emergency department (ED) as a primary source of medical care. In late 2018, the University of Chicago Medical Center (UCMC) began a quality improvement project directing providers to screen ED patients for syphilis regardless of presenting complaint. The objective of this study is to evaluate the potential utility of ED screening for syphilis.

Methods A retrospective chart review was performed of all patients with positive syphilis antibody testing from October through December of 2018, and all patients with positive rapid plasma reagin (RPR) or *Treponema pallidum* particle agglutination (TP-PA) testing were included as cases.

Results In the last three months of 2018, a total of 727 patients (average of 242 patients per month) were screened for syphilis in the ED. Of these, 61 (8.4%) tested positive for syphilis, 37 (60.1%) of whom had evidence of active infection, and 24 (39.3%) were late or unknown stage. 40.9% of patients testing positive for syphilis had presented with complaints other than abdominal pain, rash, or genitourinary symptoms. Two (3%) of patients testing positive for syphilis were also newly found to be pregnant and both were referred for antibiotic treatment in the first trimester.

Conclusion Early data suggests that screening of patients for syphilis in the ED regardless of presenting complaint yields high positive rates. ED screening may represent an effective way of combating the syphilis epidemic, particularly in the most vulnerable populations. In the near future, we plan to hold a provider awareness initiative combined with an update to the electronic medical record system with automated ordering reminders to increase the numbers of patients screened.

Disclosure No significant relationships.

P741 DETECTION OF *TREPONEMA PALLIDUM* DNA AT VARIOUS BODY LOCATIONS

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Background Syphilis is routinely diagnosed based on clinical findings and serological tests. Syphilis may be asymptomatic and in the early stages of infection serology may be false negative. This poses challenges in the diagnosis; missed infections may lead to onward transmission and late sequelae. The aim of this study is to assess the added value of testing various anatomical sites for DNA of *Treponema pallidum* (TP).

Methods The study is conducted at the STI clinic in Amsterdam. Eligible are men who have sex with men (MSM), 18 years or older with clinical signs or symptoms suggestive of syphilis stage 1 or stage 2, and those with serologically demonstrated early latent syphilis. Swabs taken from anus and pharynx, a urine sample, and a venous blood sample were tested using a validated in-house PCR targeting the *poA* gene (Tp-PCR). We intend to include 285 participants, with similar numbers of stage 1, stage 2, early latent syphilis, and patients without syphilis.

Results Between November 2018 and January 2019 we included 45 MSM. Eleven participants had syphilis stage 1, 10 stage 2, 11 early latent syphilis, and 13 did not have syphilis. Among the 11 stage 1 patients, 1 blood sample, 2 pharyngeal samples, 4 rectal samples and 3 urine samples were Tp-PCR positive. Among the 10 stage 2 patients, 2 blood samples, 8 pharyngeal samples, 6 rectal samples and 3 urine samples were Tp-PCR positive. Among the 11 early latent syphilis patients, 1 blood sample, 4 pharyngeal samples, 4 rectal samples and no urine samples were Tp-PCR positive. None of the samples of clients without syphilis were Tp-PCR positive.

Conclusion DNA of *T. pallidum* was frequently detected in various body compartments of 32 MSM diagnosed with syphilis. Tp-PCR on samples from various body locations might have a role in the diagnosis of early syphilis.

Disclosure No significant relationships.

P742 USING LOTTERY INCENTIVES TO ATTRACT SEXUALLY RISKY CHINESE MEN WHO HAVE SEX WITH MEN TO PREVENT SYPHILIS

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Background Individuals with risk-loving attitudes may be more likely to participate in high-risk sex and gambling. We investigated whether a lottery-based financial incentive linked to syphilis testing may attract Chinese men who have sex with men (MSM).

Methods In July/August 2018, an online cross-sectional survey was conducted in China. The survey collected information on socio-demographic characteristics, risk-taking attitude, sexual behaviors and their likelihood to test for syphilis linked with a lottery-based financial incentive where men were eligible if they tested negative for syphilis. We asked about the minimum lottery prize that would attract them to participate. Risk attitude was measured with a validated risk attitude scale, which asked men about their likelihood to take risks in general: scores ranged from 0 (avoids taking risk) to 10 (fully prepared to take risks). Risk behaviours include having multiple sexual partners and condomless sex. Logistic regression analysis was used to examine the association of willingness to participate in the syphilis testing lottery with risk attitude score and behaviors.

Results 699 MSM were enrolled with a median age of 26 years (IQR:23–30). 70% self-identified as gay and 52% reported ever testing for syphilis. 64% stated they were likely/very likely to test for syphilis linked with a lottery incentive. The median amount for the lottery had an expected value of 10 RMB (\$1.50 USD, IQR:5–30 RMB). Being willing to test for syphilis when a lottery was offered was associated with a higher risk attitude score (OR 1.12, 95%CI:1.06–1.18), older age (OR 1.03 per year increase, 95%CI: 1.00–1.06), reported more than one partner in the last 3 months (OR 1.71, 95%

CI:1.25–2.36), and did not use condoms with last sex (OR 1.50, 95%CI:1.05–2.16).

