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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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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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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Background The time to RNA-based nucleic acid amplification tests (NAAT) clearance following treatment of NG at the pharynx remains undefined.

Methods Between March 2019–2020, we enrolled 55 men who have sex with men (MSM) with untreated pharyngeal gonorrhea detected ≤14 days to self-collect daily pharyngeal swabs at home for 21 days after treatment. All men received ceftriaxone 250mg intramuscularly plus 1g azithromycin orally once at enrollment. We used Kaplan Meier estimates to determine the median days of positive NAAT following treatment and the number of positive NAAT days when >95% of the cohort cleared, with clearance defined as 2 consecutively negative tests and censoring for loss-to-follow-up. We categorized men into groups by time-to-clearance and used chi-square and t-test (categorical and continuous variables respectively) to assess for differences by demographics, clinical history and sexual behavior.

Results Of 55 men enrolled, 7 (13%) were NAAT-negative at enrollment (pretreatment) and 8 (15%) did not return any home self-collected swabs. Of the remaining 40 MSM (NAAT-positive at baseline and returned swabs), all cleared between 0 and 17 days. The median time-to-clearance was 5 days (95% CI: 3–8 days); >95% of men cleared NG RNA at 12 days (95% CI: 10 – undefined days) following treatment. Compared to men in the slowest to clear group (median 9 days, range 8–16, n=7), men who cleared NG RNA most rapidly (<3 days, range 0–2 days, n=28) more frequently had a history of gonorrhea (14% vs. 58%, p=0.04), and were somewhat older (median 25 vs. 30 years), though the latter was not significant (p=0.124). Time-to-clearance did not differ by HIV status, BMI or mouthwash use.

Conclusions Test-of-cure for pharyngeal gonorrhea should not be performed before 12 days following treatment when using an RNA-based NAAT. The time-to-clearance may be shorter in persons with a history of gonorrhea.

P244 CLINICAL MANIFESTATIONS OF TREPONEMA PALLIDUM DNA POSITIVE SYPHILITIC LESIONS AMONG PATIENTS FROM STI CLINICS IN PERU

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Background The control of Syphilis, a sexually transmitted infection (STI) cause by *Treponema Pallidum* (TP), requires early diagnosis and treatment, especially during primary syphilis when serologic tests may fail to confirm infection. In our PICASSO cohort, we detected TP DNA from anogenital lesions from people with active syphilis, described clinical findings and took lesion images.

Methodology The Picasso cohort study recruited adults with active syphilis, diagnosed either by laboratory (new seroconversions or fourfold increase in RPR) or clinical criteria (new anogenital ulcer compatible with primary syphilis). Patients underwent a short survey, clinical examination and laboratory tests including serum RPR, TP-rapid test (TP-RT), HIV rapid test, and TP-PCR from lesion swabs. Clinical examination was performed and documented by a trained clinician and pictures were taken after obtaining consent.

Results Among 161 participants, 61 (38%) had suspected primary lesions which were swabbed and analyzed using

PCR. Results were available from 58 participants. TP-DNA was detected in 27/58 (47%) lesions. Among those 27 participants, 11(41%) were HIV positive, RPR titer ≤1:4 was found in 12 (44%), 2 were RPR non-reactive and TP-RT negative. The most common presentations were a single painless ulcer, found in 11/27 cases (41%) and multiple painless ulcers found in 10/27 cases (37%). Two participants with multiple lesions (one with painful lesions) also had cutaneous rash on the trunk and back; and one of them had rash on palms and soles. Five participants consented for the use of photographs of their lesions for research/publication purposes.

Conclusion We were able to confirm primary syphilis cases by detecting TP-DNA from anogenital lesions. Describing those cases and showing lesion photographs can contribute to the current tools for clinical training to improve syphilis diagnosis and early treatment during symptomatic stages.

P245 MISSED OPPORTUNITIES TO DIAGNOSE OCCULT PRIMARY SYPHILIS AMONG ADULTS FROM STI CLINICS IN PERU

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Background Primary syphilis, the most contagious disease stage, is when serologic tests are most likely to be negative. Including the anal canal in the clinical exam can aid diagnosis, especially during this period. We used preliminary data from our PICASSO cohort to discuss the probability of occult primary syphilis in adults not presenting with cutaneous or oral lesions.

Methodology Occult primary syphilis probability (OPSP) was classified into three categories (Gunn, 2019): 1. High, having a non-reactive RPR/TP-rapid test (TP-RT) within one year; 2. Intermediate, having a non-reactive RPR/TP-RT more than a year ago; and 3. Low, no prior non-reactive RPR/TP-RT. The higher the probability of occult primary syphilis, the higher the potential benefit from an anal exam. Participants were eligible for OPSP classification if they had a diagnosis of asymptomatic (latent) syphilis, recent condomless receptive anal sex, and current RPR result ≤1:8 if HIV-negative and first TP infection, or RPR result ≤1:128 if HIV positive and/or had prior syphilis.

Results Forty-eight participants were eligible for OPSP classification. Among those, 19 (40%) were HIV positive, 35 (73%) had prior syphilis, and 42 (88%) were diagnosed with early latent syphilis. Twenty participants (42%) were classified as high OPSP, 3 (6%) as intermediate, and 25 (52%) as low OPSP. Anoscopes were available at the study centers for 19 of the 48 cases, but only one anoscopy (5%) was performed. No anal lesions were found despite 13/19 (68%) being classified as high OPSP. Participant refusal was the primary reported reason for lack of anoscopy.

Conclusion High OPSP among asymptomatic individuals with primary syphilis is common, but anoscopy was used infrequently even when available, missing the opportunity of diagnosis. Anoscopy promotion among clinicians and patients is needed to reduce the gap of under-diagnosed primary syphilis and prevent TP transmission when it is most contagious.