hotspots in Rwanda to recruit a nationally representative sample of 1040 FCSW in 2006 and 1338 FCSW in 2010. At the time of the interview, all FCSW present at the site were asked to participate in the study and administered a quantitative survey instrument after obtaining informed consent. Data were double-entered and analysed using EpiInfo, SPSS and STATA. χ^2 Tests of significance were performed on key variables. Logistic regression analysis was performed to control for key socio-demographics. Overall, an increase in comprehensive HIV knowledge from 18% in 2006 to 22% in 2010 was observed (p Value<0.0001). However, some misconceptions still persist, with a decline in FCSW who rejected that mosquito bites can transmit HIV from 74% in 2006 to 69% in 2010 (p value <0.0001). The median age of respondents' first paid sexual act remained the same, with a reported median age of 19 years in both surveys. The proportion of FCSW who reported having consistently used condoms in the month prior to the survey rose from 28% in 2006 to 35% in 2010 (p value<0.001). At the same time, the proportion of FCSW who reported having used a condom during their last sexual act with a paying client dropped from 84% in 2006 to 80% in 2010 (p value<0.001). Comparing key indicators from the 2006 and 2010 BSS provides important insights for HIV program planners. Although the comparison indicates that overall HIV knowledge has generally improved in the time between the two surveys, some misconceptions on HIV transmission still persist. Equally, regarding sexual behaviour and practices, although consistent condom use reportedly improved between the two BSS, the overall level of reported use is still relatively low and some important indicators—including condom use at last sex with a paying client—declined. These data further underscore the importance of reaching FCSW with prevention commodities and appropriate HIV education and behaviour change communication messages.

Epidemiology poster session 2: Population: transgender

P1-S2.23 TRANSGENDER PERSONS IN GUATEMALA - OVER-EXPOSED AND UNDER-PROTECTED - THE FINDINGS OF AN RDS BEHAVIOURAL SURVEY

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Background Male-to-female transgender persons experience the highest HIV prevalence rates of any high risk population in Central America. The purpose of this study is to compare HIV-related risk behaviours, knowledge and exposure to prevention activities among transgender persons and other men who have sex with men (MSM) in Guatemala City.
Methods From September—to December 2010, we conducted a probability-based survey of MSM, including male-to-female transgender persons who have sex with men, using respondent-driven sampling (RDS) in Guatemala City. Data on sexual and drug use behaviour, knowledge of HIV, attitudes, stigma, access to prevention, care, and treatment services were collected by interviewers using Personal Digital Assistants (PDA). Population proportions and 95% CIs, adjusted for RDS sampling weights, were calculated using the Respondent Driven Sampling Analysis Tool (version 6.0). Crude summary statistics were calculated in SAS (version 9.1).
Results A total of 509 MSM, including 99 male-to-female transgender persons enrolled in the study. The mean age for transgendered persons was 29.1 vs 28.0 for non-transgender MSM. Education level and socio-economic status were comparable between the two groups. Transgender persons, in comparison to

non-transgender MSM, had higher rates of transactional sex (77.6% vs 41.9% in the past year, respectively), drug use (26.7% vs 3.3% cocaine use in the past month) and prior HIV testing (95.7% vs 68.9%, during lifetime). On the other hand, transgender persons have similar levels of forced sex (14.1% vs 6.5% in the past year), exposure to HIV educational activities (74.2% to 67.8% in the past year), access to free condoms (83.9% to 79.6%) and correct knowledge of HIV prevention (54.8% vs 41.7%) see Abstract P1-S2.23 Figure 1. Conclusions—Compared to other MSM, transgender persons in Guatemala City more often receive money for sex and use cocaine and are at disproportionately higher risk for HIV infection. While prevention activities, such as HIV testing, seem to be reaching transgender persons, exposure may not translate into increased protection. Findings emphasise the need for innovative HIV prevention activities to address the many facets and levels of vulnerability and social marginalisation experienced by transgender persons in Guatemala City. Such efforts should extend beyond individual-level outreach and information provision to rigorously evaluated intervention strategies at the social and structural levels.
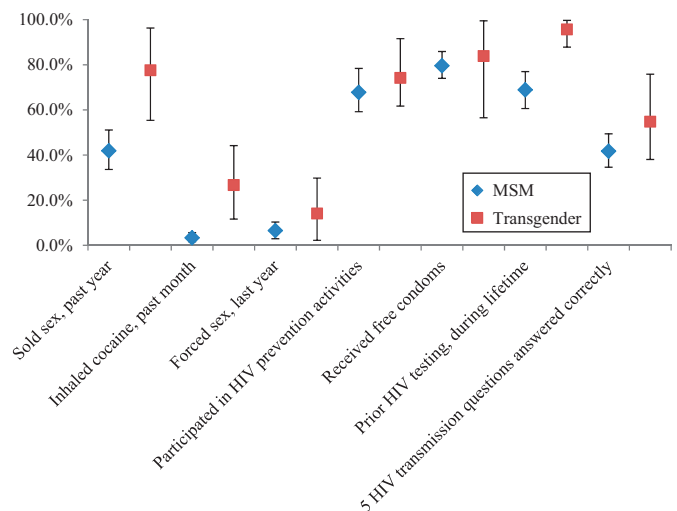
Abstract P1-S2.23 Figure 1 Behavioural and HIV Prevention Indicators. Non-transgender MSM and Transgender Persons, Guatemala City, 2010.

