Results Transmission contributions from each site have greater uncertainty when more routes may transmit, when all routes may transmit, the oropharynx can contribute 0–100% of all transmissions. In contrast, when only anal or oral sex may transmit, transmission from the oropharynx can account for only 0–25% of transmission. Intervention effectiveness against transmission from each site also has greater uncertainty when more routes may transmit.

Conclusion Multiple routes of transmission leads to great uncertainty. Even under ideal conditions (i.e., when site-specific gonococcal prevalence, relative rates of specific sex acts, and duration of infection at each anatomical site are known and do not vary), the relative importance of different anatomical sites for gonococcal transmission cannot be inferred with precision. This result is generalizable to any other infection where multi-site infection leads to multiple routes of transmission. Additional data informing per act transmissibility are needed to understand site-specific gonococcal infection transmission. This understanding is essential for predicting population-specific intervention effectiveness.

Disclosure No significant relationships.

S16.3 ANATOMICAL SITES OF INFECTION: BEHAVIOURAL CONSIDERATIONS FOR STI PREVENTION

Catherine Mercer*. *University College London, Centre for Population Research in Sexual Health and HIV, Institute for Global Health, London, UK*

10.1136/sextrans-2019-sti.75

Many industrialised countries have witnessed a broadening of sexual repertoires, including increases in reported heterosexual oral, and in particular, anal sex, and same-sex behaviour in women, while among MSM, oral sex remains more prevalent than anal sex. Condoms, when used correctly, are highly-effective in preventing STI transmission through penetrative sex, yet their use remains suboptimal. For MSM, this may partly reflect the effectiveness of biomedical interventions for HIV such as treatment as prevention and pre-exposure prophylaxis. For heterosexuals, pregnancy prevention often trumps STI concerns, with more reliable and less intrusive contraception used for vaginal sex, while condoms are seldom used for heterosexual anal sex, or oral sex regardless of gender.

Given these behavioural trends, it is unsurprising that a large proportion of STI transmission is thought to occur extra-genitally. Among MSM attending US sexual health clinics, more than half of GC/CT infections were not in the urethra, and most MSM with extra-genital GC/CT infections did not have concurrent urethral infections. Extra-genital infections are more often asymptomatic, a potential reservoir for transmission, and undetected antibiotic resistant strains may spread resistance. STI prevention efforts must therefore include targeting extra-genital infections.

Efforts to change sexual practice, e.g. promoting condom use for oral sex and/or sexual positioning, are unlikely to have significant impacts, but opportunities exist beyond the bedroom. Raising public awareness about the potential for, and consequences of, extra-genital infection may encourage disclosing sexual behaviour to clinicians and appropriate site-specific testing. Educating clinicians - especially non-specialists - about the importance of asking all patients about their sexual practices and testing for extra-genital STIs accordingly may also be helpful. Such endeavours could result in the

greater detection of extra-genital infections but cost-effective strategies need determining. As such, a multifaceted approach including evidence-based behavioural and biomedical interventions is likely to yield the greatest health gains.

Disclosure No significant relationships.

S16.4 DESIGNING AN APPROACH TO DEAL WITH EXTRAGENITAL SEXUALLY TRANSMITTED INFECTIONS: DO WE HAVE THE DATA WE NEED?

Jeanne Marrazzo*. *University of Alabama, Medicine, Birmingham, USA*

10.1136/sextrans-2019-sti.76

This symposium entitled 'Anatomical Sites of Infection: Biomedical, Modeling, Behavioral, and Programmatic Considerations for STI Prevention' will focus on the implications that extragenital (defined as infections that occur outside of the cervix and urethra) sexually transmitted infections have for various dimensions of STI care and prevention. These infections are common, particularly among men who have sex with men (rectal and pharyngeal) and heterosexual women (both sites as well). Yet, we have little understanding of the pharmacokinetics of commonly used antimicrobials at these sites, the natural history of the infections at these sites, and as a critical corollary, how much of a role these sites have in providing a meaningful reservoir for sustaining transmission in populations at risk. We need to have a better understanding of these parameters before we can intelligently design screening protocols and intervention studies. This presentation will explore these issues and allow ample time for discussion of these challenges.

Disclosure No significant relationships.

S17 – CLINICAL ISSUES IN WOMEN'S HEALTH AND STI

Wednesday, July 17, 2019

10:45 AM – 12:15 PM

S17.1 HPV SCREENING – NEW EVIDENCE AND CURRENT STATE OF THE ART

Suzanne Garland*. *The University of Melbourne, Obstetrics and Gynaecology, Parkville, Australia*

