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1057. CpG-adjuvanted Hepatitis B vaccination improves seroprotection rates in Veterans with HIV

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Session: P-48. Hepatitis

Background. Hepatitis B virus (HBV) remains a global health issue, leading to complications including cirrhosis and hepatocellular carcinoma. Individuals co-infected with Human Immunodeficiency Virus (HIV) and HBV have increased liver-related morbidity and mortality compared to those with HBV mono-infection. Vaccination can effectively prevent HBV infection, but certain critical populations including people living with HIV (PLWH) are less likely to achieve seroprotection (antibody to hepatitis B surface antigen (HBsAb) titer ≥ 10 IU/mL) after vaccination; seroprotection rates (SPR) in PLWH range from 34 to 88% in clinical trials, with improved SPR in those with immunologic reconstitution and viral suppression. With improved immunologic status, SPR have dramatically improved in our Veteran Infectious Disease clinic population. However, a subset of patients remain HBV vaccine nonresponders despite re-vaccination attempts, perhaps due to intrinsic immunologic anergy. We hypothesized that Veterans with HIV who were nonresponders to prior HBV vaccines may respond to a more immunogenic vaccine. Heplisav-B is a 2-dose series, with improved SPR in other classically difficult to vaccinate groups (including the elderly and those with diabetes), but has not yet been studied in individuals with HIV.

Methods. HBV vaccine nonresponders who had previously been vaccinated and boosted with median 3 and up to 8 doses of alum-adjuvanted HBV vaccines were re-vaccinated with Heplisav-B. HBsAb titers were assessed at days 0, 30, and 60 to follow vaccine responses.

Results. Participants had a median age of 65 (range 44 to 83) and were virologically suppressed on antiretroviral therapy. Enrollment and vaccination was interrupted by the COVID-10 pandemic, but 8 of 10 (80%) enrolled participants had seroprotective titers at day 60, with 6 having titers > 1000 IU/mL. Of the 8 additional participants who had available serologies after the first dose, all were seroprotected, and 3 had titers > 1000 IU/mL. 16 of 18 (89%) participants achieved seroprotection with Heplisav-B.

Conclusion. Heplisav-B is immunogenic in persons with HIV and should be a reasonable option for HBV vaccination of PLWH who are previous nonresponders.

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1058. Demographics of Hepatitis C Virus Antibody and RNA Positivity within an Emergency Department Screening Program

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Background. In support of the recent United States Preventive Services Task Force's (USPSTF) revised recommendations for non-targeted HCV screening, we have noted a shift away from active infections within the birth cohort (patients born between 1945-1965), as these individuals have often undergone successful treatment, and a shift towards younger adults who are RNA positive, especially people who use intravenous drugs (PWID).

Methods. Located in Northeastern New York State, Albany Medical Center conducts routine emergency department (ED) HCV screening, with active linkage to care. We performed a retrospective study of our HCV linkage to care data from April 2019 to June 2020. Patients were offered screening if they belonged to the birth cohort, were PWID, or at staff discretion. We estimated the effect of birth cohort, intravenous drug use and other potential risk factors on RNA positivity via Chi-square tests and Modified Poisson Regression.

Results. There were 242 people that were HCV antibody positive. The mean age was 50.9 years-old, with 118 (46.8%) in the birth cohort and 103 (42.56%) PWID. As compared to the birth cohort, a significantly greater proportion of non-birth cohort patients were PWID (62% vs 21.2%, $p < 0.01$) and homeless (17.7% vs 9.3%, $p = 0.05$). Birth cohort patients were 0.55 times (95%CI: 0.39 to 0.79) less likely to be RNA positive. PWID were 2.22 times (95% CI: 1.58 to 3.13) and homeless people were 2.05 times (95% CI: 1.50 to 2.80) more likely to be RNA positive. After multivariable adjustment, birth cohort was not a significant risk factor for RNA positivity but PWID (RR: 1.84; 95% CI: 1.26 to 2.68) and homelessness (RR: 1.69; 95% CI: 1.20 to 2.39) were significantly associated with RNA positivity.

