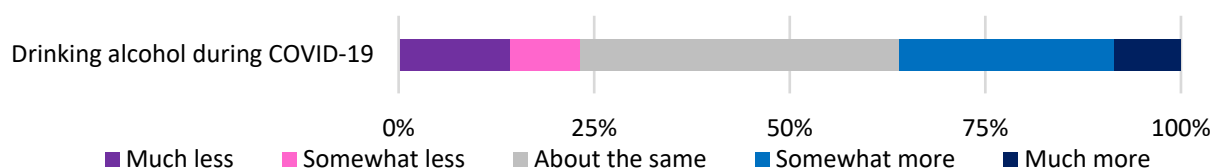
At the time of the survey (April 2020), 780 men reported drinking alcohol. About a third of men were having four or more drinks containing alcohol per week during restrictions. About half had 2-3 drinks or less containing alcohol a week and about one in seven never had drinks containing alcohol.

Table 15. Frequency of alcohol consumption since COVID-19 restrictions began among total sample (n = 780)

	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
Number of standard drinks on a typical day	409 (44.8)	224 (24.5)	98 (10.7)	33 (3.6)	16 (1.8)

Just over a third of men indicated they had been drinking more alcohol compared to before COVID-19 restrictions began.

Figure 13. Difference in alcohol consumption since COVID-19 restrictions began



Illicit drugs

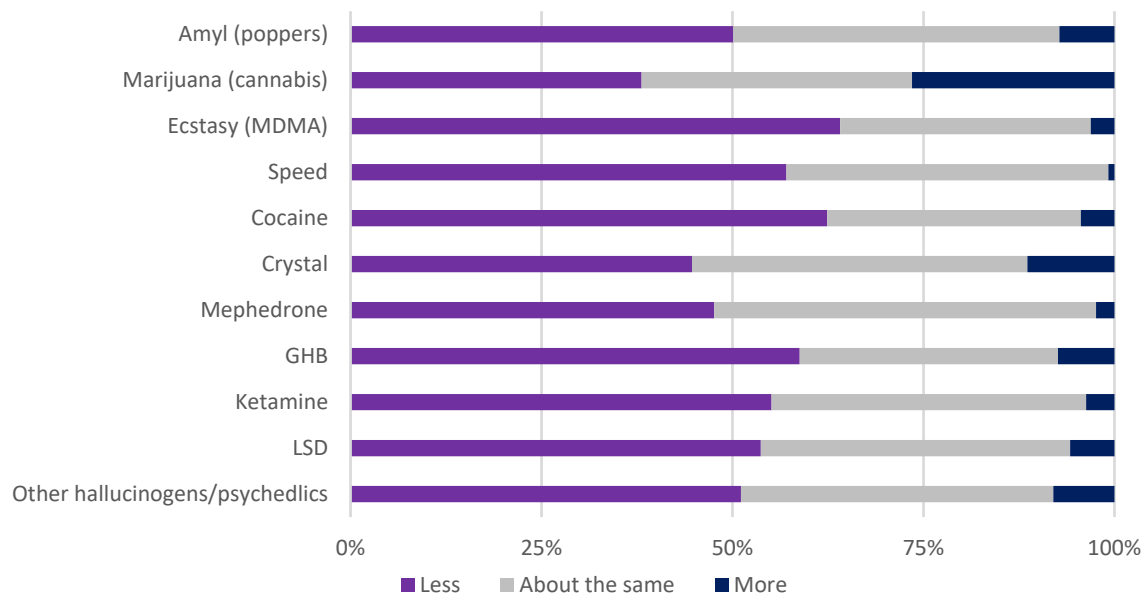
The most reported illicit drug used was amyl nitrite (poppers) with one quarter of men indicating they had been using it since the introduction of restrictions in March up to the survey in April. This was followed by cannabis, reported by one in six men, and ecstasy (MDMA), reported by around 6% of men. It should be noted that nearly two thirds of men indicated they hadn't used illicit drugs during COVID-19 restrictions.

