July 9, 2020

The Honorable Alex M. Azar II
Secretary
U.S. Department of Health and Human Services
200 Independence Avenue SW
Washington, DC 20201

Dear Secretary Azar:

We, the undersigned organizations, appreciate all the steps the U.S. Department of Health and Human Services has taken to work towards hepatitis B elimination, including ensuring that adults in the U.S. are protected from hepatitis B through vaccination. However, we are deeply concerned regarding the continuous rise in the number of adults contracting hepatitis B and the connection between the spread of this infectious disease and the low adult vaccination rates, including the lack of completion of the three-dose over six-month hepatitis B vaccine series.

As you know, the Food and Drug Administration (FDA) approved a two-dose in one-month vaccine for the prevention of hepatitis B in November 2017. The two-dose in one-month vaccine provides faster and higher rates of seroprotection than three-dose over six month options, and was subsequently recommended by the CDC Advisory Committee on Immunization Practices (ACIP) in February 2018. The two-dose hepatitis B vaccine offers a shorter dosing regimen and has exhibited higher immunogenicity among both the healthy and immunosuppressed populations1.

As organizations dedicated to the elimination of hepatitis B, we encourage the Department, and in particular the Centers for Disease Control and Prevention (CDC), to prioritize its adult vaccination efforts and consider expediting the Advisory Committee on Immunization Practices (ACIP) preferential review of this two-dose in one-month vaccine.

The two-dose vaccine presents a significant advancement in public health, particularly when vaccination is still the primary means for preventing hepatitis B infection and its severe, long-term consequences. Not only is this a more clinically and logistically effective solution, but it is also a more cost effective solution.

While we defer to the CDC ACIP and its scientific expertise, we note the two-dose vaccine has three critical advantages over the three-dose vaccine, including completion, efficacy and the cost per protected patient.

Completion: Dose completion is critical for any vaccine to work successfully. Multiple recent studies indicate suboptimal series completion rates for the three-dose adult hepatitis B vaccines. Alarming low rates of third-dose completion -- 31%, 22% and 26% -- leave approximately

---

70%\(^2\) of patients who have started the three-dose adult hepatitis B vaccine regimen unprotected, creating an illusion of successful vaccination for them, their providers and the public health infrastructure. Among our own community efforts reaching underserved populations including high-risk first and second generation Americans and persons who inject drugs, we have difficulty administering the third dose - in Philadelphia, we have seen less than 20% of those who start the vaccine series with us complete the third dose. The hepatitis B vaccine is particularly important for Asian Americans, Pacific Islanders, and African immigrants, who face a disproportionate burden from the virus. Asian Americans and Pacific Islanders account for approximately five percent of the U.S. population but account for over 50% of all chronic hepatitis B cases while African immigrant communities can have up to a 15% infection rate.\(^3,4\)

**Efficacy:** Effective rates of seroprotection in adults who have received only two doses of the three-dose hepatitis B vaccine range in the area of 22%-32%.\(^5\) In comparison, the two-dose vaccine has a seroprotection rate of 90%-95%\(^6\) after one month and two doses. Statistically significantly higher rates with the 2-dose vs. the 3-dose were also observed in persons with diabetes and other known hyporesponsive populations.\(^7\)

**Cost Per Protected Patient:** The cost of protecting adults from hepatitis B is critically important to our role as stewards of good fiscal responsibility. In 2019, the CDC Public Health Awardees

---


\(^5\) Engerix-B second dose seroprotection rates data can be found in: HEPLISAV-B [package insert]. Berkeley, CA: Dynavax Technologies Corporation; 2018.; Halperin S, et al. *Vaccine.* 2012;30:2556-2563.; FDA Advisory Committee Briefing Document: HEPLISAV-B® [Hepatitis B Vaccine (Recombinant), Adjuvanted]. Presented at: Meeting of the Vaccines and Related Biological Products Advisory Committee; Silver Spring, MD; July 28, 2017.; Second dose seroprotection (SPR) rates for Engerix-B in Dynavax clinical trials HBV-10 and HBV 16 were 33.7% (ages 18) and 21.5% (ages 40-70) respectively.

\(^6\) Heplisav-B second dose seroprotection rates can be found in: HEPLISAV-B [package insert]. Berkeley, CA: Dynavax Technologies Corporation; 2018.; Halperin S, et al. *Vaccine.* 2012;30:2556-2563.; FDA Advisory Committee Briefing Document: HEPLISAV-B® [Hepatitis B Vaccine (Recombinant), Adjuvanted]. Presented at: Meeting of the Vaccines and Related Biological Products Advisory Committee; Silver Spring, MD; July 28, 2017.; Second dose seroprotection (SPR) rates for Heplisav-B in Dynavax clinical trials HBV-10 and HBV 16 were 95% (ages 18) and 90.1% (ages 40-70) respectively.

purchased 164,700 adult 3-dose hepatitis B vaccine doses, at a cost of $5,435,100. Given the low rates of third-dose completion stated above, approximately 75% of the patients receiving those doses remain unprotected. This translates into a budget wastage of $4,098,065 or 75.4% of public funds invested. Low compliance rates are not limited to the public health setting. There is equivalent low compliance for state Medicaid programs, Medicare and Managed Care Organizations, with associated budget wastage ranging from 50%-70% of adult hepatitis B dose spend for the three-dose vaccine in these payer segments.11

The CDC has been asked by Congress to come up with a plan for hepatitis B elimination and we encourage you to take the necessary steps to evaluate the utility of the two-dose vaccine as a stronger, more effective weapon in our fight to eliminate hepatitis B. An estimated 2.2 million people in the United States live with hepatitis B virus, with more than half unaware they are living with the disease. Despite being a vaccine preventable disease, little to no progress has been made to reduce the number of chronic hepatitis B cases in the U.S. The number of reported acute hepatitis B cases across the country rose for the first time since 2006, increasing by 20.7% in 2015, largely due to low adult vaccination rates. Only about 30% of adults aged 19-49 years and 16% of adults over 50 years are vaccinated against hepatitis B13.

