group-specific STI prevalence with and without turnover, and compared the fitted partner change rates and transmission population attributable fraction (tPAF) of the core group to cumulative STI infections in the total population.

Results Across the range of turnover and treatment parameters explored, turnover consistently decreased STI prevalence in the core group. In the low-risk group, turnover increased prevalence under low treatment rate, but had the opposite effect under high treatment rate. When calibrating to the same STI prevalence, fitted core group partner change rates were higher with turnover than without. Using these fitted parameters, models with turnover then consistently projected a higher tPAF of the core group versus models without.

Conclusion Modeling of risk group turnover can influence the projected group-specific STI prevalence and fitted risk parameters. Models without turnover may underestimate the contribution of core groups in STI epidemics, and thus the impact of interventions prioritizing these populations.

Disclosure No significant relationships.

019.6 PROFESSIONAL INJECTORS, INJECTION NETWORKS, AND HIV: CASES STUDIES FROM FIVE CITIES IN PAKISTAN

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10.1136/sextrans-2019-sti.215

Background There are large numbers of people who inject drugs (PWID) in Pakistan, with a high and growing HIV prevalence in many cities. Cross-sectional bio-behavioural surveys conducted over fifteen years have shown heterogeneous HIV epidemic trajectories in different cities with inconsistent associations between aggregate and individual measures of behaviour and epidemic trajectories. This study triangulates behavioural, biological, and network data to gain new insights into drivers of local epidemics among PWID.

Methods A questionnaire was administered to 1,439 PWID in five cities in Pakistan in 2014 and dried blood spots were collected for HIV testing and sequencing. The questionnaire collected locations where participants injected recently and these were used to construct place-based injection networks. Demographic, behavioral, geographic, and network structure data were tested for associations with HIV and HIV phylogenetic analysis was conducted to identify transmission clusters.

Results HIV prevalence varied between the cities, from 8.6% to 45.3%. Although aggregate individual behaviours were not strongly associated with HIV, there were differences between cities in injecting practices and network configurations. Injection network configurations differed between cities, ranging from networks with dense sub-regions to widely dispersed networks. A city that experienced an explosive HIV outbreak showed particularly dense geospatial networks and a large phylogenetic cluster (n=52) suggesting a link between

geospatial concentration and rapid HIV transmission. In a city where the use of professional injectors was associated with HIV at the individual level, there were dense network sub-regions and HIV+ individuals were more likely to be more centrally located in networks ($p<0.01$) and in network components with a greater proportion who had used a professional injector ($p<0.05$).

Conclusion Contextual factors shape the injection practices and network configurations among PWID in Pakistan. Factors that influence HIV transmission dynamics are more complex than individual behaviours, and include professional injectors and geographic and network clustering.

Disclosure No significant relationships.

Poster Presentations

PS01 – POSTER VIEWING SESSION – MONDAY

Monday, July 15, 2019

5:45 PM – 7:00 PM

P004 THE NATIONWIDE ANTIMICROBIAL RESISTANCE SURVEILLANCE SYSTEM OF SEXUALLY TRANSMITTED INFECTIONS – SOUTH KOREA, 2017–2018

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Background The Korea Centers for Disease Control and Prevention established the new nationwide surveillance system and conducted the first nationwide surveillance of antimicrobial resistance for three major sexually transmitted pathogens; *Neisseria gonorrhoeae*, *Chlamydia trachomatis*, and *Mycoplasma genitalium*.

Methods The urethral discharge was collected from male patients with urethritis at 20 primary urologic clinics from January 2017 to December 2018. The cervical swab was collected from female patients with cervicitis at 8 primary gynecological clinics from January to December 2018. All specimens were sent to the 4 regional or the central laboratories.

Results A total of 224 *N. gonorrhoeae* isolates were collected. Of these, 90.6% were resistant to tetracycline, 95.3% to ciprofloxacin, and 58.0% to penicillin. None of the strains was resistant to ceftriaxone and spectinomycin. The minimum inhibitory concentration (MIC) range of ceftriaxone was ≤ 0.008 –0.25 $\mu\text{g/mL}$ and the MIC₅₀ and MIC₉₀ were 0.06 $\mu\text{g/mL}$ and 0.12 $\mu\text{g/mL}$. Twenty-two strains were resistant to cefixime (MIC 0.5 $\mu\text{g/mL}$). Most of the penA genotypes were type X. In particular, the proportion of mosaicism in DNA specimens has been steadily increasing, and the spread of penA-34.001 was confirmed in 2018. Reduced azithromycin susceptibility (defined MIC ≥ 1.0 $\mu\text{g/mL}$) increased from 0% in 2017 to 13% in 2018. The MIC range, MIC₅₀ and

MIC90 of gentamicin were 2–16 µg/mL, 4 µg/mL and 8 µg/mL, respectively.

