

Programmatic Gaps Under Option B+: Factors Associated with WEPEE494 Residual Vertical HIV Transmission in Malawi, 2020 – 2024

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BACKGROUND

- Malawi has made progress toward eliminating vertical HIV transmission under Option B+.
- However, new pediatric infections still occur.
- This study identified factors associated with residual transmission in routine care.

METHODS

- Case-control study using routine data.
- Cases were infants born between 2020 and 2024 who tested HIV-positive; two HIV-negative controls per case were matched by birth month and facility.
- Analysis: Multivariable logistic regression adjusting for maternal age group, ART duration at delivery, viral suppression status, and infant birth weight.

Main Findings

Infants with HIV infection were more likely to have mothers not on ART or unsuppressed mothers at delivery. Maternal age <25 years showed increased odds but was not statistically significant after adjustment.

RESULTS



229 cases and 469 controls.



75% of infections diagnosed at six weeks.



Low birth weight higher in cases (18% vs 12%, p=0.017).



Mothers <25 years accounted for 45.9% of cases vs 23.8% of controls.



Only 59.2% had viral load results at delivery (n=250).



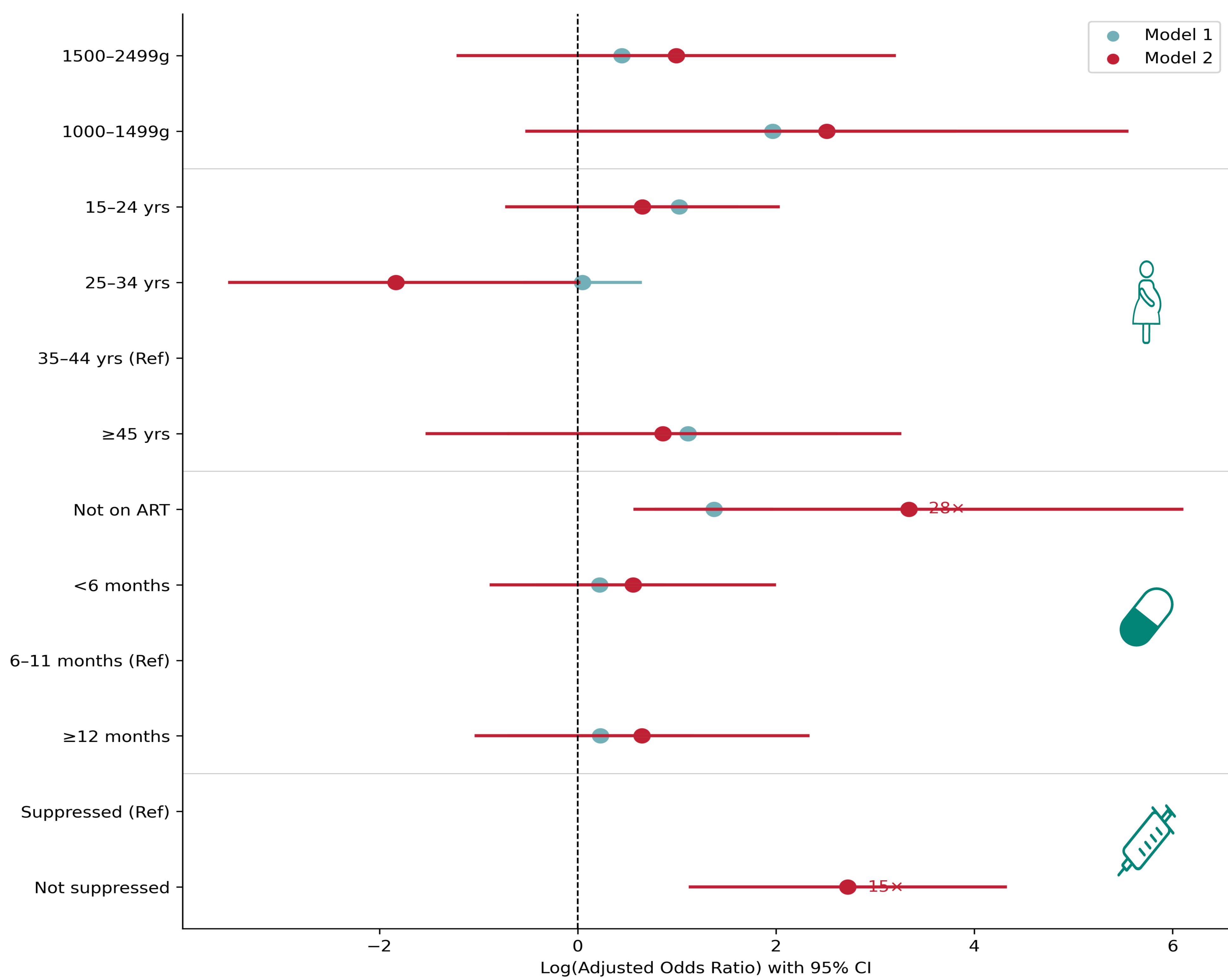
Infants with HIV infection likely to have mothers not on ART (aOR 28.20, 95% CI 1.79 –442.4) and mothers not virally suppressed at delivery (aOR 15.27 95% CI: 3.1 – 74.8).

No significant differences in suppression rates by infant prophylaxis regimen.

CONCLUSIONS

- In our study, vertical transmission was strongly associated with lack of ART at delivery and unsuppressed maternal viral load. Maternal viral load coverage was also suboptimal.
- These findings suggest potential missed opportunities along the eVT care cascade.
- Strengthening timely ART initiation, supporting maternal viral suppression during pregnancy, and providing targeted support for young mothers may help reduce new pediatric HIV infections..

Figure 1: Factors associated with HIV infection among HEI (Model 1 excludes maternal viral load status; Model 2 includes maternal viral load status), logistic regression



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