**Supplemental Table 1. Operationalisation of PrEP eligibility criteria**

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| Eligibility criteria in 2017 Australian PrEP prescribing guidelines1 | Criteria adapted in Gay Community Periodic Surveys | Criteria adapted in PrEPARE Project |
| 1. CAI with a HIV-positive regular male partner (not on treatment and/or detectable viral load) in the last three months | CAI with a HIV-positive regular male partner (not on treatment and/or detectable viral load) in the last six months | CAI with a HIV-positive regular male partner (not on treatment and/or detectable or unknown viral load) in the last six months |
| 1. Any receptive CAI with a HIV-positive or unknown status casual male partner in the last three months | Any receptive CAI with casual male partners in the last six months | Any CAI with casual male partners in the last six months |
| 1. Rectal gonorrhoea, rectal chlamydia or infectious syphilis diagnosis in the last three months | Any sexually transmissible infection diagnosis other than HIV in the last 12 months | Any sexually transmissible infection diagnosis other than HIV in the last 12 months |
| 1. Methamphetamine use in the last three months | Methamphetamine use in the last six months | Methamphetamine use in the last six months |

1 Wright E, Grulich A, Roy K, Boyd M, Cornelisse V, Russell D, et al. Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine HIV pre-exposure prophylaxis: clinical guidelines. J Virus Erad. 2017;3(3):168-84.

CAI = condomless anal intercourse

**Supplemental Table 2. Comparison of participants from the Gay Community Periodic Surveys, 2017-18, and PrEPARE Project, 2017**

|  | **GCPS**  **N=8,833**  **n (%)** | **PrEPARE**  **N=1,038**  **n (%)** | **Crude OR (95% CI)** | **Adjusted OR (95% CI)** |
| --- | --- | --- | --- | --- |
| Age |  |  |  |  |
| <25 years | 1591 (18.0) | 207 (19.9) | 1.13 (0.96−1.33) |  |
| 25-29 years | 1724 (19.5) | 140 (13.5) | 0.64 (0.53−0.77)\*\*\* | 0.64 (0.53−0.77)\*\*\* |
| 30-39 years | 2565 (29.1) | 331 (31.9) | 1.14 (1.00−1.31) |  |
| 40 and above | 2953 (33.4) | 360 (34.7) | 1.05 (0.92−1.21) |  |
| State/territory |  |  |  |  |
| New South Wales | 2619 (29.7) | 319 (30.7) | 1.05 (0.91−1.21) |  |
| Australian Capital Territory | 373 (4.2) | 25 (2.4) | 0.56 (0.37−0.84)\*\* | 0.54 (0.35−0.82)\*\* |
| Queensland | 1677 (19.0) | 174 (16.8) | 0.86 (0.72−1.02) |  |
| South Australia | 860 (9.7) | 66 (6.4) | 0.63 (0.48−0.81)\*\*\* | 0.64 (0.49−0.84)\*\* |
| Victoria | 2503 (28.3) | 337 (32.5) | 1.21 (1.05−1.39)\*\* | 1.11 (0.96−1.28) |
| Western Australia | 582 (6.6) | 81 (7.8) | 1.20 (0.94−1.52) |  |
| Other (North Territory & Tasmania) | 219 (2.5) | 36 (3.5) | 1.41 (0.98−2.02) |  |
| Born in Australia | 6217 (70.4) | 833 (80.3) | 1.71 (1.45−2.00)\*\*\* | 1.63 (1.39−1.92)\*\*\* |
| Aboriginal and/or Torres Strait Islander | 281 (3.2) | 28 (2.7) | 0.84 (0.56−1.24) |  |
| University degree | 4837 (54.8) | 472 (45.5) | 0.68 (0.61−0.78)\*\*\* | 0.73 (0.63−0.84)\*\*\* |
| Full-time employed | 5736 (65.0) | 655 (63.1) | 0.91 (0.80−1.05) |  |
| Gay-identified | 7708 (87.3) | 984 (94.8) | 2.65 (2.00−3.52)\*\*\* | 2.34 (1.76−3.11)\*\*\* |
| More than 10 male partners1 | 1788 (20.2) | 270 (26.0) | 1.38 (1.20−1.61)\*\*\* | 1.08 (0.90−1.28) |
| Any condomless sex with regular partners1 | 4076 (46.2) | 576 (55.5) | 1.45 (1.27−1.65)\*\*\* | 1.27 (1.11−1.45)\*\*\* |
| Any condomless sex with casual partners1 | 2871 (32.5) | 473 (45.6) | 1.73 (1.52−2.00)\*\*\* | 1.47 (1.25−1.72)\*\*\* |
| Recent HIV test1 | 4743 (53.7) | 663 (63.9) | 1.52 (1.33−1.74)\*\*\* | 1.32 (1.10−1.58)\*\* |
| Any STI test2 | 5675 (64.3) | 738 (71.1) | 1.36 (1.18−1.57)\*\*\* | 1.03 (0.85−1.24) |
| Any STI diagnosis2 | 1799 (20.4) | 248 (23.9) | 1.22 (1.05−1.42)\*\* | 0.91 (0.76−1.08) |
| Recent PrEP use1 | 1615 (18.3) | 242 (23.3) | 1.35 (1.16−1.58)\*\*\* | 0.91 (0.75−1.10) |

