Disclosure of interest statement  No potential conflicts of interest.

**P09.29**  HIGH PREVALENCE OF NEISSERIA GONORRHOEAE AMONG EMERGENCY DEPARTMENT “SUPER-USERS” IN A LARGE URBAN MEDICAL CENTRE

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Introduction  Sexually Transmitted Infections (STIs) remain prevalent in urban populations and are often diagnosed in emergency departments (ED). However, the burden of STI-care on urban EDs is not well characterised.

Methods  We conducted a retrospective study of patients seeking acute care for STI-related complaints at a large urban academic ED in the Midwestern US from July, 2012 to June, 2014. All ED patients evaluated for Neisseria gonorrhoeae (GC) and Chlamydia trachomatis (Ct) infection by nucleic acid amplification testing were examined for demographic characteristics, testing rates, and STI prevalence.

Results  Approximately 183,000 ED patient visits occurred during the study period. Of these, 6,518 visits (3.6%) resulted in STI testing for 5,431 patients. For tested patients, 77% were female, 83% African-American, and median age was 26.3 (IQR 22.1–34.5). Overall prevalence was 6.8% for GC and 11.8% for Ct among patients tested. Among patients positive for GC, Ct, or both, 55.04–74.5% were female and 60.5–72.2% were ≤24 years. A total of 758 patients (14%) were tested more than once in the ED during the study period and defined as “super-users”. These super-users made up 28% of the total visits during the study period. Super-users were more likely to be female, African American and older adolescents (age 20–24) (p < 0.001). Super-users were more likely than non-super-users to have a positive test for GC (p < 0.001) and Ct (p < 0.001), and had GC prevalence more than twice that of non-super-users (13.1% vs 5.7%, p < 0.001).

Conclusion  Our study revealed a significant burden of STI-related diagnoses, especially GC, in the urban ED setting. ED super-users were more likely to have a positive test than those tested patients only once, and may represent a higher risk population. Additional research is needed to understand the unique patient population presenting to urban EDs for STI care and inform tailored intervention strategies.

Disclosure of interest statement  All authors report no disclosures.

**P09.30**  TEMPORAL DISTRIBUTION OF SYPHILIS SEROLOGICAL TESTS (VDRL) DEMAND AND POSITIVITY IN A REFERENCE MUNICIPAL CENTRAL LABORATORY: IS THERE INCREASE AFTER CARNIVAL?

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Introduction  Despite the advancement of medicine and the absence of penicillin resistance, syphilis/congenital syphilis remains as a serious public health problem, especially in Brazil.

Objective  To evaluate possible seasonality relation existence between temporal distribution of demand and positivity of VDRL tests at Miguelote Viana Public Health Central Laboratory (MVPHCL).

Methods  This is a temporal series analytical cross-sectional study. Data of demand, VDRL tests positivity and worked days were collected in database related to the period 2006–2010 and analysed statistically through temporal series and hypothesis testing on tendency and seasonality. MVPHCL is reference to public health units of Niterói-Rio de Janeiro. This is an innovative research, since similar articles have not been found.

Results  From January 2006 to December 2010, 22,943 VDRL tests were registered; on 2006: 22.85% (5,235); 2007: 20.16% (4,622); 2008: 20.15% (4,620); 2009: 19.27% (4,415); 2010: 17.57% (4,024). Worked days by month, in annual average, were 19.5 in 2006; 19.8 in 2007; 19.6 in 2008; 19.7 in 2009 and 19.3 in 2010. Monthly average of worked days was 21.2 in January, 17.2 in February, 21.6 in March 17 in April 16 in May, 18.4 in June, 21.8 in July 22, in August, 20.2 in September, 20.4 in October, 17.2 in November and 18.6 in December. Positivity annual average was in 2006: 19.83; 2007: 20.25; 2008: 21.58; 2009: 18; 2010: 18.25. Monthly positivity was 6.67% in January, 5.88% in February, 5.57% in March, 4.65% in April, 5.51% in May, 4.39% in June, 4.13% in July, 5.30% in August, 4.35% in September, 5.90% in October, 5.05% in November 5.30% in December. Carnival National Holiday occurred: February 28th, 20th, 05th, 24th, 16th from 2006 to 2010, respectively.

Conclusion  Was not observed seasonal relation nor increase in demand and positivity of VDRL tests after Carnival over the studied years.

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**P09.31**  FACTORS ASSOCIATED WITH SYPHILIS SEROREACTIVITY AMONG POLYDRUG USERS IN NORTHEAST BRAZIL: A CROSS-SECTIONAL STUDY USING RESPONDENT DRIVEN SAMPLING

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Introduction  The burden of sexually transmitted infections (STIs), such as syphilis, is greatest in median and low-income countries with serious consequences to sexual and reproductive health and increased risk to HIV infection. The prevalence of syphilis among drug users is higher than in the general population. Our aim is to report the rate of syphilis seroreactivity and associated factors among polydrug users (PDUs) in Northeast Brazil.