Table 16. Proportion of men who had used drugs since COVID-19 restrictions (March) by drug type (n = 913)

Amyl nitrite (poppers)	235 (25.7)
Cannabis	150 (16.4)
Ecstasy (MDMA)	50 (5.5)
Crystal methamphetamine	47 (5.1)
GHB/GBL	38 (4.2)
Cocaine	31 (3.4)
Ketamine	25 (2.7)
LSD (acid)	15 (1.6)
Other psychedelics	11 (1.2)
Other drugs	8 (0.9)
Speed (powder methamphetamine)	5 (0.5)
Mephedrone	5 (0.5)
Heroin	3 (0.3)
None of the above	553 (60.3)

Except for amyl nitrite, most men indicated they had not used any of the drugs listed below since the onset of restrictions. Among the 220 men (24.1%) that reported illicit drug use, almost all indicated that they were using about the same or less compared to before COVID-19 restrictions. Cannabis and crystal methamphetamine saw the largest increases in use, with about a quarter of cannabis users and about one in nine crystal methamphetamine users indicating that their use had increased since COVID-19 restrictions.

Figure 14. Difference in drug use compared to before COVID-19 restrictions by drug type among men who reported previous use



Mental health

At the time of the survey (April 2020), almost half of men indicated they had experienced mental health 'problems' regardless of whether they had consulted a health professional. Just over a third of men indicated that they had experienced depression and anxiety respectively, since the introduction of restrictions and a quarter had experienced stress. Just under half had seen a health professional regarding their mental health and just over a quarter had been prescribed psychiatric medications (e.g., antidepressants). The free-text responses contained detailed explanations of how respondents' mental health had been impacted during COVID-19, including feelings of isolation, claustrophobia, lack of motivation, increased stress, restlessness, paranoia, over-eating or sleeping, lost confidence, and insomnia. Many responses were telling of respondents' sense of fragility while restrictions were in place.

I'm more anxious, depressed, sleeping too much, I'm very lonely and a high risk of further depression. I rely on the energy of others to motivate myself and the prospect of not getting enough work terrifies me because I am casual and in debt. I don't cope very well on my own. I need help. (36, New South Wales)

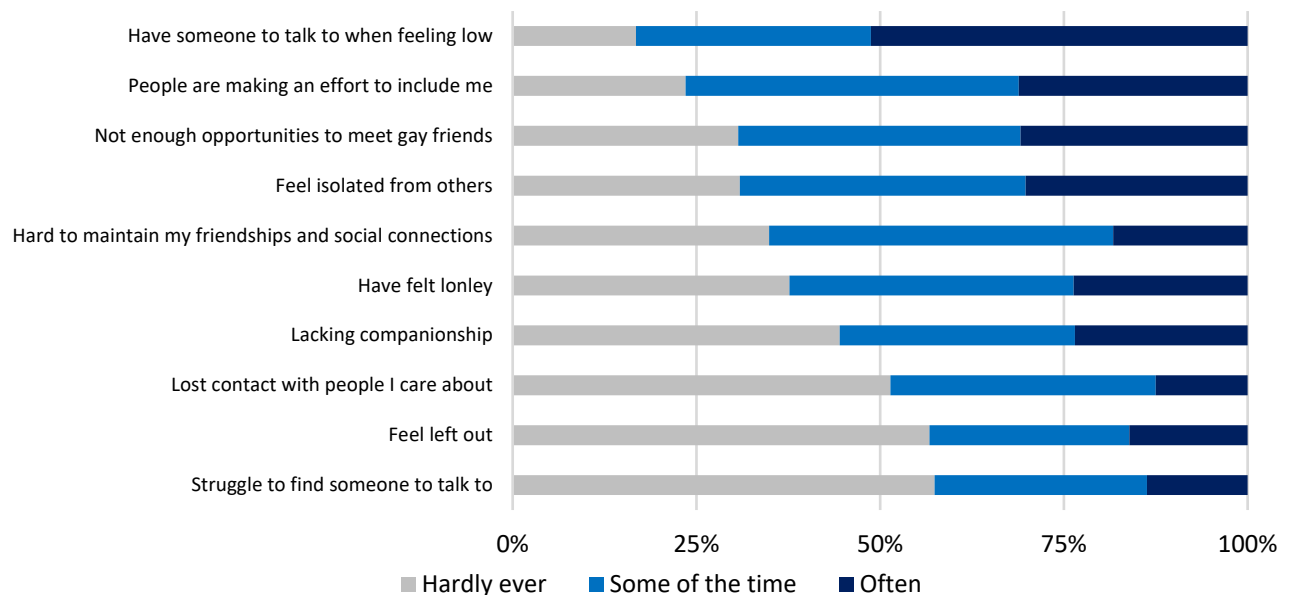
Table 17. Self-reported mental health ‘problems’ during COVID-19 restrictions (n = 913)

