008.4 INFLUENCE OF HIV-STATUS AND PREP USE ON HIGH STI PREVALENCES IN MSM IN GERMANY, 2018

Klaus Jansen^{1*}, Gyde Steffen², Ann-Kathrin Schuppe³, Viviane Bremer², Carsten Tiemann³, Msm Screening Study Study Group¹. ¹Robert Koch Institute, Infectious Disease Epidemiology, Berlin, Germany; ²Robert Koch Institute, Berlin, Germany; ³Krone Laboratory, Bad Salzuflen, Germany

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Background HIV-positive (HIV+) MSM often show higher STI-prevalence than HIV-negative MSM (HIV-). Approval of HIV pre-exposure prophylaxis (PrEP) in Germany might have influenced sexual behaviour and STI-prevalence of HIV- MSM. We estimated STI-prevalence and risk factors amongst HIV- and HIV+ MSM in Germany to plan effective interventions.

Methods We conducted a nationwide, cross-sectional study between February and July 2018. Thirteen MSM-friendly STI-clinics screened MSM for *Chlamydia trachomatis* (CT), *Mycoplasma genitalium* (MG), *Neisseria gonorrhoea* (NG), and *Trichomonas vaginalis* (TV) using self-collected rectal and pharyngeal swabs, and urine samples, and APTIMA[®] STI-assays. We oversampled HIV+ MSM. We collected information on sociodemographics, HIV-status, clinical symptoms, sexual behaviour within last 6 months, and PrEP-use. We combined HIV status and PrEP use for defining risk groups, and used multivariate logistic regression to identify risk factors for STI.

Results 2,303 MSM were included: 50.5% HIV+, median age 39 years. Median number of male sex partners was 5. 57.2% reported unprotected receptive anal intercourse (URAI), 43.0% use of party drugs. 78.9% had a STI history, 32.1% of STI+ MSM reported STI-related symptoms. 27.6% of HIV- MSM used PrEP. Overall STI-prevalence was 25.0% in HIV-/PrEP- MSM (CT:7.2%; MG:14.2%; NG:7.4%; TV:0%), 40.3% in HIV-/PrEP+ MSM (CT:13.8%; MG:19.4%; NG:14.9%; TV:0.4%), and 30.8% in HIV+ MSM (CT:10.1%; MG:18.4%; NG:8.6%; TV:0.1%). Independent risk factors were HIV/PrEP-status (HIV-/PrEP+ OR:1.4; 95%-CI:1.0–2.0; HIV+ OR:1.5; 95%-CI:1.1–1.9), >5 sex partners (OR:1.5; 95%-CI:1.2–1.9), URAI (OR:2.0; 95%-CI:1.5–2.6), and use of party drugs (OR:1.5; 95%-CI:1.2–2.0).

Conclusion We found a high STI-prevalence in MSM in Germany, especially in PrEP users, frequently being asymptomatic. Higher STI prevalence in PrEP users than in HIV+ MSM was partly explained by differences in risk behaviour. As a relevant proportion of PrEP users will not use a condom while using PrEP, counselling and comprehensive STI screening is essential. Counselling of PrEP users should address condom use and party drugs.

Disclosure No significant relationships.

008.5 TRENDS IN BACTERIAL STI INCIDENCE AND IMPACT OF PREP USE AMONG MSM ATTENDING WESTERN SYDNEY SEXUAL HEALTH CENTRE (2013–2018)

¹David Lewis*, ¹Charles Chung, ¹Jennifer Walsh, ²Shailendra Sawleshwarkar, ²Iryna Zablotska-Manos. ¹Western Sydney Local Health District, Western Sydney Sexual Health Centre, Parramatta, Australia; ²University of Sydney, Western Sydney Sexual Health Centre, Parramatta, Australia

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Background Bacterial sexually transmitted infections (STI) are rising among men-who-have-sex-with-men (MSM) in many

urban settings. Western Sydney Sexual Health Centre (WSSHC) provides HIV/STI services for a culturally and linguistically diverse MSM population; many have commenced HIV pre-exposure prophylaxis (PrEP) since 2016. The study analyses changes in the incidence of chlamydia, gonorrhoea and syphilis among this MSM population around a period of transition to PrEP provision.

Methods Data were extracted from WSSHC's Specialised Health Information Program database for men providing anorectal/oropharyngeal samples for chlamydia/gonorrhoea testing during two time periods (2013–2015, 'pre-PrEP era'; 2016–2018, 'PrEP era'). Extracted variables included age at visit, country of birth, STI diagnosis date and site of chlamydia/gonorrhoea infection. Analyses used population-average panel-data models based on generalised estimation equations (5% cut-off level of error, $p=0.05$). Logistical regression analyses accounted for the number of clinic visits; a multivariate model adjusted for age group, year and PrEP use.

