quick STI risk-assessment may help people to seek testing. An online self-assessment can enhance privacy and confidentiality, empower clients, and is likely to appeal to more technology confident groups such as young people.

P067

TIMING OF PRIMARY SYPHILIS TREATMENT AND IMPACT ON THE DEVELOPMENT OF TREPONEMAL ANTIBODIES: A CROSS-SECTIONAL CLINIC-BASED STUDY

^{1,2}J Towns*, ³D Leslie, ¹I Denham, ³F Azzato, ³T Karapanagiotidis, ^{4,5,6}D Williamson, ⁷S Graves, ^{1,2}C Fairley, ¹M Bissessor, ^{1,2,8}E Chow, ^{1,2,9,10}L Zhang, ^{1,2}M Chen. ¹Melbourne Sexual Health Centre, Melbourne, Australia; ²Central Clinical School, Faculty of Nursing, Medicine and Health Sciences, Monash University, Melbourne, Australia; ³Victorian Infectious Diseases Reference Laboratory, The Peter Doherty Institute for Infection and Immunity, Melbourne, Australia; ⁴Microbiological Diagnostic Unit Public Health Laboratory, Department of Microbiology and Immunology, The University of Melbourne at The Peter Doherty Institute for Infection and Immunity, Melbourne, Victoria, Australia; ⁵Department of Microbiology and Immunology, The University of Melbourne at The Peter Doherty Institute for Infection and Immunity, Melbourne, Victoria, Australia; ⁶Department of Microbiology, Royal Melbourne Hospital, Melbourne, Australia; ⁷Australian Rickettsial Reference Laboratory, Barwon Health, Geelong, Australia; ⁸Centre for Epidemiology and Biostatistics, Melbourne School of Population and Global Health, The University of Melbourne, Melbourne, Australia; ⁹China-Australia Joint Research Center for Infectious Diseases, School of Public Health, Xi'an Jiaotong University Health Science Center, Xi'an, China; ¹⁰Department of Epidemiology and Biostatistics, College of Public Health, Zhengzhou University, Zhengzhou 450001, Henan, China, Zhengzhou, China

10.1136/sextrans-2021-sti.205

Background Serology is negative in a proportion of primary syphilis cases where *Treponema pallidum* polymerase chain reaction (PCR) testing is positive. We aimed to identify discordant, T. pallidum PCR-positive, serology negative primary syphilis cases and any clinical or laboratory factors associated with failure to subsequently seroconvert.

Methods Serodiscordant primary syphilis cases that were T. pallidum PCR positive and serology negative (including rapid plasma reagin, T. pallidum particle agglutination, T. pallidum enzyme immunoassay or T. pallidum chemiluminescence assay) were identified from the Melbourne Sexual Health Centre electronic records between April 2011 and December 2019. Clinical and laboratory associations were examined.

Results There were 814 primary syphilis cases in the study period and 38 (4.7%) were serodiscordant, 35 in men who have sex with men. Thirty-two had follow-up serology performed a median of 24 days later, of which 16 (50%) seroconverted, mostly (81%) within six weeks. Failure to seroconvert was significantly associated with treatment on day 1. Of the 12 cases treated on day 1, 10/12 (83%) failed to seroconvert compared to 6/20 (30%) among those who were treated after day 1.

Discussion Earlier treatment of primary syphilis can prevent the development of serological markers. T. pallidum PCR can identify primary syphilis lesions before the development of serological markers and improve diagnosis of early primary syphilis lesions. Serology alone will miss a proportion of primary syphilis infections and should be repeated if a diagnosis of syphilis is being considered.

