

# HIV viraemia in women who enter antenatal care on preconception ART in KwaDukuza, KwaZulu-Natal

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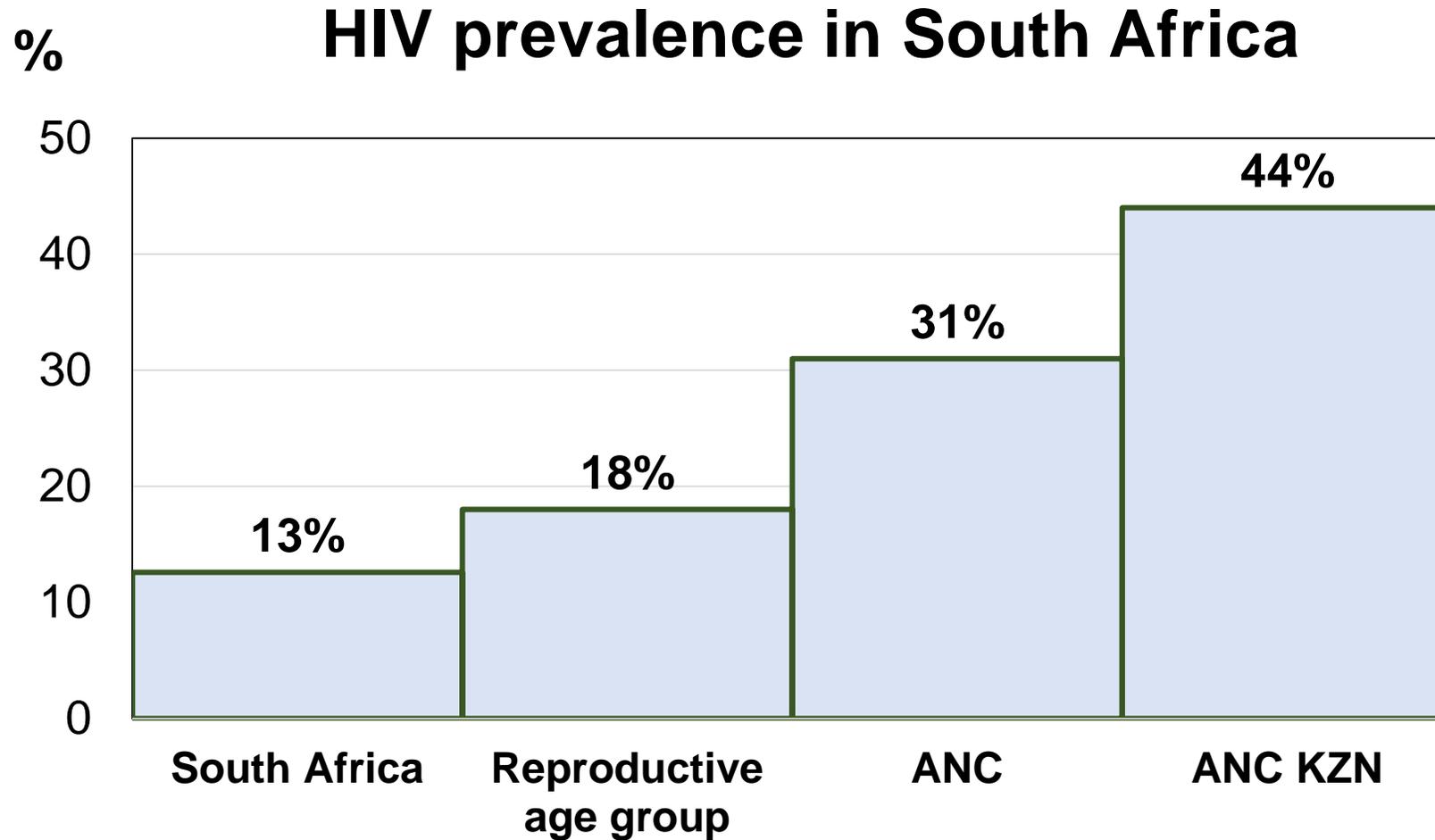
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INSPIRING GREATNESS

