

Virtual Exhibit Hall: Dynavax

April 24, 2023



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This webinar is being recorded and will be posted to the AIM website

Agenda

- 2:00 - 2:02 ET: Welcome and Technology Overview (Monica)
- 2:02 - 2:25 ET: Dynavax Presentation
- 2:25- 2:30: Q&A and Closing

About AIM

- The Association of Immunization Managers (AIM) represents the 64 immunization programs that receive funding from CDC's National Center for Immunization and Respiratory Diseases (NCIRD)
- In 50 states, 5 major cities + D.C., the territories, and Pacific Islands
- Programs are tasked with COVID-19 vaccine planning: distribution, administration, and tracking

Catching Up Adults on Hepatitis B Vaccination

Stephanie Campbell, PhD

April 24, 2023

Goals & Objectives

- Discuss hepatitis B elimination efforts and review ACIP hepatitis B vaccination recommendations for adults
- Highlight key considerations for successful hepatitis B vaccine implementation
- Explain the critical role of public health stakeholders in getting adults vaccinated for hepatitis B

Majority of US Adults Are Missing Routine Vaccinations



Only up to 32% of general internists and family physicians reported assessing vaccination status at every visit according to a recent survey¹



At least 3 out of every 4 adults are missing one or more routinely recommended vaccines, a rate made worse by the COVID-19 pandemic²



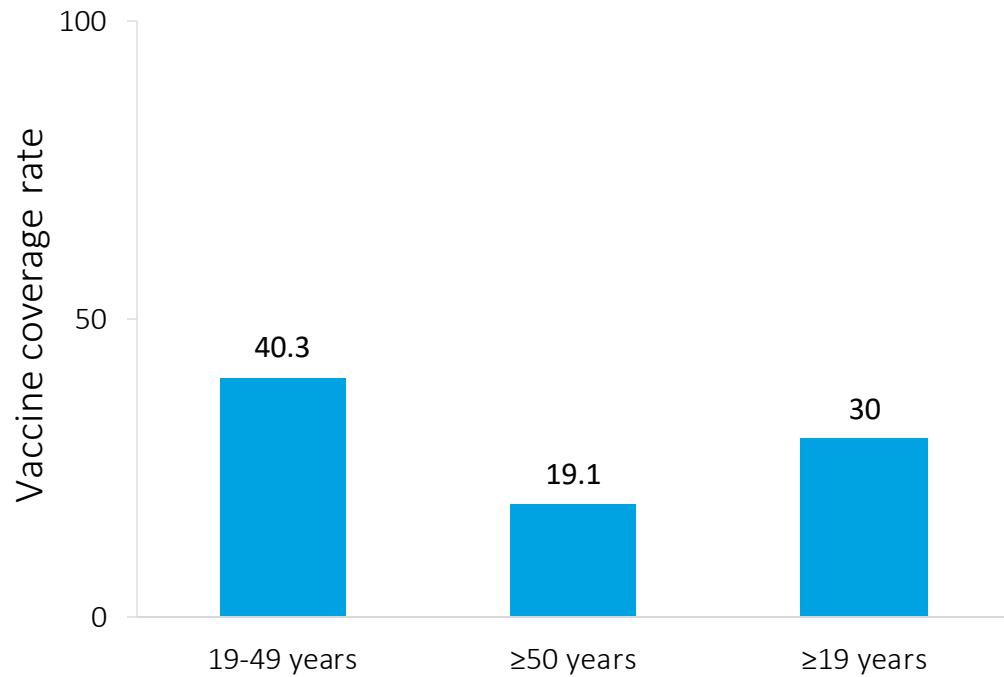
Million doses of recommended vaccines missed by adolescents and adults in one analysis from January 2020–July 2021, during the COVID-19 pandemic³

1. CDC. Overview A Series on Standards for Adult Immunization Practice. <https://www.cdc.gov/vaccines/hcp/adults/downloads/standards-immz-practice.pdf>. Accessed February 10, 2022. 2. CDC. Strategies for Increasing Adult Vaccination Rates. <https://www.cdc.gov/vaccines/hcp/adults/for-practice/increasing-vacc-rates.html>. Accessed February 10, 2022. 3. Avalere Health. Declines in Routine Adult and Teen Vaccinations Continued in 2021. January 10, 2022. <https://avalere.com/insights/declines-in-routine-adult-and-teen-vaccinations-continued-in-2021>. Accessed February 21, 2022.

