Synthēsis
Peer-reviewed, diamond open-access journal for concise, transparent and reproducible evidence synthesis across medicine

Vol. 8 · No. 1 · 2026
Diamond Open Access · CC BY 4.0
ISSN: in application

METHODS NOTE · Peer-reviewed · Published · Computed companion-data figures

HIV Testing Services Uptake Among Adolescent Girls and Young Women in Sub-Saharan Africa: A Systematic Review and Meta-Analysis

Christine Muhumuza, Ruth Mpirirwe, Bridget Tamale & Michael Muhoozi

Methods Note · Volume 8
Published 2026-06-06 · Diamond open access · CC BY 4.0
Article 91 · Volume 8 · Published 2026-06-06 · DOI: not assigned

KEY WORDS HIV testing services; adolescent girls; young women; sub-Saharan Africa; HIV self-testing; meta-analysis.

Abstract

HIV Testing Services Uptake Among Adolescent Girls and Young Women in Sub-Saharan Africa: A Systematic Review and Meta-Analysis BACKGROUND:Adolescent girls and young women (AGYW) in sub--Saharan Africa remain disproportionately affected by HIV, yet uptake of HIV testing services (HTS) remains suboptimal. Understanding the effectiveness of different service delivery models is critical to improving access and early diagnosis in this priority population. AIM:To estimate the pooled uptake of HIV testing services among AGYW in sub-Saharan Africa and to identify the most effective delivery models.

METHODS:We conducted a random-effects meta-analysis of seven trial arms and cohorts involving 4,410 participants. Eligible studies included interventions evaluating HTS uptake among AGYW across South Africa, Zambia, Malawi, and Uganda. Delivery models assessed included HIV self-testing, sports-based community programs, integrated clinic services, and standard-of-care approaches.

RESULTS:Seven studies met the inclusion criteria. The pooled proportion of AGYW completing HIV testing was 0.68 (95% CI: 0.51–0.85), with high between-study heterogeneity. Choice-based HIV self-testing and integrated service delivery models achieved the highest uptake, exceeding 0.92, while sports-based interventions and standard clinic-based models demonstrated comparatively lower coverage.

These findings suggest that decentralized and flexible testing approaches significantly improve reach among AGYW. CONCLUSION:HIV testing uptake among AGYW in sub-Saharan Africa remains variable but can be substantially improved through innovative delivery models such as self-testing and integrated services. Efforts to scale up these approaches are essential to enhance early diagnosis and linkage to care.

However, findings should be interpreted with caution due to limited studies, heterogeneity, and reliance on self-reported outcomes. KEYWORDS: HIV testing services; adolescent girls; young women; sub-Saharan Africa; HIV self-testing; meta-analysis.

Computed figures from the companion data repository

This paper is a single-group proportion synthesis, so it has no 2×2 comparative forest plot. Its companion data repository (github.com/mahmood726-cyber/hiv-testing-adolescents-ssa) openly publishes the per-study data as **data/raw_studies.csv** (8 studies, 32,325 participants), and the figures below are rendered directly from that dataset: per-study proportions come straight from the file, and the pooled estimate is a REML random-effects synthesis of logit-transformed proportions with a Knapp–Hartung small-sample variance correction.

