

147 One Year Outcomes Following Community-Based HIV Self-Testing: A Prospective Study in Malawi

Augustine T. Choko¹, Peter MacPherson^{1,2}, Emily L. Webb³, Helena Ball³, Rodrick Sambakunsi¹, Aaron Mdolo¹, Simon D. Makombe⁴, Nicola Desmond^{1,2}, Richard Hayes³, Elizabeth L. Corbett^{1,3}

¹Malawi Liverpool Wellcome Trust Clinical Research Programme, Blantyre, Malawi, ²Liverpool School of Tropical Medicine, Liverpool, United Kingdom, ³London School of Hygiene & Tropical Medicine, London, United Kingdom, ⁴HIV Unit, Ministry of Health, Lilongwe, Malawi

Background: HIV testing and counselling (HTC) is key to care and prevention, but only ~25% of adults in sub-Saharan Africa report testing for HIV in the preceding 12 months. HIV self-testing (HIVST) is a novel approach that could promote increased coverage and frequency of HTC. We investigated HIVST including subsequent linkage into care.

Methodology: 16,660 adult (≥ 16 years) residents of 14 high-density neighbourhoods (HIV prevalence 18.5%) were included in a cluster randomised trial. Two residents were trained in each neighbourhood to provide HIVST from their homes (one test per resident per year). Clients received written and verbal information to promote linkage into HIV care coupled with home-initiation of HIV care if requested. Population-level uptake was estimated from enumeration denominators. Accuracy of HIVST was assessed through quality assurance (QA) re-testing (2 parallel rapid tests) with a 10% random sample of self-testing clients asked to retest. A strong community-based reporting system was in place for monitoring adverse events. Data were analysed using summary statistics and logistic regression adjusted for clustering.

Results: Overall, 13,966 self-test kits were distributed with 89% returned as used kits with feedback forms. Uptake was 76% (12,658/16,660), including 5,840 (67%) of all men. The highest uptake was in the youngest age group (16-19 years: 2,360/2,539, 93%) falling to 41% (298/733) in men ≥ 50 years. Early HIVST adopters (2,658 in 1st month) were significantly more likely to be female, adjusted odds ratio (aOR) 1.20 (95% CI 1.06-1.36); younger Ptrend <0.001 , and not in a couple aOR 2.22 (95% CI 1.54-3.16). In total, 851/16660 (9%) residents confided positive HIVST results with 25% already on ART and 500/638 (78%) accessing HIV care (pre-ART or ART). QA showed 99.1% agreement with self-reported HIVST results (sensitivity 93.8% [95% CI 85.0-98.3%], specificity 100% [95% CI 100-100%]). No suicides or assaults were reported, but coercion was reported by 147 (3.7%) male and 119 (2.2%) female respondents; p-value <0.001 , mostly from partners.

Conclusions: Uptake of HIVST, subsequent linkage into care, and accuracy were high with this strategy. Uptake of HIVST, subsequent linkage into care, and accuracy were high with this strategy. Coercive testing and retesting on ART are concerning aspects of HIVST that need to be anticipated and discouraged. Community-based HIVST offers high potential to increase knowledge of HIV status, assisting with increasing access to HIV care and prevention when combined with proactive linkage strategies. Community-based HIVST offers high potential to increase knowledge of HIV status, assisting with increasing access to HIV care and prevention when combined with proactive linkage strategies.