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Paper Poster Session

Use of non-culture diagnostics for genital and urinary infection

### Prevalence of pharyngeal *Neisseria gonorrhoeae* and *Chlamydia trachomatis* infection among men who have sex with men (MSM) in Slovenia as determined with NAAT and culture-based methods

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**Background:** In Slovenia the prevalence of *Neisseria gonorrhoeae* pharyngeal infection among men-who-have-sex-with-men (MSM) is relatively high (2.3%). Nucleic acid amplification tests (NAATs) are regarded as the optimal method for the diagnosis of genital gonococcal infection. However, so far NAATs have not been licensed for extra-genital infection and the main advantage of culture is the ability to detect antimicrobial resistance among gonococci. Herein we compared the detection of pharyngeal gonococcal infection with culture and NAAT (APTIMA Combo 2 Assay, Hologic) among MSM in Slovenia during the period 2013-2014.

**Material/methods:** Pharyngeal swabs were offered to attendees of two gay clubs (on monthly basis) and one STI anonymous testing point of a Non-Governmental MSM Organization (on weekly basis). Amies-charcoal swabs were inoculated within 2 hours on selective (VCA3, bioMerieux) and non-selective (BBL chocolate, Becton Dickinson) agar plates and incubated for 72 h at 35-37°C in 5% CO<sub>2</sub>-enriched atmosphere for culture. For NAATs, swabs were frozen immediately after collection at -80°C and sent to core laboratory on dry ice for batch testing. A short anonymous demographic questionnaire was obtained simultaneously.

**Results:** A total of 598 MSM, aged 17 to 60 years (mean age: 30 years), were included. The prevalence of pharyngeal *N. gonorrhoeae* was 2.3% (95% CI; 1.4%-3.9%) and 4.5% (95% CI; 3.1%-6.5%) using culture and NAAT, respectively. All culture positive samples were also positive with NAAT. The prevalence of *Chlamydia trachomatis* infection as detected with NAAT was 1.7% (95% CI; 0.9%-3.1%). 78% of men never used protection during oral sex.

**Conclusions:** The prevalence of *N. gonorrhoeae* pharyngeal infection among MSM in Slovenia was relatively high. With the use of NAATs we detected almost twice as much infection as with the use of culture only (4.5% vs. 2.3%). Furthermore, the prevalence of *C. trachomatis* infection among MSM in

pharynx was relatively high at 1.7%. Culture may therefore be insufficient, compared with NAATs, for pharyngeal *N. gonorrhoeae* detection.