# Background

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# Background

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- Mother to child transmission (MTCT) rate 15-45% in the absence of interventions but <1% with antiretroviral therapy (ART).
- Highest risk of MTCT linked to maternal viral load (VL) hence efforts to reduce VL are effective in reducing transmission.
- Maternal VL consistently <50 copies/ml before conception, during pregnancy and for the duration of breastfeeding and after pregnancy appears to result in the most effective PMTCT
- SA policy - Universal Test and Treat (UTT), we expect increase in numbers of women who will be on preconception ART (PCART)
- PCART has to be followed by continued viral suppression through pregnancy and the period of breastfeeding and infant prophylaxis.

# Background

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- A significant proportion of South African women are found to be viraemic during pregnancy despite PCART (13 – 23%) *Cragg et al. (2015, Myer et al. (2015), Chetty et al. (2017)*
  - Adherence is known to be a major predictor of viraemia in patients on ART - only 72% pregnant women achieve at least 80% adherence. *(Nachega et al. 2012)*
  - **TRANSIENT** vs **PERSISTENT** viraemia is often not well described and the impact thereof on MTCT particularly in patients on pre-conception ART.
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# Aims and Specific Objectives

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**Study Aim:** To study the prevalence of HIV viraemia among HIV positive pregnant women on preconception antiretroviral treatment and possible associated factors/ variables.

## **Study Objectives:**

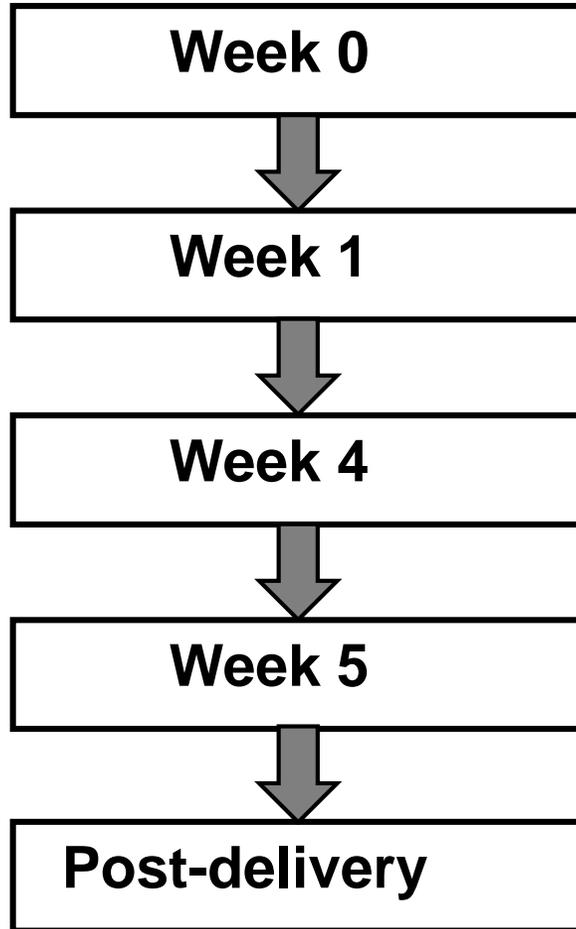
1. To determine the prevalence of transient and persistent viraemia in women who enter ANC on PCART in a single primary health centre in KwaZulu-Natal
  2. To determine factors associated with viraemia
  3. To determine proportion of infants who test HIV positive at birth
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# Methods

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- Prospective observational study November 2016-April 2017
- Screening for women on ART for minimum 24 weeks before conception (PCART)
- Inclusion criteria:
  - Age 18 years and older
  - First line ART
- Exclusion criteria:
  - GA >30 weeks
  - Second line ART
- Study approved by UKZN Biomedical Research Ethics Committee

# Study design



- Study questionnaire, ACTG adherence questionnaire, VAS
- VL
- VL Results
- Pill count
- Repeat VL if viraemic
- VL Results
- Follow-up pill count
- Infant PCR results

**ART adherence questionnaire**

Please place an "X" on the line below at the point showing your best guess about how much of your current antiretroviral medication you have taken in the **past 30 days**

