# Rapid return of viral load (VL) results to pregnant/postpartum women via Mentor Mothers in Kenya

993

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## BACKGROUND

- Virologic monitoring and counseling empowers women with knowledge of their suppression status and enables intervention for those with viremia
- Current routine laboratory monitoring processing is often slow, with suppressed results only returned months later at a subsequent visit; unsuppressed results are returned more quickly but may take weeks.
- Point-of-care technology is promising, but sample processing still takes well over an hour, requires space, maintenance. It is unlikely such systems will be placed at every small or remote health facility in resource limited settings. Even when co-located, process too long to encourage many patients to wait.
- Thus, provision of results will still likely require post-visit contact in most routine settings.
- Mentor mothers provide peer adherence support to pregnant and breastfeeding women with HIV
- We assessed the feasibility of engaging mentor mothers to promptly return viral load results.

## METHODS

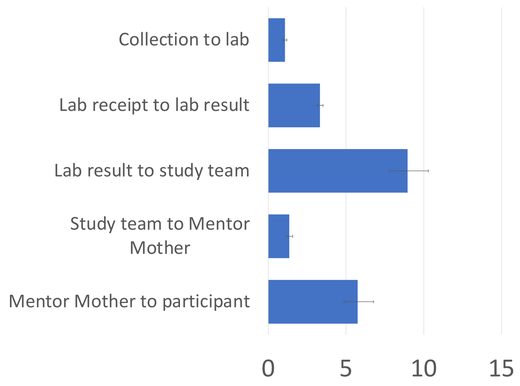
- From May-Dec 2023 we enrolled
  - women between 27 weeks gestation and 6 months postpartum
  - from 4 facilities in Kisumu Kenya
- We tested VL via GeneXpert at 1-2 time points.
- Mentor Mothers were trained to rapidly return results to participants, document time of result delivery and number of phone attempts. They were reimbursed for phone minutes.
- We tracked times of sample processing.
- Participant clinical histories were collected from records
- Research assistants collected sociodemographic data from participants.
- We assessed factors associated with time from sample collection to result return to participants, via unadjusted and adjusted generalized estimating equations with log-transformed time as the outcome.

**Mentor Mothers delivered VL results to pregnant and postpartum women in just over 1 day on average.**

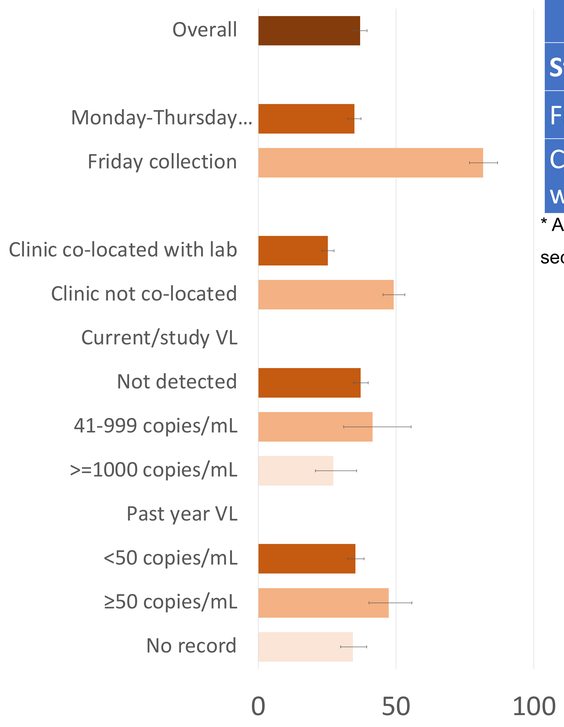
## RESULTS

- From 273 participants (47% pregnant) we collected 422 blood samples of which Mentor Mothers delivered 414 (98%) VL results via phone and 2% in person.
- VL was ≤40, 41-999, and ≥1000 copies/mL in 90%, 6%, and 4% of samples, respectively.

**Time spent on each step of sample/result processing**
Geometric mean hours & 95% Confidence Intervals




**Time from sample collection to result return to participant**, stratified by facility and clinical characteristics
Geometric mean hours & 95% Confidence Intervals




## RESULTS continued

Adjusted* geometric mean ratios of associations between clinical/facility factors and time from sample collection to result return to participant

| | Adjusted GMR | |
|---|---|---|
| | GMR (95% CI) | p-value |
| **Clinical characteristics** | | |
| Past year viral load | | |
| Suppressed | (reference) | 0.05 |
| Viremia (>=50) | 1.22 (0.98, 1.52) | |
| No record | 0.91 (0.60, 1.38) | |
| Xpert Study VL results | | |
| Undetectable | (reference) | 0.001 |
| 41-999 | 1.07 (0.67, 1.71) | |
| 1000+ | 0.80 (0.59, 1.08) | |
| **Structural factors** | | |
| Friday (vs. Mon-Thu) | 2.02 (1.57, 2.59) | 0.003 |
| Clinic not co-located with GeneXpert | 1.81 (1.66, 1.98) | <0.001 |

* Adjustment variables: age, education, depression scale, stress scale, food security, mobility, disclosure * varibles in table

## CONCLUSIONS

- Mentor Mothers delivered VL results to pregnant and postpartum women in just over 1 day on average.
- This low-cost approach could complement other strategies to enhance VL monitoring.