10.1136/sextrans-2019-sti.77

HPV-vaccination programs constitute major public-health initiatives worldwide and have been introduced into National immunisation programs in over 80 countries, although most are in high income countries. Programs were implemented around 10 years ago: where high coverage of target populations especially with catch-up programs, the impact and effectiveness on HPV infection and disease has been remarkable. For the quadrivalent vaccine (6/11/16/18) there have been reductions of ~90% for HPV vaccine type infections, ~90% for genital warts, ~45% for low-grade cytological cervical abnormalities, ~60% for cervical histologically-proven high-grade abnormalities [HSIL], in colposcopic referrals, and

ablative therapy. Thus, the positive predictive value of cervical cytology [Pap screening] for underlying HSIL has reduced: accordingly, countries are adopting new screening strategies using more sensitive, more objective methods of HPV nucleic acid tests (NAT). In 2017 Australia, screening changed to HPV NAT assays commencing at 25 years of age, with immediate triage to cytology and colposcopy if HPV16/18 positive, and five yearly screening for those HPV DNA negative. It is important that NAT assays chosen must strike a balance between sufficient clinical sensitivity to detect/predict HSIL, without being too sensitive (detecting transient infection only not destined to becoming lesions). The highest quality HPV NAT is thus a priority to reduce falsely negative screens and manage the risk associated with false positive HPV NAT test results. It is imperative that we adopt the best QA and QC measures to accompany the introduction of these new assays. Today we are poised to markedly reduce the incidence of cervical cancer, with the vision of eventually eliminating it as a public health problem (as the call to action from WHO DG Dr Tedros May 2018), using the combination of sustained high coverage HPV vaccination and sustained high coverage HPV NAT screening, with treatment of those with disease.

Disclosure No significant relationships.

S17.2 TREATMENT OF BACTERIAL VAGINOSIS: HOW, WHEN AND HOW MUCH?

Caroline Mitchell*. *Massachusetts General Hospital, Obstetrics and Gynecology, Boston, USA*

10.1136/sextrans-2019-sti.78

Bacterial vaginosis (BV) is a leading cause of symptomatic vaginitis in North American populations. BV is also associated with adverse reproductive health outcomes such as miscarriage, preterm birth, and increased risk for sexually transmitted diseases. Treatment of this common disorder is mostly effective in the short term, but recurrence is common. Current treatment guidelines will be reviewed, as well as alternative regimens and treatments, some of which may not be FDA-approved for treating BV. This presentation will discuss the short and long term efficacy of recommended antibiotic treatment regimens, as well as alternative treatment and prevention strategies such as boric acid and probiotics. The role of treatment for prevention of adverse health outcomes will be reviewed. Predictors of treatment success will be discussed, and incorporated into practical advice for patients and treating providers.

Disclosure No significant relationships.

S17.3 SCREENING WOMEN FOR BACTERIAL STIS: SHOULD WE SCALE-BACK?

Jonathan Ross*. *University Hospital Birmingham NHS Trust, Birmingham, UK*

10.1136/sextrans-2019-sti.79

Screening for bacterial STIs, in particular chlamydia, is common in high income countries using a variety of different

approaches. However, recent reductions in funding for STI treatment services in several countries highlight the need to ensure that investment in screening remains appropriate and cost-effective. The evidence base for chlamydia screening suggests that it can reduce the incidence of pelvic inflammatory disease but with several caveats, and it remains unclear whether screening represents good value for money. In particular, the opportunity cost of choosing screening over other sexual health interventions requires consideration. Harms have been poorly characterised but need to be addressed when measuring the potential value of a screening program. Overall, the evidence for broad population based screening is limited and new approaches are needed to reduce the morbidity and reproductive sequelae associated with bacterial STIs.

Disclosure No significant relationships.

S17.4 PREMATURITY AND STI – VALUE OF SCREENING AND TREATMENT

Deborah Money*. *University of British Columbia, Vancouver, Canada*

10.1136/sextrans-2019-sti.80

Prematurity and STI – the value of screening and treatment Preterm birth is a significant cause of perinatal morbidity and mortality worldwide and strategies to prevent preterm birth have often focussed on infectious etiologies. In addition, prenatal care is a time when women access health care, even in resource limited settings, and poses a very important opportunity to optimize a woman's health and ensure screening for communicable diseases, particularly STI's is conducted. Screening and treating STI's in any reproductive aged woman are important but treating in pregnancy requires appropriate selection of antimicrobials that will be the safest in pregnancy depending on the gestational age. Many STI's have been associated with preterm birth but treating in all cases has not been consistently associated with prevention of prematurity. This talk will present data on the most common STI's and sexually associated genital tract infections, and the individual value of screening and treating in pregnancy including; HIV, Hepatitis B, Hepatitis C, Syphilis, *Herpes simplex*, *Trichomonas vaginalis*, bacterial vaginosis, *Chlamydia trachomatis*, *Neisseria gonorrhoeae*, *Mycoplasma genitalium*, *Mycoplasma hominus*, *Ureaplasma urealyticum*. Screening and treatment of bacterial vaginosis has been studied extensively over time with variability in results. Many studies have shown an association of bacterial vaginosis with higher rates of preterm birth, but in low risk women treatment has not proven of benefit. In some studies, treatment of high-risk women has been beneficial. However, the lack of precision around the diagnosis of bacterial vaginosis has likely contributed to confusing results in the literature, and new methods of genomic analysis of the vaginal microbiome is leading to opportunities for much greater precision in the diagnosis of dysbiosis and targeted treatment trials that would be more promising than standard treatment has proven to be in the past.

Disclosure No significant relationships.