

## **ADVANCED HIV DIAGNOSES AMONG GAY AND BISEXUAL MEN IN AUSTRALIA 2007-2016: RESULTS FROM AN ANALYSIS OF NATIONAL HIV SURVEILLANCE DATA.**

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**Background:** Despite high and increasing HIV testing coverage in Australia among gay and bisexual men (GBM), 13% continue to be diagnosed with advanced HIV (indicative of AIDS), defined as a CD4 count <200 at diagnosis. Advanced HIV diagnosis is strongly associated with increased HIV-related mortality and morbidity. In addition people who are unaware of their HIV-positive status may also be unwittingly transmitting HIV. Considering ambitious targets to eliminate HIV, it is important to understand the characteristics of GBM with advanced HIV diagnosis in Australia, to target testing strategies.

**Methods:** National HIV surveillance data on new HIV diagnoses between 2007 and 2016 were analysed. Univariate and multivariate logistic regression models were used to identify factors associated with advanced HIV diagnosis among GBM diagnosed with HIV.

**Results:** Among 6,363 GBM diagnosed with HIV in the study period, 825 (13.0%) were diagnosed with advanced HIV infection. Multivariate model covariates significantly associated with advanced HIV infection were older age (50+) (adjusted odds ratio (AOR): 3.35, 95% confidence interval(CI): 2.70-4.16;  $p < 0.001$ ) (compared to age 30-39), likely mode of HIV exposure (sex with men and women (AOR: 2.43 (95%CI:1.93-3.05;  $p < 0.001$ ), and male-to-male sex and injecting drug use (IDU) (AOR:1.72, 95%CI:1.27-2.34,  $p < 0.001$ ) compared to male-to-male sex only; living in regional Australia compared to a major city (AOR:1.30, 95%CI:1.04-1.62;  $p = 0.021$ ); and being born in South-East Asia (AOR:2.7, 95%CI:2.11-3.43;  $p < 0.001$ ) compared to being Australian-born. Being born in South and Central-Asia was associated with a reduced risk (AOR: 0.2, 95%CI:0.05-0.85;  $p < 0.001$ ). Indigenous status and year of diagnosis were not associated with advanced HIV infection.

**Conclusion:** Increased risk of advanced HIV diagnosis among GBM is associated with increasing age, bisexual and IDU exposure risks, being born in South-East Asia and residing in regional Australia. Targeting HIV testing to GBM with these characteristics may be needed to reduce the rate of advanced HIV diagnoses among GBM.

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