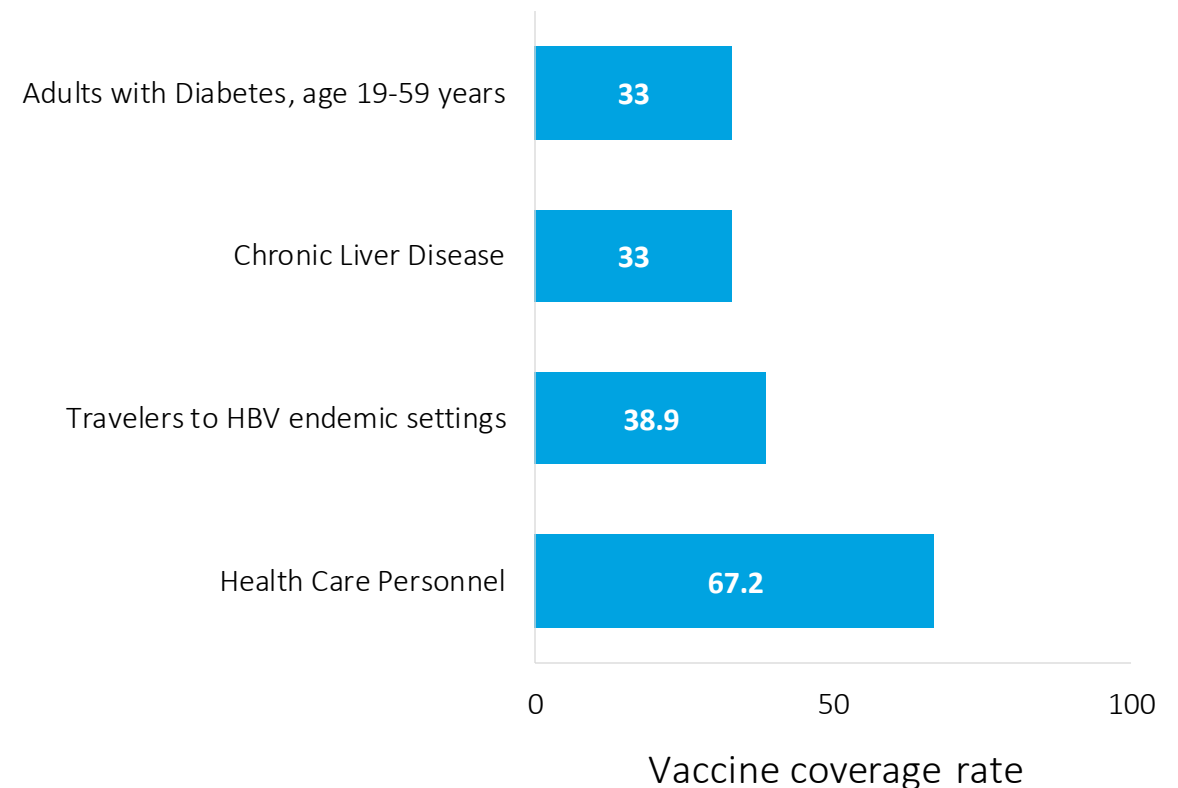
Adult Hepatitis B Vaccination Coverage Rates Are Low

Approximately 30% of adults aged 19 and older have received a hepatitis B vaccine series

Hep B vaccination coverage among adults, by age (≥ 3 doses), 2018*



Hep B vaccination coverage among persons at increased risk, by risk factor (≥ 3 doses), 2018*



*Hepatitis B vaccine coverage rates among US adults were estimated based on the results of the 2018 National Health Interview Survey that sampled 25,207 adults.

Weng MK, et al. *MMWR Morb Mortal Wkly Rep.* 2022;71(13):477-483.