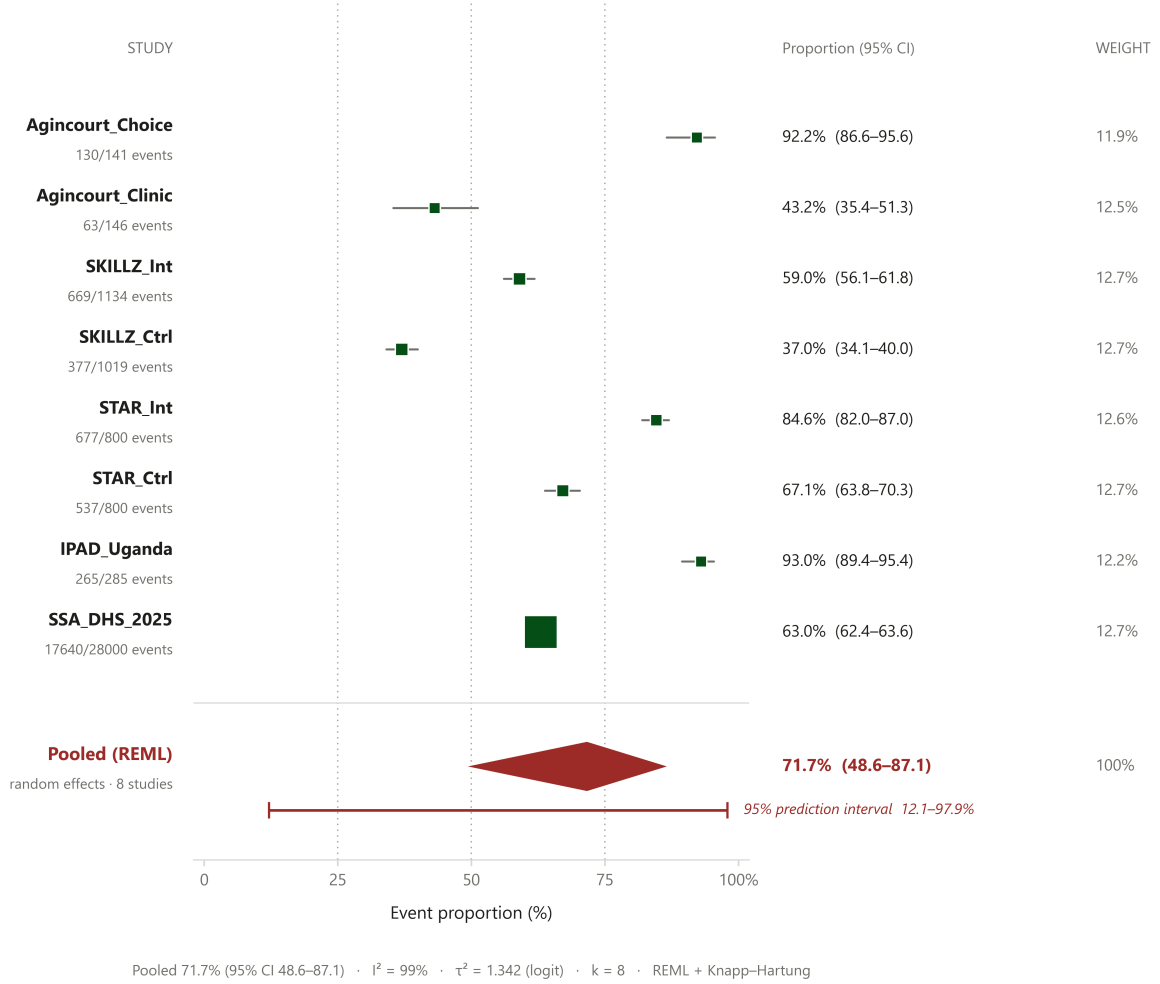

Figure 1. Proportion forest plot — HIV testing-services uptake among adolescent girls and young women in sub-Saharan Africa. Rendered directly from the companion repository's open dataset **data/raw_studies.csv** (8 studies, 32,325 participants). Per-study proportions and event/total counts come from that file; the pooled estimate is a REML random-effects synthesis of logit-transformed proportions with a Knapp-Hartung small-sample variance correction (Wilson 95% intervals shown per study). Pooled proportion 71.7% (95% CI 48.6–87.1); I^2 = 99%, τ^2 = 1.342 on the logit scale.