0% means you have taken none of your current antiretroviral medication, 50% means you have taken half your current antiretroviral medication, 100% means that you have taken every single dose of your current antiretroviral medication in the past 30 days.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% Estimate percent indicated   %

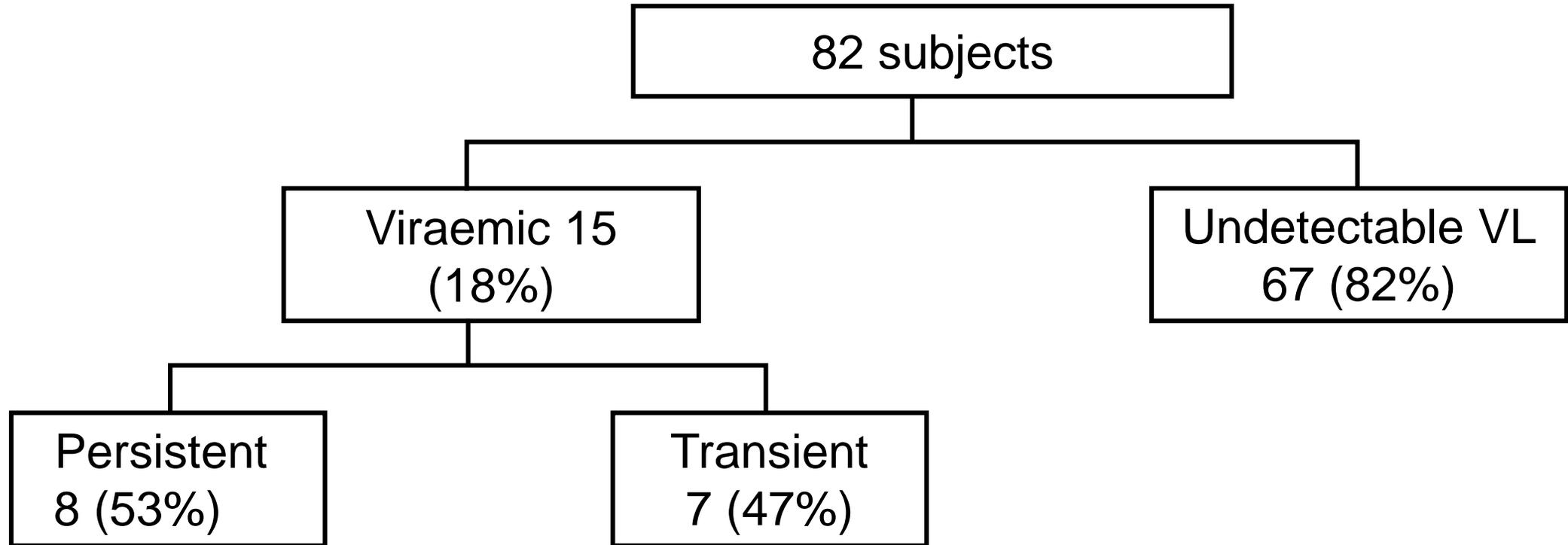