Epidemiology poster session 2: Population: Injection drug users

P1-S2.24 HIV AND HEPATITIS C RISK FACTORS, INFECTION STATUS AWARENESS AND ACCESS TO CARE AMONG PEOPLE WHO INJECT DRUGS - RESULTS FROM A NATIONAL SURVEILLANCE SYSTEM, I-TRACK PHASE 2 (2005—2008)

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Background HIV and hepatitis C (HCV) risk factors, infection status awareness and access to care among people who inject drugs (IDU) were compared across infection groups in a national enhanced surveillance sample.
Methods Phase 2 data collection for I-Track (Enhanced surveillance of HIV and HCV risk behaviours among IDU) was conducted from 2005 to 2008 in 10 Canada sites. Confidential face-to-face interviews collected data on demographics, drug-use and sexual risk behaviours, and HIV and HCV testing. Dried blood or oral fluid samples were collected for HIV and HCV antibody testing. Descriptive statistics for demographics, risk behaviours and access to care and treatment

were compared across four exclusive infection groups—HIV-sero-positive-only, HCV-seropositive-only, HIV-HCV seropositive and HIV-HCV seronegative individuals.

Results Of 2969 IDU, 1.7% were HIV-seropositive-only, 57.5% were HCV-seropositive-only, 11.6% were HIV–HCV seropositive, and 29.2% were HIV–HCV seronegative. The proportion of IDU who were accurately aware of their negative or positive HIV infection status (based on concordance between self-report and laboratory result) was 85.7% among HIV-seropositive-only, 87.5% among HCV-seropositive-only, 78.7% among HIV–HCV seropositives and 77.5% among HIV–HCV seronegatives. The highest proportions reporting needle borrowing (past 6 months 24.2%) and high drug injecting frequency (69.4% > once or twice per week) were in the HCV-seropositive-only group. The highest proportions reporting multiple sex partners (past 6 months 44.9%) and no condom use at last sex (33.8%) were among HIV–HCV seronegative IDU; this group was also least likely to have been tested for HIV or HCV (85.1% and 80.6% respectively). Among those who were HIV-sero-positive-only, 87.8% were under the recent care of a doctor and 74.2% were taking prescribed drugs for HIV. Among those HCV-seropositive-only, 45.5% were under the recent care of a doctor and 13.1% were taking prescribed drugs for HCV.

Conclusions Injecting and sexual risk behaviours were prevalent particularly among HCV-seropositive-only and seronegative IDU, respectively. Awareness of correct HIV infection status and frequency of HIV testing were lowest among seronegative IDU. These findings underscore the importance of routine and integrated HIV and HCV testing for at-risk IDU which may lead to higher levels of awareness for both HIV and HCV infections.

P1-S2.25 **HIV SEROSTATUS KNOWLEDGE, ABSENCE OF PREVIOUS TESTING AND SEXUAL BEHAVIOURS AMONG INJECTING DRUG USERS**

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Background Few studies have examined the association between HIV status knowledge and sexual behaviours among injection drug users (IDUs). We tested the hypothesis that IDUs who know their HIV positive status will have safer sexual practices than IDUs aware of their HIV negative status or never tested for HIV.

