Integrated Antenatal HIV, Hepatitis B, & Curable STI Testing: A Pragmatic Study in Harare, Zimbabwe

1167

Kevin Martin[1 2], Chido Dziva Chikwari[1 2], Ethel Dauya[1], Constance Mackworth-Young[1 2], Joe D Tucker[2], Victoria Simms[1 2], Tsitsi Bandason[1], Leolin Katsidzira[3], Francis Ndowa[4], Owen Mugurungi[5], Anna Machiha[5], Michael Marks[2], Katharina Kranzer[1 2], Rashida A Ferrand[1 2]

[1]The Health Research Unit Zimbabwe, Biomedical Research and Training Institute, Harare, Zimbabwe [2]London School of Hygiene & Tropical Medicine, London, UK [3]University of Zimbabwe, Harare, Zimbabwe
[4]Skin & Genito-Urinary Medicine Clinic, Harare, Zimbabwe [5]AIDS and TB Unit, Ministry of Health and Child Care, Harare, Zimbabwe

BACKGROUND

- Many STIs are associated with adverse outcomes among pregnant women.
- Most antenatal care (ANC) clinics in the Global South do not routinely screen for STIs outside of HIV and syphilis.
- Existing HIV and syphilis testing in ANC provides a platform for integrating testing for other STIs.
- We evaluated the feasibility of STI testing for *Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (NG), *Trichomonas vaginalis* (TV), and hepatitis B (HBV), integrated with HIV and syphilis testing in ANC in Zimbabwe.

METHODS

- A prospective pragmatic study was conducted in two ANC clinics in Harare over ten months in 2023.
- Participants were screened for CT, NG, TV, HBV, HIV, and syphilis, using point-of-care tests **(table 1)**.
- Treatment, partner notification, and onward referral were provided as per national guidelines.
- We assessed testing uptake, and the number of people who received same-day results, treatment, and referrals.
- The primary outcome was composite prevalence of CT, NG, TV, syphilis and HBV.

STI	Samples	Diagnostic
CT	Vaginal swab #1	Xpert® CT/NG
NG		
TV	Vaginal swab #2	OSOM® Trichomonas test
HIV	Fingerprick blood	SD Bioline HIV/syphilis Duo
Syphilis		
HBV		Determine™ HBsAg2

Table 1: Samples and point-of-care tests used for STIs

31% of pregnant women attending two ANC clinics in Zimbabwe have an STI, 90% without symptoms. Same-day STI screening and treatment is acceptable and feasible.

RESULTS

- 1002/1005 (99.7%) of participants collected their results - all but 9 collecting on the same day.
- 308/1001 (30.8%) were diagnosed with a curable STI
- 256/283 (90.5%) of CT/NG/TV infections were asymptomatic
- **Tables 2 and 3** show individual and composite STI prevalence, and the CT/NG/TV prevalence disaggregated by symptom status.
- **Figure 1** shows the treatment cascade.

Prevalence (N = 1001*)	n (%)
HIV	105 (10.5%)
CT	186 (18.6%)
TV	124 (12.4%)
NG	40 (4.0%)
Syphilis	35 (3.5%)
HBV	14 (1.4%)
CT/ NG/ TV/ syphilis/ HBV	316 (31.6%)
CT/ NG/ TV/ syphilis	308 (30.8%)

Table 2: STI prevalence in pregnant women in Harare
*4 excluded – 3 did not return for questionnaire, 1 no CT/NG results due to GeneXpert error

Presence of symptoms*	CT/NG/TV prevalence N (%)
Yes	27/56 (48.2%)
No	256/945 (27.1%)

Table 3: CT/NG/TV prevalence by symptom status
*presence of vaginal discharge/ pelvic pain/ dyspareunia

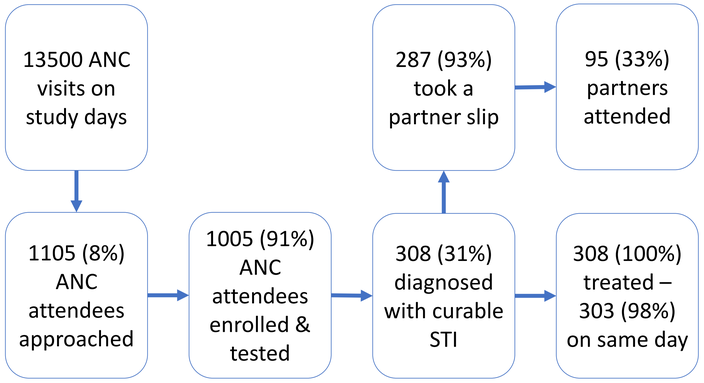


Figure 1: STI treatment cascade

CONCLUSIONS

- There is an urgent need to implement strategies for prevention, screening, and treatment for these highly prevalent STIs.
- The majority of STIs in this study would not have been detected and treated by syndromic management.
- The high uptake and completion of the intervention demonstrates acceptability.
- Feasibility was demonstrated through the provision of a same-day testing and treatment service for the vast majority of participants
- Further implementation research is needed to inform scalability, alongside cost-effectiveness evaluation.

PARTNERS & CONTACT INFORMATION

E-mail: kevin.martin@lshtm.ac.uk
Website: www.thruzim.org
Twitter: @ThruZim @dr_kevin_martin