Prevalence of Active Hepatitis B Among New York City MSM Initiating PrEP and PEP, 2016-2017

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BACKGROUND

- All CDC recommended regimen for HIV pre-exposure prophylaxis (PrEP) and post exposure prophylaxis (PEP) contain Tenofivir DF (TDF) and Emtricitabine (FTC).
- Providing TDF/FTC to those infected with Hepatitis B virus (HBV) could theoretically lead to HBV flares and liver injury with TDF/FTC discontinuation.
- Prevalence of chronic active HBV infection in the U.S. is 1.1% among foreign born and 0.14% among U.S. born.[1]

OBJECTIVE

- Determine prevalence of active HBV among HIV negative MSM initiating HIV PEP or PrEP medications at New York City (NYC) sexual health clinics (SHC).
- Match active HBV cases against the NYC HBV surveillance registry to determine if they were newly diagnosed.

METHODS

- **Observation period :**
  - ❑ Sep 2016- August 2017
- **Population of interest:**
  - ❑ HIV negative MSM initiating PEP or PrEP medications at NYC SHC.
  - ❑ If a patient initiated PEP/PrEP more than once during observation period, data from the first visit was included
- **Data source:**
  - ❑ NYC SHC electronic medical record
- **HBV Testing method:**
  - ❑ Hepatitis B serology panel
  - ❑ HBV Surface Antigen (HBsAg)
  - ❑ HBV Surface antibody (anti-HBs)
  - ❑ HBV Core antibody(anti-HBc)

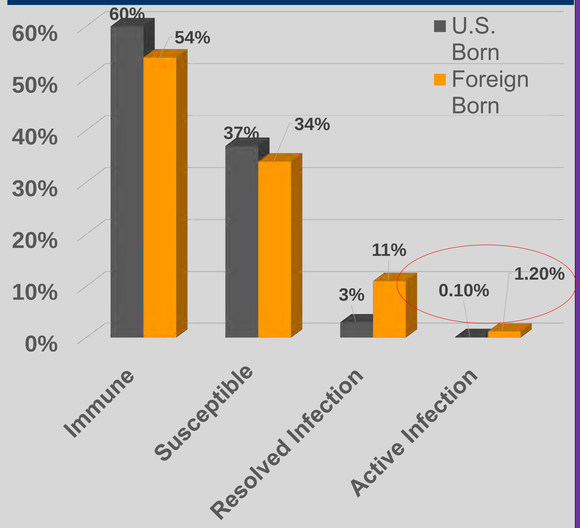
RESULTS

Table 1: Characteristics of PEP and PREP MSM Patients tested by Hepatitis B Panel at NYC SHC[1]

Variable	Patients N (%)
Total	1138 (100)
HIV medication	
PEP	757 (66.5)
PrEP	381 (33.5)
Age	
< 20	35 (3.1)
20-29	620 (54.4)
30-39	365 (32)
40+	118 (10.4)
Race/Ethnicity	
Non-Hispanic White	328 (28.8)
Non-Hispanic Black	290 (25.4)
Non-Hispanic Asian	73 (6.4)
Non-Hispanic Other	102 (9.0)
Hispanic	345 (30.3)
Country of Birth	
Foreign born	423 (37.2)
Incident STD [1]	
Yes	279 (24.5)
Number of Sex Partners [2]	
Median (Q1,Q3)	3 (2,6)

[1] Incident STD: positive gonorrhea /chlamydia NAAT test and/ or early syphilis diagnosis within 10 days of PEP/PrEP medication initiation visit
[2] Missing data : Number of sex partners (5)

Figure 1 : HBV Serology Results Among MSM Initiating PEP and PREP Medications at NYC SHC : US Born (N= 715) Vs. Foreign Born N=423)[1]



[1]Hepatitis B testing done among 99.7% of patients who initiated PEP and PrEP medications during the study period.
Immune: HBs Ag negative, anti-HBc negative, anti-HBs positive
Susceptible: HBs Ag negative, anti-HBc negative, anti-HBs negative
Resolved Infection: HBs Ag negative, anti-HBc positive, anti-HBs positive
Active Infection: HBs Ag positive, anti-HBc positive, anti-HBs negative

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RESULTS

- All patients diagnosed with active HBV had normal liver function tests.
- **Foreign- born patients were more likely to be infected with HBV than U.S. born patients (1.2% vs. 0.14%; p<0.05)**.
- Among the six diagnosed with active HBV infection, one patient reported history of HBV infection. After being recalled for abnormal HBV test , additional four recalled their past history of HBV infection.
- All six patients were offered referrals and linkage to HBV providers; five patients accepted.
- **Match against HBV surveillance registry results:** Five patients were considered newly diagnosed HBV

DISCUSSION

- **Limitations**
  - ❑ HBV testing method in this study did not test for IgM anti-HBc antibody to differentiate acute versus chronic HBV infections.
- **Conclusion**
  - ❑ The prevalence of active HBV infection in this cohort is similar to the national estimates, despite the of HBV vaccine induced immunity (57%) among this MSM cohort is higher than the national estimates of similar age group [1].
- **Implications**
  - ❑ At clinics that provide PEP and PrEP to foreign-born MSM, establishing access to HBV care for MSM with active HBV infection through referral systems is important.

References

[1] Roberts et al. *Hepatology*. 2016; 63: 388-397