Conclusion Findings indicate that lottery-based incentives might be a feasible approach to increase syphilis testing uptake in Chinese MSM, particularly amongst men with higher risk attitude scores and sexually risky behaviors.

Disclosure No significant relationships.

P743

CLINICAL PROFILES OF 58 HOSPITALIZED HIV-NEGATIVE PATIENTS WITH NEUROSYPHILIS IN A GENERAL HOSPITAL IN CHINA

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Background Patients with neurosyphilis have been increasingly reported from clinics in China. Symptomatic neurosyphilis is more common among HIV-positive than HIV-negative patients. Clinical data of neurosyphilis among HIV-negative patients are limited.

Methods Socio-demographic and clinical data of the patients diagnosed with neurosyphilis and hospitalized at the Suzhou 5th People's Hospital in China during January 2012 to November 2018 were collected and clinical and laboratory characteristics of these patients were analysed.

Results Of the 58 patients enrolled into the analysis, majority (84.5%) were males. Two cases (3.4%) were diagnosed with asymptomatic neurosyphilis by evidence of only increases of protein and white blood cell count in their cerebrospinal fluids (CSF). The clinical characteristics were presented to be meningeal vascular type (defined as presentation of hemiplegia, headache, tinnitus, or epileptic attack) among 6, paralytic dementia (defined as decline in intelligence and memory, decrease of judgement sense and cognition, or mental symptoms) among 30, tabes dorsalis (defined as having manifestation such as walking instability of lower limbs, lightning pain, numbness, abnormal urination, or Arrows pupil) among 8, and ocular syphilis (defined as choroiditis, iritis, retinitis, or optic atrophy) among 12 patients, respectively. Most of the patients (84.5%) had serum RPR titers of $\geq 1:8$ and two-thirds (75.9%) were positive for RPR in CSF (ranging 1:1 to 1:16). Additional CSF evaluations indicated an elevated protein in 55 and leukopenia in 57 patients. Among 30 patients with paralytic dementia, 16 (53.3%) shown a multiple lacunar foci in their brain CT or MRI, and 7 (23.3%) had cerebral atrophy.

Conclusion Symptomatic neurosyphilis is common among HIV-negative patients and clinical features characterized majorly as neurological, psychiatric or ophthalmic symptoms have call

for attention of the relevant departments to detect these patients for interventions timely.

Disclosure No significant relationships.

P745

THE PREGNANCY SYPHILIS CASCADE OF CARE: "95-95-95" GOALS FOR REDUCING OF CONGENITAL SYPHILIS IN THE STATE OF SAO PAULO, BRAZIL

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Background Congenital syphilis (CS) is a preventable condition. However, in 2017, 4,039 cases were reported in São Paulo State (SPS), with an incidence rate of 6.6 cases/1,000 live births (LB). In 2018, SPS proposed the "95-95-95" goals to reduce CS: 95% of all pregnant women (PW) with timely diagnosis during antenatal care (ANC), 95% of all with timely diagnosis receiving treatment and 95% of all babies from treated PW-syphilis, born without CS. This study aimed evaluate the pregnancy syphilis cascade of care and the "95-95-95" goals for reducing CS in SPS, 2017.

Methods Ecological study, using reported cases of PW-syphilis and CS. The cascade of PW-syphilis care was estimated considering five columns. First column: number of PW-syphilis, calculated considering an estimated prevalence of 2.1% of syphilis in PW; and for the total population of PW, was considered the number of LB increased by 10% for fetal losses. Second: PW-syphilis diagnosed during ANC or delivery. Third: PW-syphilis linked to ANC with timely diagnosis. Fourth: PW-syphilis properly treated. Fifth: potentially avoided CS cases.

Results Were estimated 14,369(100%) PW-syphilis, of these, 82.6% (N=11,875) were diagnosed during ANC or delivery; 73.8% (N=10,606) linked to ANC with timely diagnosis; 66.1% (N=9,500) treated and 54.5% (N=7,836) CS cases avoided. For the "95-95-95" goals, SPS reached the following levels: 89.3% (N=10,606/11,875) of PW-syphilis with diagnosis during ANC; 89.6% (N=9,500/10,606) were timely treated and 82.5% (N=7,836/9,500) of babies born without CS.

Conclusion Prevention actions should be intensified to improve access and qualification of ANC. Specifically: wide screening coverage, availability of medication for the timely treatment and reproductive planning. These challenges can be overcome with an agenda of priorities and political commitment. The integration of STI/HIV/AIDS and maternal-child health programs, as well as the strengthening of primary care, is essential for the sustainability, duration and success of interventions aimed to the CS elimination.

Disclosure No significant relationships.