Results Data were extracted for 6,734 STI testing visits by 2,796 MSM. There were 1,121 (16.7%) gonorrhoea cases, 1,144 (17.0%) chlamydia cases and 257 syphilis cases (199 with early syphilis). Chlamydia (OR:1.08; 95%CI:1.04–1.13) and gonorrhoea incidence (OR:1.06; 95%CI:1.02–1.11) increased over time; syphilis incidence did not. There was no significant trend differences in bacterial STI incidence by country of birth. In multivariate analyses, the incidence of chlamydial and gonococcal cases was much higher among PrEP users: any chlamydial infection (aOR:2.35; 95%CI 1.96–2.81), anorectal chlamydia (aOR:2.60; 95%CI 1.93–3.52), any gonorrhoea (aOR:2.13; 95%CI 1.65–2.76), anorectal gonorrhoea (aOR:2.00; 95%CI 1.38–2.90). There were no significant differences in syphilis incidence between PrEP users and non-PrEP users.

Conclusion Incident chlamydial and gonococcal infections, but not syphilis, significantly increased over time in MSM attending WSSHC and PrEP use was the major determinant of these observations. Data analyses at clinic level are important for informing local health service planning and health promotion activities.

Disclosure No significant relationships.

008.6 FREQUENCY AND DETERMINANTS OF SWITCHING BETWEEN DAILY OR EVENT-DRIVEN PREP AND DISCONTINUING EACH REGIMEN IN AMSTERDAM MSM

¹Liza Coyer*, ¹Mark Van Den Elshout, ¹Roel Achterbergh, ²Maarten Schim Van Der Loeff, ¹Udi Davidovich, ³Henry De Vries, ²Maria Prins, ¹Elske Hoorneborg, ¹Anders Boyd. ¹Public Health Service of Amsterdam, Infectious Diseases, Amsterdam, Netherlands; ²Public Health Service of Amsterdam, Amsterdam UMC, Infectious Diseases, Amsterdam, Netherlands; ³Public Health Service Amsterdam, Amsterdam UMC, Infectious Diseases, Dermatology, Amsterdam, Netherlands

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Background Optimizing HIV pre-exposure prophylaxis (PrEP) roll-out requires insight in dosing regimen preferences, frequency and determinants of regimen switches, and PrEP discontinuation. We assessed user-initiated switches and factors associated with switching or stopping daily (dPrEP) or event-driven (edPrEP) PrEP regimens among men who have sex with men (MSM) participating in a PrEP demonstration project in Amsterdam.

Methods At enrolment, participants could choose either dPrEP or edPrEP. Participants were able to switch regimens at each quarterly study visit. We evaluated transition intensities (TI) and (time-varying) factors associated with switching (i) between

edPrEP and dPrEP and (ii) from either PrEP regimen to discontinuing PrEP, using a continuous-time, multi-state Markov model. **Results** Of 367 enrolled participants with follow-up, 73.3% chose dPrEP and 26.7% edPrEP at enrolment. During a median follow-up of 2.6 years (IQR=2.4–2.7), 114 (cumulative proportion=36.5%) switched their PrEP regimen at least once. In total, 85 switches from edPrEP to dPrEP (TI=0.41, 95%CI=0.33–0.50) and 98 from dPrEP to edPrEP (TI=0.17, 95%CI=0.14–0.20) occurred, with transitions from edPrEP to dPrEP 2.43-times more likely (95%CI=1.84–3.22) than *vice versa*. In multi-variable analysis, switching from edPrEP to dPrEP was associated with lower age, higher number of sex acts with casual partners, chemsex and living alone, whereas switching from dPrEP to edPrEP was associated with lower age, lower number of casual partners, higher number of sex acts with casual partners and lower score on the New Sexual Satisfaction Scale. A total of 61 individuals discontinued PrEP, with no difference from which regimen: edPrEP (n=22, TI=0.10, 95%CI=0.06–0.15) and dPrEP (n=39, TI=0.06, 95%CI=0.04–0.08). PrEP discontinuation was only associated with lower age (from dPrEP).

Conclusion Switching between PrEP regimens is common and more frequent among younger MSM and MSM with higher number of sex acts, who may benefit from client-centered counseling. Rates of PrEP discontinuation are low and are linked to younger age.

Disclosure No significant relationships.

