

**007.3 SEXUALLY TRANSMISSIBLE ENTERIC INFECTIONS IN MEN WHO HAVE SEX WITH MEN: PRELIMINARY FINDINGS FROM A CROSS-SECTIONAL STUDY**

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**Background** Increasing rates of sexually transmissible enteric infections (STEs) in men who have sex with men (MSM), often associated with antimicrobial resistance, are a growing public health concern. There is a need to better understand the characteristics and burden of STEs to improve control measures.

**Methods** We conducted a cross-sectional study at a large London sexual health clinic (SHC) from December 2017 to February 2018. Residual rectal swabs collected from consecutive MSM attending for routine chlamydia/gonorrhoea testing (80% from asymptomatic screening), were anonymously tested for *Shigella*, *Campylobacter*, *Salmonella* and *Escherichia coli* by PCR. We generated STEI prevalence estimates and explored factors associated with STEs using linked socio-demographic, behavioural and clinical data from electronic health records.

**Results** Of 2,138 specimens tested, overall STEI prevalence was 9.9% (95% CI: 8.6%-11.2%), ranging from 0.7% (95% CI: 0.4%-1.2%) for *Shigella* to 5.0% (95% CI: 4.1%-6.0%) for enteroaggregative *E. coli*. *Salmonella* was not detected. MSM with an STEI-positive specimen were more likely to be co-infected with gonorrhoea (23.7% vs 16.2%,  $p=0.006$ ), to have a previous bacterial STI diagnosis (past year) (48.3% vs 37.4%,  $p<0.002$ ), to report an 'interest in high-risk sexual behaviours' (e.g. Chemsex) (47.9% vs 38.7%,  $p=0.02$ ), to report higher partner numbers (past 3 months) (median 6 vs 4,  $p<0.001$ ), and among HIV-negative MSM, to report current use of HIV pre-exposure prophylaxis (PrEP) (54.7% vs 35.6%,  $p<0.001$ ). Rectal or gastrointestinal symptoms were reported by 1.9% (39/2,098) of MSM, and this was not associated with overall STEI test result.

**Conclusion** Nearly one in ten MSM attending a London SHC had a rectal STEI detected. The association with higher-risk sexual behaviour and STIs strengthens the evidence that these pathogens are sexually transmitted. STEs might be widely underdiagnosed in MSM and sub-clinical infection may support sustained transmission, suggesting the need for well-considered clinical and public health responses.

**Disclosure** No significant relationships.

**007.4 INCIDENCE OF SEXUAL BEHAVIORS AND RELATIONSHIP TO THE URETHRAL MICROBIOTA AMONG MEN WHO HAVE SEX WITH MEN (MSM) IN SEATTLE**

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**Background** Studies suggest that sexual behavior influences the composition of the male urethral microbiota, but this hypothesis has not been tested.

**Methods** From 12/2014–5/2018, we enrolled MSM with NGU attending an STD clinic into a cohort study. Men attended five in-clinic visits at 3-week intervals, collected weekly urine specimens at home, and reported daily antibiotics and sex on weekly diaries. We applied broad-range 16S rRNA gene PCR with deep sequencing to urine. We estimated incidence of insertive oral sex (IOS) only, condomless insertive anal intercourse (CIAI) only, and IOS with CIAI (IOS+CIAI) after NGU diagnosis using Poisson regression with robust standard errors. We estimated the association between urethral sexual exposures (referent group=none) in seven 3-day time windows before specimen collection and Shannon Index (diversity) and log<sub>10</sub> number of bacterial species (richness) using generalized estimating equations, adjusting for recent antibiotics, age, race/ethnicity, HIV status, and PrEP use. For each exposure category, we tested whether all seven window coefficients were equal to zero (i.e., no overall association) using a Wald test.

**Results** Among 92 MSM with NGU, median age was 31 (interquartile range [IQR]=28–40); 55% were non-Hispanic white. They contributed 1,095 person-weeks of behavioral data (median=12 diaries/man, IQR=12–13). Incidence of any sex, IOS only, CIAI only, and IOS+CIAI were 1.07 (95% confidence interval [CI]=0.93–1.24), 0.40 (95%CI=0.32–0.49), 0.10 (95%CI=0.07–0.15), and 0.40 (95%CI=0.30–0.52) episodes per person-week, respectively. Among 894 urine specimens (median=10 specimens/man, IQR=8–12), median diversity was 1.33 (IQR=0.76–1.99), and median richness was 14 species (IQR=9–23). Overall, CIAI only ( $P<0.01$  in each model) but not IOS only or IOS+CIAI in the prior 21 days was associated with diversity and log<sub>10</sub>-richness. Diversity and log<sub>10</sub>-richness were lower 1–3 days after and higher 16–18 days after CIAI only.

**Conclusion** Among MSM after NGU, CIAI only in the prior 21 days was independently associated with diversity and richness of the urethral microbiota.

**Disclosure** No significant relationships.