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BRIEF REPORT

Changing the Use of HIV Pre-exposure Prophylaxis Among Men Who Have Sex With Men During the COVID-19 Pandemic in Melbourne, Australia

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We surveyed 204 men who have sex with men (MSM) who were pre-exposure prophylaxis (PrEP) users. One in 4 daily PrEP users stopped taking PrEP during the COVID-19 pandemic, and 5% switched to on-demand PrEP. Most men reduced PrEP use because they stopped having casual sex and reduced the number of casual partners during the COVID-19 pandemic.

Keywords. coronavirus disease; lockdown; PrEP; SARS-CoV-2; sexual health.

The first case of coronavirus disease (COVID-19) was reported in China in December 2019, and it became a global pandemic on March 11, 2020. The first COVID-19 case in Australia was identified on January 25, 2020, and after an initial rapid rise in mid-March, the number of cases fell to low levels by late April, where they have remained [1]. This fall followed the implementation of several major public health responses in March and April 2020, including the closure of Australia's border to all visitors, enforced quarantine for 14 days after international travel, social distancing rules, staying home restriction, and banning all nonessential services (hereafter referred to as "lockdown") [1]. We hypothesized that lockdown had an impact on sexual practices, thereby reducing HIV risk [2, 3]. We also hypothesized that men who have sex with men (MSM) who take pre-exposure prophylaxis (PrEP) to reduce their risk of HIV acquisition may also change the way they use PrEP as a result of lockdown. This study aimed to examine the proportion of MSM who had changed their PrEP use during lockdown in response to the COVID-19 pandemic and their reasons.

METHODS

We identified a list of clients who (1) were aged ≥18 years; (2) were men who have sex with men; (3) had their PrEP care and management at the Melbourne Sexual Health Centre (MSHC) in Australia between January and April 2020 (including those who had appointments booked but canceled their PrEP appointments during the period). All clients attending MSHC are asked to indicate whether they wish to provide consent to receive a short message service (SMS) from MSHC. We conducted a cross-sectional online survey between May 1 and May 10, 2020, by sending an SMS invitation to the clients who fulfilled the above-mentioned eligibility criteria and had consented to receive an SMS from MSHC. The SMS included a unique link to an online short survey. A description of the study and the participant information sheet were provided on the first page of the survey. Participants were required to provide consent to participate in the survey by selecting the "Agree" button before commencing the survey. The survey investigated how they used PrEP during 2 time intervals: (i) between January and February (before lockdown); and (ii) the time they completed the survey in early May (during lockdown). Our survey captured whether they used PrEP daily, on-demand (or event-driven), or not at all. For those who indicated they had changed the way they used PrEP, an extra question was asked about the reasons for changing. Participants could provide multiple reasons why they changed their PrEP use during lockdown. No other personally identifiable information was collected in the survey. Ethics approval was obtained from the Alfred Hospital Ethics Committee (Project number: 249/20).

Descriptive statistics were used to determine the frequency and proportion of PrEP use among MSM before and during lockdown. The 95% confidence intervals of the proportion were calculated using binomial exact methods. All statistical analyses were performed using STATA (version 14; StataCorp, College Station, TX, USA).

RESULTS

A total of 450 individual MSM had made an appointment (including those who had canceled) at the PrEP clinic at MSHC between January and April 2020, and 437 (97.1%) men provided consent to receive an SMS from the clinic. An SMS with a unique link to the survey was sent to all 437 men, and 205

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men (46.9%) provided consent to participate in the survey. One man provided consent to participate but did not complete the survey and was excluded from the analysis. Of the remaining 204 men, ranging in age from 21 to 73 years (median [interquartile range {IQR}], 36 [31–48] years), more than half were born in Australia (62.3%; n = 127). The median time men reported being on PrEP (IQR) was 2.7 (1.2–3.7) years.

Between January and February 2020 (before lockdown), 178 men (87.3%) used daily PrEP, 11 (5.4%) used on-demand PrEP, and 15 (7.4%) did not take PrEP. Overall, 57 men (27.9%; 95% CI, 21.9%–34.6%) changed the way they used PrEP in May (during lockdown). There were no differences in age between those who did or did not change PrEP use (median age = 36 years vs 36 years, respectively; $P = .364$), nor by the amount of time they had been taking PrEP (median time = 2.7 years vs 2.6 years, respectively; $P = .686$).