# Results

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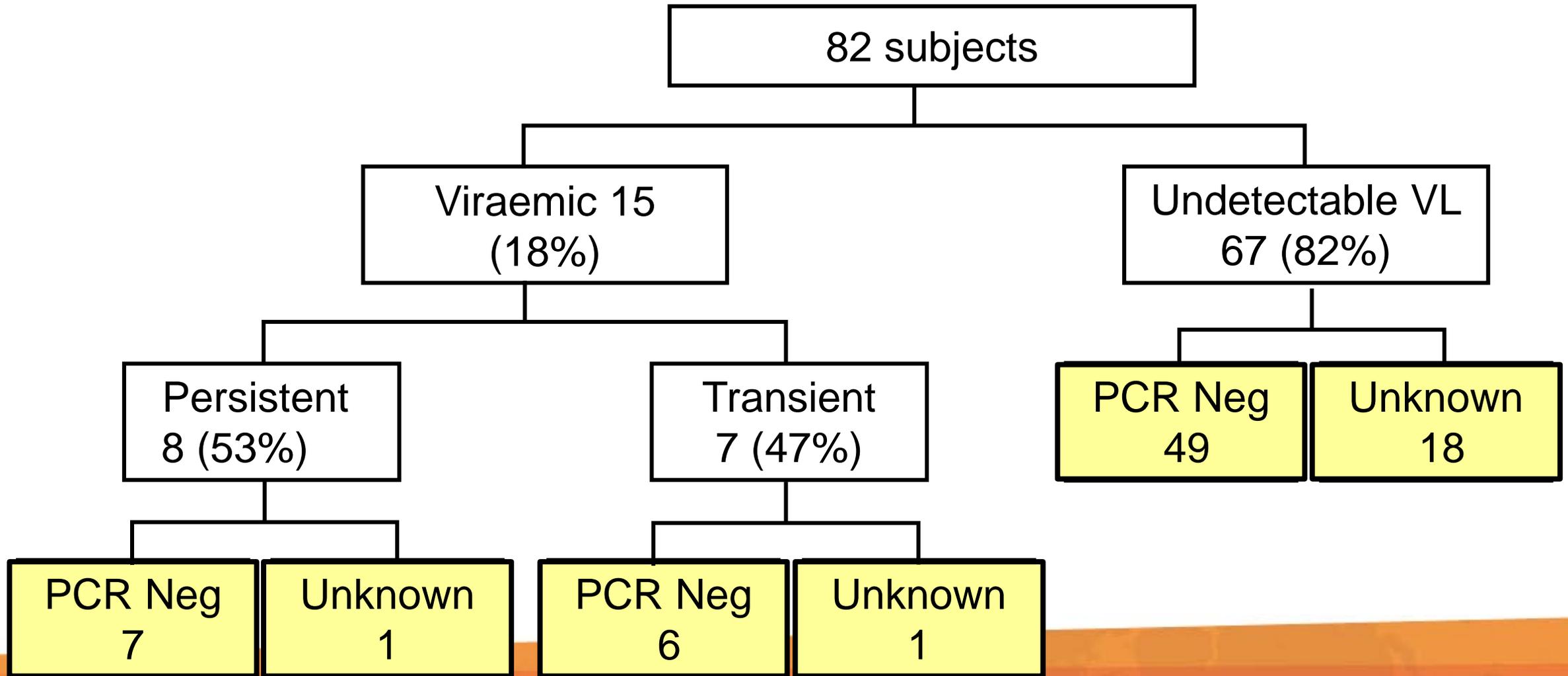
- No of subjects **82**
  - Mean age **30.4 years** (range 18 – 43)
  - Unplanned pregnancies **72%** (n=59)
  - Previous PMCTC exposure **23%** (n=19)
  - ART duration **46 months** (range 9-216)
  - Mean CD4 count **515 cells/ $\mu$ L**
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# Viraemia

