Increasing knowledge of HIV status and demand for ART using community-based HIV self-testing: A cluster randomised trial in rural Malawi

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ABSTRACT

BACKGROUND

Knowledge of HIV status is the biggest gap in meeting the UNAIDS ‘90-90-90’ targets. In Malawi, 72.7% of people with HIV are aware of their status, 89.6% of whom are on treatment, and 91.2% of whom are virally suppressed [1]. Coverage of HIV testing is relatively low in men, adolescents and rural populations [2]. HIV self-testing (HIVST) has potential to reach populations poorly served by facility-based HIV testing services.

METHODS

Public primary health centres and their defined catchment areas [=32] were allocated using restricted 1:1 randomisation to either (i) standard of care (SOC) facility-based HIV testing, or (ii) HIVST: door-to-door distribution of HIVST kits by resident community-based distributors (CBD) in addition to the standard of care. CBDs provided continuous HIVST access and option of post-test support and assisted referral to routine confirmatory testing and ART services.

Primary outcome: HIV testing in the last 12 months

Secondary outcomes: Lifetime HIV testing and cluster-level ART initiations for 17 months after cluster enrolment

RESULTS

Table 1. Comparison of population characteristics by study arm

<table>
<thead>
<tr>
<th>Study arm</th>
<th>N (%; N=2800)</th>
<th>Unadj GM ratio (95% CI)</th>
<th>Unadj GM ratio (95% CI)</th>
<th>Adj GM ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>167 (59.3)</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Intervention</td>
<td>212 (70.7)</td>
<td>1.34 (1.14-1.57)</td>
<td>1.29 (1.08-1.51)</td>
<td>1.01</td>
</tr>
</tbody>
</table>

CONCLUSION

CBD delivered HIVST increased recent and lifetime testing coverage in rural populations, especially among men and adolescents. Uptake of HIVST was almost half when kits were easily accessible, and resulted in few social harms. HIVST had no measurable impact on population-level ART uptake. Community-based HIVST is an approach that can rapidly improve knowledge of HIV status in underserved populations.

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2. National Statistical Office (NDO); Malawi and ICF. Malawi Demographic and Health Survey (DHIS) 2015-2016; Zambia, Malawi, and Rockville, Maryland, USA: NDO and ICF; 2017.