Where is the US Hepatitis C Epidemic *Now*? Putting the “Pen” on the Map as Elimination Efforts Hunt for Remaining Cases.

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Background. CDC estimated 30,500 new HCV infections in the US in 2014 (or 0.096 per 1,000 person-years (PYs)) and HCV incidence of high-risk groups ranged from 2 to 400 per 1000 PYs. High seroreivalence of HCV antibody, evidence of HCV infection ever, is common among urban emergency department (ED) patients. Little is known about the incidence of HCV infection in urban emergency department (ED) patients in recent years.

Methods. We conducted a retrospective cohort study to determine HCV incidence among ED adult patients. The study ED rolled out an ED-based HCV screening program since November 2015. A secondary data analysis was performed from a seroreivalence study on all adult patients who visited the study ED during December 10, 2015 and January 21, 2016. Patients who had at least two HCV antibody tests from two separate visits at the study hospital from 2003 to 2016 were included for this secondary data analysis. Patients who had reactive HCV antibody result at the first time point were excluded. Follow-up time (PYs) was calculated for each patient by the interval of between two HCV antibody tests. Time of HCV seroreivalence was defined as the midpoint between the negative and positive HCV antibody test. Incidence rate ratio (IRR) and corresponding 95% CI was used to present the relative incidence between groups by mid-p exact test.

Results. A total of 302 ED patients were identified. The majority of them were female (60%), African American (79%), aged 35 years and older (60%). Sixty-eight percent of patients were born after 1965 (68%) and 25% born between 1945 and 1965 (birth cohort). Fifty-six percent of patients had commercial insurance payer and 36% had Medicaid payer. Thirty-four (11%) patients had HIV infection and 7 (2%) were injection drug users (IDU). Overall, 6 (2%) had HCV seroreivalence during 971.1 PYs, resulting in an HCV incidence of 6.2 per 1,000 PYs (95% CI: 2.5, 12.9 per 1,000 PYs). The incidence was significantly different by race [white: 30.9/1,000 PYs, African American: 2.9/1,000 PYs; RR: 12.3 (2.2, 95.8)] and IDU [IDU: 192.3/1,000 PYs, non-IDU: 4.2/1,000 PYs; RR: 46.2 (5.9, 260.3)] but not by birth cohort or HIV status.

Conclusion. The HCV incidence in urban ED patients was over 60 times higher than in general US population and even higher in some high-risk groups, indicating ED is a critical venue for identifying high-risk individuals for HCV prevention and detecting HCV-infected Americans for treatment.

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515. Where is the US Hepatitis C Epidemic *Now*? Putting the “Pen” on the Map as Elimination Efforts Hunt for Remaining Cases.

Background. Hepatitis C disease (hepC) is unevenly distributed both by geography and subpopulation. Our 2013 US prisons survey led to an estimate of 17.4% anti-hepC prevalence in persons who pass through jails and prisons each year bear 30–50% of disease burden, but are excluded from traditional sources of surveillance data, such as NHANES. CDC estimates 50% of persons with hepC lack knowledge of infection in life, thus death data are also imperfect. Data for corrections could enhance understanding of geographic representation of hepC.

Methods. In 2016, we surveyed prison state medical directors, providers and testers, for data on non-targeted screening of prisoners between 2010-2016. Non-responders were phoned for information. Sizes of state prison populations came from the Bureau of Justice Statistics. Via published reports, we obtained data on anti-HCV prevalence in 2006. The 10M persons who pass through jails and prisons in the US each year would enrich understanding of geographic representation of hepC.

Results. A total of 278 patients with HCC and chronic HBV seen at two medical centers in a 12-year span from January 2002 to December 2015. These cases were age- and sex-matched in a 1:3 ratio with 823 non-cancer control subjects with chronic HCC. Logistic regression analyses were used to estimate the odds of HCC for each race, with black race stratified by foreign-born status, after adjustment for other demographics and clinical conditions.

Results. Of the 278 HCC cases, 67% were 60 years of age or older, 78% were male and 72% were Asian. Twenty percent of 823 HBV controls were black but only 7% of 278 HCC cases were black, of whom 14 were African immigrants (1 each from Chad, Liberia and Senegal and 11 from East Africa: Ethiopia n = 4, Somalia n = 4, Eritrea n = 1, Sudan n = 1, Kenya n = 1). In multivariable analysis, Asian race and cirrhosis were associated with greater odds of HCC. Asian-immigrants were at increased odds of HCC (adjusted odds ratio [aOR] 3.2, 95% confidence interval [CI] 2.1–5.1) and non-immigrants were at increased odds of HCC (aOR 1.3; 95% CI 0.6–2.9). Asian race was associated with increased odds of HCC. Asian-immigrants were at increased odds of HCC (95% CI 0.2–1.8) for non-immigrant blacks. We found no association with HCC and other risk factors including diabetes, HCV coinfection, and HIV coinfection. Alcohol use was associated with HCC but risk appeared to be mediated through cirrhosis as it was no longer associated when cirrhosis was included in the model.

Conclusion. Asian patients were the only racial subgroup associated with increased odds of HCC in our cohort. African-immigrant status was not associated with increased risk of HCC in our mostly East African cohort, suggesting regional differences in HCC risk. Optimal screening strategies for HCC in African immigrants with chronic HBV warrant further study.