

# HIV Vertical Transmission Risks Among South African Female Sex Workers



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## INTRODUCTION

- The past decade has witnessed significant declines in HIV mother-to-child transmission (MTCT) in South Africa as a result of scale up of HIV testing and antiretroviral therapy (ART) for all HIV positive pregnant women.
- Female sex workers (FSW) are disproportionately affected by HIV and may either desire pregnancy or be at a high occupational risk for unplanned pregnancy.
- Due to socioeconomic and structural barriers, FSW may also experience lower engagement in prevention of mother-to-child transmission (PMTCT) programming, including: antenatal care, postnatal care, and lower ART use during pregnancy.
- Little is known about the health and potential levels of MTCT risk among pregnant FSW, or their engagement in antenatal and postnatal care which are critical to the health outcomes of both mother and child.
- The objective of this analysis is to assess MTCT-related risk histories among FSW in South Africa in order to identify the potential need for improved support during pregnancy for FSW, as well as gaps in services for children.

## METHODS

- Prior to study launch, extensive community engagement with FSW was conducted by the TB/HIV Care Association in collaboration with the Human Sciences Research Council.
- Respondent driven sampling (RDS) was used to recruit FSW in Port Elizabeth, South Africa, into a cross-sectional study conducted from October 2014 to April 2015.
- Women ≥18 years currently living in Port Elizabeth, assigned female sex at birth, reporting sex work as their principal source of income in the past 12 months, and presenting with a valid RDS coupon were eligible for study participation.
- Following consent, all participants completed a questionnaire covering demographics, pregnancy history and engagement in care.
- Urine-based pregnancy testing, as well as syphilis and HIV testing were performed on all FSW; viral loads were assessed only among pregnant FSW.
- We describe sample statistics of pregnancy and HIV related outcomes.

## RESULTS

- In total 410 FSW were enrolled into the study.
- Overall 261/410 FSW (63.7%, [95% CI 59.0-68.3]) had positive HIV test results (RDS-adjusted estimate 63.0% [95% CI 56.7-69.3]).
- Syphilis prevalence was similarly high in this sample, as 81/400 had a positive rapid plasma reagin (RPR) test result (crude prevalence: 20.3% [95% CI 16.3-24.2]; RDS-adjusted 17.1% [95% CI 12.1-22.1]).
- Characteristics of study participants are presented in Table 1.

**Table 1: Characteristics of female sex workers in Port Elizabeth, South Africa**

Characteristics (n=410)	n (%)
<b>Age, years</b>	
18-24	122 (29.8)
25-34	205 (50.0)
≥35	83 (20.2)
<b>Education completed</b>	
Less than primary	50 (12.2)
Some secondary	300 (73.2)
Completed secondary	60 (14.6)
<b>Race*</b>	
Black African	337 (83.2)
White African or mixed race	68 (16.8)
<b>Relationship status</b>	
In a relationship	238 (58.0)
Single, not in a relationship	172 (42.0)
<b>Ever been pregnant</b>	
Yes	343 (83.7)
No	67 (16.3)
<b>Number of living children</b>	
None	103 (25.1)
One	130 (31.7)
Two or more	177 (43.2)
<b>Biological children ≤12 years living with FSW</b>	
None	228 (55.6)
One	114 (27.8)
Two or more	68 (16.6)

