

**Feasibility and Acceptability
of
Video Observed Therapy
for
Pre-Exposure Prophylaxis use
among
pregnant and postpartum
women**



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INTRODUCTION

Aim:

To assess the feasibility and acceptability of VOTS as an adherence intervention for women initiating on oral PrEP

- **Pregnancy and postpartum are periods of increased risk for HIV infection.**
- **Strict PrEP adherence is critical during these times of biological change.**
- **INCLUSION CRITERIA:**
 - ✓ **Women \geq 18 years**
 - ✓ **Confirmed HIV-negative (4th gen. antigen test)**
 - ✓ **Attending ANC visits at Gugulethu MOU**
 - ✓ **GA: 20-30 weeks pregnant**
 - ✓ **Has a smart phone**
 - ✓ **Consent to video observations of PrEP dosing.**

A bit of context

The image shows a stylized graphic design layout on a cream-colored background. At the top, the text "A bit of context" is centered in a bold, black, sans-serif font. Below this, four vertical rectangular blocks are arranged side-by-side, separated by thin white lines. Each block is a different color: blue, yellow, pink, and green. The blue block has a white paper scrap at the top left and a blue paper clip. The yellow block has a white paper scrap at the top left. The pink block has a white paper scrap at the top left with the text "fare example" written in pink. The green block has a white paper scrap at the top right and a yellow paper clip. On the left side, there are three horizontal tabs: a red one at the top, a blue one in the middle, and a yellow one at the bottom. On the right side, there are three horizontal tabs: a yellow one at the top, a green one in the middle, and a pink one at the bottom. A small blue triangle is located in the bottom left corner of the layout.



METHODS (procedures)

01

Pregnant women
enrolled into the
PrEP -PK study

02

Participants
randomised to
type of oral PrEP
(Truvada/Descovy)



03

Participants
observed taking
PrEP daily via
VOTs.



METHODS (data)

04

Observation period:
16 weeks.
8 weeks in
pregnancy + 8
weeks postpartum



05

Feasibility
assessed:
Reported as
fraction of
expected doses
observed (FEDO).

06

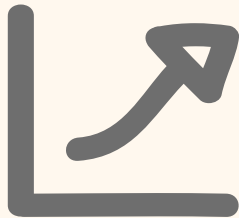
A median FEDO of
 $\geq 85\%$ indicated VOT
feasibility while
 $< 85\%$ indicated lack
of feasibility.¹

¹ Sekandi et.al. Video directly observed therapy for supporting and monitoring adherence to tuberculosis treatment in Uganda: a pilot cohort study. ERJ open research. 2020 Jan 1;6(1).

METHODS (analysis)

07

**Logistic regression:
Baseline
characteristics VS.
FEDO score**



08

**Linear mixed
effect models:
Observation time
VS. FEDO score.
AND
Pregnancy state
VS. FEDO score.**

09

**Acceptability:
Qualitative, semi-
structured
questionnaires
and interviews.**



RESULTS (Demographics)



Sample size n=53



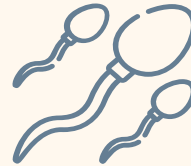
Mean (SD) age: 28 (6)



**All participants:
African/Black females
residing in Cape Town**



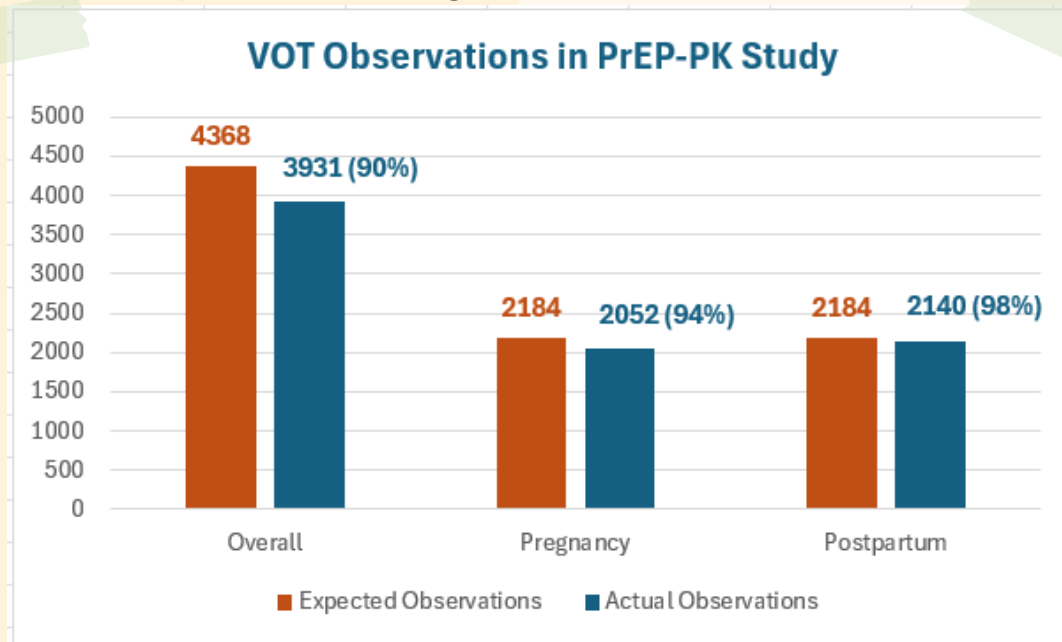
**58% were unemployed/not
studying at the time of
enrolment.**



