

**SUPPLEMENT TO:****Can we screen less frequently for STI among PrEP users? Comparing biannual versus quarterly STI screening in the AMPrEP cohort study**

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**Supplementary Table 1: Socio-demographic and sexual behaviour characteristics at baseline of PrEP users (n=366), AMPrEP cohort study, August 2015 to June 2016, Amsterdam, the Netherlands.**

|  | <i>n</i> <sup>1</sup> | <i>%</i> <sup>1</sup> |
|--|-----------------------|-----------------------|
| <b>PrEP regimen</b>  |                       |                       |
| Daily  | 268                   | 73%                   |
| Event-driven   | 98                    | 27%                   |
| <b>Age (years)</b>   |                       |                       |
| Median (IQR)   | 40                    | [32-48]               |
| <35 year   | 120                   | 33%                   |
| 35 - 44 year   | 111                   | 30%                   |
| ≥45 year   | 135                   | 37%                   |
| <b>Gender identity</b>   |                       |                       |
| Male   | 364                   | 99%                   |
| Transgender woman  | 2                     | 1%                    |
| <b>Self-declared racial-ethnic background</b>                                  |                       |                       |
| White  | 314                   | 86%                   |
| Non-white  | 52                    | 14%                   |
| <b>Residence</b>   |                       |                       |
| Amsterdam  | 223                   | 61%                   |
| Other  | 143                   | 39%                   |
| <b>Highest education level</b>   |                       |                       |
| No college/university  | 86                    | 24%                   |
| College/university   | 280                   | 77%                   |
| <b>Employment</b>  |                       |                       |
| Employed   | 282                   | 78%                   |
| Unemployed   | 80                    | 22%                   |
| <b>Monthly net income</b>  |                       |                       |
| Low (≤€1700)   | 96                    | 27%                   |
| Middle (€1701 to €2950)  | 150                   | 43%                   |
| High (>€2950)  | 104                   | 30%                   |
| <b>Steady relationship</b>   |                       |                       |
| No   | 204                   | 56%                   |
| Yes  | 158                   | 44%                   |
| <b>Living situation</b>  |                       |                       |
| Alone  | 195                   | 53%                   |
| With partner   | 116                   | 32%                   |
| With others  | 55                    | 15%                   |
| <i>Sexual behaviour</i>  |                       |                       |
| <b>Sexual preference</b>   |                       |                       |
| Exclusively homosexual   | 288                   | 79%                   |
| Not exclusively homosexual   | 77                    | 21%                   |
| <b>Number of anal sex partners<sup>2</sup>, median [IQR]</b>                   | 12                    | [6-25]                |
| <b>Number of casual partners<sup>2</sup>, median [IQR]</b>                     | 12                    | [5-23]                |
| <b>Number of anal sex acts<sup>2</sup>, median [IQR]</b>                       | 22                    | [11-36]               |
| <b>Number of anal sex acts with a casual partner<sup>2</sup>, median [IQR]</b> | 15                    | [8-28]                |
| <b>CAS with casual partner<sup>3</sup></b>                                     |                       |                       |
| No   | 16                    | 4%                    |
| Yes  | 350                   | 96%                   |
| <b>Post-exposure prophylaxis used<sup>3</sup></b>                              |                       |                       |

|  |        |     |
|--|--------|-----|
| No   | 339    | 93% |
| Yes  | 27     | 7%  |
| <b>HIV-positive partner with a detectable viral load<sup>3</sup></b> |        |     |
| No   | 357    | 98% |
| Yes  | 9      | 2%  |
| <b>Any bacterial STI</b>   |        |     |
| Chlamydia  | 35/357 | 10% |
| Gonorrhoea   | 35/358 | 10% |
| Syphilis   | 5/357  | 1%  |
| <i>Drug use and mental health characteristics</i>                    |        |     |
| <b>Chemsex<sup>2,4</sup></b>   |        |     |
| No   | 207    | 57% |
| Yes  | 154    | 43% |
| <b>Alcohol-use disorder (AUDIT)<sup>5</sup></b>                      |        |     |
| Score <8   | 262    | 72% |
| Score ≥8   | 100    | 28% |
| <b>Drug-use disorder (DUDIT)<sup>5</sup></b>                         |        |     |
| Score <8   | 230    | 63% |
| Score ≥8   | 134    | 37% |
| <b>MHI-5<sup>6</sup></b>   |        |     |
| Score <60  | 76     | 21% |
| Score ≥60  | 290    | 79% |
| <b>Sexual compulsivity score (SCS)<sup>7</sup></b>                   |        |     |
| Score <24  | 283    | 78% |
| Score ≥24  | 82     | 22% |

