Conclusion We found ongoing potential STI/HIV transmission among MSM during the initial UK lockdown, despite a reduction in sexual activity, and potential inequalities in access to sexual healthcare. These findings will support public health planning to mitigate against health risks during and after the COVID-19 response.

P237 DIAGNOSTIC AGREEMENT EVALUATION OF TREPONEMAL TEST FOR SYPHILIS TESTING

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10.1136/sextrans-2021-sti.319

Background Laboratory diagnosis of syphilis infection requires treponemal and non-treponemal antibody tests. Treponemal pallidum (TP) antibody tests can be used for screening and confirmation, as part of a two-stage diagnostic algorithm. The diagnostic performance of treponemal tests should be assessed for potential implementation by local STI laboratories. We evaluated three treponemal antibody tests using serum samples from syphilis patients enrolled in a cohort study.

Methods The Picasso study is a cohort of participants with clinically diagnosed syphilis. Enrolment criteria required a positive rapid point-of-care TP test (Alere Determine syphilis, Abbott Inc, USA) followed by qualitative and semi-quantitative RPR test or clinical evidence of syphilis infection, AND additional confirmatory testing with TPPA (Serodia TPPA, Fujirebio Inc, USA) and TPHA (Syphilis TPHA liquid, Human Diagnostics, Germany). Three comparisons of interest were: TPPA vs rapid TP, TPPA vs TPHA and TPHA vs rapid TP. For each comparison, statistical analysis included positive percent agreement (PPA) and prevalence-adjusted and bias-adjusted kappa (PABAK) correlation coefficient (i.e. a modification of Cohen's kappa when prevalence is too high). TPHA-indeterminate results were considered negative for analyses.

Results The Picasso study has enrolled 163 participants; all of them had a positive rapid TP test; 85% had an RPR $\geq$ 1:8; 160 had a positive TPPA test, and 142 had a positive TPHA test. The PPA between TPPA and rapid TP was 98.0% with a PABAK of 0.96. For TPPA vs TPHA comparison, the PPA was 89.2% with a PABAK of 0.78. The PPA between rapid TP and TPHA was 87.2% with a PABAK of 0.74.

Conclusion We found a good concordance when comparing TPHA with either the TPPA or rapid syphilis test.

P238 RIGHT TEST, RIGHT TIME: ENSURING TIMELY RENAL FUNCTION MONITORING IN CLIENTS TAKING PREP

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10.1136/sextrans-2021-sti.320

Background Clients receiving PrEP (HIV Pre-Exposure Prophylaxis) require renal function (estimated Glomerular Filtration Rate (eGFR)) monitoring as detailed in BASHH/BHIVA guidelines. Annual monitoring is required for individuals < 40 with

normal baseline eGFR and no risk factors for kidney disease. Our busy urban sexual health clinic lacked a structured system for eGFR monitoring, with concern clients were being tested unnecessarily or not at all.

Method A retrospective review was conducted of all clients under 40 years who received PrEP between June and November 2020. eGFR results and additional tests performed without clinical justification were extracted from records in the year preceding the issue of each PrEP prescription. The number of unnecessary repeat eGFRs within 12 months was recorded.

Results 199 clients were identified of whom 186 (93.5%) had eGFR checked in the year prior to issuing PrEP. 13 clients (6.5%) therefore had inadequate eGFR monitoring whilst continuing to take PrEP.

Of those tested, 55 (29.6%) had eGFR re-checked within a year without clinical justification with a total of 69 unnecessary tests performed. This equates to £345 expenditure on tests, six hours of clinical time administering results and over-investigation of clients with minor fluctuations in eGFR.

We implemented a new pathway for eGFR testing, including a visible alert on each client's record allowing clinical staff to immediately see when the eGFR was last checked, and when the next is due.

Conclusion This study identified both under- and over-testing of eGFR for clients taking PrEP. Whilst it is vital that eGFR testing is not missed, over-testing wastes clinical and financial resources which are at a premium in an era of budgetary constraints and reduced appointment availability due to COVID-19. As the number of clients taking PrEP increases, it is important for all services to ensure robust and efficient methods of eGFR monitoring.

P239 CLINICAL OUTCOMES OF SYPHILIS IN HIV-NEGATIVE AND HIV-POSITIVE MSM: OCCURRENCE OF REPEAT SYPHILIS EPISODES AND NON-TREPONEMAL SEROLOGY RESPONSES

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10.1136/sextrans-2021-sti.321

Objectives HIV-positive men who have sex with men (MSM) may be at a higher risk of repeat syphilis, have different clinical manifestations, and have a different serological response to treatment compared to HIV-negative MSM. The objective of this study was to assess whether HIV-negative and HIV-positive MSM with infectious syphilis (primary, secondary or early latent), differed in history of previous syphilis episodes, disease stage and non-treponemal titre of initial and repeat episodes, and the titre response 6 and 12 months after treatment. Furthermore, the determinants associated with an inadequate titre response after treatment were explored.

Methods This retrospective analysis used data of five longitudinal studies (4 cohorts and one RCT) conducted at a large sexually transmitted infection (STI) clinic in Amsterdam, the Netherlands. Participants were tested for syphilis and completed questionnaires on sexual risk behaviour every 3 or 6 months. We included data of participants with one or more syphilis diagnoses in 2014–2019.