P069

THE EPIDEMIOLOGY OF HERPES SIMPLEX VIRUS TYPE 2 IN SUB-SAHARAN AFRICA: SYSTEMATIC REVIEW, META-ANALYSES, AND META-REGRESSIONS

^{1,2}M Harfouche*, ³F AbuHijleh, ⁴C James, ⁴K Looker, ^{1,2,5}L Abu Raddad. ¹Infectious Disease Epidemiology Group, Weill Cornell Medicine-Qatar, Cornell University, Qatar Foundation – Education City, Doha, Qatar; ²World Health Organization Collaborating Centre for Disease Epidemiology Analytics on HIV/AIDS, Sexually Transmitted Infections, and Viral Hepatitis, Weill Cornell Medicine-Qatar, Cornell University, Qatar Foundation – Education City, Doha, Qatar; ³Department of Public Health, College of Health Sciences, Academic Quality Affairs office, QU Health, Qatar University, Doha, Qatar; ⁴Population Health Sciences, Bristol Medical School, University of Bristol, Bristol, UK; ⁵Department of Population Health Sciences, Weill Cornell Medicine, Cornell University, New York, New York, USA

10.1136/sextrans-2021-sti.206

Background Herpes simplex virus type 2 (HSV-2) infection is a prevalent sexually transmitted infection with a sizable disease burden that is highest in sub-Saharan Africa. This study aimed to characterize HSV-2 epidemiology in this region.

Methods Cochrane and PRISMA guidelines were followed to systematically review, synthesize, and report HSV-2 related findings. Meta-analyses and meta-regressions were conducted.

Results From 218 relevant publications, 451 overall outcome measures and 869 stratified measures were extracted. Pooled incidence rates ranged between 2.4–19.4 per 100 person-years across populations. Pooled seroprevalence was lowest at 37.3% (95% confidence interval (CI): 34.9–39.7%) in general populations and high in female sex workers and HIV positive individuals at 62.5% (95% CI: 54.8–70.0%) and 71.3% (95% CI: 66.5–75.9%), respectively. In general populations, pooled seroprevalence increased steadily with age. Compared to women, men had a lower seroprevalence with an adjusted risk ratio (ARR) of 0.61 (95% CI: 0.56–0.67). Seroprevalence decreased in recent decades with an ARR of 0.98 (95% CI: 0.97–0.99) per year. Seroprevalence was highest in Eastern and Southern Africa. Pooled HSV-2 proportion in genital ulcer disease was 50.7% (95% CI: 44.7–56.8%) and in genital herpes it was 97.3% (95% CI: 84.4–100%).

Conclusions Seroprevalence is declining by 2% per year, but a third of the population is infected. Age and geography play profound roles in HSV-2 epidemiology. Temporal declines and geographic distribution of HSV-2 seroprevalence mirror that of HIV prevalence, suggesting sexual risk behavior has been declining for three decades. HSV-2 is the etiological cause of half of GUD and nearly all genital herpes cases.

P070

EPIDEMIOLOGY OF HERPES SIMPLEX VIRUS TYPE 2 IN LATIN AMERICA AND THE CARIBBEAN: SYSTEMATIC REVIEW, META-ANALYSES, AND META-REGRESSIONS

^{1,2}M Harfouche, ³H Maalmi, ^{1,2,4}L Abu-Raddad*. ¹Infectious Disease Epidemiology Group, Weill Cornell Medicine-Qatar, Cornell University, Qatar Foundation – Education City, Doha, Qatar; ²World Health Organization Collaborating Centre for Disease Epidemiology Analytics on HIV/AIDS, Sexually Transmitted Infections, and Viral Hepatitis, Weill Cornell Medicine-Qatar, Cornell University, Qatar Foundation – Education City, Doha, Qatar; ³Institute for Clinical Diabetology, German Diabetes Center, Leibniz Center for Diabetes Research at Heinrich Heine University Dusseldorf, Dusseldorf, Germany; ⁴Department of Population Health Sciences, Weill Cornell Medicine, Cornell University, New York, New York, USA

10.1136/sextrans-2021-sti.207

Background Herpes simplex virus type 2 (HSV-2) infection is a sexually transmitted infection of global concern. This study