

Evaluation of Vaginal Specimens for the detection of *C. trachomatis* (CT) and *N. gonorrhoeae* (GC) in High Risk Females attending Sexually Transmitted Infection (STI) Clinics in Alberta, Canada

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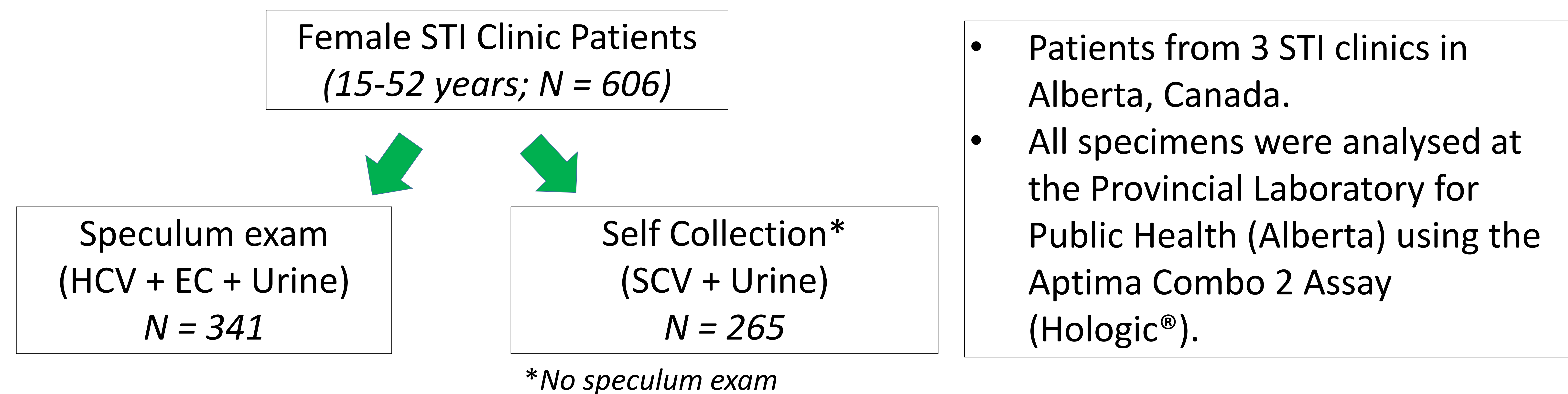
BACKGROUND

- In Canada, rates of chlamydia (CT) and gonorrhea (GC) increased 57.6% and 38.9% respectively from 2003 to 2012. This trend continues into 2016. (1)
- Undiagnosed STIs can have long term health consequences such as infertility and further transmission of infection. (2)
- Many patients who require testing do not have ready access to a major STI testing centre.
- With the wide distribution of the Canadian population and rising health care costs, there is a need for innovative methods of STI screening that is still both safe and yet reliable.
- Vaginal specimens could provide a non-invasive method of improved screening for CT and GC infections.
- The objective of our study was to evaluate the utility and performance of self-collected vaginal swabs (SCV) compared to a first-void urine, and health care provider collected vaginal swabs (HCV) and endocervical swabs (EC) for the molecular detection of GC and CT.

DISCUSSION

- Our study showed that SCV swabs were equivalent to urine testing for both GC and CT and correlates with the findings of Munsen, et al from Wisconsin, USA. (3)
- This study validates the utility of SCV in our local health care setting and is comparable to current standards of testing. This data will help better inform public health on alternate screening methods for GC and CT.
- Given many patients live in rural areas with limited access STI testing, SCV may allow for home / internet-based STI screening.
- A lower sensitivity was seen with HCV for *N. gonorrhoeae* testing. This is attributed to the dilution of the vaginal fluid with water/lubricant from the speculum examination.

METHODS & RESULTS



- Patients from 3 STI clinics in Alberta, Canada.
- All specimens were analysed at the Provincial Laboratory for Public Health (Alberta) using the Aptima Combo 2 Assay (Hologic®).

Table 1. Comparative test parameters of SCV, urine, HCV, and EC specimens for diagnosis of *N. gonorrhoeae* and *C. trachomatis*.

	<i>N. gonorrhoeae</i>		<i>C. trachomatis</i>	
	Sensitivity (%)	Specificity (%)	Sensitivity (%)	Specificity (%)
SCV versus urine	100	100	86.7	99.1
HCV versus EC	71.4	99.4	100	97.9

CONCLUSION

- SCV swabs for the detection of gonorrhea and chlamydia provide a sensitive, specific, and convenient method for STI screening in our setting.
- SCV can be used as alternative specimens for STI outreach settings or home based screening in populations with minimal STI clinical access in remote areas.

REFERENCES

- (1) Public Health Agency of Canada. Report on Sexually Transmitted Infections in Canada: 2012. Public Health Agency of Canada; 2015
- (2) Stamm WE. Chlamydia trachomatis infections of the adult. In: Holmes KK, et al, editors. Sexually transmitted diseases. 3rd ed. New York: McGraw-Hill; 1999. p. 407-422.
- (3) Munsen, et al. Clinical Laboratory Assessment of *Mycoplasma genitalium* Transcription Mediated Amplification Using Primary Female Urogenital Specimens. JCM, Feb 2016; 54:2, 432-8.



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