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Characteristics of Health Facilities Associated with Low HIV Viral Load Coverage

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BACKGROUND

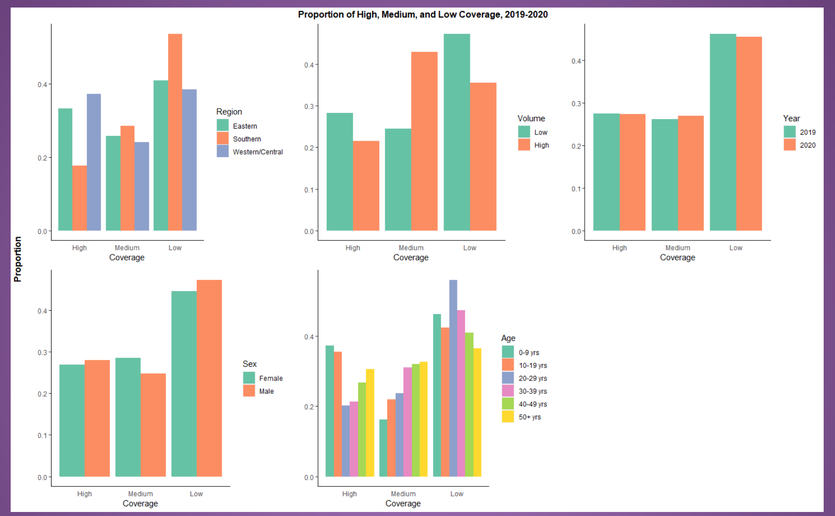
- The 2013 WHO antiretroviral guidelines recommended routine testing of HIV viral load (VL) (concentration of HIV RNA copies/mL of blood) as the preferred method for monitoring treatment in people living with HIV (PLHIV).
- The 2020 UNAIDS targets proposed that all PLHIV receiving antiretroviral therapy (ART) have access to HIV viral load testing (VLT) as part of public health programs aiming to reduce HIV transmission.
- In limited-resource countries, PLHIV are facing various challenges to VLT access, and some might be associated with health-related facility factors.

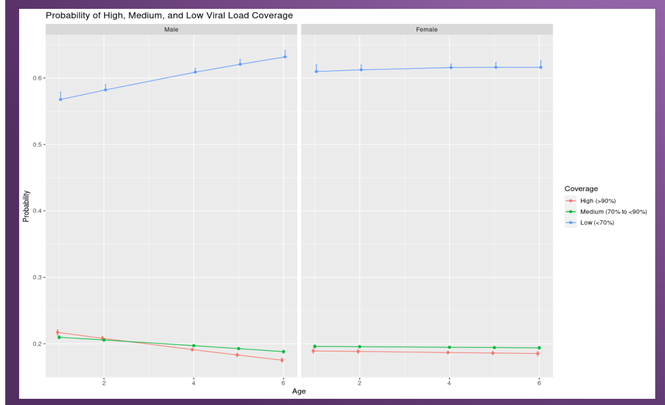
METHODS

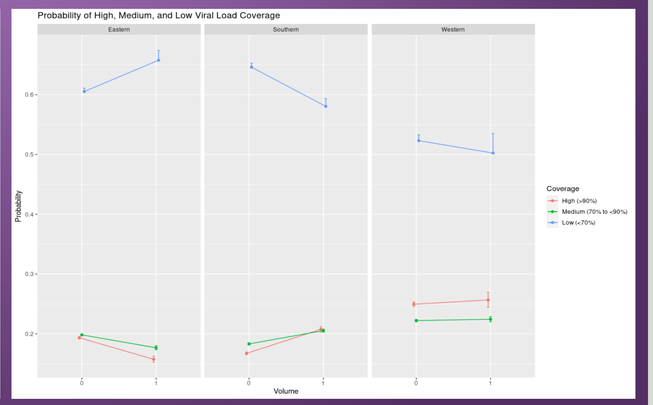
To identify characteristics of facilities associated with low VLT coverage (VLTC)), we analyzed data reported to the Monitoring, Evaluation, and Reporting (MER) System by 17 PEPFAR-supported sub-Saharan African countries in 2019 and 2020:

- We used ordinal logistic regression model accounting for clustering with assumption of random effect model on facility.
- Outcome variable was VLTC (proportion of the number of PLHIV with a VL in the medical record or laboratory record/laboratory information system within the past 12 months divided by the number of PLHIV receiving ART six months earlier) categorized as Low (< 70%), Medium (70% to < 90%), and High (>= 90%).
- Independent variables were region (Eastern, Southern, Western/Central Africa), age (0-9, 10-19, 20-29, 30-39, 40-49, 50+ years), sex (male, female), and volume (low volume: <100 PLHIV on ART vs. high volume: >=100 PLHIV on ART) by facility.

- **Gaps in HIV viral load testing coverage increased from 2019 to 2020 likely due to the COVID-19 pandemic.**
- **Regional gaps were seen in Southern Africa and with decreased facility volume.**
- **Potential gaps might be seen in younger PLHIV.**







RESULTS

- The probability of Low VLTC was higher than Medium or High VLTC.
- The odds of lower VLTC were higher in the Southern region (adjusted odds ratio [AOR] = 1.95; 95% CI 1.92, 1.97) and lower in the Western/Central region (AOR = 0.86; 95% CI 0.85, 0.88) as compared with Eastern region.
- The AOR for VLTC was lower for high volume as compared with low volume facilities (AOR = 0.69; 95% CI 0.67, 0.70). The year 2020 had a lower AOR for VLTC (AOR = 0.98; 95% CI 0.97, 0.99) than 2019.
- Males had an AOR for VLTC of 1.00 compared with females, and as age increased so did AOR for VLTC (AOR = 1.02; 95% CI 1.02, 1.02).

CONCLUSIONS

Identify barriers to scale-up of HIV viral load monitoring in facilities with low volume of PLHIV on ART.
Develop and implement effective public health strategies to improve HIV VLTC in Southern Africa.

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