Prevalence and Factors Associated with Hepatitis B Immunization and Infection among Men Who Have Sex with Men (MSM) in Beijing, China

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Study Population Recruit

• Web-based advertisements on websites targeting MSM in Beijing

• Distribution of information leaflets by trained peer recruiters at MSM-frequented venues

• Peer referral by current study participants
Data Collection

- Questionnaire-based survey
  - demographic information
  - sexual behavior information
  - potential sexual or non-sexual risk factors for STD transmission

- Blood specimens were collected and tested for serologic markers of HBV, HIV, syphilis and HCV infections
HBV Laboratory Testing

• **Vaccine-associated immunity** was defined by the sole presence of anti-HBs

• **Immunity due to natural infection (past infection)** was defined by the presence of anti-HBc and anti-HBs with an absence of HBsAg

• **Susceptibility to HBV infection** was defined as the complete absence of these three serologic markers

• **Total HBV infection** was defined as the presence of HBsAg or anti-HBc
Results

1,111 MSM were identified as eligible for the study.

- HBsAg prevalence was 9.0%
- anti-HBc prevalence was 23.8%
- HIV prevalence was 11.6%
- syphilis RPR prevalence was 13.4%
- syphilis TPPA prevalence was 33.1%
- anti-HCV prevalence was 3.9%
Magnitude and Correlates of Vaccine-associated Immunity

• Overall, 38.9% (432/1,111) of the participants had serologic evidence of Hepatitis B vaccination (vaccine-associated immunity)

• Independent factors associated with vaccination
  - Higher education level
  - Smaller number of male sex partners (past 1 year)
  - History of blood donation
Magnitude and Correlates of HBV Infection

• Overall, 26.5% (294/1,111) of participants had serologic evidence of HBV infection (including current and past infection)

• Independent factors associated with HBV infection
  ■ Absence of steady male sex partner(s), past 1 year
  ■ Reported diagnosis of STD

● MSM positive for HBV infection were more likely to have past or current syphilis infection
Comparison of the age-specific HBsAg prevalence in six age-groups between the MSM and general population (GP) in Beijing
Seroprevalence of hepatitis B infection and vaccine induced serostatus by age group among MSM
Conclusions

• The low vaccination coverage and high prevalence of HBV infection indicates that MSM population in Beijing remain at risk of HBV infection.

• High-risk sexual contact is an important mode of HBV transmission among MSM individuals.
Conclusions

• Comprehensive preventative measures for HBV among MSM, including vaccination programs based on blood banks and HIV-STD clinics and targeted health education campaigns should be developed.
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Willing to abroad postdoctoral research, welcome to contact me!

THANKS