P09.23
Abstract #798

High Prevalence of HIV Infection among Patients with STI Syndromes in Zimbabwe: Implications for Prevention

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This project was approved by the Medical Research Council of Zimbabwe

Background

- The occurrence of sexually transmitted infection (STI) syndromes among persons with HIV infection indicates:
  - Presence of high-risk behaviors
  - Biological co-factors favoring HIV transmission
  - Opportunistic infection (e.g., genital herpes recurrences)

Objectives

To determine the HIV prevalence among patients enrolled in a study of the aetiology of STI syndromes in Zimbabwe and assess co-factors associated with HIV infections in this population.

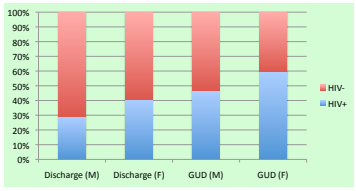
Methods

- Between June 2014 and April 2015, a mobile team recruited 600 men and women in 6 clinics:
  - Harare
    - Mbare
    - Budiriro
  - Bulawayo
    - Nkulumane
    - Khami Road
  - Beitbridge
    - Dulibadzimu
  - Gutu
    - Gutu Road Clinic
- The following patients were enrolled:
  - 200 women with vaginal discharge
  - 200 men with urethral discharge
- Demographic, and STI/sexual history data were collected using a standardized questionnaire and entered in an online database
- Specimens collected:
  - Blood (all patients)
  - Urethral Smears (Men)
  - Urine (men with GDS)
  - Vaginal Smears (women)
  - Vaginal swabs (women with GDS)
- All specimens were shipped by courier to the study receiving laboratory in Harare (ZiCHIRe)

*Results of the GDS aetiology analyses are presented in P09.22
Results of the GUD aetiology analysis are presented in P09.24

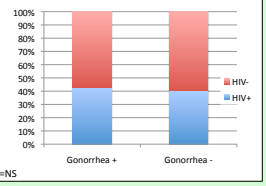
Results

HIV Prevalence among Men end Women with Genital Discharge Syndromes and Genital Ulcer Disease (GUD)



Overall HIV Prevalence 204/490 (41.6%)
Difference of HIV prevalence across STI Syndromes: <0.0001 (Chi Square)

HIV Prevalence by Gonorrhea Infection



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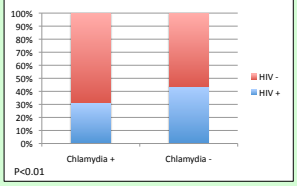
HIV Prevalence by Chlamydia Infection



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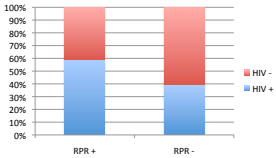
HIV Prevalence by RPR Result



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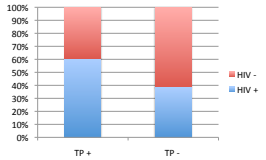
HIV Prevalence by TP DUO Result



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Factors Associated with HIV Infection Among Men and Women with STI Syndromes in Zimbabwe Multivariate Analysis

	AOR	95% C.I.	
Gonorrhea	1.9	1.2	3.1
Chlamydia	0.5	0.3	0.9
Syphilis (N)TP[1]	1.8	1.1	3.1
Female GUD[2,4]	4.4	2.3	8.1
Male GUD[2,4]	2.5	1.3	4.6
Female GDS[3,4]	2.1	1.2	3.5

[1]Syphilis (N)TP: Any RPR or DUO positive test
[2]GUD: Genital ulcer disease
[3]GDS: Genital discharge syndrome
[4]Female GUD, Male GUD, and Female GDS compared to Male GDS as referent

The Zimbabwe STI Aetiology Study
More Information and Poster Copies:
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Laboratory Tests

- Genital Discharge Syndromes:
  - Probetec (Becton Dickinson)
    - *C. trachomatis* and N. *gonorrhoeae*
  - Xpert CT/NG (Cepheid)
    - *C. trachomatis* and *N. gonorrhoeae*
  - Multiplex polymerase chain reaction (NICD*, Johannesburg)
    - *C. trachomatis*
    - *N. Gonorrhoeae*
    - *T. vaginalis*
    - *M. genitalium*
- Genital Ulcer Disease:
  - M-PCR
    - *T. pallidum*
    - *H. ducreyi*
    - Herpes simplex virus (HSV)
    - *C. trachomatis* (LGV strains)
- HIV Serology
  - First Response
  - Determine
- Syphilis Serology
  - Treponemal: SD DUO Bioline
  - Non-treponemal: RPR

* National Institute of Communicable Diseases

Conclusions

•HIV prevalence was high among patients with STI syndromes in our study

• HIV prevalence was higher among patients with genital ulcer disease compared to patients with genital discharge syndromes

• The statistically significant association between HIV prevalence and presence of gonorrhea and syphilis markers indicate high risk behaviors related to HIV acquisition and ongoing HIV transmission

• Clinics serving patients with STI syndromes in Zimbabwe and countries with similar HIV/ STI epidemiology are of importance for HIV diagnosis and prevention

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PEPFAR