

Can smart vending machines expand access to HIV testing for suboptimal testers? RAPIDVend: an implementation and evaluation study

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Background: HIV self-testing (HIVST) offers novel opportunities to access testing in non-clinical settings, particularly for suboptimal testers. RAPIDVend developed, implemented, and evaluated HIVST dissemination and uptake via smart vending machines (SVM).

Methods: SVM were installed at two urban sex-on-premises-venues in October 2021 and a regional university in February 2022. On completion of a Pre-Vend Consent Survey via a purpose-built microsite or directly on SVM interface, participants received a one-off code to access one free ATOMO[®] HIV-antibody HIVST kit. 7-days post-vend, participants were telephoned by a Peer Test Facilitator (PTF) and SMSed a Post-Vend Survey link.

Results: Of 223 HIVST kits dispensed, 39(18%) were first-time testers and 40(18%) had not tested for >12-months; 100(45%) requests occurred at the SVM interface. Most of the 196(87%) who provide a postcode resided in major Australian cities (161;83%). Non-metropolitan residents were 5 times more likely to be first-time testers (Odds ratio 4.9, 95%confidence interval 2.1-11.9). At 7-days post-vend, PTF made contact with 175(78%) participants, 6(3%) reported device error, 5(3%) user error, 8(5%) had not used the kit. Participants reported "*it's an excellent program*", "*easy, convenient, discreet*", "*needs to be rolled out over more locations*". Most of the 38 Post-Vend Survey respondents identified as gay (23;61%) or bisexual (9;24%) males (35;92%); 11(29%) were born overseas. Twelve (39%) of the 31(82%) reporting anal sex had ≥5 anal sex partners in the last 6-months. Convenience (34;90%), privacy/anonymity (24;63%), no time to go elsewhere (10,26%), and not having to wait for results (19;50%) were primary reasons for using the SVM. HIVST was preferred to clinic-based testing (26;68%). Six(16%) were unwilling to pay for a kit; 23(61%) would pay ≤AUD\$20.

Conclusion: Key target populations, including first-time and infrequent testers and regional residents, accessed HIVST via vending machines. Financial barriers need addressing to embed HIVST in the suite of testing options.

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