



CERNER REFERENCE GUIDE

EFFECTIVELY IMPLEMENTING THE ACIP ADULT HEPATITIS B VACCINE RECOMMENDATIONS

Updated July 2025

DYN**AVAX**

IMPORTANT NOTES ABOUT YOUR CERNER REFERENCE GUIDE

- ✓ The information within this document is specific to Cerner electronic health record (EHR) software and intended for educational purposes only. Health systems are responsible for developing, implementing, testing, and monitoring all Cerner features utilized within their EHR system to ensure proper application and functionality.
- ✓ This document has not been reviewed nor endorsed by the developers of Cerner. The information presented may not be complete or up-to-date as systems change without notice.
- ✓ The decision to vaccinate is the responsibility of the provider, in consultation with the eligible adult.
- ✓ This document is intended to be applicable to a wide range of health system sizes, but with an emphasis on the outpatient versus inpatient setting.
- ✓ Your institution/health system may or may not have access to all Cerner features and tools described within this document.

COMMON CERNER USERS AMONG YOUR HEALTHCARE TEAM



PROVIDER
Physician, NP, PA



NURSE



PHARMACIST



**HEALTH SYSTEM
MANAGEMENT**



**ELIGIBLE
ADULT**

INTRODUCTION TO YOUR UNIVERSAL CERNER GUIDE

This reference guide is a resource to help facilitate hepatitis B vaccination within health systems, in consideration of the Advisory Committee on Immunization Practices (ACIP) routine hepatitis B vaccination recommendations in all eligible adults.^{1,2*} With hepatitis B vaccination deemed routine in this population, millions of adults in the United States are recommended for vaccination.³ This reference guide highlights **decision support tools**, **chart functionalities**, and **population health strategies** specific to Cerner software that can be leveraged to implement hepatitis B vaccination strategies targeting appropriate adults.

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HBV, hepatitis B virus.

*As of April 2022, the ACIP updated its guidelines to recommend that all adults aged 19–59 years should receive hepatitis B vaccination. Additionally, all adults aged 60 years and older with risk factors for hepatitis B infection should be vaccinated. Adults aged 60 years and older without known risk factors may receive hepatitis B vaccination. This recommendation does not apply to adults who have received a complete hepatitis B vaccine series in their lifetime or have a history of HBV infection.¹

WHAT YOU WILL FIND WITHIN THE REFERENCE GUIDE

This guide discusses **decision support tools**, **chart functionalities**, and **population health strategies** specific to Cerner that health systems can leverage to increase vaccination rates for hepatitis B among adults.

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IDENTIFYING AND ADDRESSING PATIENT INTERVENTIONS

By using features and tools available in Cerner, health systems can create a customized approach to implementing the ACIP adult hepatitis B vaccination recommendations, with the goal of proactively encouraging vaccination among eligible adults aged 19 years and older^{1,2} and tracking series completion.



Decision Support Tools

Functionalities for specific user groups that require response from the user.



Chart Functionalities

Tabs or screens accessible within a patient chart that provide key information to users. The information displayed can trigger a user to make a decision or perform a specific evaluation for that patient.









Population Health Strategies

Interactive databases that generate customized and filtered patient lists across an entire health system based on selected criteria. These patient lists can be leveraged to create batch functions. Examples of batch functions include, but are not limited to, sending a chart message, ordering a vaccine or medication, or flagging vaccination statuses.

AVAILABLE CERNER FEATURES AND TOOLS



Below is a curated list of Cerner features and tools available to help healthcare teams identify and address hepatitis B vaccination gaps.

FEATURE/ TOOL	TYPE	DEFINITION	INTENDED END USER	OUTPUT
Section 1: Decision Support Tools				
Discern Alert	 ALERT	Customizable alerts that pop up within a patient chart, triggering an action/decision from the Cerner user	<ul style="list-style-type: none"> • Provider (Physician, NP, PA) • Pharmacist • Nurse 	<ul style="list-style-type: none"> • Suggested intervention accepted and activated (eg, order placed) • Suggested intervention dismissed or postponed
Health Maintenance Alert	 ALERT	Customizable alerts that appear within the Health Maintenance section of the patient's chart, suggesting an action/decision from the Cerner user	<ul style="list-style-type: none"> • Provider (Physician, NP, PA) • Pharmacist • Nurse 	<ul style="list-style-type: none"> • Suggested intervention accepted and activated (eg, order placed) • Suggested intervention dismissed or postponed
PowerPlan	 ORDER ENTRY	Order entry workflow allows providers to order multiple components of the patient's plan of care including lab tests, x-rays, medications, vaccinations, and patient education	<ul style="list-style-type: none"> • Ordering providers and eligible co-signers 	<ul style="list-style-type: none"> • Vaccine ordered and administered
Section 2: Chart Functionalities				
Visit Summary	 PRINT DOCUMENT	Printed information provided to patient after a visit or hospitalization summarizing the encounter, and includes instructions, current medication list, follow-up appointments, and vaccination status	<ul style="list-style-type: none"> • Provider (Physician, NP, PA) • Pharmacist • Nurse 	<ul style="list-style-type: none"> • Patient notified of vaccination recommendation • Patient schedules a vaccination appointment or receives it at a pharmacy
HealtheLife Patient Portal Reminder	 PATIENT PORTAL	Descriptive and personalized reminder messages for vaccinations and screenings sent by the patient's provider	<ul style="list-style-type: none"> • Provider (Physician, NP, PA) • Patient 	<ul style="list-style-type: none"> • Patient notified of vaccination recommendation • Patient schedules a vaccination appointment or receives it at a pharmacy
Immunization Forecaster	 PATIENT CHART	Type of preventive care tracking tool, which helps healthcare team members identify care gaps related to missing and overdue vaccinations	<ul style="list-style-type: none"> • Provider (Physician, NP, PA) • Pharmacist • Nurse 	<ul style="list-style-type: none"> • Passive – no direct action from generated tracking tool • Vaccine manually ordered and subsequently administered and documented