Methods IDUs who had injected in the past 6 months were recruited in harm reduction programs across the Province of Quebec and Ottawa, Canada. Participants completed a questionnaire including questions on sexual behaviours and provided saliva for HIV antibody testing. For IDUs with multiple participations, the last interview was selected. Data from 2003 to 2009 were analysed. Three groups were compared—IDUs aware of their positive HIV status (n=510), IDUs aware of their HIV negative status (n=2928) and IDUs never tested for HIV (n=427). Proportions were compared using χ^2 tests.

Results Male IDUs aware of their HIV positive status were less likely to have had sex in the last month (HIV positive—32.4%, HIV negative—47.2% and never tested—55.0%; p<0.0001, n=2741) and, among those sexually active, more likely to have used a condom at last sexual intercourse (HIV positive—57.4%, HIV negative—43.7% and never tested—51.7%; p<0.005, n=1249). This was not observed for women. In the last 6 months, the proportion of male IDUs who had always used condoms for vaginal or anal sex with their female sex partners was significantly higher in HIV positive than in HIV negative and in those never tested, for regular (54.3%, 22.4% and

33.1%, respectively, p<0.0001, n=1131), casual (77.4%, 54.4% and 51.2%, respectively, p=0.0002, n=933) and partners of whom they are a client (86.7%, 69.7% and 42.1%, respectively, p<0.02, n=123). Women never tested for HIV were less likely than the other groups to use condoms with their regular partners (never tested—4.7%, HIV positive—21.3% and HIV negative—20.2%; p<0.05, n=550) and their client sex partners (never tested—46.2%, HIV positive—82.1% and HIV negative—76.6%; p<0.05, n=259). Women aware of their HIV positive status were more likely to report condom use with their casual sex partners, whereas those never tested were less likely (HIV positive—66.7%, HIV negative—48.0% and never tested—15.8%; p<0.01, n=250).

Conclusions IDUs aware of their positive HIV serostatus reported more consistent condom use with their various types of sex partners than those aware of their HIV negative status or never tested.

P1-S2.26 **DRUG AND SEXUAL HIV RISK AMONG INJECTION DRUG USERS - A LATENT CLASS ANALYSIS**

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Background Injection drug users (IDUs) are at increased risk of HIV infection because they are more likely to engage in high risk injection behaviours (eg, needle sharing) as well as in high risk sexual behaviours (eg, exchange sex). This analysis examines factors associated with HIV risk using a latent class approach.

Methods Our study includes 523 eligible injection drug users, recruited into the 2009 National HIV Behavioural Surveillance project. Using maximum likelihood we calculated the posterior probability of being in an HIV risk class from nine drug and sexual behaviours. We simultaneously fitted a multinomial regression model to identify socio-demographic factors associated with HIV risk class.

Results We identified 3 HIV risk classes—high (42%), moderate (25%) and low risk (33%). Compared to the high HIV risk class, homeless IDUs had lower odds to be in the moderate (OR=0.16, 95% CI 0.04 to 0.70) and in low risk HIV class (OR=0.28, 95% CI 0.15 to 0.52). Moreover, IDUs who were arrested in the past 12 month had also lower odds to be in low risk class (OR=0.52, 95% CI 0.32 to 0.86) compared to high HIV risk class.

Conclusions Our results show that the majority of our IDUs were engaged in high HIV risk behaviours. Though temporality cannot be established due to the cross-sectional study design our findings indicate that homelessness and history of incarceration are associated with HIV risk. Interventions targeting system-level change may help to reduce the burden of HIV among the injection drug user population.

Epidemiology poster session 2: Population: Vulnerable youth

P1-S2.27 **RESPONSE OF TROUBLED YOUTH AND STIS**

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Description Pakistan, the second most populous Muslim nation in the world, has started to finally experience and confront the HIV/AIDS epidemic. The country had been relatively safe from any indigenous HIV cases for around 2 decades, with most of the infections being attributable to deported HIV positive migrants from the Gulf States. However, the virus finally seems to have found a home-base, as evidenced by the recent HIV outbreaks among the injection drug user community. Extremely high-risk behaviour has