Conclusion In South Korea, the antimicrobial resistance of *N. gonorrhoeae* is very severe and most isolates are multi-drug resistant to penicillin G, tetracycline, and fluoroquinolones. PenA-10.001 and penA-34.001, which are mainly isolated in South Korea, are thought to be the pre-stage of ceftriaxone-resistant germs in Japan and Europe, and the possibility of highly resistant germs is highly increased in South Korea. Enhanced antimicrobial resistance surveillance is necessary to prevent transmission of these strains.

Disclosure No significant relationships.

P005 GONORRHEA IN THE ERA OF AMR, DIAGNOSTIC NEEDS FOR IMPROVED ANTIMICROBIAL STEWARDSHIP IN LOW AND MIDDLE INCOME COUNTRIES

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10.1136/sextrans-2019-sti.217

Background In 2012, the World Health Organization (WHO) estimated 78 million cases of *Neisseria gonorrhoea* (NG) worldwide and recent reports indicate an increase in NG resistance to current antibiotic therapies globally. Chlamydia trachomatis (CT) infection is more prevalent than NG and current syndromic management guidelines are designed to simultaneously treat both bacteria with a combination of antibiotics to avoid missing treatment. In resource constrained settings many patients with urethral or vaginal discharge presenting at primary healthcare settings (PHC) are over-treated due to syndromic management, which lacks appropriate diagnostic tools for CT and NG differentiation in these settings.

Methods To address this gap, the Foundation for Innovative New Diagnostics (FIND) and WHO collaborated on the development of Target Product Profiles (TPPs) to guide the development of appropriate diagnostics tools for improved clinical management of NG and CT infections. Using a Delphi-like process involving two serial surveys to solicit input from over 52 experts.

Results Two TPPs for the appropriate identification of NG (and NG/CT) and its susceptibility/resistance profile to antibiotics were developed and will be publicly available on the WHO and FIND websites. A request for proposals is in process to stimulate the development of diagnostic tools that meet the technical characteristics of these TPPs.

Conclusion TPPs for rapid identification of NG-positive patients at PHC and for identification of NG susceptibility/resistance to antibiotics are urgently needed. Technology advancements over the past years may enable development of improved tests to support uptake and wide scale use in PHC. A reflex antibiotic susceptibility test would be useful to further guide prescription of current therapies. Results of this work will guide the development of new and appropriate diagnostics in the next 3–5 years, to enable improved patient management and conservation of new antibiotics that will become available.

Disclosure No significant relationships.

P006 'FIRST TEST ALONG THEN TOGETHER' – THE PRACTICE OF COUPLE'S HIV TESTING IN ETHIOPIA

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Background Some evidence indicates that Couple HIV Testing & Counselling (CHTC) is an approach that could be used to enable more people to be reached. However, little is known about how couples may use this service and what their concerns are around the approach. This study aimed to understand how individuals who had ever been in a long-term heterosexual relationship intended to use CHTC in Ethiopia and their beliefs about its benefits and potential harms.

Methods A qualitative study was conducted in Addis Ababa, Ethiopia. We interviewed individuals who had ever been in a long-term heterosexual relationship (n=21), and key-informants (n=11) including religious leaders, health-care providers and case managers. The interview data were transcribed verbatim and thematically analysed using NVivo 11. The data were coded to look for concepts and patterns across the interviews, and relevant themes and sub-themes identified which captured key aspects related to individual's views on undertaking HIV-testing with a sexual partner.

Results Most participants regarded CHTC as an important HIV-testing approach for people who are in a long-term heterosexual relationship and expressed the view that there was 'nothing like testing together'. However, many participants said they would prefer to be tested alone to check their own HIV-status before undertaking or deciding to undertake CHTC - 'first alone then together'. This strategy was expressed as a way of managing their concerns about being HIV-positive and 'fear of the consequences' including potential accusations of infidelity, relationship break-up, and potentially exposed in the community as being HIV-positive.

Conclusion The findings of this study suggest that while CHTC has been actively promoted in Ethiopia, people may be concerned about undertaking CHTC without prior individual HIV-testing and have developed ways of making the process work for them. More work is needed to understand the approach couples considering is a more dignified, effective and cost-effective way.

Disclosure No significant relationships.

P007 UPTAKE OF COUPLES HIV TESTING AND COUNSELLING IN SUB-SAHARAN AFRICA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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10.1136/sextrans-2019-sti.219

Background This systematic review and meta-analysis aimed to estimate and characterise the uptake of Couples HIV Testing and Counselling (CHTC) in Sub-Saharan African countries.