We are concerned that as a result of the opioid crisis, in particular, infections of viral hepatitis have spiked at alarming rates in parts of the nation most impacted by it: rates of acute hepatitis B increased ranging from 56% to 457% in states most heavily affected by the opioid epidemic.

---

8 CDC Awardee Program, 2019 reported doses from CDC
9 Cost based on CDC price for Engerix-B, as listed on CDC Adult Vaccine Price List; https://www.cdc.gov/vaccines/programs/vfc/awardees/vaccine-management/price-list/index.html
10 Source, Dynavax Technologies. Poster presented at: 48th National Immunization Conference (NIC); May 15-17, 2018; Atlanta, Georgia.
including in Kentucky, Tennessee, West Virginia, North Carolina, and Maine.\textsuperscript{14,15,16,17} While the recent increase in hepatitis B cases has been attributed to homelessness and the opioid crisis, infections have also increased amongst many high-risk populations such as patients suffering from diabetes, end stage renal disease (ESRD) and HIV. These increases are evidence that our current vaccination efforts of those most vulnerable are not working. Effective, rapid vaccination is critical in the short-term to stem the tide of HBV infection.

In addition, hepatitis B vaccination saves millions of dollars of health care spending in the U.S. In fact, hepatitis B vaccination is the most cost-effective strategy towards eliminating hepatitis B and related liver cancers. Hepatitis B remains a leading cause of liver cancer; 50\% of all liver cancers are caused by hepatitis B\textsuperscript{18}-- one of the most lethal, most expensive to treat, and fastest growing cancers in America-- with 5-year survival rates of only 15\%. The hepatitis B vaccine was named the first “anti-cancer” vaccine by the U.S. Food and Drug Administration because it prevents chronic hepatitis B infections, thereby preventing liver cancer caused by the hepatitis B virus.

The United States is falling short on hepatitis B elimination goals with significant outbreaks of this disease across the U.S. The two-dose vaccine provides an essential option for protecting adults from hepatitis B. We know that this is a challenging time for our public health leaders and advisors, but especially now, it is imperative that we move forward efforts to improve adult vaccine rates for hepatitis. We ask that CDC and CDC’s ACIP continue to prioritize hepatitis B and consider a timely review and implementation of strategies to improve adult vaccine rates, including a review of preferential status for the two-dose vaccine.

Sincerely,

Hepatitis B Foundation
Hep B United
National Viral Hepatitis Roundtable
The AIDS Institute


ADAP Advocacy Association
Alliance for Positive Change
African Family Health Organization (AFAHO)
American Association for the Study of Liver Diseases
Any Positive Changes Inc.
Asian Center - Southeast Michigan
Asian Pacific Health Foundation
Asian & Pacific Islander American Health Forum (APIAHF)
Asian Pacific Liver Center
Association of Asian Pacific Community Health Organizations (AAPCHO)
Bay Clinic Pharmacy
The Bonnie Morgan Foundation for HCV
Caring Ambassadors Program, Inc.
Coalition on Positive Health Empowerment
Community Access National Network (CANN)
Community Health Care Network
Community Liver Alliance
Community Welfare Services of Metro Detroit
Desert AIDS Project
Dynavax
End Hep C San Francisco
Georgia AIDS Coalition
Global Liver Institute
Hawaii Comprehensive Cancer Control Program
Hawaii Health & Harm Reduction Center
Hawai’i Immunization Coalition
Hep B United Philadelphia
Hep Free Hawaii
Hepatitis B Initiative of Washington DC (HBI-DC)
Hepatitis C Association
Hepatitis C Mentor and Support Group (HCMSG)
Hepatitis Education Project
HIV Medicine Association
Immunization Action Coalition
Immunize Colorado
Infectious Diseases Society of America
Latino Commission on AIDS
National Alliance of State & Territorial AIDS Directors (NASTAD)
National Nurse-Led Care Consortium
National Task Force on Hepatitis B Focus on Asian and Pacific Islander Americans
Northeast Philadelphia Chinese Association (NEPCA) of Culture Trust Greater Philadelphia
Robert G. Gish Consultants LLC
San Francisco Hep B Free - Bay Area
Sidney Kimmel Cancer Center at Jefferson
Treatment Action Group
TruCare Internal Medicine & Infectious Diseases
Vietnamese American Cancer Foundation
Vietlead

cc: Elinore F. McCance-Katz, M.D., Ph.D.
Assistant Secretary for Mental Health and Substance Use
Substance Abuse and Mental Health Services Administration

Robert R. Redfield, M.D.
Director
Centers for Disease Control and Prevention

Robert Wilkie
Secretary
U.S. Department of Veterans Affairs

Jonathan Mermin, MD, MPH
Director
National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention
Centers for Disease Control and Prevention

Carolyn Wester, MD, MPH
Director
Division of Viral Hepatitis
Centers for Disease Control and Prevention