

**P070 DETERMINATION OF ANTIBIOTIC SUSCEPTIBILITY AND EFFICACY BY VITA-PCR**

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**Background** Major challenges in the management of infectious diseases include treatment failure due to antimicrobial resistance (AMR) and the lack of a reliable test of cure (TOC). Whilst culture is a trusted method it is slow, and with the widespread use of nucleic acid amplification tests (NAATs), many labs no longer retain culture capabilities. NAATs can assess AMR by detecting microbial mutations associated with resistance; however, this approach requires knowledge of the molecular mechanism(s), and as new mutations emerge, tests need to be reconfigured. Uses of NAATs for TOC is problematic since residual DNA and RNA have been reported following effective therapy. The VITA method provides a new tool which can overcome current drawbacks.

**Methods** The VITA Index is the ratio of the number of copies of a gene and its associated transcripts to those of a non-transcribed region of DNA. It provides a relative measure of active transcription regardless of the quality/quantity of specimen. The approach has several applications. Firstly, following addition of antibiotic to a specimen, e.g. for 5 min/37°C or 15 min/room temperature, Total Nucleic Acid can be amplified by VITA RT-PCR. Comparison of the VITA indices  $\pm$  drug will relate to antibiotic resistance or sensitivity. VITA RT-PCR can later provide a TOC, where VITA indices of a specimen can fall either above or below a predetermined threshold, indicating a viable or cleared infection respectively.

**Results** Both sensitivity and resistance to different antibiotics has been demonstrated *in vitro* on *Chlamydia trachomatis*, with significant decreases in VITA in the presence of drug in sensitive ( $p < 0.05$ ), but not in resistant strains. Further, urine obtained from a patient post-treatment was analysed, and consistent with clinical evidence of ongoing infection, the VITA Index indicated viable chlamydia.

**Conclusion** In conclusion, VITA provides a powerful new approach for rapid determination of AMR and TOC.

**Disclosure** No significant relationships.

**P071 POLICE HARASSMENT AND HIV/STI RISK BEHAVIORS AMONG A SAMPLE OF PEOPLE WHO INJECT DRUGS ON THE U.S.-MEXICO BORDER**

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**Background** The number of people who inject drugs on the U.S.-Mexico border has been increasing over the last years and has become a public health concern due to their vulnerability to HIV and other sexually transmitted infections (STIs). We explored the HIV/STI risk behaviors of people who inject drugs (PID) and their relationship to police harassment.

**Methods** The sample for this study included 200 PID (75% male, 25% female) recruited through respondent driven sampling methodology. Data analysis was conducted using SPSS v.25; independent sample t-test was used to identify mean differences across PID experiencing police harassment during the past three months vs. PID who did not experience police harassment in the last three months; chi-squared analysis was used to explore proportional differences on substance use and HIV/STIs sexual risk behaviors.

**Results** Overall, 1.9% of participants reported being diagnosed with HIV, and 23.3% with hepatitis C. PID who experienced police harassment reported higher use of other drugs: marijuana (OR=1.78, 95%CI=[1.05,3.04], $p=0.015$ ), inhalants (OR=2.06, 95%CI=[1.40,3.03], $p < 0.001$ ), cocaine (OR=1.78, 95%CI=[1.14,2.80], $p < 0.01$ ), crystal (OR=2.11, 95%CI=[1.27,3.52], $p < 0.01$ ), methamphetamines (OR=2.06, 95%CI=[1.22,3.48], $p < 0.01$ ), tranquilizers (OR=2.02, 95%CI=[1.35,3.02], $p < 0.001$ ). Regarding risk behaviors, PID who experience police harassment reported higher numbers of sex partners (Mean: 10.99 vs. 5.72,  $p=0.024$ ) and condom-less sex (Mean: 3.18 vs. 1.55,  $p=0.042$ ). Men reported higher rates of sex with other men (OR=1.66, 95%CI=[1.25,2.19],  $p < 0.01$ ). More PID reported being gang raped (OR=2.15, 95%CI=[1.73,2.68], $p < 0.001$ ) and having condom-less sex with a person known to have HIV (OR=1.48, 95%CI=[1.10,1.99], $p < 0.01$ ).

**Conclusion** There is a clear relationship between experiencing police harassment, engaging in HIV high-risk behaviors, and higher consumption of other drugs among PID. Understanding the structural dynamics of discrimination and stigma among this group (e.g. double stigma, being MSM) could lead to a deeper understanding of these relationships.

**Disclosure** No significant relationships.

**P073 FROM SILOS TO BUCKETS: A QUALITATIVE STUDY OF HOW SEXUAL HEALTH CLINICS CAN ADDRESS MENTAL HEALTH & SUBSTANCE USE NEEDS**

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**Background** In 2016–17, we surveyed clients of six sexual health clinics in Greater Vancouver. Consistent with studies from the US and Europe, we measured high rates of mental health and substance use (MHSU)-related service needs (39%). As a next step, we interviewed sexual health providers to characterize barriers and opportunities to addressing clients' MHSU needs.

**Methods** We conducted in-depth interviews with 22 providers (14 nurses, 3 physicians, 3 administrators, 2 other health professionals) from six sexual health clinics in British Columbia.