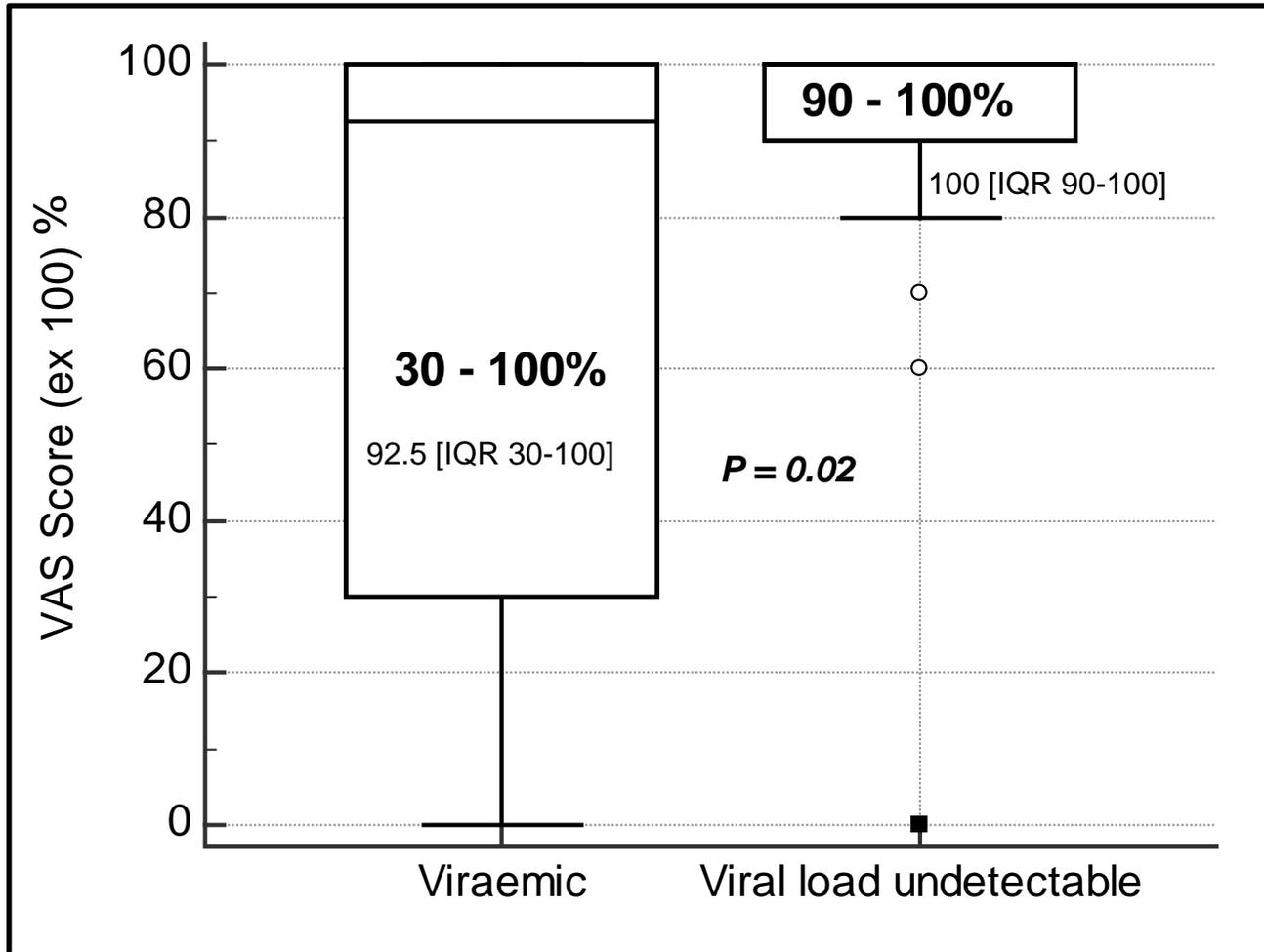
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# Mother to child transmission



# Self-assessed adherence vs viraemia



**Other adherence assessment tools were not effective in predicting viraemia (ACTG tool and pill count)**

# Discussion

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## **Viraemia:**

Approximately a 5<sup>th</sup> of pregnant women on PCRT have viraemia at the time of booking – and half are transient (resolve in 4 weeks).

## **Adherence:**

- Adherence is a major factor in predicting viraemia in our population
- The visual analogue scale is a simple and effective tool for monitoring adherence

# Discussion

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## Unplanned pregnancies

- The rate of unplanned pregnancy is very high (72%)
- Were pregnancies planned, efforts would be made to ensure that viral loads were adequately suppressed immediately before conception and monitored regularly thereafter.
- The high rate of unplanned pregnancies prevents this.

## LIMITATIONS

**Continuity of care** - Difficulty in determining the outcomes for our subjects and their infants whenever final delivery occurred at a different facility, even one on the direct referral chain.

# Conclusions

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- Approximately 80% of women on PCART are not well suppressed at the time of booking. - results are below the UNAIDS 90-90-90 target
- Despite this, PCART is highly effective in preventing MTCT. A larger sample is required to determine the actual MTCT rate in those who demonstrate viraemia, though our study suggests that there may be at least some degree of protection.
- Efforts to improve adherence need to be bolstered to reduce viraemia in individuals on long-term ART

# Acknowledgements

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- UKZN, College of Health Sciences, School of Clinical Medicine
- DRILL

# References

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