OR = odds ratio, CI = confidence interval, STI = sexually transmissible infection, PrEP = pre-exposure prophylaxis

1 In the last six months, 2 In the last 12 months

\* *p*<0.05, \*\* *p*<0.01, \*\*\* *p*<0.001

**Supplemental Table 3. Comparison of eligible and aware participants using and not using PrEP, Gay Community Periodic Surveys, 2017-18**

|  | **Eligible, aware and not using PrEP (N=1,579)**  **n (%)** | **Eligible, aware and using PrEP (N=1,209)**  **n (%)** | **Crude OR (95% CI)** | **Adjusted OR (95% CI)** |
| --- | --- | --- | --- | --- |
| Age |  |  |  |  |
| <25 years | 308 (19.6) | 135 (11.2) | 0.52 (0.41-0.66)\*\*\* | 0.72 (0.49-1.05) |
| 25-29 years | 340 (21.6) | 257 (21.3) | 0.89 (0.72-1.10) | 0.82 (0.59-1.13) |
| 30-39 years | 475 (30.2) | 431 (35.8) | 1.07 (0.88-1.29) | 0.92 (0.70-1.22) |
| 40 and above | 451 (28.6) | 382 (31.7) | 1.00 | 1.00 |
| State/territory |  |  |  |  |
| New South Wales | 474 (30.0) | 420 (34.7) | 1.00 | 1.00 |
| Australian Capital Territory | 68 (4.3) | 36 (3.0) | 0.60 (0.39-0.91)\* | 0.44 (0.25-0.78)\*\* |
| Queensland | 304 (19.3) | 278 (23.0) | 1.03 (0.83- 1.27) | 1.38 (1.01-1.89)\* |
| South Australia | 146 (9.3) | 98 (8.1) | 0.75 (0.56-1.01) | 1.34 (0.87-2.07) |
| Tasmania | 23 (1.4) | 19 (1.6) | 0.93 (0.50-1.73) | 2.00 (0.78-5.15) |
| Victoria | 453 (28.7) | 340 (28.1) | 0.84 (0.70-1.02) | 0.78 (0.59-1.02) |
| Western Australia | 111 (7.0) | 18 (1.5) | 0.18 (0.11-0.31)\*\*\* | 0.33 (0.17-0.64)\*\* |
| Born in Australia | 1,111 (70.4) | 851 (70.4) | 1.00 (0.85-1.18) |  |
| Anglo-Australian | 1,038 (65.7) | 859 (71.1) | 1.27 (1.08-1.50)\*\* | 1.31 (1.04-1.65)\* |
| Aboriginal and/or Torres Strait Islander | 52 (3.3) | 30 (2.5) | 0.74 (0.47- 1.17) |  |
| University degree | 790 (50.0) | 747 (61.8) | 1.61(1.38-1.88)\*\*\* | 1.36 (1.09-1.71)\*\* |
| Full-time employed | 1,027 (65.0) | 894 (74.0) | 1.52 (1.29-1.80)\*\*\* | 1.35 (1.05-1.72)\* |
| Socially engaged with gay men1 | 1,084 (68.7) | 988 (81.7) | 2.04 (1.70-2.44)\*\*\* | 1.19 (0.91-1.56) |
| Gay-identified | 1,415 (89.6) | 1,139 (94.2) | 1.88 (1.41-2.52)\*\*\* | 1.05 (0.69-1.61) |