**Results** Providers consistently affirmed that MHSU-related concerns (including both 'chronic' conditions related to mood or anxiety and episodic crises) co-occur with sexual health concerns among clients presenting to sexual health clinics. In particular, anxiety was frequently cited—sometimes in association with a client profile that constituted low risk for sexually

transmitted infections (STI). Providers struggled to differentiate event-specific anxieties from more chronic, underlying anxiety-related conditions. Three barriers constrained the providers' abilities to effectively address MHSU service needs: 1) clinic mandates or funding models (specific to STI/HIV or reproductive health); 2) 'silo-ing' (i.e., physical and administrative separation) of services; and, 3) limited familiarity with MSHU service referral pathways. In response to these barriers and acknowledging the prevalence and prominence of MHSU concerns among clients, participants described actionable solutions. 1) Reduce silos, by clarifying referral pathways from sexual health clinics to MHSU providers. 2) Co-locate sexual health and MHSU services. 3) Assess the broader health needs of high-anxiety and low-STI risk clients who frequently access sexual health services.

**Conclusion** Sexual health clinicians in British Columbia generally affirm the results of previous, quantitative and client-focused research showing high rates of MHSU-related needs among sexual health clinic clients. Providers prioritized specific short-term (referral-focused) and long-term (healthcare reorganization) solutions for improving access to MHSU for those using sexual health services.

**Disclosure** No significant relationships.

#### P075 STI AND HIV INFECTIONS AMONG MSM REPORTING EXPOSURE TO GONORRHEA OR CHLAMYDIA: IMPLICATIONS FOR EXPEDITED PARTNER THERAPY

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**Background** Expedited partner therapy (EPT) is not recommended for U.S. men who have sex with men (MSM), due, in part, to concerns that STI and HIV infections may remain undiagnosed in EPT-treated partners who do not seek medical attention. To estimate how often infections might be missed, we assessed bacterial STI and new HIV diagnoses among MSM presenting as contacts to *Chlamydia trachomatis* (Ct) or *Neisseria gonorrhoeae* (GC).

**Methods** MSM attending New York City sexual health clinics are routinely tested for HIV, syphilis, and urogenital and extra-genital Ct and GC. We measured the number and percent of visits, during 2016–2018, with diagnoses of new HIV infection, or alternate/additional bacterial STI, among MSM who had: reported contact to STI, a clinician diagnosis of contact to GC or CT, and no reported contact to syphilis.

**Results** A total of 3,549 MSM had 4,390 visits eligible for analysis. Overall, 14.6% (640/4,390) visits resulted in bacterial STI diagnoses other than those to which exposure was reported. Among MSM-visits for exposure to Ct-only, 12.4% (177/1,430) resulted in GC diagnoses (including 81 rectal GC infections). Syphilis was diagnosed at 4.4% (159/3,652) of visits for Ct or GC exposure (49 primary/secondary, 49 early latent, 61 late latent). Twenty-eight new HIV diagnoses were made (3 acute, 25 non-acute infections); 8 among visits for Ct-only exposure, 20 for GC exposure.

**Conclusion** MSM reporting contact to Ct or GC, have other, concurrent bacterial STI that will be inadequately treated with therapy directed at only the STI to which they report exposure. A substantial number of HIV infections may remain undiagnosed if sex partners to MSM with Ct and GC do not receive HIV testing. Opportunities to offer HIV pre-exposure prophylaxis may also be missed. Our findings support examining and testing MSM exposed to Ct or GC rather than using EPT.

**Disclosure** No significant relationships.

#### P076 DO PRESCRIPTIONS FOR EXPEDITED PARTNER THERAPY GET FILLED? FINDINGS FROM A MULTI-JURISDICTIONAL EVALUATION, US, 2017–2018

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**Background** Expedited partner therapy (EPT) is commonly provided by prescription, however, the effectiveness of prescription-EPT has not been studied, and will depend on how often prescriptions are filled. We examined whether EPT-prescriptions get filled at retail pharmacies when the cost barrier is removed.

**Methods** Clinical sites diagnosing large numbers of *Chlamydia trachomatis* (Ct) infections and providing EPT-prescriptions were recruited. An industry partner developed voucher cards redeemable, with prescription, for free azithromycin, 1g, in any pharmacy in states where EPT is legal. Voucher cards were distributed to clinical sites. Providers prescribing EPT recorded index-patient age, gender, and prescription date on a tear-off tab accompanying each card, retained these tabs, and dispensed vouchers, along with EPT-prescriptions, to index-patients. A standard pharmacy interface captured unique voucher codes, prescription data, age, sex of the person redeeming the card. Pharmacy data were downloaded from an industry portal, linked with data from tear-off tabs, and analyzed. We considered redeemed cards a surrogate for filled prescriptions, and assessed patient and provider characteristics associated with redemption.

**Results** During September, 2017–June, 2018, 30 sites in New York City (NYC), New York State outside NYC, and Maryland enrolled; 580 EPT discount cards were dispensed by providers and 40% (234/580) redeemed at pharmacies. Redemption differed significantly by: index-patient gender (women, 44% versus men, 32%,  $p=0.005$ ), and age in years ( $\leq 18$ , 23% versus  $> 18$ , 45%,  $p<0.001$ ). Most cards (57%) were redeemed same-day. Among sites dispensing  $\geq 10$  cards, redemption was 41% (212/521), range 6–78% (median, 36%); redemption of cards distributed at STD clinics was 38% (51/136). After excluding a high-volume site with an onsite pharmacy, there was no association between index-patient gender and card redemption.

**Conclusion** Less than half of EPT-prescriptions were filled, despite medication being dispensed for free, suggesting prescription-EPT to treat Ct may result in low partner-treatment rates, especially among adolescents.

**Disclosure** No significant relationships.