

NSW is approaching virtual elimination of HIV transmission among gay and bisexual men in inner Sydney, and geographical variation is consistent with patterns in HIV prevention indicators

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Background:

The headline target of the NSW HIV Strategy 2021-25 is a 90% reduction in the rate of preventable HIV infection (virtual elimination), with specific targets for HIV testing, PrEP and net prevention coverage (NPC, comprising the proportion of HIV-negative gay and bisexual men (GBM) using an effective form of HIV prevention).

Methods:

We examined trends in HIV diagnoses among GBM, based on HIV notifications data, and trends in HIV testing, PrEP and NPC in those at risk, based on data collected in the Sydney Gay Community Periodic Survey, between 2015 and 2021. We examined trends state-wide, and in 3 postcode-defined strata, based on the estimated proportion of the adult male population who identify as gay: >20% ("inner Sydney"); 5-19% (Sydney "middle ring" suburbs); and <5% ("elsewhere"). We examined differences in prevention indicators between postcode groupings in 2021 using chi-squared tests for linear trends.

Results:

Between 2015 and 2021, HIV diagnoses among GBM in NSW declined by 52.3% overall (from 285 to 136), and by 82.7%, 47.4%, and 40.5% in inner Sydney, middle ring postcodes, and elsewhere, respectively. In 2021, HIV testing in the last 12 months was higher in inner Sydney (90.2%) than the middle ring (83.7%) and elsewhere (75.3%, $p < 0.001$). A similar geographical pattern was seen for PrEP use (82.8%, 71.5% and 50.4%, $p < 0.001$) and NPC (88.1%, 83.3% and 70.4%, $p < 0.001$).

Conclusion:

HIV diagnoses among GBM in NSW declined by over half between 2015 and 2021, with the greatest reduction in inner Sydney, where the reduction approached the

Strategy target of 90%. In 2021, prevention indicators were all higher in inner Sydney, intermediate in the middle ring, and lower elsewhere. HIV notifications are approaching levels consistent with virtual elimination in inner Sydney. Achieving this success state-wide requires additional effort to increase uptake of prevention strategies among GBM elsewhere.

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