Video Observed Therapy for Pre-Exposure Prophylaxis Use in South African Pregnant / Postpartum Women

#00901

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BACKGROUND

- Use of oral pre-exposure prophylaxis (PrEP) during periods of HIV risk is efficacious when taken daily as prescribed.
- Video observed therapy (VOT) is an adherence technique involving daily observation of participant dosing via digital means.
- VOT is an alternative to in-person directly observed therapy and may be useful for resource-scarce settings and pharmacokinetic (PK) studies.

Video-based observed therapy was **feasible and acceptable as an adherence monitoring technique for oral PrEP dosing** among pregnant and postpartum women

CONCLUSIONS

- Short-term VOT is feasible and acceptable in pregnant and postpartum women for the monitoring and supporting of daily oral PrEP adherence.
- A high proportion of women successfully completed the observation period.
- VOT was a useful technique for assuring daily dosing and can be applied to future PK studies that require strict adherence.

METHODS

- From June 2022 – October 2023, we evaluated feasibility and acceptability of VOT in a PK study (PrEP PK) of oral PrEP in pregnant and postpartum South African women.
- Each participant was observed for 16 weeks: 8 weeks in pregnancy and 8 weeks postpartum.



- **Feasibility was defined as participant adherence to VOT,** reported as fraction of expected doses observed (FEDO); **Median FEDO ≥85% indicated VOT feasibility**
- Logistic regression analysis was used to determine the impact of baseline characteristics on FEDO score.
- Linear mixed effect models (LME) were used to examine the effect of observation time and pregnancy status on FEDO score.
- Acceptability was assessed through semi-structured questionnaires and interviews

RESULTS

- In 53 women in the study, 39 (73.6%) completed all 16 weeks of observation; Median (IQR) observation time =15 (14-16) weeks, Mean (SD) age = 28 (6) years.
- Of the 4571 videos expected, 4112 (90.0%) were received.
- During pregnancy 94% of expected videos were received and 98% were received in postpartum.
- Reported reasons for missed video submissions were mostly person or technology related (Table 1)
- Median (IQR) FEDO was 91.3% (82.9%-97.1%), exceeding the feasibility threshold.
- There was no significant impact of baseline characteristics on FEDO score.
- FEDO increased over weeks of observation: 81% at Week 1, 92% at Week 7, 97% at Week 15.
- Every additional week of observation time was associated with a 0.5% increase in median FEDO score (95% CI: 0.2%-0.89%) in LME modeling (p-value=0.002).
- There was no significant association between pregnancy status and median FEDO score in LME modeling (p-value=0.523).
- When participants were asked about their experiences with VOT, 100% of respondents said they were willing to do VOT again, and 98% felt VOT helped them to take their oral PrEP daily.

Table 1. Self-reported reasons for participants failing to submit video observations during PrEP PK study, June 2022-October 2023 (n=53)

Type of Reason (%)	Reasons for missed video	Videos missed (N=459) n (%)
Person Related (50%)	Pill not taken (dose missed)	155 (33.8%)
	Forgot to record video	30 (6.5%)
	Traveling	8 (1.7%)
	Participant uncontactable during dosing time	35 (7.6%)
Technology Related (46%)	Power outages (battery dead / too dark to record)	25 (5.4%)
	No cell phone network in area	27 (5.9%)
	Phone malfunction	8 (1.7%)
	No reason specified	151 (32.9%)
Process Related (4%)	Unsure of VOT process	2 (0.4%)
	Pills finished / late for refill	3 (0.7%)
	Not in a convenient/private place to record video at time of dosing	15 (3.3%)

ADDITIONAL KEY INFORMATION

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