| How men met their male partners2 |  |  |  |  |
| Internet | 654 (41.4) | 612 (50.6) | 1.45 (1.24-1.69)\*\*\* | 0.96 (0.77-1.20) |
| Mobile app | 1,152 (78.1) | 1,052 (90.8) | 2.76 (2.18-3.50)\*\*\* | 1.01 (0.71-1.44) |
| Gay bar | 559 (40.9) | 603 (55.9) | 1.83 (1.56-2.15)\*\*\* | 0.99 (0.78-1.25) |
| Sex venue | 524 (33.2) | 638 (52.8) | 2.25 (1.93-2.62)\*\*\* | 1.32 (1.05-1.67)\* |
| More than 10 male partners2 | 465 (29.5) | 688 (56.9) | 3.16 (2.70-3.70)\*\*\* | 1.19 (0.93-1.51) |
| Any condomless sex with regular partners2 | 788 (49.9) | 778 (64.4) | 1.81 (1.55-2.11)\*\*\* | 1.40 (1.13-1.75)\*\* |
| Any condomless sex with casual partners2 | 1,034 (65.5) | 1,057 (87.4) | 3.67 (3.00-4.47)\*\*\* | 2.29 (1.70-3.09)\*\*\* |
| Any group sex2 | 741 (46.9) | 884 (73.1) | 3.07 (2.61-3.61)\*\*\* | 1.38 (1.07-1.77)\* |
| Recent HIV test2 | 1,129 (71.5) | 1,177 (97.4) | 14.67 (10.14-21.18)\*\*\* | 2.92 (1.69-5.06)\*\*\* |
| Had more than two HIV tests3 | 593 (37.6) | 1,115 (92.2) | 19.72 (15.61-25.00)\*\*\* | 10.3 (7.63-14.01)\*\*\* |
| Any STI test3 | 1,317 (83.4) | 1,201 (99.3) | 29.86 (14.71-60.61)\*\*\* | 2.72 (1.20-6.12)\* |
| Any STI diagnosis3 | 790 (50.0) | 827 (68.4) | 2.16 (1.84-2.52)\*\*\* | 1.51 (1.19-1.91)\*\* |
| PEP use2 | 99 (6.3) | 152 (12.6) | 2.14 (1.65-2.80)\*\*\* | 1.76 (1.23-2.51)\*\* |
| Used party drugs for sex2 | 456 (28.9) | 463 (38.3) | 1.53 (1.30-1.80)\*\*\* | 1.11 (0.83-1.48) |
| Any injecting drug use2 | 70 (4.4) | 76 (6.3) | 1.44 (1.04-2.01)\* | 1.16 (0.66-2.03) |
| Drugs used2 |  |  |  |  |
| Amyl nitrite | 893 (56.6) | 900 (74.4) | 2.23 (1.90-2.63)\*\*\* | 1.42 (1.11-1.82)\*\* |
| Cannabis | 641 (40.6) | 508 (42.0) | 1.06 (0.91-1.23) |  |
| Crystal methamphetamine | 326 (20.7) | 206 (17.0) | 0.78 (0.65-0.96)\* | 0.66 (0.46-0.96)\* |
| Ecstasy | 476 (30.2) | 428 (35.4) | 1.26 (1.08-1.49)\*\* | 0.87 (0.67-1.13) |
| Erectile dysfunction medication | 421 (26.7) | 531 (43.9) | 2.15 (1.83-2.52)\*\*\* | 1.32 (1.02-1.72)\* |
| Gamma hydroxybutyrate | 208 (13.2) | 267 (22.1) | 1.86 (1.53-2.28)\*\*\* | 1.53 (1.06-2.19)\* |
| Ketamine | 185 (11.7) | 172 (14.2) | 1.25 (1.00-1.56) |  |