**30% of the women were
carrying their 1st
pregnancy.**

RESULTS (VOTs)

- **n= 39 (73%) completed the observation period.**
- **Median(IQR) observation time: 15 weeks (14-16)**
- **90% OF expected videos were received after 16 weeks of PrEP dosing observation.**
- **This exceeds the specified feasibility threshold of 85%**



RESULTS (VOTs)

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

- **Reasons for missed videos are listed in Table 1.**

RESULTS (Feasibility)

FEDO vs. TIME

- FEDO increased over weeks of observation: FEDO at week 1 (81%); week 7 (92%) and week 15 (97%).
- LME modelling: every additional week of observation time was **associated with a 0.5% (95% CI: 0.20%, 0.89%) increase in median FEDO score (p value=0.002).**

FEDO:
fraction of expected doses that were observed. Used as a measure of feasibility.

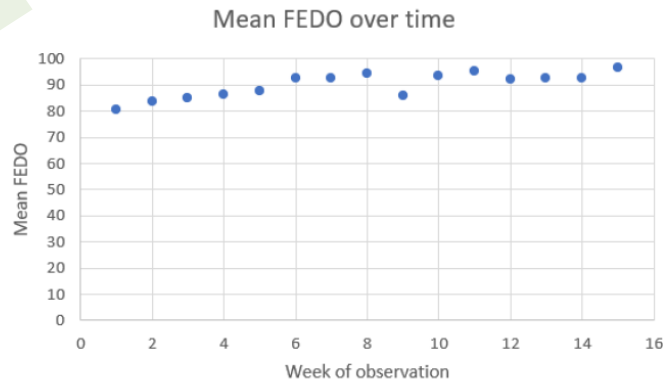
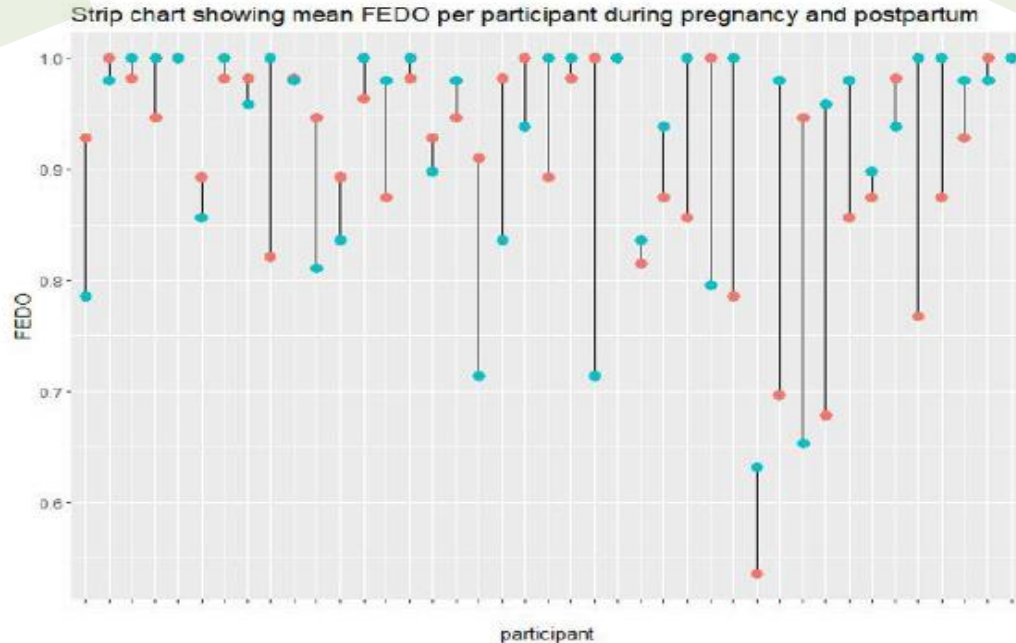


Fig.1 Scatter plot depicting median FEDO at each study week

RESULTS (Feasibility)

FEDO vs. Pregnancy

- **No significant association between pregnancy state and median FEDO score in LME modelling (P value= 0.523).**
- **Strip chart shows lots inter-participant variation.**