GLOBAL GOAL: Elimination of Viral Hepatitis by 2030

Viral Hepatitis National Strategic Plan: Roadmap to Elimination¹

Goal 1: Prevent New Viral Hepatitis Infections

Goal 2: Improve Viral Hepatitis–Related Health Outcomes of People with Viral Hepatitis

Goal 3: Reduce Viral Hepatitis–Related Disparities and Health Inequities

Goal 4: Improve Viral Hepatitis Surveillance and Data Usage

Goal 5: Achieve Integrated, Coordinated Efforts That Address the Viral Hepatitis Epidemics among All Partners and Stakeholders




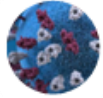
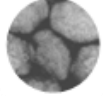
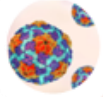
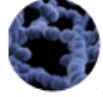
Hepatitis B is a
vaccine preventable
disease²

*“The best way to prevent hepatitis B
is to get vaccinated.”*

– CDC³

¹. Department of Health and Human Services. Viral Hepatitis National Strategic Plan: A Roadmap to Elimination 2021–2025. Available at: <https://www.hhs.gov/sites/default/files/Viral-Hepatitis-National-Strategic-Plan-2021-2025.pdf>. Accessed April 26, 2022. ². CDC. Why CDC is working to prevent hepatitis B globally. <https://www.cdc.gov/globalhealth/immunization/diseases/hepatitis-b/why/index.html>. Accessed May 9, 2022. ³. CDC. Hepatitis B. <https://www.cdc.gov/hepatitis/hbv/index.htm>. Accessed October 4, 2022.

History of Progress Against Vaccine-Preventable Diseases in the United States

	CASES ¹ (prevaccine* to postvaccine [†])	DEATHS ¹ (prevaccine* to postvaccine [‡])
 DIPHTHERIA	100% reduction (21,053 to 0)	100% reduction (1822 to 0)
 MEASLES	99.99% reduction (530,217 to 55)	100% reduction (440 to 0)
 SMALLPOX	100% reduction (29,005 to 0)	100% reduction (337 to 0)
<hr style="border-top: 1px dotted #0070C0;"/>		
 HEPATITIS A	87% reduction (117,333 to 15,298)	86.9% reduction (137 to 18)
 INVASIVE PNEUMOCOCCAL DISEASE	34.1% reduction (63,067 to 41,550)	25.4% reduction (6500 to 4850)

Vaccines are among the most beneficial and cost-effective health interventions available²

*Prevaccine dates vary among diseases.

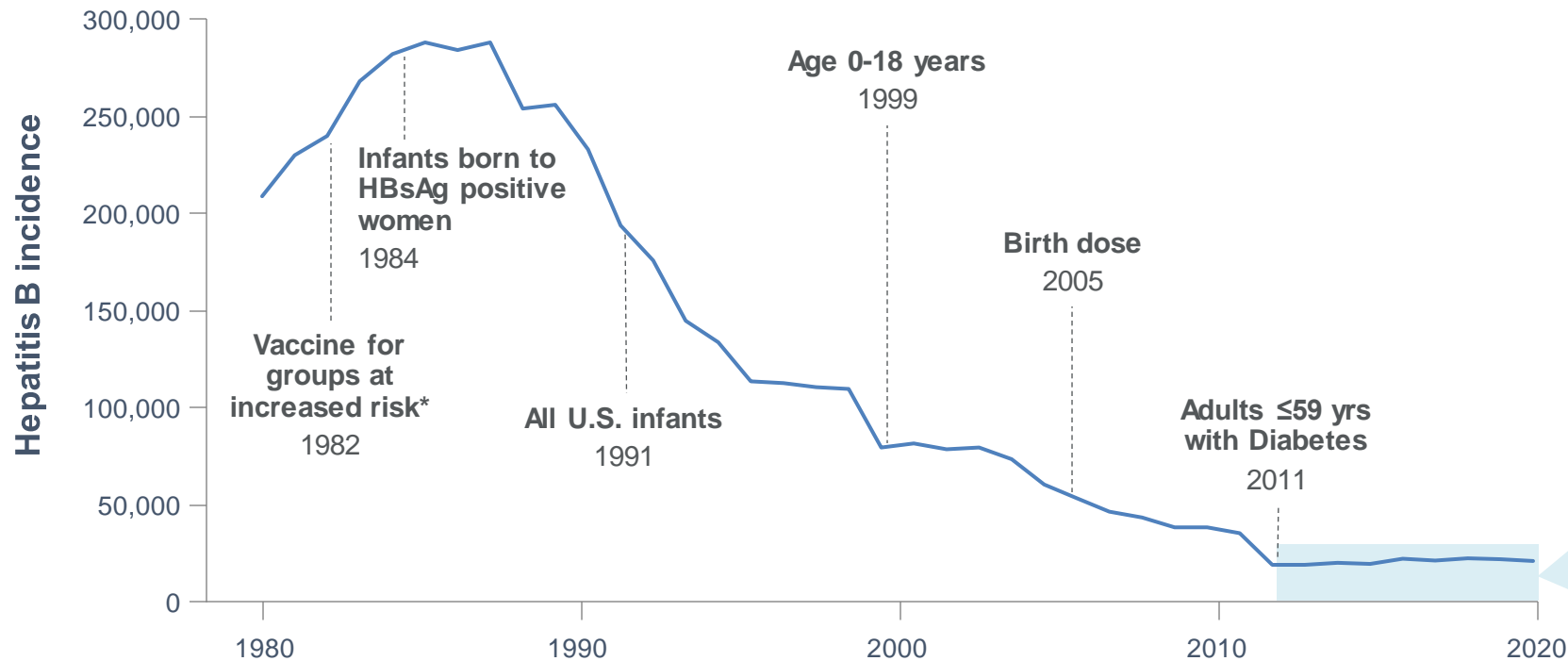
[†]Cut-off date for postvaccine cases is from 2006, except for invasive pneumococcal disease (2005).

