Introduction In Myanmar, People Who Inject Drugs (PWIDs) has the highest HIV prevalence of 18.7% in comparing to other key population. Establishment of drop-in-centre (DIC) and provision of services has been proved as successful intervention for key population. An assessment was conducted to determine the knowledge on sexually transmitted infections (STI)/HIV and utilisation of drop-in-centres among drug users after the establishment of DIC and out-reach activities.

Methods A community-based, post-intervention assessment was conducted using quantitative and qualitative methods in underserved areas of north-western border in Myanmar.

Results A total of 202 drug users, 156 PWIDs and 46 People Who Use Drugs (PWUDs), were included in the study. Their age ranged from ranged from 18 to 60 years with the mean age of 34.9±8.2 years. Regarding STI knowledge, no one sought to treat STD at the beginning of the intervention but 4% of drug users searched for the treatment at the end. Over 25% knew at least one symptom of STI in men while only 15.3% recognised at least one symptom in women. Knowledge on higher risk of blood borne infections such as Hepatitis B (25% vs. 51%, p<0.1), Hepatitis C (8% vs. 13%, p<0.05) was improved in comparing to pre-intervention. HIV testing rate within six months was also increased from 10% to 74% (p<0.001). Regarding sexual behaviours, percent of drug users who had sex with paid sex partner and who had more than one sexual partner within 6 months were significantly reduced (11% vs. 0.5%, p<0.001; 11% vs. 1%, p<0.05). Regarding drop in centre (DIC), more drug users were aware of DIC services consisted of HIV testing and counselling (47%) and health education service (68%). Nearly half of them (46%) received outreach services and mobile HIV testing covered about 16%.

Conclusion Improvement in knowledge and behaviour regarding STI/HIV and DIC utilisation were seen among the drug users after the intervention.
DEVELOPMENT OF A RISK CALCUlATOR FOR THE 3-MONTH PREDICTION OF INCIDENT SYPHILIS INFECTION AMONG HIGH-RISK MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN PRESENTING TO A STD CLINIC IN LIMA, PERU

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Introduction Syphilis incidence worldwide has rebounded since 2000, especially among men who have sex with men (MSM). A predictive model for future syphilis infection may inform prevention counselling and use of chemoprophylaxis.

Methods We analysed data from a longitudinal study of a STD clinic-based cohort of MSM and transgender women reporting a history of HIV or syphilis infection and/or high-risk sexual behaviour, followed quarterly for two years. Incident infection was defined as a four-fold increase in RPR titters or new RPR reactivity if two prior titters were non-reactive. We used generalised estimating equations with a Poisson regression to develop a predictive model of syphilis incidence in one-half of the data set, and verified the model in the second half, calculating an area under the curve (AUC), summarising specificity and sensitivity. We then applied the final model to the full baseline dataset. Finally we developed an online risk calculator from our model.

Results Among 401 participants enrolled, 22% were transgender women and 31% were HIV-infected at baseline. Syphilis incidence was 19.9 cases per 100-person years (95% CI 16.3–24.3). Predictors of syphilis incidence were HIV infection, high number of male sex partners (categorised as: 0, 1, 2–3, 4–9, >10), history of syphilis infection, receptive and versatile anal sex role and consensual receptive anal sex. The AUC was 71% (95% CI 64%–78%) in the validation dataset for incident syphilis infection in the next 3 months. Those at highest risk had a 1-in-7 likelihood of syphilis infection in the next 3 months. When applied to the baseline dataset the AUC was 71% (95% CI 63%–77%) for predicting recent syphilis infection. The online syphilis risk calculator is available at: www.syphrisk.net (English), www.sifriesgo.net (Spanish).

Conclusion Our results show that the likelihood of syphilis infection among a high-risk STD clinic-based cohort can be estimated accurately. Our calculator may guide STD clinical management by directing risk behaviour counselling and potential use of doxycycline chemoprophylaxis.

P3.130 POTENTIAL IMPACT OF TESTING FOR MYCOPLASMA GENITALIUM INFECTION AND MACROLIDE RESISTANCE: A MATHEMATICAL MODELLING ANALYSIS

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Introduction Patients with genitourinary symptoms are generally treated syndromically with azithromycin, which can induce macrolide resistance in Mycoplasma genitalium (MG). Directing treatment based on aetiology and known macrolide susceptibility may prevent emergence of resistance. We constructed a mathematical model to evaluate the potential impact of simultaneous detection of MG and resistance markers on the percent of MG infections that are macrolide-susceptible.

Methods We developed a gender- and risk-stratified, compartmental model of MG transmission within a heterosexual population. We assumed clearance of untreated infections in 30 days; development of symptoms in 2.4% of infected men and 5.1% of infected women; initial treatment of symptomatic men and women with azithromycin; treatment of men with persistent/recurrent symptoms with moxifloxacin; 50% of infections macrolide-susceptible at baseline; de-novo macrolide resistance in 18% of susceptible bacteria after azithromycin therapy; and 100% efficacy of moxifloxacin. The model was...