**Abbreviations:** AMPrEP, Amsterdam PrEP demonstration project; CAS, condomless anal sex act; HIV, human immunodeficiency virus; IQR, interquartile range; PrEP, pre-exposure prophylaxis

Data were missing for employment (n=4), income (n=16), steady relationship (n=4), sexual preference (n=1), syphilis diagnosis (n=9), AUDIT (n=1), DUDIT (n=2), SCS (n=1).

1. Unless stated otherwise
2. In the 3 months before baseline
3. In the 6 months before baseline
4. Defined as any gamma-hydroxybutyrate (GHB)/gamma-butyrolactone (GBL), crystalized methamphetamine or mephedrone use during sex
5. A score of eight or higher indicates possible presence of alcohol- or drug-use disorder
6. A score lower than 60 indicates possible mood or depressive mood disorder
7. A score or 24 or higher indicates a greater impact of sexual thoughts on daily functioning and an inability to control sexual thoughts or behaviour

**Supplementary Table 2: Proportion of bacterial STI diagnoses that would have been delayed and that would not have been delayed if screening was done biannually or based on symptoms rather than quarterly, AMPrEP cohort study, August 2015 to February 2020, Amsterdam, the Netherlands.**

|  | Total | Would not have been delayed |     | Would have been delayed |     |
|--|-------|-----------------------------|-----|-------------------------|-----|
|  |       | <i>n</i>                    | %   | <i>n</i>                | %   |
| <b>Chlamydia</b>                               | 630   | 438                         | 70% | 192                     | 30% |
| <b>Gonorrhoea</b>                              | 848   | 598                         | 71% | 250                     | 29% |
| <b>Syphilis</b>                                | 146   | 105                         | 92% | 41                      | 28% |
| <b>Total chlamydia or gonorrhoea</b>           | 1,478 | 1036                        | 70% | 442                     | 30% |
| <b>Total chlamydia, gonorrhoea or syphilis</b> | 1,624 | 1,141                       | 70% | 483                     | 30% |

**Abbreviations:** AMPrEP, Amsterdam PrEP demonstration project; STI, sexually transmitted infection

**Supplementary Table 3. Determinants of any incident asymptomatic chlamydia or gonorrhoea among PrEP users, AMPrEP observational cohort study, August 2015 to February 2020, Amsterdam, the Netherlands.**

|  | # events | Person-years | Univariable Poisson model |             |         | Multivariable Poisson model |             |         |
|--|----------|--------------|---------------------------|-------------|---------|-----------------------------|-------------|---------|
|  |          |              | IRR                       | 95% CI      | p-value | aIRR                        | 95% CI      | p-value |
| <b>Years since PrEP initiation</b>           |          |              |                           |             |         |                             |             |         |
| 1  | 179      | 359          | REF                       |             | 0.757   | REF                         |             |         |
| 2  | 156      | 338          | 0.93                      | (0.75-1.15) |         | 0.97                        | (0.77-1.20) | 0.760   |
| 3  | 162      | 320          | 1.02                      | (0.82-1.26) |         | 1.14                        | (0.92-1.42) | 0.227   |
| 4  | 119      | 259          | 0.92                      | (0.73-1.16) |         | 1.07                        | (0.82-1.41) | 0.608   |
| <b>Age, per 10 year increase<sup>1</sup></b> |          |              | 0.86                      | 0.80-0.92   | <0.001  | 0.85                        | 0.79-0.91   | <0.001  |
| <b>Age<sup>1</sup></b>                       |          |              |                           |             |         |                             |             |         |
| <35 year                                     | 176      | 308          | REF                       |             | <0.001  |                             |             |         |
| 35 - 44 year                                 | 229      | 413          | 0.97                      | 0.80-1.18   |         |                             |             |         |
| ≥45 year                                     | 231      | 582          | 0.69                      | 0.57-0.85   |         |                             |             |         |
| <b>Self-declared ethnicity<sup>2</sup></b>   |          |              |                           |             |         |                             |             |         |
| White  | 546      | 1117         | REF                       |             | 0.941   |                             |             |         |
| Non-white                                    | 90       | 186          | 0.99                      | 0.79-1.24   |         |                             |             |         |
| <b>Highest education level<sup>2</sup></b>   |          |              |                           |             |         |                             |             |         |
| No college/university                        | 118      | 286          | REF                       |             | 0.033   |                             |             |         |
| College/university                           | 518      | 1016         | 1.24                      | 1.01-1.51   |         |                             |             |         |
| <b>Employment<sup>2</sup></b>                |          |              |                           |             |         |                             |             |         |
| Unemployed                                   | 129      | 279          | REF                       |             | 0.452   |                             |             |         |
| Employed                                     | 500      | 1006         | 1.08                      | 0.89-1.31   |         |                             |             |         |
| <b>Sexual preference<sup>2</sup></b>         |          |              |                           |             |         |                             |             |         |
| Exclusively homosexual                       | 517      | 1029         | REF                       |             | 0.204   |                             |             |         |
| Not exclusively homosexual                   | 119      | 269          | 0.88                      | 0.72-1.07   |         |                             |             |         |
| <b>CAS with a steady partner<sup>1</sup></b> |          |              |                           |             |         |                             |             |         |
| No   | 7.5      | 748          | REF                       |             | 0.390   |                             |             |         |