[‡]Cut-off dates for postvaccine deaths are from 2004 (diphtheria, measles, and smallpox), 2005 (invasive pneumococcal disease), and 2006 (hepatitis A).

Pathogen images are from the Centers for Disease Control and Prevention (CDC) website.

ACIP Recommendations Have Led to a Decrease in Acute Hepatitis B Cases, but Numbers Have Plateaued

Hepatitis B Vaccine Recommendations, Estimated Acute Hepatitis B Cases in the US, 1980-2019¹



- Previous age-based universal vaccination strategies have led to lower rates of hepatitis B infection among children and adolescents of all races and ethnicities²
- Case numbers have since plateaued, despite risk-based recommendations for adults

*Health care providers, men who have sex with men, injection-drug users, hemodialysis patients, household & sexual partners of persons with chronic hepatitis B, persons in certain institutional settings, e.g., inmates of long-term correctional facilities.

ACIP, Advisory Committee on Immunization Practices.

1. Doshani M. Evidence to Recommendations Framework: Should all HepB-unvaccinated adults receive hepatitis B vaccination? Presentation to ACIP.

<https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2021-09-29/03-hepb-Doshani-508.pdf>. Accessed December 1, 2021. 2. Weng MK, et al. *MMWR Morb Mortal Wkly Rep*. 2022;71(13):477-483.

Universal Hepatitis B Vaccination Recommended in Adults

Updated policy simplifies hepatitis B vaccine recommendations in adults^{1,2}

- All adults aged 19–59 years **should** receive hepatitis B vaccination
- Adults aged ≥60 years with risk factors for hepatitis B **should** receive hepatitis B vaccination
- Adults aged ≥60 years without known risk factors for hepatitis B **may** receive hepatitis B vaccination

Centers for Disease Control and Prevention
MMWR
Weekly / Vol. 71 / No. 13

Morbidity and Mortality Weekly Report
April 1, 2022

Universal Hepatitis B Vaccination in Adults Aged 19–59 Years: Updated Recommendations of the Advisory Committee on Immunization Practices — United States, 2022

Mark K. Weng, MD¹; Mona Doshani, MD¹; Mohammed A. Khan, PhD¹; Sharon Frey, MD²; Kevin Ault, MD³; Kelly L. Moore, MD⁴; Eric W. Hall, PhD⁵; Rebecca L. Morgan, PhD⁶; Doug Campos-Outcalt, MD⁷; Carolyn Wester, MD¹; Noele P. Nelson, MD, PhD¹

“Removing the risk factor assessment previously recommended to determine vaccine eligibility in this adult age group could increase vaccination coverage and decrease hepatitis B cases.”²