Conclusion. These data suggest that the RNA positivity rate is higher among the non-birth cohort age group but is explained by the higher prevalence of drug use and homelessness. The findings support USPSTF's new guidelines for testing all adults and shed light on the demographics of populations at risk for active infection vs. populations who are antibody positive and RNA negative. Further research might explore (a) whether these findings are applicable to other clinical settings and geographic locations

and (b) the feasibility of targeting patients with active infection in settings such as the ED.

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1059. Evaluating Hepatitis C Screening Rates and Successful Interventions at an Outpatient Medicine/Pediatrics Practice

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Background. Despite the 2013 United States Preventive Services Task Force (USPSTF) recommendations, Hepatitis C (HCV) screening rates among patients born between 1945-1965 has remained below 25% (MacLean, 2018). At our outpatient academic suburban primary care practice in Albany County, NY, our hepatitis C baseline prior to interventions was 31.75%. In collaboration with Project FOCUS through Gilead, our practice attempted to increase screening rates among this birth cohort.

Methods. We performed a retrospective chart review on patients eligible for HCV screening with birth years 1945-1965 at the time of their visit at the Albany Med Internal Medicine/Pediatrics practice. We report monthly HCV screening from January 2018 to April 2020. In addition, we determined whether HCV screening rates differed by race, gender, ethnicity, private vs public insurance, and risk stratification or RAF (standard vs. high-risk patient).

Results. The chance that a test conducted for eligible patients increased from 29.9% (pre-intervention) to 58.76% in 2019 (post-intervention). From June 2019-December 2019, the testing rates were consistently above the 2019 average (Figure 1). There were no significant differences in HCV screening due to gender, race, ethnicity, or type of insurance (Table 1).

Figure 1. Hepatitis C Screening Rates at an Outpatient Medicine/Pediatrics Practice 2018-2020

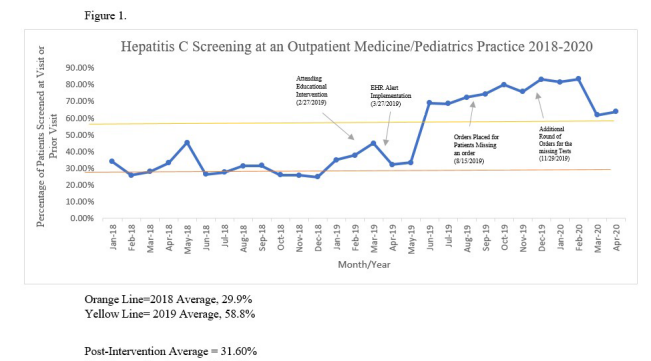


Table 1. Demographics - Hepatitis C Screening Rates

	% Screened for HCV(n)	% Not Screened for HCV(n)	Chi-Square	P-value
Gender				
Male	64.13 (506)	35.87 (283)		
Female	68.03(879)	31.97(413)	3.3511	0.67
Race				
American Indian or Alaska Native	0(0)	100(1)		
Asian	67.57(25)	32.43(12)		
Black or African American	74.71(65)	25.92 (22)		
Native Hawaiian or Pacific Islander	0(0)	100(1)	6.8459	0.232
Unknown	67.55(127)	32.45(61)		
White	66.10(168)	33.90(599)		
Ethnicity				
Hispanic/Latino	75(30)	25(10)		
Non-Hispanic	66.89(1273)	33.11(630)	4.5359	0.103
Unknown	59.42(82)	40.58 (56)		
Risk Stratification				
Standard Risk	66.08(1313)	33.92(674)	4.4592	0.034
High Risk	76.60(72)	23.40 (22)		
Insurance				
Managed Medicaid	56.70(55)	43.30(42)		
Managed Medicare	70.27(208)	29.73 (88)		
Medicaid	83.33(5)	16.67(1)	9.618	0.087
Medicare	64.43(221)	35.57 (122)		
Private	66.97 (896)	33.03(442)		
Self-Pay	0(0)	100(1)		
Insurance				
Private	66.97(896)	33.03(441)	0.2423	0.606
Public	65.90(489)	34.10(253)		

Conclusion. In this outpatient Med/Peds practice, hepatitis C screening rates increased dramatically after incorporation of an EMR prompt, as well as nursing-generated orders for patients due for screening. There was no statistical difference