Methods

An online survey was designed based on a large-scale in depth focus discussion study among STI experts and professionals and distributed via email to current IUSTI members. Conditional logistical regression modelling will be used for data analysis. We present preliminary data here.

Results

To date, 142 subjects took the online survey with 123 completing it: 44% (n = 63) male and 56% (n = 79) female. Most subjects were from Oceana (35%) followed by Europe (18%), America (18%), Africa (15%) and Asia (14%). The majority (59%) of participants were from developed countries. Unreliability (17%) was the greatest barrier for use of POCTs, followed by being laboratory-driven (15%) and time-frame (13%). Perceptions of STI POCT differed significantly between developing and developed country participants. The majority (85%) of participants from developing countries thought test cost was more important versus 67% from developed countries (p < 0.05). Participants from developing countries ranked early HIV seroconversion as top priority for new STI POCT while those from developed countries chose chlamydia. Only 28% from developing countries preferred a POCT with higher sensitivity compared to 57% from developed countries (p < 0.05). Participants from developing countries (p < 0.05). Participants from developing countries (p < 0.05). Participants from developing countries (p < 0.05).

Conclusion

One STI POCT may not fit all. Industry should consider country identified needs in development of future acceptable, usable STI POCT.

**P5.085** MULTIPLEX CAPABILITY OF A FULLY-INTEGRATED, LOW-COST, ULTRA-RAPID PCR DEVICE WITH POINT-OF-CARE APPLICATIONS


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**Background**

We have developed a novel Point-Of-Care molecular assay system, io™, comprising an assay-specific Cartridge and Reader. With a turnaround time of just 80 minutes the System has an initial focus on rapidly detecting sexually-transmitted infections (STIs). The System has been developed to run tests that simultaneously detect *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG), each run with an internal control (IC). The assays utilise a novel electrochemical method that demonstrates low copy number amplification and detection. Here, we have developed a CT/NG/IC triplex assay where each target analyte is co-amplified prior to being differentially detected.

**Methods**

The assays were run using prototype PCR Cartridges in conjunction with an ultra-rapid thermocycler. All reagents necessary to perform the assay were deposited into the Cartridge. A sample was added to the Cartridge, DNA extracted, and the resulting eluate reconstituted dried amplification reagents. Amplified targets were detected using electrochemically-labelled target-specific probes and a double-stranded DNA-specific nuclease to release the electrochemical labels. Released labels were detected by applying a voltage to a screen-printed carbon electrode. Measurable current at specific oxidation potentials indicated the presence of targets in the sample.

**Results**

Initial analytical sensitivity of the triplex CT/NG/IC assay was evaluated by testing each target analyte in combination with various concentrations of the other two (including negative controls). Electrochemical detection demonstrated clear differentiation between peaks generated by each cleaved label and showed a limit of detection of ten genome copies. Negative samples showed no significant peaks.

**Conclusions**

The results showed that reliable, differentiated detection of three targets in a single sample was possible across a wide range of concentrations of the three targets. While demonstrated here for three analytes, the Atlas high-multiplex technology will allow expansion of the Atlas io™ test menu to detect multiple STIs in a single sample.

**P5.086** DIAGNOSIS OF EXTRA-GENITAL CHLAMYDIA AND/OR GONORRHOEA INFECTIONS BY VERSANT CT/GC DNA 1.0


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**Objectives**

Nucleic acid amplification testing (NAAT) has become the preferred method to detect *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (GC) infections. Anyway, no commercial test has been cleared so far for use with extra-genital swab samples.

In this study Versant CT/GC DNA 1.0 (Siemens) performances have been evaluated by testing ocular, rectal or pharyngeal secretions collected by Siemens collection devices.

**Methods**

**Study group**

A prospective study was performed with 7 newborns with conjunctivitis, and 183 subjects attending the STD Outpatients Clinic of St. Orsola Hospital, Bologna. The latter ones were enrolled because having unsafe receptive anal and/or pharyngeal sex intercourses.