

009.3 POTENTIAL *NEISSERIA GONORRHOEAE* OUTBREAK IN HETEROSEXUALS YOUNGER THAN 25 REVEALED THREE CLUSTERS BY CULTURE-FREE GENOTYPING

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10.1136/sextrans-2019-sti.154

Background Surveillance of *Neisseria gonorrhoeae* (NG) is important to monitor antimicrobial resistance and detect outbreaks but is limited by the low NG culture success rate. Recently, we developed a culture-free NG multi-antigen sequence typing (NG-MAST) method. In 2018, an increase of 155% of genital NG cases in heterosexual men and women younger than 25 was observed in South Limburg, the Netherlands. We investigated the genetic relatedness of the NG strains with culture-free NG-MAST to characterize the 2018 increase and compared this with NG cases of heterosexual men and women younger than 25 in 2016 and 2017.

Methods Residual routine nucleic acid amplification test diagnostic sample material was retrieved for 53/56 NG cases in 2018 (13 male urine and 40 vaginal swabs) and 36/38 control cases in 2016–2017 (13 male urine and 23 vaginal swabs). Total DNA was isolated and NG was genotyped using the culture-free NG-MAST protocol. Sanger sequence data was used to construct a phylogenetic tree.

Results A total of 48/53 cases were genotyped of the 2018 increase, two failed and three samples showed a potentially mixed strain infection. We identified three clusters of closely related NG strains, a novel sequence type (n=15), G2 (n=14) and G13113 (n=10) respectively. No large clusters (n<5 cases) were observed in 2016 and 2017 cases and hardly any overlap with 2018 cases. Half of the samples (26/53) were subjected to culture as part of routine procedures and 11/26 were culture positive. Therefore, only 4/39 samples of the three clusters could have been characterized with culture-dependent methods.

Conclusion We observed a potential NG outbreak in South Limburg using culture-free NG-MAST and identified three clusters of closely related strains. Using current culture-dependent surveillance methods we would not have identified the three clusters to enable intervention assessment.

Disclosure No significant relationships.

009.4 HIV AND HCV AMONG CLIENTS OF FEMALE SEX WORKERS IN DNIRO, UKRAINE

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10.1136/sextrans-2019-sti.155

Background Ukraine has the highest HIV and HCV rates in Europe. Initially driven by unsafe injection use, more recent studies have documented the ongoing transmission of HIV via unprotected sex work. This paper describes the profile of clients of female sex workers (FSWs) in eastern Ukraine and their HIV and HCV prevalence and risk factors.

Methods We conducted a cross-sectional bio-behavioural survey of clients of FSWs recruited from sex worker hotspots in Dniro, Ukraine. Inclusion criteria was men aged 18 and older who purchased sex services from a FSW (N = 370). The prevalence of HIV and HCV among clients was determined by serology from dried blood spots. Descriptive statistics of socio-demographic and sexual behavior are presented with univariate analysis for association.

Results The median age of clients was 32 (IQR 27–38) and the median age at first purchase of sex was 22 (IQR 19–27). Thirty-three percent of respondents were living with a regular sex partner. The mean number of sex services purchased in the past 6 months was 4.85 (SD 3.50), from 4.11 (SD 2.95) different FSWs. A mean of 2.1 hotspots were visited in the past 12 months (SD 1.6). Fourteen (3.8%) respondents reported ever injecting drugs. Two hundred and eight (56.2%) clients had ever tested for HIV. HIV and HCV prevalence was 2.4% (9) and 6.5% (24) respectively, yet only 33% (3/9) of people living with HIV reported knowing their status. Binge drinking was associated with both HIV and HCV prevalence; 8.2% of widowed/divorced respondents tested positive for HIV (p=0.003).

Conclusion The HIV prevalence among clients is almost three times the general population in Ukraine. Further, the frequency of sex work visits and the high number of sex workers visited, suggests a diffuse network with potential for wide transmission of HIV and HCV.

Disclosure No significant relationships.