Of the 178 men who used daily PrEP before lockdown, 130 (73.0%; 95% CI, 65.9%–79.4%) continued to use daily PrEP, but 8 (4.5%; 95% CI, 2.0%–8.7%) changed to on-demand PrEP and 40 (22.5%; 95% CI, 16.6%–29.3%) stopped using PrEP during lockdown (Figure 1A). Furthermore, of the 11 men who used on-demand PrEP before lockdown, 5 (45.5%; 95% CI, 16.7%–76.6%) continued, but 6 (54.5%; 95% CI, 23.4%–83.3%) stopped using PrEP during lockdown.

Of the 54 men who reduced the use of PrEP during lockdown (ie, changed from daily PrEP to on-demand or stop taking PrEP; or changed from on-demand PrEP to stop taking PrEP), the most frequent reason reported was not engaging in casual sex during lockdown (n = 47; 87.0%; 95% CI, 75.1%–94.6%) (Figure 1B). Some men also reported they reduced the number of casual partners (n = 19; 35.2%; 95% CI, 22.7%–49.4%) and group sex (n = 9; 16.7%; 95% CI, 7.9%–29.3%). A small proportion of men were concerned about catching SARS-CoV-2 while visiting the clinic during lockdown (n = 8; 14.8%; 95% CI, 6.6%–27.1%), and very few clients reported difficulties in making a PrEP appointment (n = 4; 7.4%; 95% CI, 2.1%–17.9%).

Of the 15 who did not use PrEP before lockdown, 12 (80.0%) continued not using PrEP, but 3 (20.0%) switched to daily PrEP during lockdown. Of the 3 men who changed to daily PrEP, 1 man reported decreased condom use, another man reported decreased anxieties, and 1 man did not provide a specific reason.

DISCUSSION

This cross-sectional survey showed that 1 in 4 MSM daily PrEP users stopped using PrEP during lockdown and about 5% of MSM switched from daily PrEP to on-demand PrEP; however, the majority of MSM daily PrEP users kept taking daily PrEP during lockdown during the COVID-19 pandemic.

On-demand PrEP is highly effective in preventing HIV, as shown in a clinical study [4]. On-demand PrEP is recommended as an alternative option of PrEP dosing in Australian guidelines [5]; however, we found that only a very small proportion of MSM were taking on-demand PrEP (5.4%) before the COVID-19 lockdown, which is consistent with the estimate from a community-based survey in Melbourne (4.0%) in 2019 [6]. Compared with international studies, the proportion of MSM who use on-demand PrEP in Melbourne is lower than other settings such as London (16%) [7] and Amsterdam (27%) [8]. We found that 1 in 4 MSM reduced PrEP dosing during lockdown, and the most frequent reason for reducing or ceasing PrEP was not having casual sex during lockdown and a reduced number of casual partners, and no men reported having an increased number of casual partners and condomless sex, suggesting that they were unlikely to have an increased risk of acquiring HIV. This is also consistent with past studies showing that on-demand PrEP users tend to have a lower number of casual sex partners compared with daily PrEP users [9]. Although the participants in this study are regular PrEP patients at our clinic, it is unclear whether they have consulted with their doctors about reducing PrEP use to on-demand PrEP or ceasing PrEP altogether. A previous Australian study showed that only 37% of PrEP users had prior knowledge about on-demand PrEP, and more importantly, most of them received this knowledge from social media and the Internet [10]. It is important to ensure that MSM receive the correct information and knowledge and use on-demand PrEP correctly and safely if they switch from daily to on-demand PrEP.

Adequate HIV prevention access is also important during this lockdown period. Similar to other settings [11], our clinic was open during the lockdown period to provide HIV testing and postexposure prophylaxis (PEP). This lockdown may provide unique opportunities for eliminating HIV.

This study has several limitations. First, this study was conducted among PrEP users who had their PrEP care and management at a large metropolitan sexual health clinic. In Australia, individuals can also access PrEP from private general practitioners and through personal importation; these men may use PrEP differently. Hence, our findings may not be generalizable to all MSM. Second, we only asked men why they changed their PrEP use during lockdown. For men who continued using PrEP daily, we did not ask whether they had changed their sexual practices during the lockdown period. Third, the use of postexposure prophylaxis (PEP) was not assessed during the lockdown period. However, data from a sexual health clinic in London have shown that there was an 80% reduction in PEP within 4 weeks of the lockdown in the United Kingdom [11].

