

## Estimates of PrEP eligibility in high-risk HIV negative gay men aged 16 to 69 by jurisdiction

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|       |       |
| NSW   | 9594  |
| Vic   | 7773  |
| Qld   | 6283  |
| WA    | 3753  |
| SA    | 2331  |
| ACT   | 542   |
| Tas   | 693   |
| NT    | 354   |
| Total | 31318 |

### Methodological notes

For each jurisdiction, calculations were performed as follows.

1. (Men aged 16-69 in Australia X jurisdiction specific population proportion x 1.88%) minus (estimated population of MSM living with HIV) = Estimated population of 16-69 year old HIV negative gay men in each jurisdiction
2. Estimated population of 16-69 year old men HIV negative gay men x 0.819 = estimated population of sexually active 16-69 year old men HIV negative gay men
3. Estimated population of sexually active 16-69 year old men HIV negative gay men x 0.28 = estimated population of high-risk sexually active 16-69 year old men HIV negative gay

### Assumptions

1. The ABS estimates that in 2015 there were 8,287,110 men aged 16-69 years in Australia. They are distributed around Australia as follows: 31.7% NSW, 25.0% Vic, 19.9% Qld, 11.3% WA, 7.1% SA, 1.7% ACT, 2.1% Tas, and 1.1% NT.
2. The Kirby Institute estimates that there are 19,097 MSM with HIV living in Australia. We estimated the jurisdiction breakdown as 39.6% in NSW, 26.5% living in Victoria, 18.9% living in Qld, 6.5% living in WA, 4.7% living in SA, 1.5% in ACT, 1.3% in Tas and 0.9% in NT. These estimates were obtained by applying the national HIV diagnosis and care cascade methodology [ASR 2016] to notifications attributed to male-to-male sex. With this method the number of PLWHIV equals the cumulative number of unique notifications minus the number of deaths and the number of permanent overseas migrants using estimated mortality and overseas migration rates. We estimated jurisdiction breakdowns using jurisdiction notifications, mortality rates, and overseas migration rates.
3. According to the second Australian Survey of Health and Relationships, the prevalence of gay/homosexual identity in males is 1.88% and the proportion of gay-identifying men aged 16-69 who are sexually active is 0.819. We have assumed these ASHR2 estimates do not vary

by jurisdiction. Fewer than 200 men identified as gay in ASHR2, so jurisdictional estimates are based on very small sample size and are unstable. The Kirby Institute is working on improved estimates of gay men by jurisdiction, and these may be available within the next few months.

4. We measured high-risk behaviour (as defined by ASHM guidelines) through the gay community periodic surveys. Nationally, 28.0% of gay men reported a behaviour which would see them included in the high-risk group according to AHSM guidelines. For our calculations, we assume these do not vary between jurisdictions. In fact, based on the most recent of 2014/15 data, actual estimates are within 2.4% of the national estimate of 28.0% for SA (25.6%); Vic (27.9%), WA (29.7%), Qld (27.9%), and NSW (29.7%). In the two smallest jurisdictions in which the GCPS is conducted, estimates were lower (Canberra 19.6%, based on a total sample size of 250; Tasmania 23.3%, based on a total sample size of 176). Given the small sample size, these numbers tend to go up and down each time the GCPS is conducted, hence the use of a national mean of 28.0% seems reasonable.