Mobile Text Messaging Improves PMTCT Follow-up in South African Public Setting

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Origin of study idea

- Rahima Moosa Mother and Child Hospital, approximately 10,000 deliveries annually
- High Institutional delivery rate
- Implies 2,500 -3,000 HIV positive women should be delivering annually at RMMCH
- Identification of maternal HIV – problem at delivery
- Routine Postpartum testing introduced 2008
- Follow-up rates still poor especially in “newly diagnosed”
Background

- **Loss to follow-up** during the PMTCT process breaks the **cascade** of care, prevention and monitoring.
- Some women find out their HIV status only at the time of delivery.
- While **late diagnosis** in mothers helps to provide prophylaxis to infants, it may exacerbate **poor infant follow-up**.
- Late diagnosis increases the risk of HIV transmission.
- Interventions to **improve follow-up testing** rates of HIV-exposed infants are needed.
- This study aims to test whether **mobile phone text messages** (SMSs) improve infant follow-up rates.
Methods

- HIV-positive women were interviewed after their infant's delivery – interim results
- 10 weeks of SMS encouragement and reminders for infant PMTCT medication and appointments (infant PCR test, collection of results)
- Three groups:
  - Women requesting SMS, randomised (1:1) to
  - Receive (group A1) or not receive SMSs (group A2)
  - Those declining SMSs (group B)
- Follow-up tracked using clinical databases, national laboratory and by phoning women
Preliminary results

- 418 women
  - Grp A1: 160 received SMSs; Grp A2: 177 randomised not to receive SMSs; Grp B: 81 did not want SMSs

- Follow-up rates (group A1 vs A2 vs B):
  - 6wk follow-up: p=0.003
  - 10wk follow-up: not significant
Preliminary results

- Newly diagnosed women = 51 (12.2%) of all women
  - Grp A1: 16 received SMSs; Grp A2: 13 did not receive SMSs; Grp B: 22 did not want SMSs

- Follow-up rates (group A1 vs A2 of B):
  - 6wk follow-up: p=0.04
  - 10wk follow-up: p=0.04

![Graph showing follow-up rates for Early PCR test (6 weeks) and Collection of Results.](image.png)
Preliminary results

- **309 infants HIV PCR results available:**
  - 18 (6%) positive
  - 4 (15%) positive of 26 infants born to women diagnosed at the time of delivery (p=0.08 Fisher Exact)

- **349 infants with vital status data**
  - 8 (2.3%) died early, before 6 weeks
  - 2 (6.3%) died of 32 infants born to women newly diagnosed at delivery (p=0.16 Fisher Exact)
Conclusions

- SMS messages can help improve infant PCR follow-up
- SMS messages can offer additional support for women newly diagnosed at time of delivery
- Further work required to
  - Improve follow-up for results and tracking methodology
  - Maintain contact for more than 10 weeks and monitor follow-up
  - Investigate tendency of higher mortality vertical transmission
Relevance for observational cohorts

- Cheap intervention (SMSs cost US$1.20/woman)
- Achieved high follow-up and could be scaled up
  - Potential for other settings and other time points
- Promotes linking between adult and paediatric cohorts
- Challenges in terms of rolling out:
  - Based on individualised care, not a blanket intervention, requires good counselling to achieve results
  - Requires coordination between clinical and laboratory databases as well as phone contact with women
  - Women change / loose access to phones – may require a “login” facility
“Sitting alone in the room, I felt like I had a friend when the SMSs came...”

FEEDBACK FROM MOTHER WHO HAD RECEIVED SMS
Important Lesson

- The emphasis on **INDIVIDUALISED support** was highlighted to us during focus group discussions.
- SMS had an encouraging and supportive tone rather than simply being reminders.
- SMS could possibly assist:
  - Pending final data.
  - **Proviso**: nothing can/should ever replace the human care that a mother should receive.
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