PrEP = pre-exposure prophylaxis, OR = odds ratio, CI = confidence interval, SD = standard deviation, STI = sexually transmissible infection, PEP = post-exposure prophylaxis

\* *p*<0.05, \*\* *p*<0.01, \*\*\* *p*<0.001

1 Defined as participants who reported that most or all of their friends were gay men and that they spent some or a lot of their free time with gay men.

2 In the last six months

3 In the last 12 months

**Supplemental Table 4. Comparison of eligible and aware participants willing and unwilling to use PrEP, PrEPARE Project, 2017**

|  | **Eligible, aware, unwilling to use PrEP (N=177)**  **n (%)** | **Eligible, aware, willing to use PrEP (N=157)**  **n (%)** | **Crude OR (95% CI)** | **Adjusted OR (95% CI)** |
| --- | --- | --- | --- | --- |
| Age |  |  |  |  |
| <25 years | 34 (19.2) | 41 (26.1) | 1.00 | 1.00 |
| 25-29 years | 23 (13.0) | 25 (15.9) | 0.90 (0.44-1.86) | 0.92 (0.42-2.01) |
| 30-39 years | 48 (27.1) | 55 (35.0) | 0.95 (0.52-1.73) | 0.99 (0.52-1.89) |
| 40 and above | 72 (40.7) | 36 (22.9) | 0.41 (0.23-0.76)\*\* | 0.41 (0.21-0.79)\*\* |
| State/territory |  |  |  |  |
| New South Wales | 64 (36.2) | 43 (27.4) | 1.00 |  |
| Queensland | 27 (15.3) | 23 (14.6) | 1.27 (0.64-2.50) |  |
| Victoria | 53 (29.9) | 51 (32.5) | 1.43 (0.83-2.47) |  |
| Other jurisdictions | 33 (18.6) | 40 (25.5) | 1.80 (0.99-3.29) |  |
| Resides in capital city | 129 (72.9) | 98 (62.4) | 0.62 (0.39-0.98)\* | 0.68 (0.41-1.13) |
| Born in Australia | 139 (78.5) | 137 (87.3) | 1.87 (1.04-3.38)\* | 1.82 (0.96-3.46) |
| Aboriginal and/or Torres Strait Islander | 7 (4.0) | 4 (2.5) | 1.58 (0.45-5.48) |  |
| University degree | 74 (41.8) | 57 (36.3) | 0.79 (0.51-1.23) |  |
| Full-time employed | 121 (68.4) | 98 (62.4) | 0.77 (0.49-1.21) |  |
| Gay-identified | 168 (94.9) | 151 (96.2) | 1.35 (0.47-3.88) |  |
| More than 10 male partners1 | 51 (28.8) | 51 (32.5) | 1.19 (0.75-1.89) |  |
| Any condomless sex with regular partners1 | 103 (58.2) | 107 (68.2) | 1.54 (0.98-2.41) |  |
| Any condomless sex with casual partners1 | 123 (69.5) | 142 (90.4) | 4.16 (2.23-7.73)\*\*\* | 4.43 (2.31-8.50)\*\*\* |
| Recent HIV test1 | 109 (61.6) | 119 (75.8) | 1.95 (1.22-3.14)\*\* | 1.78 (1.05-3.01)\* |
| Any STI test2 | 106 (59.9) | 109 (69.4) | 1.52 (0.97-2.39) |  |
| Any STI diagnosis2 | 61 (34.5) | 45 (28.7) | 0.76 (0.48-1.22) |  |
| Ever taken PEP | 37 (20.9) | 31 (19.7) | 0.93 (0.55-1.59) |  |
| Used party drugs for sex1 | 46 (26.0) | 43 (27.4) | 1.07 (0.66-1.75) |  |
| Any injecting drug use1 | 12(6.8) | 5 (3.2) | 0.45 (0.16-1.31) |  |
| Drugs used1 |  |  |  |  |
| Amyl nitrite | 89 (50.3) | 91 (58.0) | 1.36 (0.88-2.10) |  |
| Cannabis | 68 (38.4) | 63 (40.1) | 1.07 (0.69-1.67) |  |
| Crystal methamphetamine | 39 (22.0) | 27 (17.2) | 0.73 (0.43-1.27) |  |
| Ecstasy | 53 (29.9) | 48 (30.6) | 1.03 (0.65-1.64) |  |
| Erectile dysfunction medication | 51 (28.8) | 35 (22.3) | 0.71 (0.43-1.17) |  |
| Gamma hydroxybutyrate | 23(13.0) | 14 (8.9) | 0.66 (0.32-1.32) |  |
| Ketamine | 12 (6.8) | 8 (5.1) | 0.74 (0.29-1.86) |  |
| Knows someone taking PrEP | 120 (67.8) | 123 (78.3) | 1.72 (1.05-2.82)\* | 1.67 (0.97-2.88) |
| Knows someone living with HIV | 120 (67.8) | 91 (58.0) | 0.65 (0.42-1.02) |  |
| Perceived likelihood of acquiring HIV |  |  |  |  |
| Unlikely/neutral | 167 (94.4) | 143 (91.1) | 1.00 |  |
| Likely | 10 (5.6) | 14 (8.9) | 1.63 (0.70-3.79) |  |
| Personal experience of using condoms |  |  |  |  |
| Negative/neutral (score <4) | 167 (94.4) | 152(96.8) | 1.00 |  |
| Positive (score >4) | 10 (5.6) | 5 (3.2) | 0.55 (0.18-1.64) |  |

PrEP = pre-exposure prophylaxis, OR = odds ratio, CI = confidence interval, SD = standard deviation, STI = sexually transmissible infection, PEP = post-exposure prophylaxis

\* *p*<0.05, \*\* *p*<0.01, \*\*\* *p*<0.001

1 In the last six months

2 In the last 12 months