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Has rapid scaleup of dual HIV/syphilis testing in antenatal care improved syphilis testing coverage?

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BACKGROUND

- There are over 120,000 new HIV infections among children and adolescents (under 15 years of age) and over 700,000 congenital syphilis cases occur each year.
- WHO recommends the use of the dual HIV/syphilis rapid test as the first test for pregnant women in antenatal care (ANC) to address gaps in HIV and syphilis testing coverage.
- We hypothesized that following WHO guidance and increased procurement, countries who have introduced the dual HIV/syphilis rapid test in ANC will report higher syphilis testing coverage than those who have not yet adopted this policy.

METHODS

- Analysis of procurement data from Global Fund to understand recent trends in dual test procurement.
- Analysis of country-reported data on HIV and syphilis policy uptake and testing coverage from the Global AIDS Monitoring (GAM) platform to test the association between dual HIV/syphilis test policy uptake and reported syphilis testing coverage in countries consistently reporting between 2021-2023.
- Mixed effects logistic regression with a random effect for country to account for repeated measurement.

RESULTS

- Global Fund data from select low- and middle-income countries demonstrated a **192% increase in dual test procurement between 2021 and 2024** (Figure 1). In 2021, 7.6 million tests were ordered from 19 countries; by 2024, this had risen to 21.8 million tests procured from 28 countries.

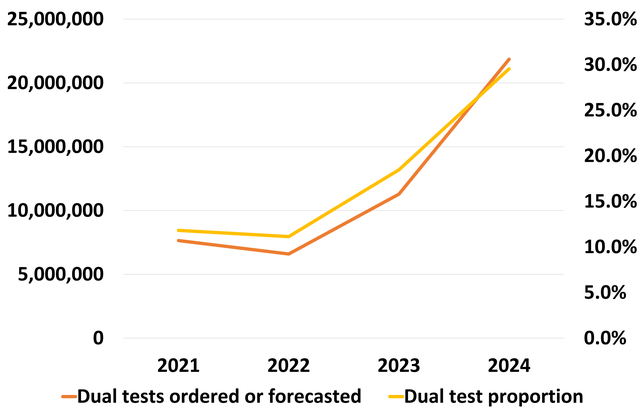


Figure 1. Dual HIV/syphilis tests ordered or forecasted by the Global Fund (2021-2024). Data underestimates actual procurement because it does not include direct procurement from countries or other donors/agencies.

- In 2023, the average HIV testing coverage was 94% and syphilis testing coverage 86%; **countries that reported adoption of dual HIV/syphilis testing in ANC had higher syphilis testing coverage than countries that did not report adoption** (Figure 2).

Dual HIV/syphilis test procurement is rising globally, and dual HIV/syphilis test adoption in antenatal care is associated with higher reported syphilis testing coverage

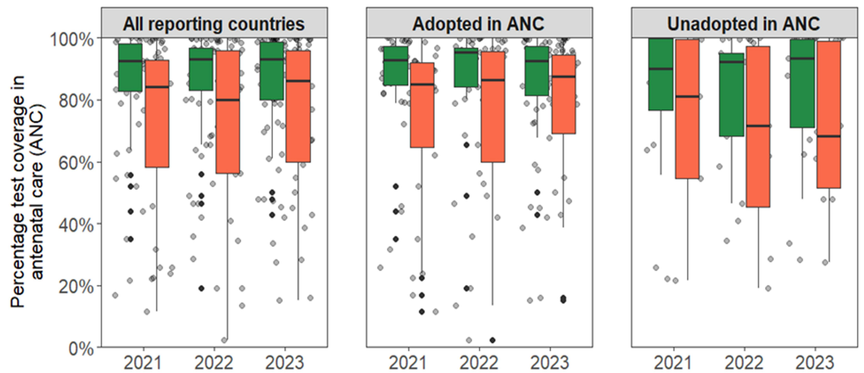


Figure 2. National HIV and syphilis test coverage among pregnant women in antenatal care reported through Global AIDS Monitoring for 2021 to 2023 for all reporting countries and by dual HIV/syphilis test policy adoption. ANC = antenatal care. Plot includes countries that reported data for both HIV and syphilis test coverage through Global AIDS Monitoring for each year.

- Pregnant women in countries that reported dual test uptake from 2021-23 were **58% more likely (odds ratio: 1.58; 1.57-1.59) to be tested for syphilis** compared with pregnant women in countries that did not use the dual test (p-value <0.05)..
- Between 2017 and 2023 **the proportion of pregnant women attending ANC who were tested for syphilis rose by 51% in Uganda, 48% in Kenya, and 137% in India**. As a result, the HIV-syphilis testing gap in these countries fell to between 4% and 10% (Figure 3).

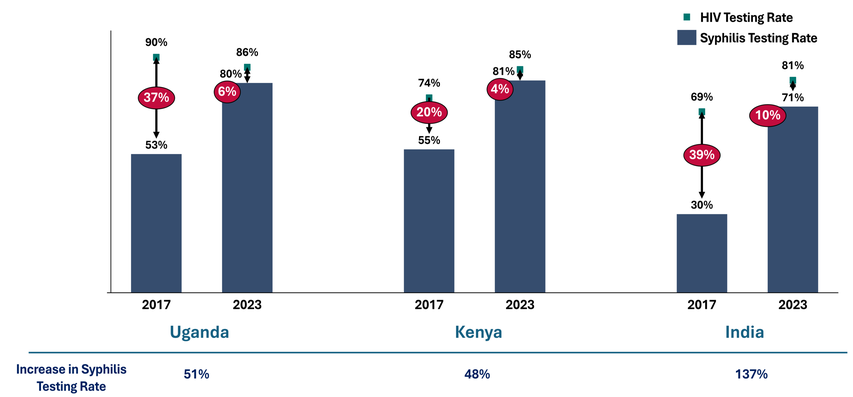


Figure 3. Progress towards increasing testing coverage for HIV and syphilis in pregnant women who visit antenatal care in selected countries (2017 – 2023)

CONCLUSIONS

- Procurement of dual HIV/syphilis rapid tests is accelerating in low-and-middle income countries.
- Our procurement estimates are likely underestimates as data was not available for all countries with dual test policies. This is due to limitations to existing global procurement data and weak syphilis reporting systems.
- While gaps between HIV and syphilis testing coverage persist, policy adoption of dual HIV/syphilis testing in ANC is associated with higher reported syphilis testing coverage.
- Countries should consider introduction and further scaleup of dual testing to achieve national and global syphilis elimination goals.

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