Depression	335 (36.7)
Anxiety	347 (38.0)
Stress	231 (25.3)
Other	44 (4.8)

Support during COVID-19 restrictions

Almost all (90.1%) men indicated they relied most often on friends and family for support during COVID-19 restrictions. The majority also indicated that they “hardly ever” struggled to find someone to talk to and hardly ever felt left out. However, the majority also indicated that they felt lonely some of the time or often and just over half indicated they were lacking companionship some of the time or often. Lack of opportunities to meet gay friends was also indicated as occurring some of the time or often by the majority of men.

Figure 15. Type and availability of support during COVID-19 restrictions



Appendix A – Methods

Data collection

The Flux Study COVID-19 Diary leverages the existing Flux cohort study infrastructure to investigate the experiences of the coronavirus (COVID-19) and its impact on pre-existing epidemics among GBM. Individual follow up occurs systematically among consenting GBM every week for an initial three-month period, to be revisited at the end of each three-month period for up to a maximum of one year to collect specific information about sexual and other risk behaviours and direct impacts of COVID-19.

Baseline questionnaires are completed by newly enrolling participants to establish the characteristics, behaviours, and beliefs required to assess changes over time, during the COVID-19 pandemic. Additional information collected includes associated harms, health-seeking, social connectedness, COVID-19 physical distancing behaviours, mental health, and relevant personal characteristics. Included in the baseline questionnaire are free-text questions about a range of issues related to participants experiences during COVID-19.

Weekly diary questionnaires collect specific limited information on sexual behaviour, PrEP use, and COVID-19 health-seeking practices, to enable measurement of changes in behaviours against the rapid changes in physical distancing regulations as they are enforced, or relaxed. Every four weeks, a slightly expanded questionnaire will also collect specific information on physical distancing and social connections, drug use, and access to services.

Six-monthly follow-up questionnaires monitor changes in characteristics, behaviours, and beliefs over time, throughout the COVID-19 pandemic, required to assess changes over time as specified in the study aims.

Data analysis

SPSS™, Version 26 (IBM Corporation) was used to analyse data. Percentage values exclude the proportion of respondents who did not answer the question and may not add to 100 because of rounding.

Framework analysis (Gale N K, Heath G, Cameron E, et al. 2013) was used to analyse free-text data. An initial analysis of a random sample of the free-text data identified a framework of themes, and this framework was subsequently used to code responses to relevant themes.

Ethical approval for Flux COVID-19 data collection was obtained from UNSW Human Research Ethics Committee (add reference number)

Appendix B – Glossary

CLAI – condomless anal intercourse

CP – Casual partner

COVID-19 – the disease caused by the novel coronavirus SARS-CoV-2

Fuckbuddy/friend with benefits (FB/FWB) – a regular sexual partner with whom ongoing sexual contact occurs, generally in the absence of romantic attachment

GBM – gay and bisexual men

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-relationship partner – a sexual partner that is not a boyfriend or husband with whom participants are in an ongoing romantic relationship, but characterised as a fuckbuddy, friend with benefits or casual partner

PEP – post-exposure prophylaxis; for the purpose of this report, it refers to the use of antiretroviral drugs by HIV-negative people to reduce the risk of HIV infection after a potential exposure has occurred

PrEP – pre-exposure prophylaxis; for the purpose of this report, it refers to the use of antiretroviral drugs by HIV-negative

Appendix C – Relevant research outputs from the Flux Study

Publications

Hammoud MA, Grulich A, Holt M, Maher L, Murphy D, Jin F, Bavinton B, Haire B, Ellard J, Vaccher S, Saxton P, Bourne A, Degenhardt L, Storer D, Prestage G. Substantial decline in use of HIV pre-exposure prophylaxis (PrEP) following introduction of COVID-19 physical distancing restrictions in Australia: Results from a prospective observational study of gay and bisexual men. *JAIDS Journal of Acquired Immune Deficiency Syndromes*. 2020 Oct 7.

