

## 023 - HIV epidemiology and prevention

### 023.1 DECREASES IN HIV PREVALENCE IN PATIENTS ATTENDING AN INNER-CITY EMERGENCY DEPARTMENT OVER A DECADE CORRELATE WITH TRENDS IN HCV BUT NOT HSV-2

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**Background** The Johns Hopkins Hospital Emergency Department (JHHED) has served as an observational window on the HIV-epidemic. We previously reported that HIV prevalence decreased among patients attending JHHED from 11.4% in 2003 to 5.6% in 2013 and incidence decreased from 0.99% in 2003 to 0.16%. This study sought to examine the potential contribution of changes in sexual and parenteral risk behaviour during this period by examining trends in HSV-2 and HCV infection in this population.

**Methods** Identity unlinked-serosurveys were conducted in the adult JHHED in 2003, 2007, and 2013. Excess sera collected from 10,274 patients were tested for HSV-2 and HCV antibodies by the Focus HerpeSelect and Genedia HCV 3.0 ELISA.

**Results** HSV-2 seroprevalence was 55.3% in 2003, 54.4% in 2007, and 50.0% in 2013 (p-trend = 0.296) and there were no significant changes when stratified by age group. HSV-2 seroprevalence among HIV positives also remained stable at 79.8% in 2003, 79.6% in 2007, and 78.3% in 2013 (p-trend = 0.660). In contrast, HCV seroprevalence declined steadily from 22.0% in 2003 to 13.8% in 2013. This was also consistent with a decrease in HCV seroprevalence among HIV positives: 59.6% in 2003, 53.6% in 2007, and 48.1% in 2013 (p-trend = 0.011). Black men had the highest change in HIV prevalence from 20.0% in 2003 to 9.9% in 2013, which correlated with changes in HCV seroprevalence in black men from 36.7% in 2003 to 22.1% in 2013. HSV-2 seroprevalence in black men remained stable between 2003 (53.3%) and 2013 (50.6%).

**Conclusions** The decline of HIV prevalence and incidence in the JHHED population is not likely attributable to changes in sexual behaviour since HSV-2 age-based prevalence remained unchanged over 10 year period. Rather the declines in HIV may be due to reductions in parenteral transmission with the observed parallel declines in HCV prevalence.

**Disclosure of interest statement** The authors have no conflicts of interest to declare.

### 023.2 ACHIEVING THE GOALS OF THE US NATIONAL HIV/AIDS STRATEGY: DECLINING HIV DIAGNOSES, IMPROVING CLINICAL OUTCOMES, AND DIMINISHING RACIAL/ETHNIC DISPARITIES IN KING COUNTY, WA., USA

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**Background** US national data suggest that new HIV diagnoses are now declining. However, that decline has been uneven, and

has not clearly included men who have sex with men (MSM), the group most affected by HIV in the US.

**Methods** We used data from the US Census, American Community Survey, and the King County, WA HIV/AIDS Reporting System (NHSS) 2004–2013 to assess trends in the rates of new HIV diagnoses, AIDS diagnoses and age- and reporting lag-adjusted HIV-associated mortality rates among King County residents. Trends in viral suppression, defined as the proportion of individuals with a last reported plasma viral load (VL) result of <200 copies, and CD4 counts were evaluated between 2006 and 2013, the period during which all VL and CD4 results were reportable in WA State. We assessed trends using Chi-square testing.

**Results** Between 2004 and 2013, the rate of new HIV diagnoses decreased from 18.4 to 13.2 per 100,000 residents (decline of 28%); AIDS diagnosis rates declined 42% from 12.3 to 7.2 per 100,000; and death rates decreased from 27 to 15 per 1,000 persons living with HIV/AIDS (PLWHA) (decline of 44%; p < 0.001 for all three trends). The rate of new HIV diagnoses declined 19% among MSM (p = 0.01), with the largest absolute decline occurring in Black MSM (44%). Among 8,679 individuals with laboratory results reported to NHSS 2006 through 2013, viral suppression increased from 45% to 86% (p < 0.001).

**Conclusions** The rates of new HIV diagnosis, AIDS diagnoses and mortality in PLWHA in King County, WA have significantly declined over the last decade. These changes have occurred concurrent with a dramatic increase in HIV viral suppression, and have affected diverse populations, including MSM and African American MSM.

### 023.3 HIV AND INJECTING DRUG USE AMONG OUT OF SCHOOL YOUTHS: EXPERIENCE FROM NIGERIA

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**Introduction** Out of school youths are often prone to high risk behaviours as a result of limited public health interventions including prevention outreach and education efforts. Little is known about injecting drug use among them. Information on drug use is needed to design harm reduction strategies to reduce out of school youths' exposure to HIV through injection. This study assessed factors associated with their injecting drug use.

**Methods** Secondary analysis of data collected among out of school youths in November 2013 in North Central Nigeria. The data collected socio-demographic, sexual, behavioural and biological information among 1600 participants aged 15–24 years. Multiple logistic regression models were used to assess factors that influence their injecting drug use.

**Results** Their average age was 20.6 ± 2.7 years, participants from urban areas were 769 (48.1%) and rural area was 831 (51.9%). Male participants were 1023 (63.9%) and age category 20–24 years was 67.6%. Mean age at sexual debut was 16.2 ± 2.8 years; mean age at first alcohol use was 16.2 ± 3.8 years; mean age at first cigarette smoking was 15.1 ± 5.8 years; current smokers was 17.5%; alcohol intake was 53.1%; cocaine intake was 3.9%; heroine intake was 3.3%; sex in the past 12 months was 79.1% and sex in the last 3 months was 30.2%. HIV prevalence was 5.2%; and proportion injecting drug was 5.5% with rural 5.3% and urban 5.8%. Factors associated with