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CONFRONTING INEQUITIES IN STI PREVENTION, DIAGNOSTICS AND CARE



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Syphilis in Pregnancy in Zambia: Gaps in the Treatment Cascade and Adverse Pregnancy Outcomes

BACKGROUND

- Syphilis in pregnancy remains a critical public health problem in sub-Saharan Africa with prevalence ranging from 0.1-10%.
- Prevalence in Zambia ranges between 2-3%.
- Zambian national guidelines recommend syphilis testing at first ANC/1st trimester, 2nd trimester and 3rd trimester.
- Syphilis during pregnancy leads to high rates of adverse birth outcomes, including stillbirth and congenital syphilis.
- Benzathine penicillin G (BPG) is an effective and safe treatment for syphilis during pregnancy.
- Many women are untreated as syphilis is often asymptomatic, the screening algorithms are not very sensitive, and due to recurring medication stock outs.

Tests and Screening Algorithms

Tests

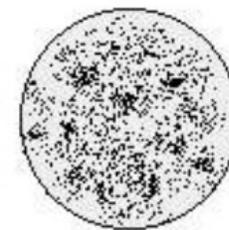
- Treponemal – specific for T. Pallidum
- Non-Treponemal – non-specific for T. Pallidum

Screening Algorithms

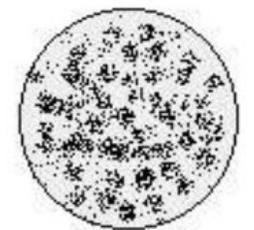
- Traditional
 - Non-treponemal
 - Treponemal
- Non-Traditional
 - Treponemal
 - Non-treponemal



Non reactive



Weakly reactive



Strongly reactive

Objective

To quantify treatment rates and birth outcomes among pregnant women with syphilis diagnosed at 10 urban/semiurban ANC clinics in Zambia

Study Outcomes

Primary Study Outcomes:

- Syphilis screening rate
- Syphilis prevalence during pregnancy
- Syphilis treatment rate and type of antibiotics used
- Pregnancy outcomes: miscarriage, stillbirth, neonatal mortality, intrauterine fetal demise (IUFD), low birth weight (<2500 grams), preterm delivery (<37 weeks), congenital syphilis.

Secondary Study Outcomes:

- Timing of treatment for syphilis
- Partner referral for syphilis treatment
- Availability of syphilis tests and BPG at the ANC clinic

