Risk Factors for Incomplete Treatment for Syphilis in Pregnant Oral PrEP Users in South Africa

T-01

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BACKGROUND

- South Africa has seen a steady increase in congenital syphilis in infants doubling from 6.5% in 2010 to 13% in 2019, far exceeding the WHO elimination goal.
- Understanding the prevalence, risk factors, and barriers to treatment of syphilis in pregnant women is essential to inform the prevention of vertical transmission.

Aim: To assess the prevalence, risk factors, and barriers to complete syphilis treatment for pregnant women without HIV on oral PrEP to inform targeted interventions for preventing congenital syphilis.

METHODS

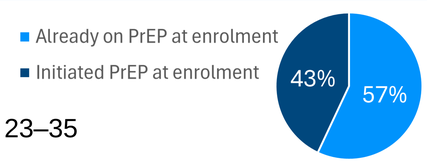
- Within ongoing SCOPE-PP randomized control trial of pregnant women taking oral PrEP (NCT05322629) and followed through 12-months postpartum
- Enrolled n=750 pregnant women without HIV on PrEP or willing to start ≥ 16 years old between September 2022 to May 2024
- Reviewed medical records to capture standard care syphilis testing and treatment, specifically:
  - Prior syphilis (TPHA+/RPR-)
  - Active syphilis (TPHA+/RPR+)
  - Complete treatment (3 doses of benzathine penicillin per local guidelines)
- **Statistical analysis**
  - Descriptive statistics of cohort
  - Prevalence of prior and active syphilis
  - Logistic regression to identify factors associated with active syphilis and incomplete treatment adjusted for maternal age and relationship status at baseline.

TPHA: treponema pallidum haemagglutination assay,
RPR: rapid plasma reagin

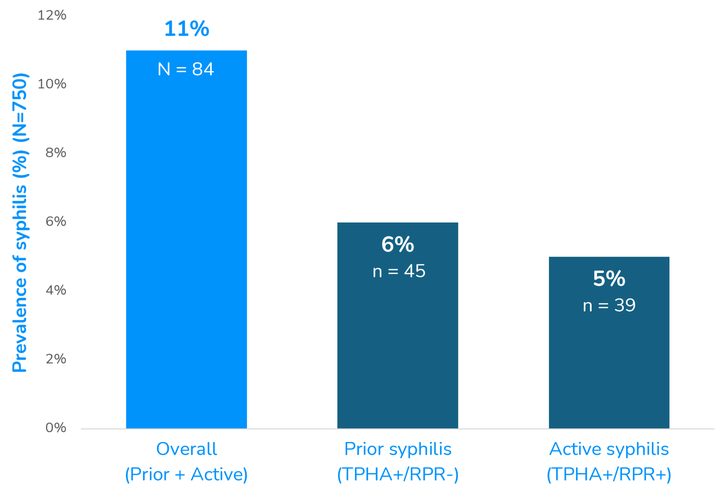
Only 35% of women with syphilis received complete treatment, highlighting the need to identify risk factors for incomplete treatment and improve timely syphilis detection, to prevent adverse pregnancy outcomes and congenital syphilis.

RESULTS

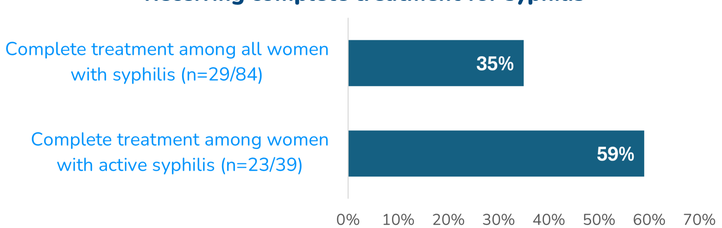
At enrolment, 750 participants:
57% on PrEP at baseline
Median age 26y, IQR 22–32
Median gestational age 29w, IQR 23–35



Prevalence of syphilis in SCOPE-PP cohort (N = 750)



Receiving complete treatment for syphilis



RESULTS CONTINUED

Risk factors associated with active syphilis



- **Younger women <25 years** had 2.6 times the odds of active syphilis compared to women ≥25 years (OR=2.59, 95% CI:1.33–5.29).
- **Alcohol use** in pregnancy doubled the odds of active syphilis (aOR=2.00, 1.04–3.88) compared to women who did not report alcohol use.

Factors associated with incomplete treatment



- For each **additional year of maternal age**, the odds of incomplete treatment increased by 10% (OR=1.10, 95% CI: 1.03–1.19).
- Women who were **unmarried/not co-habiting** had 3.9 times the odds of incomplete treatment (aOR=3.86, 95% CI: 1.10–15.8).
- **Any sexual activity** during pregnancy was associated with incomplete treatment (aOR=4.78, 95% CI: 1.14–25.3).

Congenital syphilis



- The mean gestational age of participants' first positive syphilis test was at 22 weeks (IQR 16–28).
- In 6% (n=5/84) of women with syphilis, it was detected ≤4 weeks prior to delivery.
- **3 infants (60%) were diagnosed with congenital syphilis**

CONCLUSIONS

- Syphilis is highly prevalent among pregnant women using oral PrEP.
- Risk factors including age, relationship status and late diagnosis should guide interventions including partner testing, early ANC interventions and active follow up counseling to reduce risk of adverse pregnancy outcomes.

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