

Congenital syphilis prevention in Uganda; a randomized trial of 3 different approaches to partner notification for pregnant women



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Background

- There are approximately 12 million new syphilis infections every year; 1.5 million of these in pregnant women.
- Syphilis infection in pregnancy causes poor outcomes in up to 50% infected neonates[1]
- Universal antenatal screening of pregnant women in clinics across SSA could reduce the annual number of stillbirths by up to 64,000, neonatal deaths by up to 25,000, and annual incidence of congenital syphilis by up to 32,000[2]
- Newer point of care tests (POCT) and combined HIV-syphilis tests are helping to increase syphilis testing in pregnancy across the region [3]
- In Uganda, antenatal clinic syphilis prevalence estimates are 2.1 – 3.0%.
- Even when resources are present partner attendance is poor; in our HIV clinic at the Infectious Diseases Institute (IDI), whilst we found a rate of 5.1% RPR positivity in HIV positive pregnant women; we only managed to achieve a partner re-attendance of 34.5%[4].
- Mobile phone technology has been suggested as a tool to help with PN[5]. Uganda has a mobile phone network coverage of over 90% and 48% of the population have a mobile phone subscription[6].

Results

- Of the 445 pregnant women enrolled, 81 partners attended for follow up.
- Overall, the partner attendance was very low at 18%; there was no statistical difference between the arms. (Figure 2)
- Of those women who did not enrol, 12% had attended antenatal clinic with their partner; the number of women who attended clinic with their partner increased over the course of the study. (Figure 3)
- 367/445 (82.5%) women had a healthy delivery; there was a non-statistically significant difference in adverse outcome in those with no partner treatment (25/282; 8.7%) compared to partner treatment (4/85; 4.7% RR 1.81(95% CI0.6-5.1), p=0.355).

Figure 2 - Result of partner attendance after notification

Site	Enrolled Mothers (N=445)	Randomization arm			Overall (N=81)
		Notification slip (N=23)	Slip + sms reminder (N=31)	Slip + nurse phone call (N=27)	
IDI AIDC	10 (2.2%)	0	1	1	2 (20.0%)
Mulago	365 (82.0%)	16	25	22	63 (17.3%)
Kasangati	70 (15.7%)	7	5	4	16 (22.9%)

Objective

The objective of the study was to compare the proportion of male partners who report to the clinic for syphilis testing (and treatment) when pregnant women who test syphilis positive are given only partner notification slips (standard of care), compared to a notification slip plus an automated SMS reminder, or a notification slip plus a nurse phone call reminder.

Methods

- The study was undertaken between February 2015 and February 2016.
- Sites - antenatal clinics at Mulago Hospital, Kasangati Health Centre IV and the Infectious Diseases Institute Adult Infectious Disease Clinic (AIDC), Kampala
- Those with a positive pregnancy test, treponemal antibody rapid (POCT) test were offered inclusion into the study.
- Other inclusion criteria were age >18 years or 14-17 years and being a mature and emancipated minor, having a known sexual partner, having access to cell phone, willing and able to use/ receive SMS/phone calls
- Subjects were received 1:1:1 randomization ratio