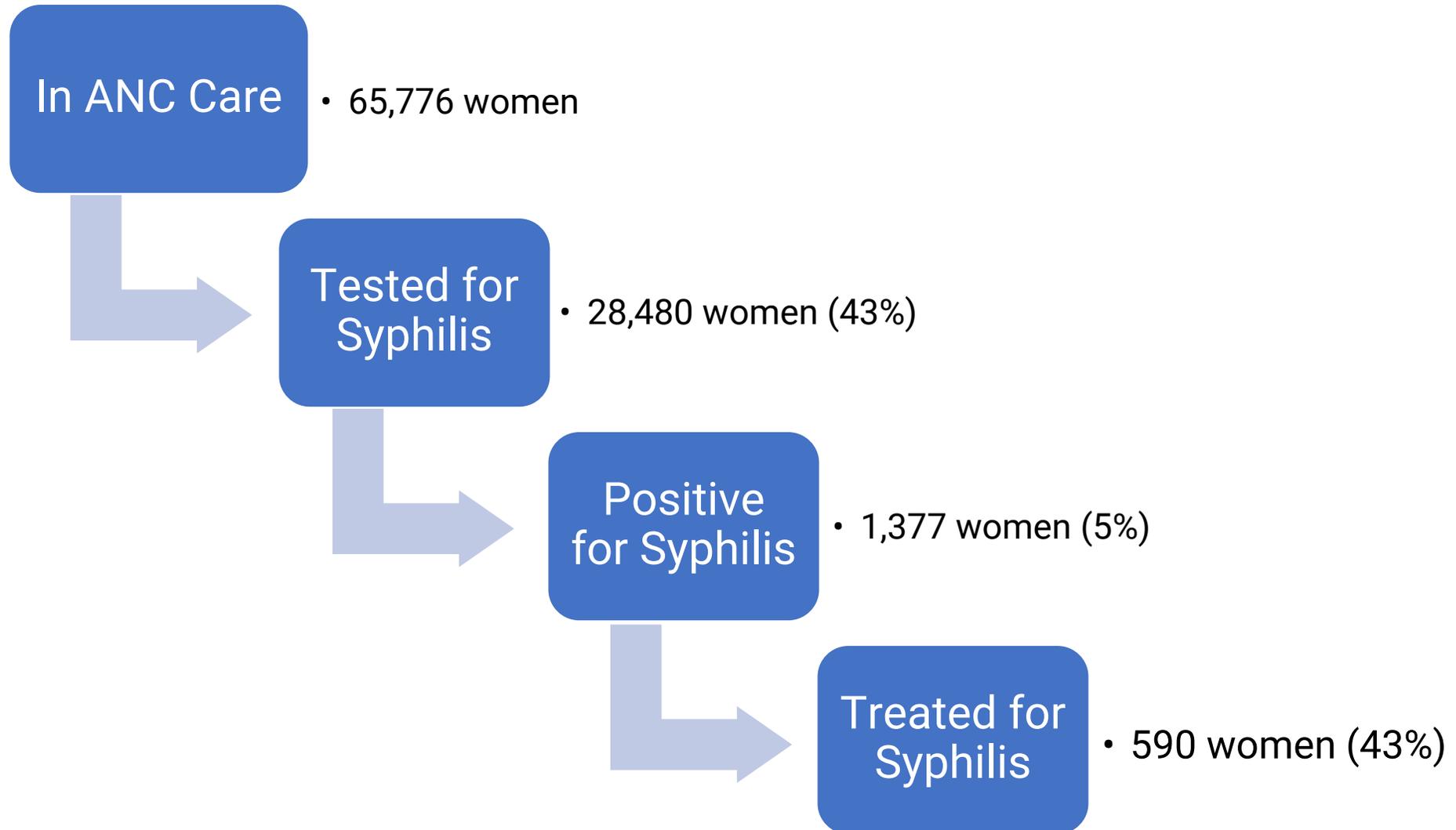
Methods

- Retrospective cohort study in 10 health facilities in Lusaka, Zambia between January 2018 and December 2019
- Data was collected from government registers – ANC, L&D, Mother-Infant, and Under-5 registers
- Physical follow ups were done to capture neonatal outcomes
- Continuous variables were calculated as mean with standard deviation
- Categorical variables were calculated as count with percentage and outcomes compared by treatment status using Pearson Chi-square test