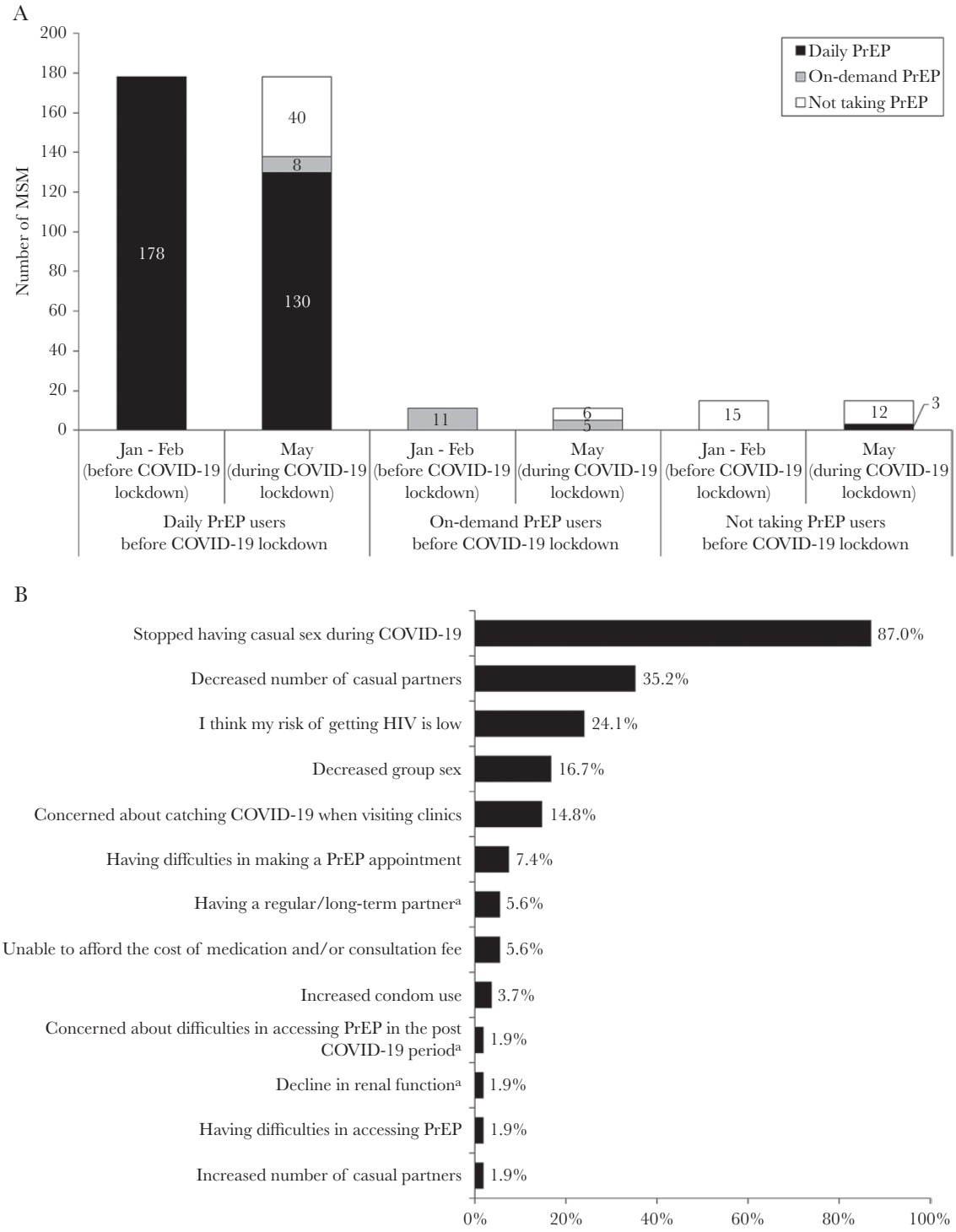

Figure 1. A, The number of men who have sex with men (MSM) who used daily pre-exposure prophylaxis (PrEP), who used on-demand PrEP, and who were not taking PrEP before and during the COVID-19 lockdown. B, The reasons for reducing or ceasing PrEP use among 54 MSM during the COVID-19 lockdown. [a]Free-text responses from participants.

In conclusion, we found that a quarter of daily PrEP users stopped taking PrEP, primarily due to stopping casual sex during lockdown in the COVID-19 pandemic, while a small proportion of MSM switched from daily to on-demand PrEP. Future studies will be required to understand the level of knowledge and understanding of on-demand PrEP among those who switched their PrEP dosing. A follow-up study among those who switched their PrEP dosing would be useful to determine whether these individuals will change back to daily PrEP once they resume their sexual activities after the lockdown or easing of restrictions.

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