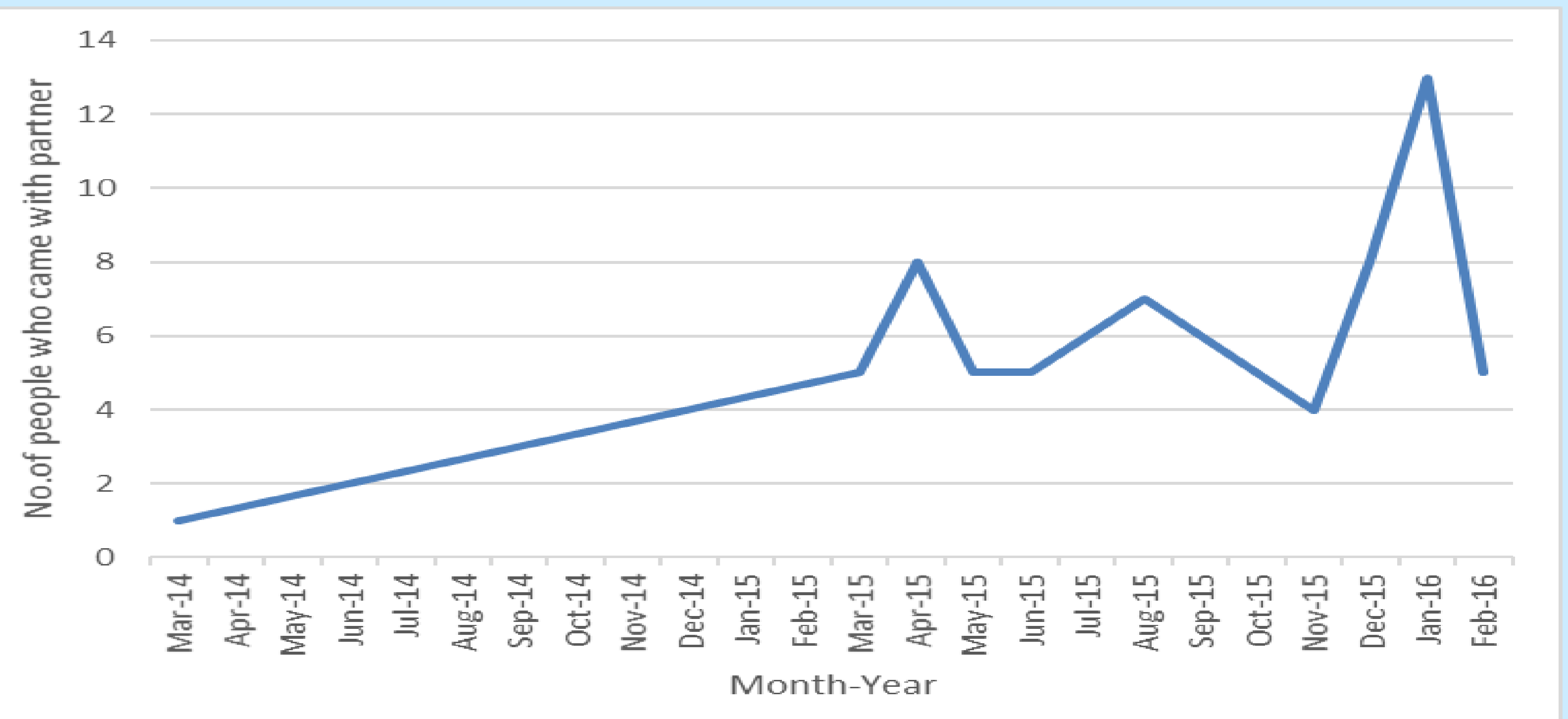


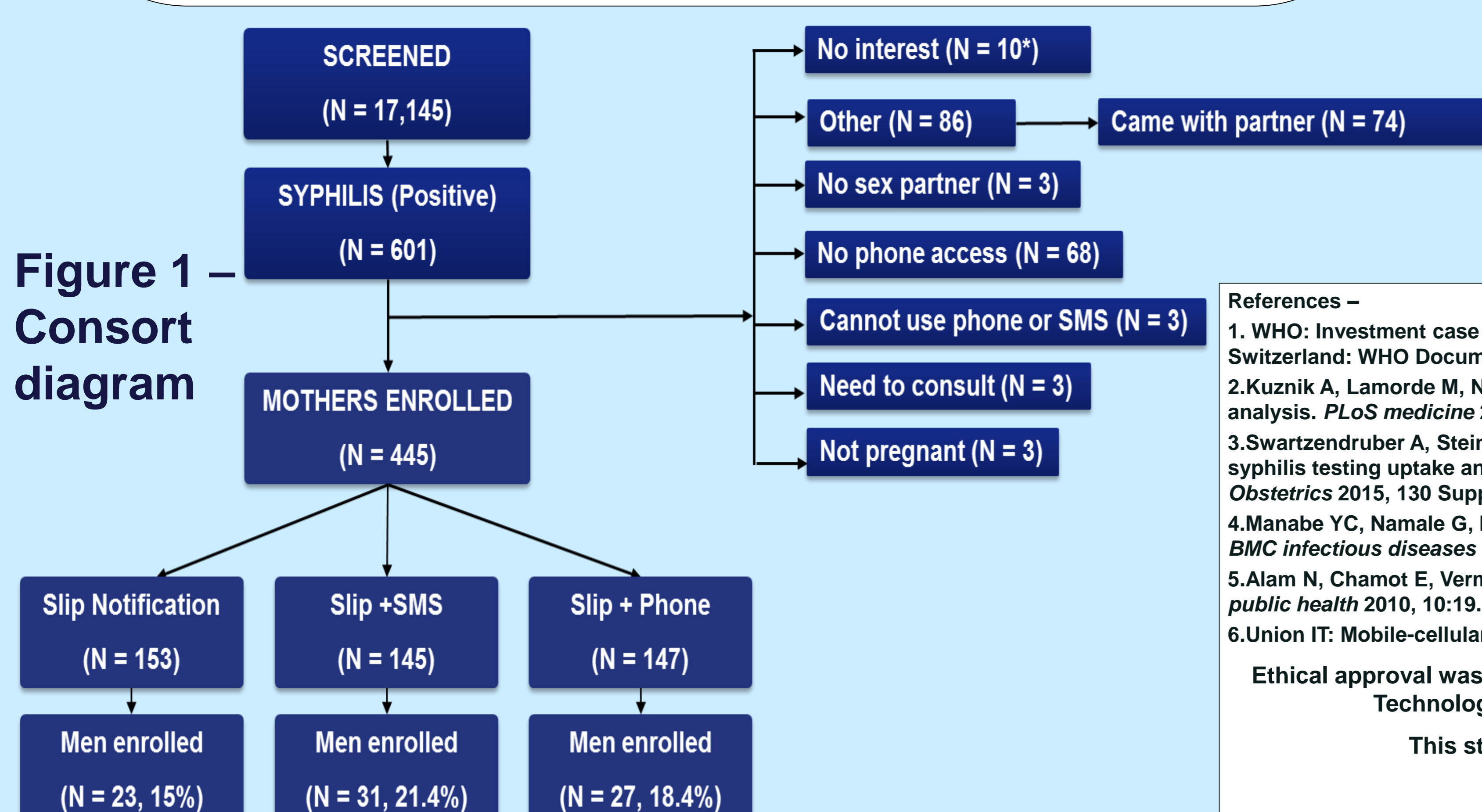
Figure 3 – Number of partners attending with mothers over time

Conclusions

- Partner notification from women testing positive for syphilis in pregnancy is low despite reminders and encouragement.
- Relying on women to inform their partner will not break the cycle of re-transmission of syphilis between partners, and increases the risk of congenital syphilis to unborn children.
- Encouraging men to accompany women to antenatal clinic and concomitantly testing them may address this issue.
- Direct notification of men by clinical services may help, but locally available resources and legislation are barriers to this.

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Figure 1 – Consort diagram



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