Methods  A cross-sectional study recruited 424 PDUs in Northeast Brazil through respondent driven sampling in 2009. Data was collected data using audio computer-assisted self-interview and rapid tests used for syphilis screening. Multivariable logistic regression was used to estimate factors associated with syphilis.
Abstracts

Correlates of HIV Testing Among Polysubstance Users in 10 Brazilian Cities: A Respondent Driven Sampling Survey

Introduction The goal to end HIV/aids pandemic by 2030 has set as a number of policies such as 90% of people living with HIV knowing their HIV status, therefore early diagnosis is fundamental as component of a comprehensive HIV prevention. In Brazil, 33.6% of interviewees in the general population reported ever tested for HIV in 2005. Little is known about HIV testing among illicit polysubstance users (PSUs). We aim to assess correlates of never been tested for HIV among illicit PSUs.

Methods A cross-sectional study recruited 3,449 PSUs in 10 Brazilian cities through respondent driven sampling in 2009. Data was collected using computer-assisted self-interview. To determine correlation, multivariate logistic regression with adjusted odds ratio (aOR, 95% confidence intervals) was performed. Estimates were weighted by the inverse of the participant social network size.

Results Overall, 56% had never tested for HIV. Statistically significant odds ratios of never tested were: being male (aOR: 0.36–0.51), non-white (0.75 (0.64–0.88)), ≤ 30 years old (0.65 (0.57–0.76)), income <US$200 (0.71 (0.60–0.86)), no-income (0.62 (0.51–0.74), ≤ 10 years of education (0.82, 0.69–0.98), and no formal education (0.48, 0.35–0.65). Never testing for HIV were also correlated to the following factors: sex exchange (0.85, 0.73–0.98), disagree that sex without condom can transmit HIV (0.30, 0.18–0.50) and that people apparently healthy should be HIV infected (0.53, 0.36–0.77); not receiving counseling on STIs in the last 12 months before the interview (0.73, 0.61–0.88), not knowing free HIV testing services (0.22, 0.19–0.26), and never had syphilis in lifetime (0.77, 0.60–0.99).

Conclusion There is a need to increase access to and uptake of HIV testing among PSUs in Brazil. The availability of self-testing is a possibility to further expand early diagnosis of HIV. However, sociodemographic disparities, stigma and discrimination among PSUs need to be addressed before implementation.

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Sexual Behaviours and Unprotected Sex with Casual and Commercial Partners Among Polysubstance Users in Brazil: Findings From a Respondent Driven Sampling Study

Introduction Unprotected sexual intercourse (USI) is a known risk factor for HIV infection. And bisexual men (BSM) who engage in USI with casual and commercial partners may be at a higher risk. Our aim is to estimate prevalence of men having sex with men (MSM), BSM, and USI to guide prevention via sexual route among polysubstance users (PSUs).

Methods A total of 3,449 PSUs were recruited in a cross-sectional study in 10 Brazilian cities through respondent driven sampling in 2009. Data was collected using audio computer-assisted self-interview. Estimates were weighted by the inverse of the participant’s social network size.

Results Among 2,682 (73.7% of the sample) males, 4.4% referred having sex only with men (MSM), 16.2% with both men and women (BSM). 64.8% engaged in USI with commercial partners; whereas 47.1% of those engaged in casual sex for money/drugs 12 months before the interview. Casual partnerships 12 months before the interview were reported by 47.9% of men; whereas 62.3% of those reported USI with that casual partner.

Conclusion It is urgent to design interventions among males PSUs in Brazil who engage in commercial and casual USI. Social interventions, education in health, and linkage to health services are needed to prevent sexual transmission of HIV in this group most at risk.

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Molecular Identification of Treponema Pallidum Strains from Syphilitic Lesions in STI Clinic Patients, Lima, Peru

Introduction Treponema pallidum, the causative agent of syphilis, is an obligate intracellular pathogen. Molecular techniques have been used to improve the specificity and sensitivity of testing for T. pallidum.

Methods In this study, we aimed to evaluate the molecular identification of T. pallidum from syphilitic lesions in STI clinic patients, Lima, Peru. A total of 32 samples were included. DNA was extracted using the QIAamp DNA Blood Mini Kit. The DNA was amplified using the primers Tp1 and Tp2, which target a variable region of the T. pallidum flagellin gene. The amplified DNA was sequenced using the BigDye Terminator v1.1 Cycle Sequencing Kit and analyzed using the ABI PRISM 3100 Genetic Analyzer.

Results The molecular identification of T. pallidum from syphilitic lesions was successful in all samples. The sequence data obtained was compared with the GenBank database, and all samples were found to be positive for T. pallidum.

Conclusion The molecular identification of T. pallidum from syphilitic lesions in STI clinic patients, Lima, Peru, was successful using the Tp1 and Tp2 primers. This method can be used to improve the diagnosis of syphilis and guide effective treatment.