ACIP HepB Recommendation: Adults ≥ 60 with Risk Factors

Persons at risk for infection by sexual exposure

- Sex partners of persons testing positive for HBsAg
- Sexually active persons who are not in a long-term, mutually monogamous relationship
- Persons seeking evaluation or treatment for a sexually transmitted infection
- Men who have sex with men

Persons at risk for infection by percutaneous or mucosal exposure to blood

- Persons with current or recent injection drug use
- Household contacts of persons testing positive for HBsAg
- Residents and staff members of facilities for persons with developmental disabilities
- Health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids
- Persons on maintenance peritoneal or hemodialysis, and persons who are predialysis
- Persons with diabetes at the discretion of the treating clinician

Others

- International travelers to countries with high or intermediate levels of endemic hepatitis B virus infection (HBsAg prevalence of $\geq 2\%$)
- Persons with hepatitis C virus infection
- Persons with chronic liver disease
- Persons with HIV infection
- Persons who are incarcerated

Clinical Guidance

- The ACIP recommendations are intended to **prompt all providers to recommend HBV vaccination to adults**, including offering vaccine to patients aged 60 years and older
 - In previous HBV vaccine recommendations, providers were advised to administer HBV vaccine to all patients with risk factors and those who requested it
 - The updated recommendations **shift the responsibility** of initiating vaccine recommendation **from the patient to the provider**
- Immunocompetent persons who have completed an HBV vaccine series at any point or who have a history of HBV infection should not receive HBV vaccination
 - **Providers should only accept dated records** as evidence of HBV vaccination
 - Electronic medical records
 - Immunization information systems (registries)
 - School records

Current US Licensed Hepatitis B Vaccines for Adults

Recommended doses and schedules of hepatitis B vaccines for adults aged ≥ 18 years, by vaccine type and age group

HepB vaccine/Age group, years	Dose (μg)	Volume (mL)	Schedule
Recombivax HB			
18–19	5	0.5	3 doses at 0, 1, and 6 months
≥ 20	10	1	
Adults on hemodialysis and other immunocompromised adults aged ≥ 20	40	1	
Engerix-B			
18–19	10	0.5	3 doses at 0, 1, and 6 months
≥ 20	20	1	
Adults on hemodialysis and other immunocompromised adults aged ≥ 20	40	2	4 doses at 0, 1, 2, and 6 months
HEPLISAV-B			
≥ 18	20	0.5	2 doses at 0 and 1 months
Twinrix (HepA-HepB combination vaccine)			
≥ 18	20	1	3 doses at 0, 1, and 6 months (standard) or 4 doses at day 0, 7, 21–30, and 12 months (accelerated)
PreHevbrio			
≥ 18	10	1	3 doses at 0, 1, and 6 months

ACIP, Advisory Committee on Immunization Practices; HepA, hepatitis A; HepB, hepatitis B

Screening and Testing for Hepatitis B Virus Infection

2023 CDC Recommendations

Universal hepatitis B virus (HBV) screening

- HBV screening at least once during a lifetime for adults aged ≥ 18 years (new recommendation)
- During screening, test for hepatitis B surface antigen (HBsAg), antibody to HBsAg, and total antibody to HBcAg (total anti-HBc) (new recommendation)

Screening

- HBV screening for individuals at risk of vertical transmission
- Pregnant women with a history of exposure to HBV (i.e., no new HBV exposures since triple panel screening) only need HBsAg screening

In addition, anyone who requests HBV testing should be tested, regardless of disclosure of risk, because many persons might be reluctant to disclose stigmatizing risks (new recommendation)

Risk-based testing

- Testing for all persons with a history of increased risk for HBV infection, regardless of age, if they might have been susceptible during the period of increased risk*
- Periodic testing for susceptible persons, regardless of age, with ongoing risk for exposures, while risk for exposures persists*

*Susceptible persons include those who have never been infected with HBV and either did not complete a hepatitis B vaccine series per Advisory Committee on Immunization Practice recommendations or who are known to be vaccine nonresponders.