009 – EPIDEMIOLOGY AND SURVEILLANCE TO INFORM PRACTICE AND POLICY

Tuesday, July 16, 2019

10:45 AM – 12:15 PM

009.1 THE NETHERLANDS CHLAMYDIA COHORT STUDY: PREGNANCIES IN WOMEN WITH AND WITHOUT A PREVIOUS CHLAMYDIA INFECTION

¹Bernice Hoenderboom*, ²Servaas Morré, ³Jan Van Bergen, ⁴Birgit Van Benthem, ⁵NECCST Study Group. ¹National Institute for Public Health and the Environment, STI, Bilthoven, Netherlands; ²Amsterdam UMC Laboratory of Immunogenetics, Amsterdam, Netherlands; ³National Institute for Public Health and the Environment (RIVM), Centre for Infectious Disease Control, Bilthoven, Netherlands; ⁴National Institute for Public Health and the Environment (RIVM), Epidemiology and Surveillance, Centre for Infectious Diseases Control, Bilthoven, Netherlands; ⁵On behalf of the NECCST study group, Bilthoven, Netherlands

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Background Studies have shown an association between *Chlamydia trachomatis* infection (chlamydia) and an increased risk for tubal factor infertility (TFI) in women. To assess if this association also result in fewer pregnancies, we aimed to investigate the proportion of pregnancies in women with and without a previous chlamydia infection in women participating in the Netherlands Chlamydia Cohort Study (NECCST).

Methods NECCST is a cohort of 5704 women of reproductive age all tested for chlamydia by PCR in a chlamydia screening study between 2008–11. Women were re-invited for NECCST in 2015–16. Chlamydia-status (positive/negative) was defined using results from the screening, chlamydia IgG presence in serum and/or self-reported chlamydia infections. Data on pregnancies was collected via questionnaires in 2015–16 and 2017–18. Pregnancies, intended and unintended, were

compared between chlamydia positive and chlamydia negative women who ever tried to become pregnant using logistic regression analyses.

Results Of 5704 women enrolled, 1717 (30.1%) were chlamydia positive and 3146 (55.2%) tried to become pregnant or had been pregnant at least once. In preliminary results, of those 3146 women, 980 (31.2%) were CT positive and 2166 (68.8%) were CT negative. Of CT positive women, 90% (n=882) got pregnant compared to 91% (n=1973) of CT negative women, $p=0.329$. Excluding unintended pregnancies, CT positive women got pregnant less often (82% versus 89%, $p<0.001$) and aOR 0.56 (95%CI 0.42–0.74, $p<0.001$) corrected for age.

Conclusion The proportion of women who were ever pregnant did not differ between chlamydia positive and negative women. However, an intended pregnancy was less common in women with a previous chlamydia infection.

Disclosure No significant relationships.

009.2 DECLINES IN CHLAMYDIA-ASSOCIATED PID AT SSHS IN ENGLAND SINCE 2007: WHAT MIGHT THIS TELL US ABOUT CHLAMYDIA CONTROL?

¹Paddy Horner*, ²Grahame Davis, ³Kate Soldan. ¹University of Bristol, Population Health Sciences, Bristol, UK; ²Public Health England, HIV/STI, London, UK

10.1136/sextrans-2019-sti.153

Background In 1998 the United Kingdom Chief Medical Officer recommended action to reduce the prevalence and morbidity associated with chlamydial infection. The introduction of NAAT testing from 2003 and the roll-out of the National Chlamydia Screening Programme (NCSP) in England from 2004 to 2008 (all regions participating) resulted in large increases in chlamydia screening and diagnoses: 2.3 million tests were reported in 2010 among 15 to 24 year-olds, equivalent to 44% of women and 24% of men in this age group. We investigated rates of diagnoses of pelvic inflammatory disease (PID) in women attending specialist sexual health services (SSHS) since 2007.

Methods Data were extracted from the GUMCAD surveillance system from 2007–2017. To explore the effect of changes in access to SSHS over this time, total number of attendances were also extracted and changes in PID diagnoses were compared to those of a symptomatic clinical presentation with no active control programme, vaginosis/vaginitis (bacterial vaginosis, candidiasis, trichomoniasis).

Results Between 2007 and 2017 PID diagnoses decreased by 18%. Chlamydia-associated-PID (CT-PID) diagnoses decreased by 46%, and the% of PIDs associated with CT fell from 14.7% (~2,400) to 9.7% (~1,300). GC-associated-PID increased 34% (to ~300). Decreases were greater in under 25s and in years up to 2011/12. Attendances by women under 25 increased over this time, and there was a 6% increase in diagnoses of vaginitis/vaginosis, with CT-PID decreasing by 49% relative to vaginitis/vaginosis.

Conclusion There has been a marked decline in diagnoses of CT-PID, and all PID, at SSHS subsequent to the introduction of wide-spread chlamydia screening. This has occurred despite an increase in attendances at SSHS and access for symptomatic women (vaginosis/vaginitis). Further work will explore trends by region and in general practice, and will determine whether CT-PID rates might be a metric for the success of chlamydia control.

Disclosure No significant relationships.