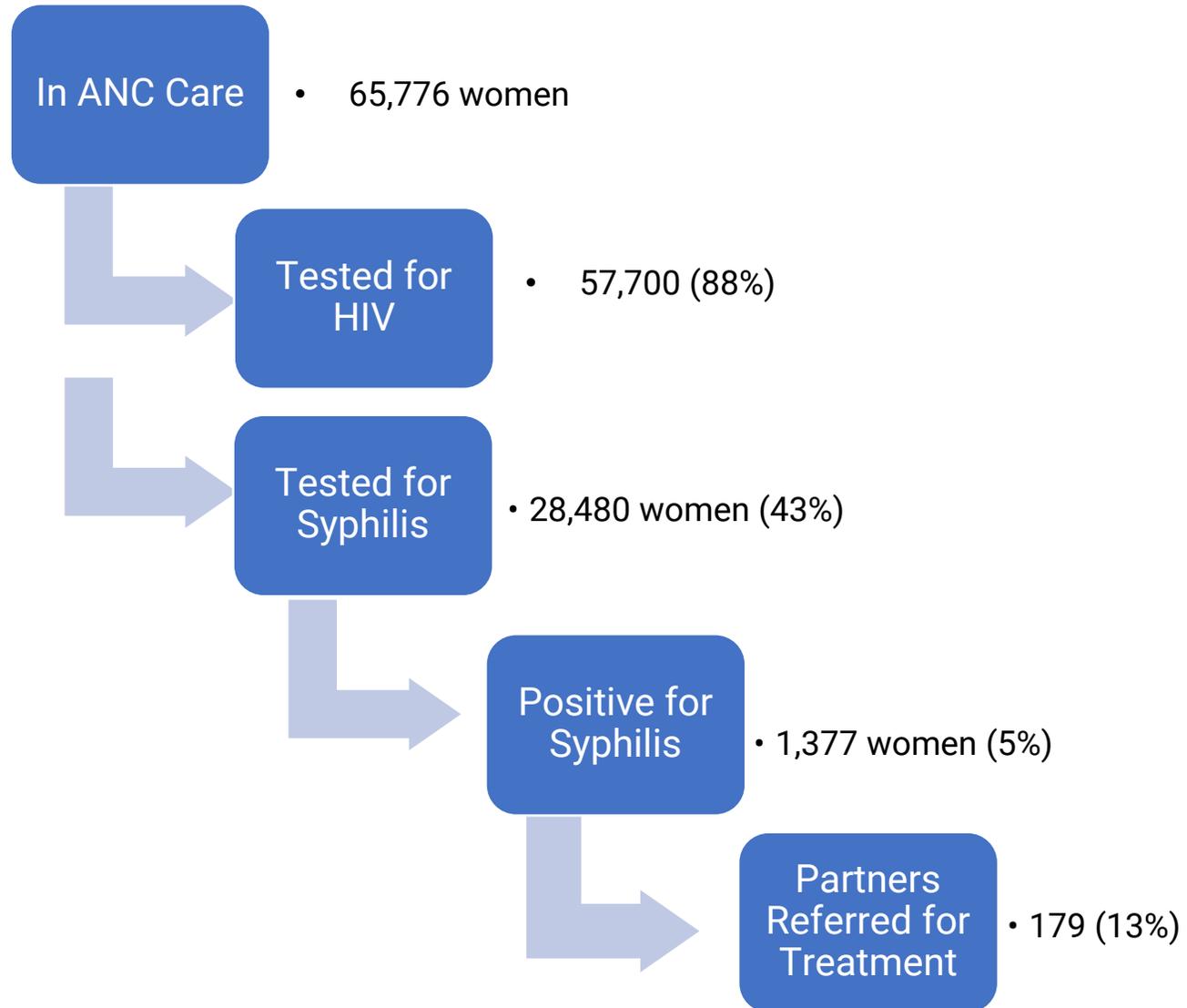
Study Sites

Facility Name	Type of Facility	Annual # of Deliveries
Kanyama	1st Level Hospital	10,974
Matero	1st Level Hospital	9,617
Chipata	1st Level Hospital	6,588
Chawama	1st Level Hospital	7,458
Chilenje	1st Level Hospital	4,695
Chelstone	Urban Health Centre	797
Kalingalinga	Urban Health Centre	807
Mtendere	Urban Health Centre	2,001
N'gombe	Urban Health Centre	1,355
Chainda Main	Urban Health Centre	600
		44,892

Care Cascade (2018-2019)



Care Cascade Continued (2018-2019)



Birth Outcomes Strategies by Treatment

	Penicillin Treatment Documented n=403	No Treatment Documented n=545	Total n=948	p-value
Facility Delivery	388/403 (96.3%)	524/545 (96.2%)	912/948 (96.2%)	0.91
Preterm Delivery (<37 weeks GA)	116/362 (32.0%)	213/480 (44.4%)	329/842 (39.1%)	<0.001
Low Birthweight (<2500 grams)	62/394 (15.7%)	120/528 (22.7%)	182/922 (19.7%)	<0.01
Birth Outcome Live Miscarriage Stillbirth	396/400 (99.0%) 0 4/400 (1.0%)	528/543 (97.2%) 5/543 (0.9%) 10/543 (1.8%)	924/943 (98.0%) 5/943 (0.5%) 14/943 (1.5%)	0.09

Conclusion

- Major barriers persist in the diagnostic and treatment cascade for syphilis in pregnancy in Zambia.
- Screening tests for syphilis is frequently out of stock and treatment rates for women and their partners are inadequate.
- New ways to ensure access to universal syphilis diagnosis and treatment, particularly in women with HIV are needed to prevent adverse birth outcomes.

Recommendations

- Strengthen linkages between screening and treatment
- Strengthen partner screening and treatment
- Increase support for syphilis testing and treatment commodities
- Scale up of the HIV/Syphilis duo test
- Strengthen patient record-keeping

Disclosure

Any circumstances that could give rise to a potential conflict of interest related to the conference or topic under discussion	Name of company, organization or institution
Sponsorship	None
Payment or other financial remuneration	None
Shareholder rights	None
Other relations	None