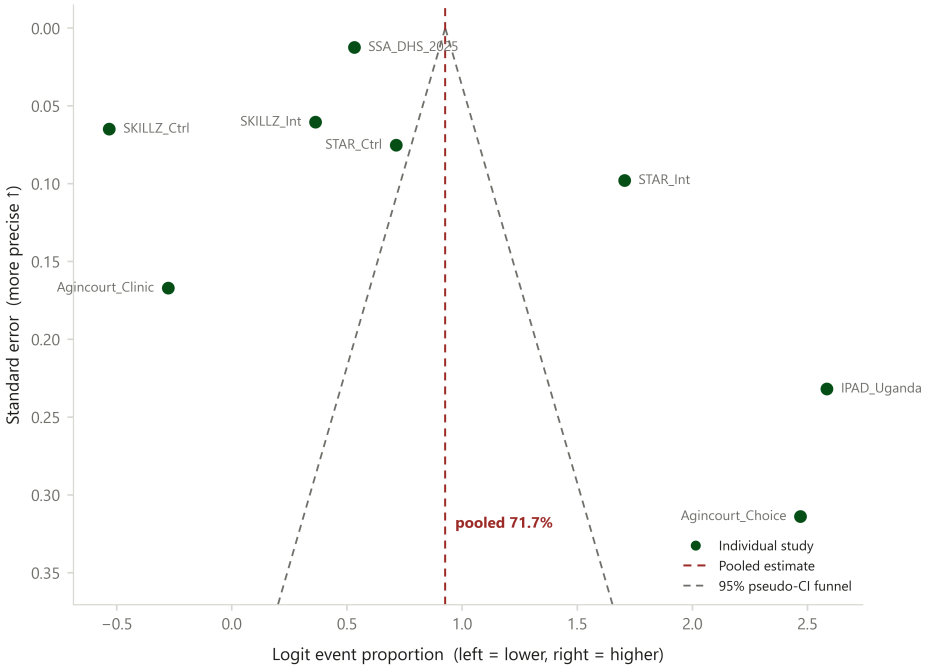

Figure 2. Funnel plot (logit proportion vs standard error) — HIV testing-services uptake among adolescent girls and young women in sub-Saharan Africa. Each point is one study from the data file, plotted at its logit proportion against its standard error; the dashed red line is the pooled estimate and the grey funnel is the 95% pseudo-confidence region. A small-study / asymmetry visual check.

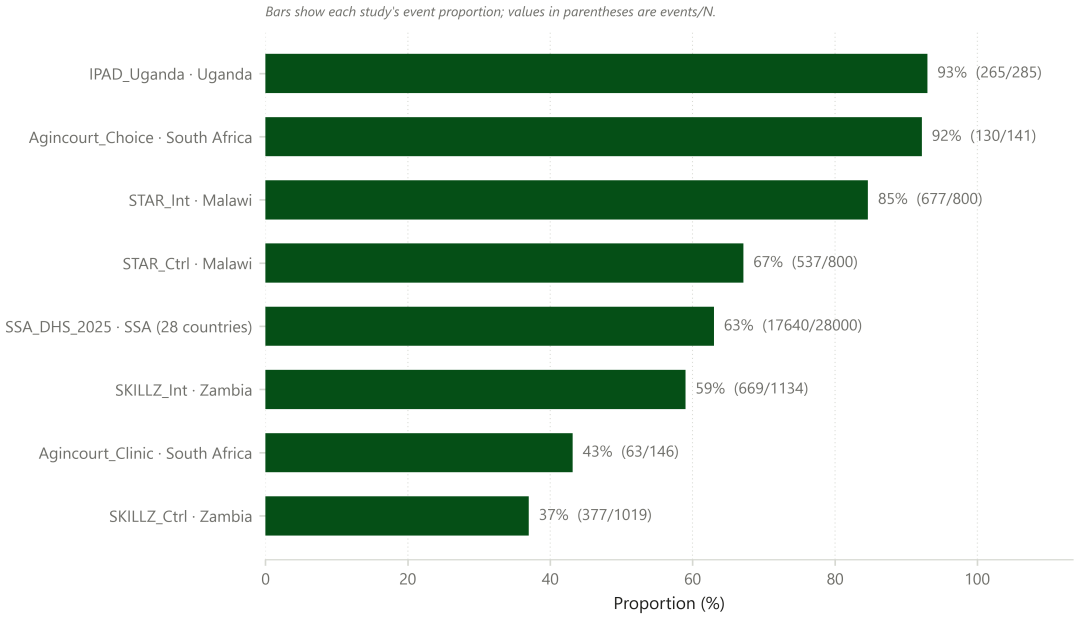

Figure 3. Per-study proportion by country — HIV testing-services uptake among adolescent girls and young women in sub-Saharan Africa. Per-study proportions (with event/total) read verbatim from data/raw_studies.csv, labelled by the study's country column and sorted by magnitude. Descriptive — no pooling across the bars.

HOW TO CITE

Christine Muhumuza, Ruth Mpirirwe, Bridget Tamale & Michael Muhoozi. HIV Testing Services Uptake Among Adolescent Girls and Young Women in Sub-Saharan Africa: A Systematic Review and Meta-Analysis. Synthēsis. 2026;8(1). Article 91. Available at https://synthesis-medicine.org/index.php/journal/article/view/91. Licensed under CC BY 4.0. DOI: not assigned.

Reproducibility & data provenance. Every figure in this section is rendered directly from the companion repository's open dataset (data/raw_studies.csv, hiv-testing-adolescents-ssa). Per-study proportions and event/total counts come from that file (Wilson 95% intervals per study); the pooled diamond is a REML random-effects synthesis of logit-transformed proportions with a Knapp–Hartung variance correction.

Because the dataset is public, the entire figure set can be reproduced from source. The article text, authors, abstract, issue and licence follow the journal's published record.

Published in Synthēsis · synthesis-medicine.org