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Progress and Gaps in Cervical Cancer Screening and Treatment Among African Women Living With HIV

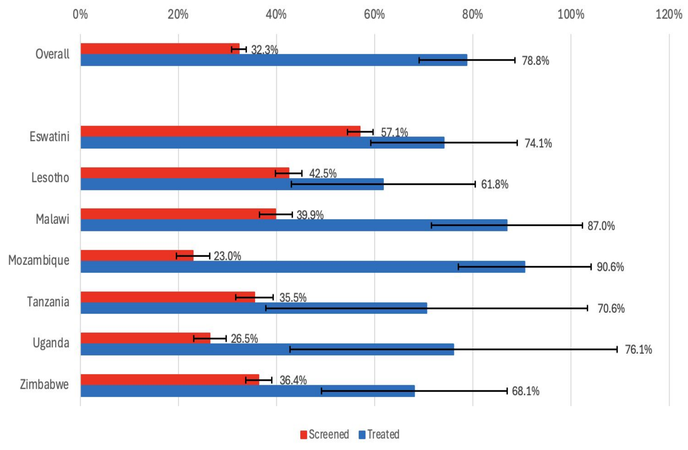
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BACKGROUND

- Cervical cancer remains one of the most common cancers among women globally, with sub-Saharan Africa (SSA) experiencing disproportionately high incidence and mortality.
- Women living with HIV (WLWH) face a six-fold higher risk of developing cervical cancer compared with women in the general population.
- Despite global HIV efforts such as the UNAIDS 95-95-95 targets and updated WHO recommendations for HPV-based "screen–triage–treat" strategies, cervical cancer screening and treatment uptake among women living with HIV in SSA remain low and highly variable across countries.
- We estimated population-level coverage of cervical cancer screening, abnormal results, and treatment among WLWH in SSA, to provide a comprehensive regional assessment of progress and persistent inequities.

METHODS

- We pooled nationally representative PHIA survey data (2020–2023) from seven SSA countries among women aged ≥25 years living with HIV.
- We assessed self-reported cervical cancer screening, abnormal results, and treatment alongside laboratory-confirmed HIV care indicators.
- We used survey-weighted log-binomial regression to estimate coverage and identify factors associated with cervical cancer screening and treatment.



Percentages are weighted to account for the complex survey design and differential non-response.
"Treated" refers to among those with self-reported abnormal screening result.

Fewer than ⅓ of women living with HIV had ever been screened for cervical cancer.
While treatment linkage was common among those diagnosed, low screening rates hinder care cascade progression.

RESULTS

- Only 32.3% had ever been screened for cervical cancer, while 67.7% had never been screened; among those screened, ~4–5% reported an abnormal result, and ~79% of those received treatment.
- Large cross-country variation in screening ranging from 23.0% (Mozambique) to 57.1% (Eswatini), with significant differences persisting after adjustment.
- Treatment completion among those with abnormal results was comparatively high (78.8% overall), exceeding 70% in most countries and reaching 90.6% in Mozambique.
- Strong gradient by HIV care engagement: screening was substantially higher among women aware of their status (35.7% vs. 11.7%), on ART (36.2% vs. 12.1%), and virally suppressed (36.1% vs. 16.4%) (all p < 0.001).
- Independent predictors of screening: older age, higher education, greater household wealth, urban residence (aPR ≈1.8–1.9), and country context (e.g., Eswatini aPR 4.45 vs. Mozambique) remained significant in multivariable models.

Country	Screening by serostatus knowledge		Screening by treatment status		Screening by viral load	
	Unaware	Aware	ART non-use	ART use	Unsuppressed	Suppressed
Overall	11.7% (9.4–14.4)**	35.7% (34.1–37.4)**	12.1% (10.0–14.7)**	36.2% (34.6–37.9)**	16.4% (14.2–18.9)**	36.1% (34.4–37.8)**
Eswatini	32.9% (22.6–45.0)*	58.0% (55.2–60.7)*	38.1% (28.7–48.6)*	58.1% (55.2–61.0)*	41.9% (34.6–49.5)**	58.7% (55.8–61.5)**
Lesotho	17.3% (12.3–23.8)**	44.6% (41.9–47.4)**	19.0% (14.4–24.8)**	45.1% (42.2–47.9)**	28.5% (23.9–33.6)**	44.9% (42.0–47.8)**
Malawi	18.1% (11.5–27.3)**	41.8% (38.4–45.2)**	17.8% (11.7–26.2)**	42.2% (38.7–45.7)**	16.2% (10.7–23.8)**	42.4% (39.0–45.9)**
Mozambique	7.7% (4.9–11.9)**	27.5% (23.7–31.8)**	8.5% (5.5–12.7)**	27.8% (23.9–32.1)**	13.5% (9.8–18.3)**	26.7% (22.6–31.2)**
Tanzania	7.8% (3.8–15.2)**	39.7% (35.5–44.0)**	8.9% (4.7–16.1)**	40.1% (35.9–44.4)**	11.8% (7.2–18.6)**	40.3% (36.0–44.7)**
Uganda	13.0% (7.7–21.2)*	28.5% (25.0–32.3)*	11.5% (6.9–18.5)*	29.3% (25.7–33.3)*	14.3% (9.7–20.5)*	29.1% (25.3–33.3)*
Zimbabwe	23.9% (16.5–33.4)*	37.8% (35.2–40.5)*	23.0% (16.5–31.0)*	38.3% (35.6–41.0)*	27.0% (21.1–33.7)*	38.6% (35.9–41.3)*

*** < 0.01**
**** < 0.001**

Variable	Category	adjPR (95% CI)	p-value
Age group	35–44 years vs. 25–34 years	1.47 (1.21–1.78)	<0.001
	45–54 years vs. 25–34 years	1.76 (1.42–2.17)	<0.001
Marital status	Married/cohabiting vs. never married	1.67 (1.19–2.34)	0.005
	Separated, widowed, or divorced vs. never married	1.60 (1.15–2.22)	0.007
Educational attainment	Primary vs. no formal education	1.39 (1.10–1.76)	0.008
	Secondary vs. no formal education	1.67 (1.25–2.22)	0.001
	Tertiary or higher vs. no formal education	1.77 (1.05–2.96)	0.032
Household wealth	Middle vs. poorest	1.36 (1.05–1.76)	0.022
	Upper-middle vs. poorest	1.89 (1.37–2.63)	<0.001
	Wealthiest vs. poorest	1.90 (1.37–2.62)	<0.001
Residence type	Urban vs. rural	1.85 (1.60–2.15)	<0.001
Country	Eswatini vs. Mozambique	4.45 (3.60–5.50)	<0.001
	Lesotho vs. Mozambique	2.47 (1.99–3.08)	<0.001
	Malawi vs. Mozambique	2.22 (1.75–2.82)	<0.001
	Tanzania vs. Mozambique	1.84 (1.42–2.38)	<0.001
	Zimbabwe vs. Mozambique	1.92 (1.54–2.38)	<0.001
Condom use	Used condom vs. did not use condom	1.41 (1.15–1.75)	0.002

CONCLUSIONS

- Despite strong HIV care engagement, cervical cancer screening remains the primary bottleneck in the cervical cancer screening and treatment cascade, while self-reported treatment among diagnosed women is relatively high.
- Low screening coverage limits early detection and slows progress in reducing cervical cancer morbidity and mortality.
- Closing this gap will require integrated, community-based, and cost-efficient screening strategies, especially as HIV foreign assistance funds decline.

ADDITIONAL KEY INFORMATION

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