

health promotion campaign and health education programs on prevention and control measures.

### P3.42 INCIDENT *TRICHOMONAS VAGINALIS* IS ASSOCIATED WITH PARTNERSHIP CONCURRENCY: A LONGITUDINAL COHORT STUDY

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**Introduction** Sexual partner concurrency has been shown to be a risk factor for a number of sexually transmitted infections but it is unknown if it is a risk factor for *Trichomonas vaginalis* (TV).

**Study design** We used mixed effects logistic regression to assess the association between partner concurrency and incident TV in the Longitudinal Study of Vaginal Flora, a cohort study of 3620 women followed quarterly for five visits.

**Results** TV was more common in those reporting definite/possible/unknown PC (15.6%/15.0%/18.3%) than those reporting no PC (5.2% -  $P < 0.001$  for all three comparisons). After controlling for a range of confounders, incident TV remained associated with reporting that one's partner definitely (adjusted Odds ratio [aOR] 5.4; 95% Confidence Interval [CI], 3.7–8.0) and possibly (aOR 3.4; 95% CI, 2.2–5.1) engaged in partner concurrency in the preceding time period.

**Conclusion** Partner concurrency was associated with incident TV infection. We hypothesise that this association may be partly explained by concurrent partnering bypassing a 'rapid-clearance-in-males-bottleneck.'

### P3.43 MODELLING THE SPREAD OF GONORRHOEA IN AN MSM POPULATION

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**Introduction** There is considerable uncertainty as to the effectiveness and optimal timing of *Neisseria gonorrhoea* (NG) screening in Men who have Sex with Men (MSM). NG has evolved resistance to a wide range of antibiotics, which makes it particularly important to ensure that NG screening in this population does not lead to excessive consumption of antibiotics. We use a mathematical model to evaluate the effectiveness of different NG screening strategies on NG prevalence in an MSM population.

**Methods** Separable Temporal Exponential Random Graph Models are used to model the sexual relationships network in MSM. Two networks of sexual relationships with main and casual partners are modelled, where the number of casual partners depends on having a main partner or not and vice versa. Next the transmission of NG is simulated on this dynamic network. We have adapted the standard model to include different infection statuses per person for the pharynx, urethra and rectum. Accordingly, different possible transmission routes (anal sex, oral sex and rimming, both active and passive) with their own act and transmission rate have been implemented. Furthermore, a different recovery rate for symptomatic and asymptomatic infections was specified. The model

was used to compare different screening programmes in terms of NG prevalence. Our models simulate day-by-day evolution of a population of 10,000 MSM. Each scenario is simulated 20 times for 10 years. Behavioural data was taken from Belgian MSM participating in the European Men who have sex with men Internet Survey (EMIS).

**Results** If one half of MSM is screened once a year, the prevalence of NG infection at pharynx decreases from 13% to 10% (urethral), 8% to 6% (rectal) and 16% to 12% (pharyngeal), as compared to no screening. When only one third is screened, prevalence decreases to 11%, 7% and 13%, respectively.

**Conclusions** The achieved prevalence reduction might not outweigh the larger risk of development of antibiotic resistance.

### P3.44 JUST GOOGLE IT! THE IMPACT OF MEDIA COVERAGE OF AN OUTBREAK OF HIGH-LEVEL AZITHROMYCIN RESISTANT GONORRHOEA ON ATTENDANCES, TESTING AND DIAGNOSES AT LOCAL SEXUAL HEALTH CLINICS

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**Introduction** An outbreak of high-level azithromycin resistant gonorrhoea, dubbed 'super gonorrhoea' in the mainstream media, emerged in Leeds, England in 2015 and has since spread to other parts of the country. We aimed to determine if media coverage affected online searches nationally and attendances, and gonorrhoea testing and diagnoses locally at sexual health clinics (SHCs).

**Methods** Google Trends was used to determine Relative Search Interest (RSI) for 'gonorrh\*' and 'super gonorrh\*' in England from 2015–2016. Using data from England's national STI surveillance system (GUMCADv2), an interrupted time series analysis was performed to compare the sex-stratified, weekly rates of attendances, and gonorrhoea testing and diagnoses at 6 SHCs in Leeds and in other affected areas. The analysis compared rates of events 6 weeks before and after initial media coverage of the outbreak in September 2015.

**Results** The RSI peaked during initial media coverage in September 2015 (100) with smaller peaks in December 2015 (47), April 2016 (72), and September 2016 (33), coinciding with subsequent coverage. The number of SHC attendances by women in Leeds rose after initial media coverage ( $p < 0.01$ ) by 36% (from 320 to 435/week), but there was only a 4% increase in attendances (from 326 to 340/week) by men ( $p = 0.70$ ). There was no change in rates of gonorrhoea tests or diagnoses in women ( $p = 0.87$  and  $0.23$ ) or men ( $p = 0.51$  and  $p = 1.00$ ). There were no significant increases in event rates in other areas with a high RSI including Birmingham, Manchester, London, Liverpool and Sheffield.

**Conclusion** Media coverage of the outbreak was associated temporally with increased online searches for gonorrhoea nationally, and female attendances at SHCs in Leeds only. This demonstrates opportunities for health promotion for the prevention and control of outbreaks and raises the question of how best to target such messaging to those populations and groups most likely to benefit from attending and being tested in SHCs.