Association of Effective Patient Communication with Hepatitis B Vaccine Coverage in the United States

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INTRODUCTION
In 2018, the prevalence of past or present hepatitis B virus (HBV) infection in the United States was 4.3%. Evidence of HBV infection was highest among non-Hispanic Asians versus non-Hispanic whites and was greater among foreign-born adults. As of 2012, the prevalence of hepatitis B vaccine-induced immunity was 25% in the US. Meanwhile, the CDC recommends hepatitis B vaccination for adults who are at-risk for contracting the infection, including sexually-active adults with more than one partner in the past 6 months and those exposed to blood among others.

PROJECT DESIGN
The NHIS was queried for respondents in 2017—the only year in which a set of questions were included to assess patient access to effective communication in the past 12 months. Sample-weighted adjusted multivariable logistic regressions defined adjusted odds ratios (AOR) and 95% confidence intervals (CI) of receiving the hepatitis B vaccine with response to one of the five questions on effective patient communication and cultural competency as the independent variable of interest, while controlling for relevant sociodemographic and clinical variables. Statistical analyses were conducted using Stata/IC 16.1 (StataCorp) with α=0.05.

FIGURE
Weighted proportions* of respondents aged ≥18 years who received the hepatitis B vaccine stratified by answers to the five cultural competency measures from the NHIS 2017.

FINDINGS
19,371 participants aged 18 or above responded to the effective patient communication and cultural competency questions, with a median age of 54 (IQR 37-67). 66.79% were non-Hispanic white, 54.51% were female, 6.64% were uninsured, 3.17% were non-English speaking, and 16.04% were foreign-born. Respondents who were asked about their beliefs and opinions regarding their care (aOR 1.28, 95% CI 1.18-1.40, p<0.001) and those who were given easy-to-understand information (aOR 1.18, 95% CI 1.00-1.40, p<0.04) were significantly more likely to receive hepatitis B vaccination compared to their counterparts. Non-English-speaking participants (aOR=0.64, 95% CI, 0.46-0.89, p<0.01) older, and uninsured individuals were less likely to have received any hepatitis B vaccination (p<0.001).

DISCUSSION
Being inoculated against hepatitis B was positively correlated with measures of effective patient communication, and negatively correlated with being a non-English speaker, Asian, older, and uninsured. These inequities can be partially explained by implicit biases among healthcare providers, poor health literacy, and lack of healthcare access among others. Lack of effective patient communication contributes to these disparities, while effective patient communication improves outcomes in vaccination, healthcare, and satisfaction. Future studies and policies can build upon these comprehensive findings.