

# Estimating the Population of Aboriginal and/or Torres Strait Islander Men who would benefit from HIV Pre-Exposure Prophylaxis (PrEP)

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## Background

- Pre-exposure prophylaxis (PrEP) can prevent HIV infection.
- People at high-risk of HIV include gay and bisexual men (hereafter gay) & trans & gender diverse people, who have condomless anal intercourse (CAI) with casual partners, a recent positive STI test, or use methamphetamine.
- HIV diagnosis rates have increased among Aboriginal and Torres Strait Islander (hereafter, respectfully, Aboriginal) people in recent years.
- In 2015, there were an estimated 108,850 gay men in Australia, with between 10,558 to 30,913 (9.7%-28.4%) at high-risk of HIV infection.<sup>1</sup>
- No estimate of the Aboriginal gay male population exists.

## Aims

- Describe the Aboriginal population engaged in Australian PrEP implementation trials.
- Estimate the number of Aboriginal gay men, including those at high-risk.
- Calculate PrEP coverage during the implementation trials.

## Methods

**A retrospective analysis of participant data from six PrEP implementation trials** conducted between March 2016 and September 2018:

- Expanded PrEP Implementation in Communities in NSW (EPIC-NSW)
- Western Australian PrEP for HIV implementation trial (PREPIT-WA)
- Protocol for an HIV PrEP Population Level Intervention Study in Victoria, South Australian and Tasmania (PrEPX, PrEPXSA, PrEPXTAS)
- Queensland PrEP Demonstration Project Expansion (QPrEPD)

**Population estimates of Aboriginal gay men calculated using**

- Australian Census data
- Range of Australian socio-behavioural and sexual health surveys<sup>2-6</sup>

Analysis accounted for relationship status, ever diagnosed with HIV, place of residence and eligibility criteria for PrEP (ever diagnosed with an STI, recent unprotected anal intercourse or drug use).

**Aboriginal gay and bisexual men do not currently have the same PrEP coverage as the wider gay community**

## Results

- There were 17,853 participants in the six PrEP studies, with 443 (2.4%) identifying as Aboriginal. Indigenous status was missing for 3,744 people.
- PrEP study participants who identified as Aboriginal were younger, more diverse in gender and sexual identity, more likely to live in regional areas, more likely to have gonorrhoea at baseline, and were more likely to be lost to follow up within 30 days of enrolment, than other participants.
- We estimate between 3 to 7% of all Aboriginal men are gay, equating to between 4,200 to 12,180 Aboriginal gay men.
- We estimate between 1,178 to 3,411 of Aboriginal gay men to be at high-risk and, therefore, eligible for PrEP.
- PrEP coverage for non-Aboriginal gay men is 61.4% in Sydney and 56.1% in Melbourne in 2017.<sup>7-8</sup> Herein, we estimate coverage among eligible high-risk Aboriginal gay men to be 19.2%.

**Table 1: Demographics of the PrEP implementation study participants.**

		All Participants	Non-Indigenous participants	Aboriginal participants	
n		17,853	14,109 (97.0%)	443 (3.0%)	
Age	Mean (SD)	36.3 (10.9)	36.76 (11.0)	33.9 (9.9)	** ^
Gender Identity	Male	17,561 (98.4%)	13896 (98.5%)	426 (96.2%)	** †
	Female	32 (0.2%)	30 (0.2%)	0	
	Transgender male	92 (0.5%)	40 (0.3%)	7 (1.6%)	
	Transgender female	57 (0.3%)	52 (0.4%)	<5	
	Two Spirit / Brotherboy	15 (0.1%)	10 (0.1%)	5 (1.1%)	
	Queer / NonBinary	62 (0.3%)	58 (0.4%)	0	
	Other	31 (0.2%)	23 (0.2%)	<5	
Sexual Identity	Gay	16,177 (90.8%)	12833 (91.1%)	376 (85.5%)	** †
	Bisexual	1,308 (7.3%)	1012 (7.2%)	43 (9.8%)	
	Heterosexual	101 (0.6%)	60 (0.4%)	8 (1.8%)	
	Other	233 (1.3%)	190 (1.3%)	13 (3.0%)	
Residential Location	Urban	14,475 (88.1%)	11735 (88.0%)	336 (77.6%)	** #
	Rest of State	1,964 (11.9%)	1602 (12.0%)	97 (22.4%)	
Baseline STI Positive	Chlamydia	1,424 (8.9%)	1106 (8.6%)	40 (9.8%)	n.s.
	Gonorrhoea	1,188 (7.5%)	914 (7.1%)	41(10.1%)	* #
Lost to Follow-Up (≤ 30 days of enrolment)		1,481 (10.2%)	1068 (9.4%)	51 (14.6%)	** ‡

n.s. = Not significant, \* p < 0.05, \*\* p < 0.001, ^ Student's t-test, # Chi-squared test, † Fisher's exact test, ‡ Wilcoxon Rank Sum

**Table 2: Estimated (mid level) number of Aboriginal gay men and PrEP coverage, compared to the residential location of Aboriginal participants of the PrEP implementation trials.**

		Estimated Gay Popn		High Risk *	PrEP study Participants		PrEP Study Coverage
		total	%		n	%	
New South Wales	Sydney	1995	67.4%	559	167	73.9%	29.9%
	Rest of NSW	963	32.6%	270	59	26.1%	21.9%
Victoria	Melbourne	464	76.8%	130	86	97.7%	66.2%
	Rest of Victoria	140	23.2%	39	<5	2.3%	<12.8%
Queensland	Brisbane	1,256	50.8%	352	49	62.8%	13.9%
	Rest of QLD	1,217	49.2%	341	29	37.2%	8.5%
South Australia	Adelaide	362	78.4%	101	15	100%	14.9%
	Rest of SA	100	21.6%	28	0	0%	0.0%
Western Australia	Perth	584	53.1%	164	15	93.8%	9.1%
	Rest of WA	515	46.9%	144	<5	16.2%	<3.5%
Tasmania	Hobart	151	45.8%	42	<5	40.0%	<11.9%
	Rest of Tasmania	178	54.2%	50	6	60.0%	12.0%
Total	Urban	4812	88.1%	1348	336	77.6%	24.9%
	Rest of State	3113	11.9%	872	97	22.4%	11.1%

\* In 2013, between 24% to 28% Aboriginal gay men engaged in high-risk behaviour.<sup>9</sup>

## Conclusion

- This is the first analysis of Aboriginal peoples engagement with PrEP trials.
- We have calculated a first time estimate of the number of Aboriginal gay and bisexual men, including the number of men eligible for PrEP.
- PrEP coverage for Aboriginal gay and bisexual men is much lower than the wider gay community.
- Lack of coverage may be contributing to increasing HIV rates among Aboriginal people.
- Greater efforts are required to increase coverage of PrEP among Aboriginal gay and bisexual men & other identified high-risk populations.

## References

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