Results We included 355 participants with in total 459 syphilis episodes. HIV-positive MSM were more likely to have a history of previous syphilis episodes compared to HIV-negative MSM (68/90 [75.6%] vs 96/265 [36.2%], $P < 0.001$). Moreover, HIV-positive MSM with repeat syphilis were less often diagnosed with primary syphilis than HIV-negative MSM (7/73 [9.6%] vs 36/126 [28.6%]) and more often diagnosed with secondary syphilis (16/73 [21.9%] vs 17/126 [13.5%]) and early latent syphilis (50/73 [68.5%] vs 73/126 [57.9%]) ($P = 0.005$). While not significantly different at 12 months, HIV-negative MSM were more likely to have an adequate titre response after 6 months compared to HIV-positive MSM (138/143 [96.5%] vs 66/74 [89.2%]) ($P = 0.032$).

Conclusions In repeat syphilis, HIV-infection is associated with advanced syphilis stages and with higher non-treponemal titres. HIV-infection affects the serological outcome after treatment, as an adequate titre response was observed earlier in HIV-negative MSM.

P240 THE IMPACT OF THE COVID-19 PANDEMIC ON THE TRENDS OF SEXUALLY TRANSMITTED INFECTIONS IN BELGIUM. RESULTS OF AN STI CLINIC

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10.1136/sextrans-2021-sti.322

Background Due to the COVID-19 pandemic, the Belgian government imposed two semi-lockdowns (LD) with different social behavioral restrictions in 2020. Our aim was to assess the impact of these COVID-19 pandemic-response measures on *Neisseria gonorrhoeae* (NG) and *Chlamydia trachomatis* (CT) figures in an STI clinic (low-threshold clinic, PrEP & HIV follow-up) in Antwerp, Belgium.

Methods The overall number of CT/NG requests and positivity ratio during 2020 was compared with 2019. In addition, different periods of 2019 and 2020 were compared using mixed-effects logistic regression methods. 1. pre-lockdown (01/01–17/03, no restrictions), 2. LD1 (18/03–10/05, no social contact outside the household, only 'urgent' consultations), 3. after LD1 (11/05–01/11, varying between 2–10 additional social contacts) and 4. LD2 (02/11–31/12, maximum two social contacts).

Results Overall, the number of CT/NG requests decreased by 27.7% (7170 in 2019 to 5183 in 2020). Whilst the number of patient contacts declined by 22.4%, positivity rate of CT (8.0% in 2019; 7.8% in 2020) and NG (4.7% vs 5.5%) remained similar in both years. During LD1, a significant reduction in CT/NG requests was noted (decrease of 88.1%) and the number of consultations dropped by 60.1%. Whereas the positivity ratio of NG during period LD1 increased from 5.3% in 2019 to 9.3% in 2020, no significant change was found for CT (8.2% in 2019 to 7.8% in 2020). During the other time periods, the absolute number of requests and CT/NG infections in 2020 were comparable with 2019. Nevertheless, higher positivity ratios were found during LD2 period 2020 compared to 2019 (CT: 9.9% vs 8.2% in 2019; NG: 6.1 vs 5.1% in 2019, $p > 0.05$).

Conclusion Despite a sharp drop in consultations, the proportion of CT/NG did not decrease in 2020 compared to 2019.

We observed a trend towards higher positive CT/NG rates in LD2 which may depict social distancing fatigue.

P241 UGANDAN MEN WITH URETHRITIS, WHAT CAN DIAGNOSTIC CERTAINTY TELL US?

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10.1136/sextrans-2021-sti.323

Background Laboratory infrastructure is limited in Uganda; syndromic case management is used to treat sexually transmitted infections (STI). Progress in addressing the HIV epidemic is threatened by uncontrolled STI transmission. We report on the prevalence of STI in Kampala, Uganda.

Methods Demographic and behavioral data were captured by questionnaire. Penile-meatal swabs, urine and blood were collected from Ugandan men with urethral discharge syndrome (UDS) attending 6 clinical sites in Kampala Uganda. Genital samples were cultured for *Neisseria gonorrhoeae* (NG), and nucleic acid amplifications tests (NAATs) performed for NG, *Chlamydia trachomatis* (CT), and *Mycoplasma genitalium* (MG). HIV, and syphilis were diagnosed using point-of-care assays.

Results Of 250 participants, mean age was 27.9 (16–59 years), 140 (56.0%) were ≤ 25 years, and 238 (95.2%) identified as heterosexual. 'Always' condom use was 1 (0.4%), and 154 (61.6%) reported transactional sex in the previous 6 months. In the 14 days prior to attendance, 100 (40%) reported antibiotic use, including ciprofloxacin, doxycycline, and penicillin (26 (25.7%), 31 (30.7%), and 13 (12.9%), respectively) despite $>98\%$ resistance in NG isolates. NAAT positivity was 166 (66.5%), 51 (20.4%), and 29 (11.6%) for NG, CT, and MG respectively. Of 50 (20%) participants with HIV; 2 (0.8%) were newly diagnosed. Syphilis serology was positive in 25 (10%), of these 20 (80%) were new diagnoses; RPR range 1:1 – 1:1024. Dual and triple NG, CT, MG co-infections were found in 33 (13.3%), 4 (1.6%) respectively.

Conclusions This cross-sectional study demonstrates a very high prevalence of bacterial STI in men with UDS, presenting to clinical services in Kampala. In contrast, new HIV infections were relatively uncommon. Without POC testing, the vast majority of syphilis infections would have gone undiagnosed. Diagnosing STI in this population presents an ideal segue into HIV prevention services; the feasibility and efficacy of this approach requires further study.

P243 TIME-TO-CLEARANCE OF N. GONORRHOEAE (NG) RNA AT THE PHARYNX FOLLOWING TREATMENT WITH CEFTRIAXONE AND AZITHROMYCIN

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10.1136/sextrans-2021-sti.324