

OPTIMISING ANNUAL INVESTMENT IN MIXED HIV TESTING STRATEGIES IN AUSTRALIA TO ADVANCE VIRTUAL ELIMINATION OF HIV BY 2030: AN ALLOCATIVE EFFICIENCY ANALYSIS

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Background:

Australia has made strong progress towards achieving 95-95-95 HIV targets, but an estimated 8% of people living with HIV remain undiagnosed. To identify interventions to support HIV transmission elimination in Australia, we aimed to estimate the most cost-effective allocation of additional government investment in HIV testing.

Methods:

An Optima HIV model was parameterized using national demographic, surveillance and behavioural data. Australia's National HIV Strategy and a stakeholder advisory committee guided the inclusion of age and sex-stratified priority populations groups and interventions defined by testing type, setting and populations reached. An allocative efficiency analysis was conducted to identify how additional investments of \$5-80 million per annum could be optimally allocated across testing interventions to minimise the cumulative person-years with undiagnosed HIV infection over 2026-2030.

Results:

Optimised spending of an additional \$5-20 million per annum over 2026-2030 could reduce the number of people living with undiagnosed HIV in the year 2030 by 20-28%, from a projected 5% under the status quo to 3.6-4.0%. This could save \$90-126 million in lifetime health care costs (discounted) due to HIV infections and late diagnoses averted over 2026-2040, with benefit-cost ratios ranging from 4.0 to 1.4. There are diminishing population-level benefits with \$40 million or more additional annual investment. The model first prioritises the following interventions for scale-up: HIV self-testing among priority populations; other testing options for gay, bisexual and other men who have sex with men (direct-to-pathology testing, peer-led community-based testing, point-of-care testing at needle and syringe programs); opt-out testing in some hospitals; and expanding testing for people who inject drugs. Interventions reaching broader priority populations are prioritised from \$20 million additional annual investment.

Conclusion:

Additional annual investment in HIV testing can deliver substantial reductions in undiagnosed HIV in Australia and accelerate efforts to achieve the virtual elimination of HIV in Australia by 2030.

Disclosure of interest statement:

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