

## HIV SELF-TESTING: ASSESSMENT OF THE USABILITY OF THE AUSTRALIAN RAPID ATOMO DEVICE.

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**Background:** An estimated 12-15% of those with HIV in Australia are undiagnosed. HIV self-testing could potentially provide broader access to testing and increased diagnosis. We assessed the usability of the Australian ATOMO rapid self-testing device.

**Methods:** Patients attending Holdsworth House Medical Practice in Sydney, September 2016 to May 2017, at HIV risk who had not previously tested HIV positive were enrolled in a prospective observational study. Demographic data was recorded. Following an instructional four minute video, participants performed the ATOMO self-test with access to a visual instruction aid, whilst the performance of the required critical 1-6 steps of testing were assessed by trained study coordinators: removal of sterility tab, lancet-prick finger, administration of sufficient blood to tube, flipping tube to well, ensuring blood moved into well, and buffer application. Concurrent plasma 4<sup>th</sup>-generation Siemens ADVIA Centaur XPT Immunoassay System was performed.

**Results:** Of 521 adult participants, 98% were male, 93% MSM, 91% spoke English as primary language, 78% had HSC or higher education, 49% were receiving PrEP. Concordance of self-test with laboratory HIV testing results was 99.8%. Observed success for performance of steps 1-6 respectively were: 99.8%, 98.7%, 94.4%, 96.8%, 92.8%, and 97.6%. Average critical step usability was 96.8%. Correct performance of all critical steps 1-6 was 88.7%. Additional steps of washing hands, checking test expiry date and massaging finger pre-test were conducted in 87.2%, 44.9% and 84.2% of participants respectively. Ease of use of self-test was rated by 76% as ≥8/10.

**Conclusions:** There was a high level of usability of the ATOMO self-test by Australian participants. HIV self-testing could provide a viable additional option to access of HIV testing in the community.

This study was funded by the study sponsor, Atomo Diagnostics, and is part of submissions to the Australian Therapeutic Goods Administration and World Health Organisation.