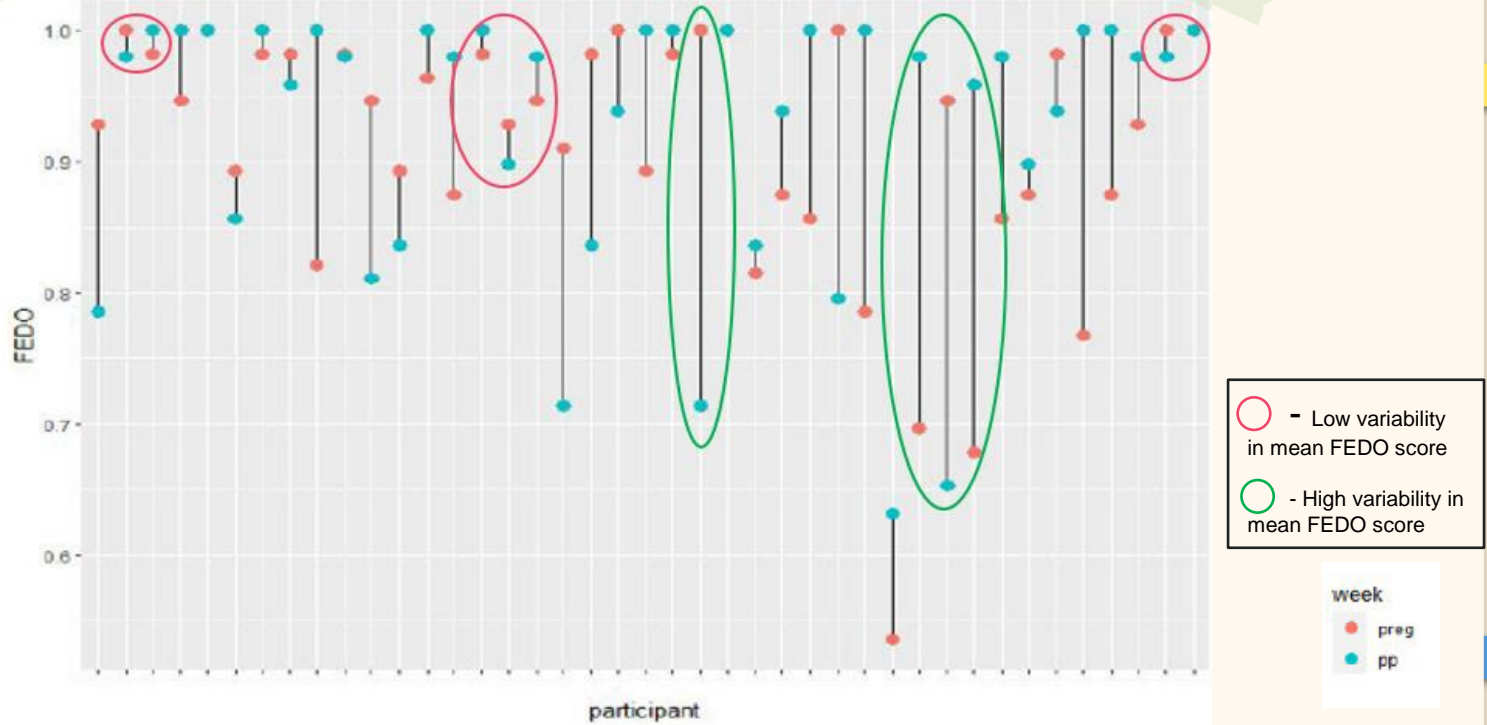


week
• preg
• pp

RESULTS (Feasibility)

FEDO vs. Pregnancy

Strip chart showing mean FEDO per participant during pregnancy and postpartum



RESULTS (Acceptability)

VOTs helped me to take my PrEP daily

98%

I felt that the process was confidential

77%

VOTs was convenient for me

79%

The process was easy for me

91%

“It helped with (cellphone) data a lot and also if I was not sending video everyday I don't think it will be easy for me to take my PrEP everyday.”- PID: 007

“ I enjoyed it so much to send the videos now there's nothing that is encouraging me to take my PrEP as much as I'm still taking it.”- PID: 027

“If you want to see if I'm taking my PrEP the blood test will be enough at times I was not comfortable to take the videos.”- PID: 004

VIDEO OBSERVED THERAPY

Technology



Technology comfort/proficiency and owning a smartphone was not a barrier

**FACTORS
RELATING TO
ACCEPTABILITY
OF VOTS**

SETTING



Adaptation needed. Resources used in the study may not be available in the South African public health system.



Infrastructure

Poor cellphone network and frequent loadshedding (rolling blackouts) were barriers.

TIME



Majority of censorship occurred within the first 3 weeks enrolment.



Acknowledgements:

The PrEP-PK team

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CONCLUSION!

Short-term VOT may be feasible and acceptable in pregnant and postpartum women for the monitoring and supporting of daily oral PrEP adherence.

VOT may be useful for assuring daily dosing and can be applied to future PK studies that require strict adherence.