

# FACTORS AFFECTING PREVENTION-EFFECTIVE ADHERENCE TO HIV PRE-EXPOSURE PROPHYLAXIS (PREP) AMONG AUSTRALIAN GAY AND BISEXUAL MEN: A CROSS-SECTIONAL ANALYSIS

## Authors:

MacGibbon J<sup>1</sup>, Holt M<sup>1</sup>, Broady TR<sup>1</sup>, Calabrese SK<sup>2</sup>, Smith AKJ<sup>1</sup>, Yu S<sup>1</sup>, Murphy D<sup>3</sup>, Heath-Paynter D<sup>4,5</sup>, Clackett S<sup>6</sup>, Gordon T<sup>6</sup>, Ellard J<sup>3</sup>, Heslop A<sup>7</sup>, Molyneux A<sup>8</sup>, de Wit J<sup>1,9</sup>, Bavinton BR<sup>4</sup>

<sup>1</sup>Centre for Social Research in Health, UNSW Sydney, Sydney, Australia,

<sup>2</sup>Department of Psychological & Brain Sciences, George Washington University,

Washington DC, USA, <sup>3</sup>Australian Research Centre in Sex, Health & Society, La

Trobe University, Melbourne, Australia, <sup>4</sup>The Kirby Institute, UNSW Sydney, Sydney,

Australia, <sup>5</sup>Health Equity Matters, Sydney, Australia, <sup>6</sup>New South Wales Ministry of

Health, Sydney, Australia, <sup>7</sup>Positive Life NSW, Sydney, Australia, <sup>8</sup>ACON, Sydney,

Australia, <sup>9</sup>Department of Interdisciplinary Social Science, Utrecht University, Utrecht, Netherlands

## Background:

Oral HIV pre-exposure prophylaxis (PrEP) is highly effective when taken appropriately at times of HIV risk, termed “prevention-effective adherence”. We compared consistent PrEP-users who reported condomless anal intercourse with casual partners (CLAIC) versus PrEP users who had any CLAIC not protected by their own PrEP use (“PrEP-unprotected CLAIC”).

## Methods:

A national online survey of gay and bisexual men (GBM) was conducted in June–July 2023. PrEP-users were asked their frequency of PrEP-unprotected CLAIC (i.e., they missed >1 required dose). Logistic regression identified characteristics associated with PrEP-unprotected CLAIC.

## Results:

Of 2,046 total respondents, 771 cisgender male current PrEP-users who had any CLAIC in the past 6 months were included (81.4% of 947 current users). Median age was 37, 88.1% identified as gay, 73.9% were Australian-born, and 94% had access to Medicare. 65.5% used daily PrEP, 31.3% on-demand, and 3.2% periodic PrEP.

193 PrEP-users reported PrEP-unprotected CLAIC in the past 6 months (20.4% of all PrEP-users, 25.0% of those reporting any CLAIC). Of these, 68.4% reported 1–2 episodes, 19.2% reported 3–5 episodes, 3.6% reported 6–10 episodes, and 8.8% reported >10 episodes. 11.4% reported PrEP-unprotected CLAIC only with PrEP-users or people with undetectable viral loads, while 88.6% reported it with an assumed HIV-negative/unknown-status partner.

Participants reporting PrEP-unprotected CLAIC were more likely to: be <30 years old (*aOR*=1.78, 95%CI=1.16–2.72), be born overseas (*aOR*=1.94, 95%CI=1.25–3.01), use on-demand (*aOR*=2.78, 95%CI=1.90–4.08) or periodic PrEP (*aOR*=4.19, 95%CI=1.74–10.11) compared to daily pills, find it difficult to get PrEP (*aOR*=1.70, 95%CI=1.09–2.64), experience side effects from PrEP (*aOR*=1.81, 95%CI=1.00–

3.28), and report any sexualised drug use in the past 6 months ( $aOR=1.95$ ,  $95\%CI=1.28-2.97$ ).

**Conclusion:**

One-fifth of PrEP-users reported PrEP-unprotected CLAIC in this first national estimate of prevention-effective adherence. Targeted interventions in subgroups with more frequent PrEP-unprotected episodes must address side effects and other adherence barriers.

**Disclosure of Interest Statement:**

The Centre for Social Research in Health and the Kirby Institute are supported by the Australian Government Department of Health. The PrEPARE Project was supported by funding from NSW Health's BBV & STI Research Intervention and Strategic Evaluation (BRISE) program and surveillance funding from the Australian Government Department of Health. No pharmaceutical grants were received for this research.