

WOMEN, THOSE WHO INJECT DRUGS, AND YOUNGER PEOPLE MORE LIKELY TO HAVE 'DETECTABLE' HIV VIRAL LOADS

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Introduction: HIV viral load is an important marker of treatment adherence and relevant at a population level for evaluating the success of 'test and treat' programs. Very little is known, however, about the characteristics of people with detectable viral loads. We report trends in prevalence and factors associated with HIV viral load and treatment status among patients attending Australian sexual health clinics.

Methods: De-identified patient data were electronically extracted from 44 clinics participating in the Australian Collaboration for Coordinated Enhanced Surveillance of Sexually Transmissible Infections and Blood Borne Viruses ('ACCESS'). Among patients receiving HIV treatment, we calculated the proportion with 'detectable' viral loads at their last test annually (≥ 400 RNA copies/mm³) and assessed trends with Wilcoxon rank-sum tests. For 2015, a cross-sectional logistic regression analysis explored factors associated with detectable viral load among patients receiving HIV treatment.

Results: From 2007 to 2015, 6,402 HIV positive patients on treatment received one or more viral load test at a participating clinic. The proportion of patients with a detectable viral load at their last test decreased from 37% in 2007 to 9% in 2015 ($p < 0.001$). In 2015, after controlling for time since diagnosis and time since treatment initiation, factors associated with a detectable HIV viral load were: being younger (≤ 40 years) (adjusted odds ratio [AOR]=1.9, 95% confidence interval [CI]:1.3-2.8, $p < 0.001$), injecting drug use in the previous year (AOR=1.9, 95%CI:1.1-3.2, $p = 0.02$), and being female (AOR=2.0, 95%CI: 1.3-3.1, $p = 0.001$).

Conclusion: Over time, detectable HIV viral loads among sexual health clinic patients have decreased significantly. Women, younger people, and those who inject drugs were more likely than other patients to have a detectable viral load, suggesting that they may require further support to maintain HIV treatment. Collaborative solutions to improve treatment adherence among potentially vulnerable populations are warranted.

Disclosure of Interest Statement: None to declare