

Antenatal women's experiences of self-collected vaginal swabs and point of care testing for sexually transmitted infections in Papua New Guinea

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Disclosure of Interest Statement

We disclose we have no conflicts of interest

STIs in pregnancy

- High burden of STIs among pregnant women in low resource settings
- Many curable, genital STIs are asymptomatic in pregnancy
- *Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (NG), *Trichomonas vaginalis* (TV) and bacterial vaginosis (BV), have been associated with adverse birth outcomes, particularly preterm birth and low birth weight

In Papua New Guinea...

- Our earlier work identified high prevalence of STIs among pregnant women
- Demonstrated that syndromic management, based on clinical presentation without laboratory confirmation, does not work
- We have one of the highest global burdens of stillbirths and newborn deaths
- High rates of preterm birth and low birth weight



Cluster-randomised crossover trial
among antenatal women and their
newborn infants in Papua New Guinea

Primary Objective

Evaluate whether point-of-care testing and immediate treatment of curable STIs in pregnancy leads to a **reduction in preterm birth and low birth weight** compared with standard antenatal care

Secondary Objective

Evaluate the acceptability of antenatal point-of-care STI testing and treatment compared with standard care



July 2017- March 2022

- 10 clinics
- 2 provinces
- 4528 women enrolled



Self collected vaginal swab



GeneXpert testing in the antenatal clinic

Methods and analysis

ACCEPTABILITY

Affective Attitude

How an individual feels about the intervention

Burden

The perceived amount of effort that is required to participate in the intervention

Ethicality

The extent to which the intervention has good fit with an individual's value system

Intervention Coherence

The extent to which the participant understands the intervention and how it works

Opportunity Costs

The extent to which benefits, profits or values must be given up to engage in the intervention

Perceived Effectiveness

The extent to which the intervention is perceived as likely to achieve its purpose

Self-efficacy

The participant's confidence that they can perform the behaviour(s) required to participate in the intervention

Prospective acceptability

Prior to participating in the intervention

Concurrent acceptability

Whilst participating in the intervention

Retrospective acceptability

After participating in the intervention

Findings

Interviews conducted between Nov 2018-Aug 2020

54 interviews across the 2 provinces

- Most women were aged 20-34
- Most were married
- Education level from nothing to university
 - 16 up to grade 8
 - 17 up to grade 10

- 22 women first pregnancy
- 34 women interviewed at second, third or fourth antenatal visit
- 30 women had up to 4 antenatal visits

Affective Attitude

How an individual
feels about the
intervention

- Overall, women reported that self-collection of a vaginal swab for STI testing was acceptable
- Women happy to participate in the self collection and testing to protect their unborn baby

“In my thoughts, I considered that they would test [for] them. They would check if there [are] some diseases present in the body or such as this. When they gave those things [swab sticks], I understood that it was for them to check for infections that might block the child (baby) or birth passage.”

Yasi, 26 years, 2nd baby

Affective Attitude

How an individual
feels about the
intervention

- Happy to receive the results the same day and to receive appropriate treatment
- Some women were surprised and upset with positive result

“I feel a bit hurt but it’s in my body system and I am the cause of it so it’s okay I just accept it. So all I have to do is to drink my medicine only and I will try to avoid some kind of way that causes it.”

Penina, 24 years, 3rd baby

Burden

The perceived amount of effort that is required to participate in the intervention

- Negative reports about long days at the antenatal clinic from most of the women
- But many happy to wait and receive the results same day

“We started around eight o’clock [clinic] was set up so around nine (when) we started the first visit. We started and it took about a whole day and we finished at about half past three. When I was going home I was excited because I was satisfied and was grateful to know my [STI] and HIV status.”

Delka, 35 years, 6th baby

Burden

The perceived amount
of effort that is
required to participate
in the intervention

- Some apprehensive about taking the swab
- Most found procedure was easy and straight forward

“I did not have worry... they told me so I simply used the kapok [swab]. I did not think of anything, I was just following the instruction of the female nurse and I did not have a worry.”

Lora, 31 years, 3rd baby

**Intervention
Coherence**

The extent to which
the participant
understands the
intervention and how
it works

- Good understanding that the vaginal swab was to check for infections that may affect their unborn baby
- Understood that an STI in pregnancy could have an impact on the unborn baby

“As for myself I feel, rather, I think that it’s okay. For instance, it’s to find some sort of diseases in me or such and they will see if there are some kind of problems with me or the baby there [and] such.”

Vero, 23 years, 1st baby

**Intervention
Coherence**

The extent to which
the participant
understands the
intervention and how
it works

- Some uncertain of what infections they were being tested for
- Some spoke of receiving a positive test result, but were unsure what they had been treated for

“I was thinking, rather, I didn’t have any thoughts but I was thinking that they would explain it to me but they did not really explain to me.”

Mune, 21 years, 1st baby

“This sore started to develop so they gave me ten tablets which I am going to drink them right now.”

Tovie, 22 years, 1st baby

Self-efficacy

The participant's confidence that they can perform the behaviour(s) required to participate in the intervention

- Overall women were happy to participate in the study
- Despite some having reservations about self collection of vaginal swab, most reported it to be straight forward and easy

“I felt that, when I put the cotton bud inside it was, what would I say, my canal was like tickly. But first time I thought that, what are we going to really do, I was having this in mind. But then I said, I’ll just do it for myself and the baby as well.”

Bronwyn, 26 years, 1st baby

Self-efficacy

The participant's confidence that they can perform the behaviour(s) required to participate in the intervention

- Some went on to say it was made easy by clear instructions from the nurse

“I insert it through the birth canal and gave it to them to test...I felt comfortable in doing it so I just did it...I was just happy and felt comfortable in doing it so I just followed their instructions.”

Olive, 28 years, 3rd baby

“... they gave us some test kits... some kapok [cotton swab] to check the birth canal and that kind...I did not fear because they told me that there was a mark on the kapok [cotton swab] where you were to insert it up to that mark exactly and stop. You could not go further because otherwise you might injure yourself. So, I inserted it up to that mark and it was alright.”

Angie, 29 years, 3rd baby

Summary

- Antenatal POC STI testing was acceptable among women in this setting
- Reducing waiting times between self-collection and communication of test result would enhance acceptance from the women's perspective
- Important to recognise the need to tailor information to an individual's understanding to ensure they are well informed of both the intervention and outcomes

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