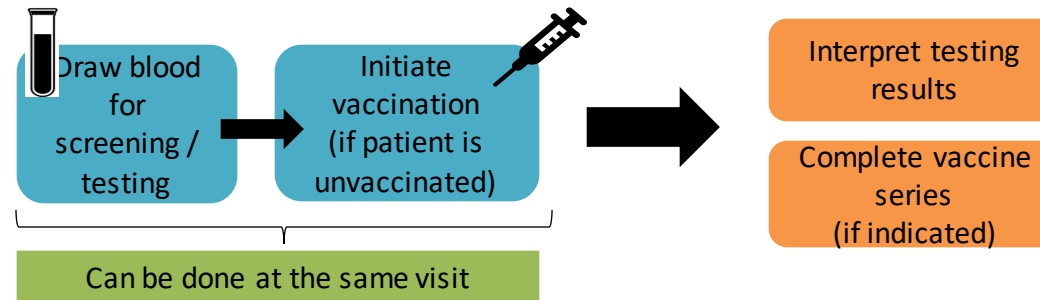
HBsAg, hepatitis B surface antigen; HBcAg (hepatitis B core antigen); HBV, hepatitis B virus.

Connors EE, et al. *MMWR Morb Mortal Wkly Rep.* 2023;72(1):1-25.

Hepatitis B Screening & Vaccination

Considerations for Implementing CDC Recommendations

- After the collection of blood for serologic testing, persons who have not completed a hepatitis B vaccine series **should be offered vaccination per ACIP recommendations¹ at the same visit or at an associated provider visit²**
 - Blood collection **before** vaccination is recommended because transient HBsAg positivity has been reported for up to 18 days after vaccination²
 - Providers **do not need to wait** for the serologic testing results to administer the first or next dose of vaccine²



- **Screening should not be a barrier to hepatitis B vaccination**, especially in populations that have decreased engagement with or access to health care²
 - In settings where testing is not feasible or the patient refuses, vaccination of persons should continue according to ACIP recommendations. Serologic testing should continue to be offered at future visits.

What role can you play in progressing the United States toward the elimination of hepatitis B?

Your Role in Adult Hepatitis B Vaccination is Critical

Educate

- Ensure providers are informed about the ACIP's adult vaccine recommendations & national elimination goals
- Increase provider awareness about removal of previous barriers such as risk assessments and patient co-pays
- Educate adult patients about the need to receive hepatitis B vaccination

Engage stakeholders

- Ensure IIS are up-to-date with hepatitis B vaccine forecasting and are interoperable with EHRs
- Encourage use of standing orders to streamline vaccination workflows
- Leverage the “immunization neighborhood” including immunization coalitions, pharmacies, and community partner organizations

Track progress

- Measure hepatitis B vaccine coverage rates in adults to establish your baseline (leverage registries, EHRs, or other sources)
- Track improvements in vaccine coverage over time
- Monitor both uptake of first dose and completion of vaccine series

Summary

Adults are behind on routine immunizations, including hepatitis B

The ACIP now recommends that **all adults aged 19-59** receive a hepatitis B vaccine series

Prevention is a key component of the national strategic plan to eliminate viral hepatitis by 2030

Public health stakeholders have a critical role to play in getting adults caught up on hepatitis B vaccination

The updated ACIP recommendations provide the unique opportunity for providers to **get adults vaccinated** as we continue to drive toward the goal of hepatitis B elimination

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Questions & Answers

Upcoming Virtual Exhibit Hall Webinars

- Wednesday, April 26 at 2:00-2:30 PM ET | [Novavax](#)
- Wednesday, April 26 at 3:30-4:00 PM ET | [Strategic Solutions Group](#)
- Wednesday, May 10 at 1:00-1:30 PM ET | [LogTag Recorders](#)
- Wednesday, May 10 at 3:00-3:30 PM ET | [Pfizer](#)
- Thursday, May 11 at 1:30-2:00 PM ET | [SensoScientific](#)
- Wednesday, June 28 at 1:00-1:30 PM ET | [Bavarian Nordic](#)

Closing

- Still have questions? Submit your questions to monica_mayer@outlook.com and AIM will facilitate a response.
- Take the event evaluation that we will send at the end of the webinars. Your feedback will help us improve!
- The event recording and Vendor FAQs will be available on the AIM website

<https://www.immunizationmanagers.org/corporate-alliance/virtual-exhibit-hall/>