\* Missing for n=5

## RESULTS (CONTINUED)

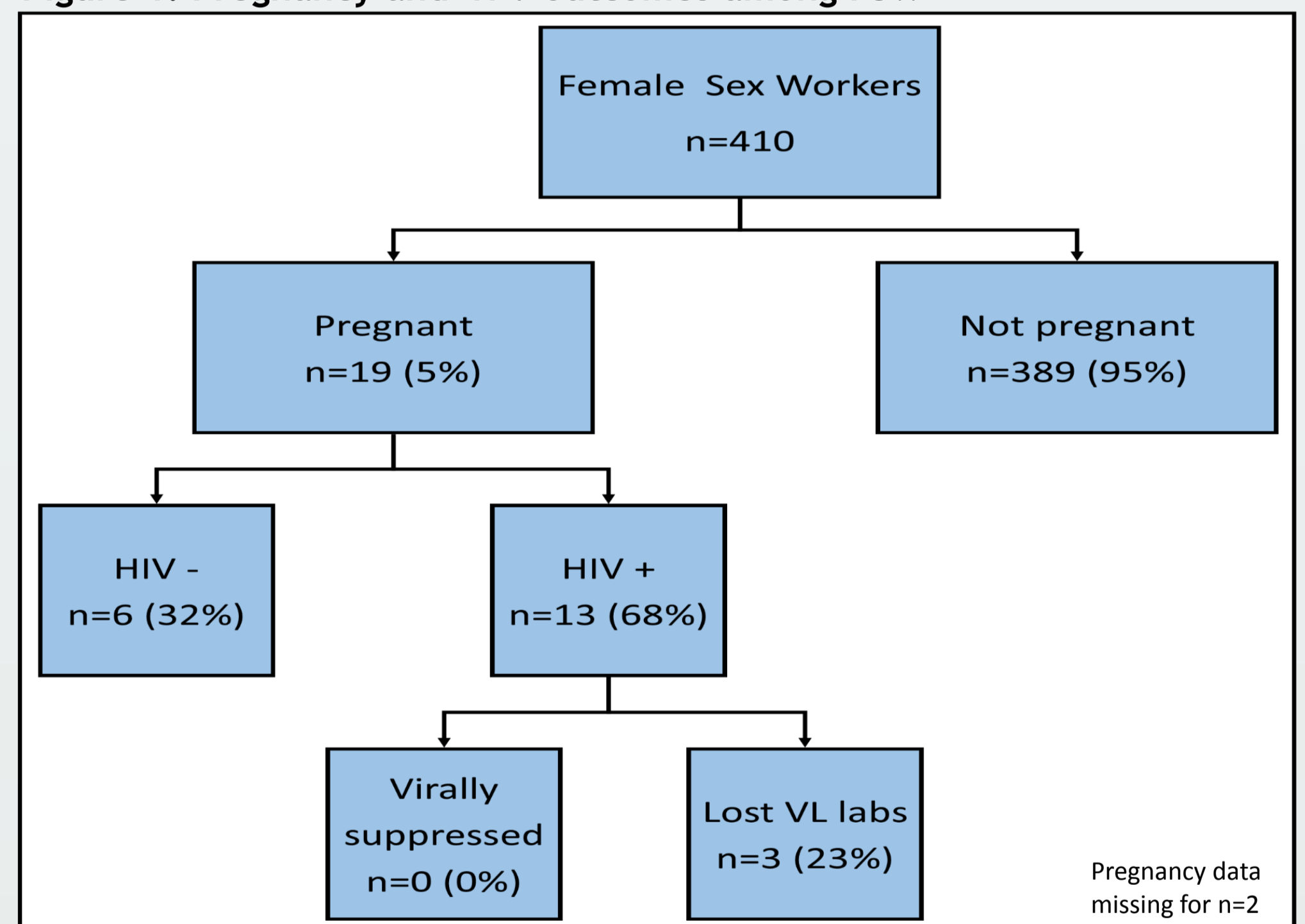
- Young children were common among FSW, as 192/410 (46.8%) had a child ≤5 years and 77/410 (18.8%) had a child ≤2 years.
- History of sex work during pregnancy and postpartum, as well as engagement in pregnancy-related care are described for women with young children (Table 2).

**Table 2: History of sex work during last pregnancy and engagement in pregnancy-related care for FSW with children 5 years and under**

Characteristics (n=192)	n (%)
Median months of sex work during last pregnancy, IQR (n=120)	5 [4-7]
Time to return to sex work following pregnant (n=185)	
Prior to 3 months	20 (10.8)
Between 3-6 months	36 (19.5)
After 6 months	57 (30.8)
Had not been engaged in sex work prior to previous birth	72 (38.9)
Breastfed child	120 (62.5)
Attended antenatal care (n=191)	182 (95.3)
Infant ever tested for HIV	158 (82.3)
Infant re-tested for HIV post breastfeeding cessation	99 (51.6)

- At time of study participation, 19/410 (4.7% [95% CI 12.1-22.1]) were currently pregnant.
- HIV prevalence and viral suppression among pregnant women are depicted in Figure 1. Overall only 4/13 pregnant FSW living with HIV reported ART use and no one was found to be virally suppressed.
- Active syphilis was detected in 2/18 pregnant women (11.1%, missing for n=1).

**Figure 1: Pregnancy and HIV outcomes among FSW**



## CONCLUSIONS

- Although engagement in antenatal care was reportedly high, several gaps existed, including need for greater ART use and adherence during pregnancy as well as increasing uptake of infant HIV testing and re-testing post breastfeeding cessation.
- These data suggest that MTCT risk is likely not evenly distributed among women in South Africa and FSW represent an underserved and at-risk population for this preventable outcome.
- Health assessments and family-focused interventions for pregnant FSW and their children are critically needed to reduce MTCT risk and promote early infant HIV diagnosis.

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