Hammoud MA, Maher L, Holt M, Degenhardt L, Jin J, Murphy D, Bavinton B, Grulich A, Lea T, Haire B, Bourne A, Saxton P, Vaccher S, Ellard J, Mackie B, Batrouney C, Bath N, Prestage G. Physical distancing due to COVID-19 disrupts sexual behaviours among gay and bisexual men in Australia: Implications for trends in HIV and other sexually transmissible infections. *Journal of Acquired Immune Deficiency Syndromes (1999)*. 2020 Jul 29.

Presentations

G Prestage, D Storer, D Murphy, L Maher, B Haire, F Jin, B Bavinton, M Holt, J Ellard, A Grulich, MA Hammoud. Week-on-week changes in sexual behaviour and PrEP use among Australian gay and bisexual men during COVID-19 restrictions. November 2020. Australasian HIV and AIDS Conference.

MA Hammoud, A Grulich, L Maher, M Holt, F Jin, D Murphy, B Bavinton, T Lea, B Haire, L Degenhardt, A Bourne, P Saxton, S Vaccher, J Ellard, B Mackie, C Batrouney, N Bath, D Storer, G Prestage. Dramatic decline in HIV pre-exposure prophylaxis (PrEP) use and sexual behaviour among gay and bisexual men following COVID-19 physical distancing restrictions in Australia: Results from a 2014 prospective observational study and implications for trends in HIV. November 2020. Australasian HIV and AIDS Conference.

S Philpot, D Murphy, L Maher, M Holt, G Prestage, MA Hammoud, B Haire, A Bourne, on behalf of the Flux Study Team. Impacts of COVID-19 restrictions on Australian gay and bisexual men: qualitative findings from a national online study. November 2020. Australasian HIV and AIDS Conference.

B Bavinton, MA Hammoud, C Chan, M Holt, L Maher, B Haire, D Murphy, J Ellard, T Lea, G Prestage, for the Flux research group. Depression and anxiety in Australian gay and bisexual men prior to and during COVID-19 restrictions. November 2020. Australasian HIV and AIDS Conference.

G Prestage, MA Hammoud, S Philpot, D Storer. [Impacts of COVID-19 on gay and bisexual men in Australia: Changes in sexual behaviour, PrEP and mental health](#). July 2020. ACON Research Snapshot Forum.

MA Hammoud, A Grulich, L Maher, M Holt, L Degenhardt, F Jin, D Murphy, B Bavinton, T Lea, B Haire, A Bourne, P Saxton, S Vaccher, J Ellard, B Mackie, C Batrouney, N Bath, G Prestage. [Impact of social distancing due to COVID-19 on sexual behaviour among gay and bisexual men in Australia: Implications for trends in HIV and other sexually transmissible infections](#). July 2020. International AIDS Conference 2020, Virtual.

G Prestage, MA Hammoud, S Philpot. [Impacts of COVID-19 on gay and bisexual men in Australia: Changes in sexual behaviour, PrEP and mental health](#). May 2020. Kirby Institute Seminar Series.

Reports

D Storer on behalf of the Flux Study BRIS Reference Group. [Flux Study COVID-19 Diary: Monthly Report. Report 06: Reporting week ending 10 January](#). 2021. Kirby Institute, UNSW Sydney.

D Storer on behalf of the Flux Study BRIS Reference Group. [Flux Study COVID-19 Diary: Monthly Report. Report 05: Reporting week ending 15 November](#). 2020. Kirby Institute, UNSW Sydney.

D Storer on behalf of the Flux Study BRIS Reference Group. [Flux Study COVID-19 Diary: Monthly Report. Report 04: Reporting week ending 06 September](#). 2020. Kirby Institute, UNSW Sydney.

D Storer on behalf of the Flux Study BRIS Reference Group. [Flux Study COVID-19 Diary: Monthly Report. Report 03: Reporting week ending 09 August](#). 2020. Kirby Institute, UNSW Sydney.

D Storer on behalf of the Flux Study BRIS Reference Group. [Flux Study COVID-19 Diary: Monthly Report. Report 02: Reporting week ending 12 July](#). 2020. Kirby Institute, UNSW Sydney.

D Storer on behalf of the Flux Study BRIS Reference Group. [Flux Study COVID-19 Diary: Monthly Report. Report 01: Reporting week ending 14 June](#). 2020. Kirby Institute, UNSW Sydney.

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