|   |     |      |      |           |        |      |           |        |
|---|-----|------|------|-----------|--------|------|-----------|--------|
| Yes   | 5.0 | 504  | 0.93 | 0.79-1.10 |        |      |           |        |
| <b>CAS with a known casual partner<sup>1</sup></b>                    |     |      |      |           |        |      |           |        |
| No  | 114 | 347  | REF  |           | <0.001 | REF  |           | 0.008  |
| Yes   | 503 | 906  | 1.69 | 1.38-2.07 |        | 1.35 | 1.08-1.68 |        |
| <b>CAS with an unknown casual partner<sup>1</sup></b>                 |     |      |      |           |        |      |           |        |
| No  | 98  | 331  | REF  |           | <0.001 | REF  |           | <0.001 |
| Yes   | 519 | 922  | 1.90 | 1.53-2.36 |        | 1.84 | 1.45-2.34 |        |
| <b>Chemsex<sup>1,3</sup></b>  |     |      |      |           |        |      |           |        |
| No  | 256 | 690  | REF  |           | <0.001 | REF  |           | <0.001 |
| Yes   | 312 | 477  | 1.76 | 1.50-2.08 |        | 1.53 | 1.28-1.81 |        |
| <b>Alcohol use disorder identification test (AUDIT)<sup>1,4</sup></b> |     |      |      |           |        |      |           |        |
| Score <8  | 453 | 884  | REF  |           | 0.037  | REF  |           | 0.050  |
| Score ≥8  | 116 | 280  | 0.81 | 0.66-0.99 |        | 0.81 | 0.66-1.00 |        |
| <b>Drug use disorder identification test (DUDIT)<sup>1,4</sup></b>    |     |      |      |           |        |      |           |        |
| Score <8  | 355 | 802  | REF  |           | <0.001 |      |           |        |
| Score ≥8  | 214 | 362  | 1.34 | 1.13-1.58 |        |      |           |        |
| <b>MHI-5<sup>1,5</sup></b>  |     |      |      |           |        |      |           |        |
| Score ≥60   | 459 | 939  | REF  |           | 0.983  |      |           |        |
| Score <60   | 109 | 222  | 1.00 | 0.81-1.24 |        |      |           |        |
| <b>Sexual compulsivity score (SCS)<sup>1,6</sup></b>                  |     |      |      |           |        |      |           |        |
| Score <24   | 489 | 1021 | REF  |           | 0.186  |      |           |        |
| Score ≥24   | 79  | 140  | 1.18 | 0.93-1.49 |        |      |           |        |

**Abbreviations:** aIRR, adjusted incidence rate ratio; AMPrEP, Amsterdam PrEP demonstration project; CAS, condomless anal sex act; CI, confidence interval; IRR, incidence rate ratio; PrEP, pre-exposure prophylaxis

1. Time-updated
2. As reported at baseline
3. Defined as any gamma-hydroxybutyrate (GHB)/gamma-butyrolactone (GBL), crystalized methamphetamine or mephedrone use during sex
4. A score of eight or higher indicates possible presence of alcohol- or drug-use disorder
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