(Continued on next page.)

AVAILABLE CERNER FEATURES AND TOOLS

Below is a curated list of Cerner features and tools available to help healthcare teams identify and address hepatitis B vaccination gaps. (continued)

FEATURE/ TOOL	TYPE	DEFINITION	INTENDED END USER	OUTPUT
Section 3: Population Health Strategies				
Discern Informatics Query and Recall Report	 DATABASE	Functionality that allows users to filter patient data to identify gaps in care	<ul style="list-style-type: none"> • Provider (Physician, NP, PA) • Health system management 	<ul style="list-style-type: none"> • Report generated and reviewed for vaccination eligibility • Vaccine manually ordered and subsequently administered and documented
HealthIntent	 DATABASE	Aggregation and filtering of population health and patient data	<ul style="list-style-type: none"> • Provider (Physician, NP, PA) • Health system management 	<ul style="list-style-type: none"> • Reports and data sets generated and reviewed for vaccination eligibility

GUIDANCE FOR THE IMPLEMENTATION OF CERNER FEATURES AND TOOLS

DISCERN ALERT



DECISION SUPPORT TOOL > Alert

Discern Alerts are customizable alerts that can appear within various sections in a patient chart when specific criteria are met, triggering an action or decision from the user.

CONSIDERATIONS

- It is important to ensure correct inclusion/exclusion criteria are incorporated to avoid unnecessary or incorrect popups
- Appropriately set up the hepatitis B vaccination Discern Alert to encourage healthcare teams to speak with their patients about vaccination and preventive care
- Include a link to the hepatitis B [MMWR publication](#) in your alert to give your healthcare team members key information to make informed decisions

HEPATITIS B VACCINATION – IMPLEMENTATION CHECKLIST

- ☐ **Select title of alert:** Adult Hepatitis B Vaccination Status
- ☐ **Create Evoke (trigger event), Logic (inclusion/exclusion criteria), and Action (content/actions) parameters, which will indicate the ACIP criteria logic necessary to trigger the alert**
- ☐ **Include key message:** Your patient is [RECOMMENDED to receive/OVERDUE for/MISSING A DOSE of] routine hepatitis B vaccination
- ☐ **Select inclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 19 years and older^{1*} **AND**
 - **Hepatitis B Vaccination History:** No history of vaccination
- ☐ **Select exclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 18 years and younger¹ **OR**
 - **Contraindications to Hepatitis B Vaccination** **OR**
 - **Hepatitis B Vaccination History:** Completion of hepatitis B vaccine series **OR**
 - **History of Hepatitis B Infection**
- ☐ **Create Discern Rules based on the inclusion and exclusion criteria above to identify patients recommended to receive hepatitis B vaccination**

ACIP, Advisory Committee on Immunization Practices; MMWR, *Morbidity and Mortality Weekly Report*.

*In order to comply with Boolean logic and address shared decision making, consider flagging adults aged 60 years and older without known risk factors as *may be recommended to receive* hepatitis B vaccination.

GUIDANCE FOR THE IMPLEMENTATION OF CERNER FEATURES AND TOOLS

HEALTH MAINTENANCE ALERT



DECISION SUPPORT TOOL > Alert

Health Maintenance Alerts appear in the Health Maintenance section of the patient's chart; they are used by providers and nurses to identify patients who may be recommended to receive vaccination.

CONSIDERATIONS

- Automate a Health Maintenance Alert for adult hepatitis B vaccination so that healthcare team members can stay on track with the updated vaccine recommendations
- Ensure the patient's vaccination history is current to avoid unnecessary or incorrect alerts
- Activate Health Maintenance Alerts for pharmacists and nurses – they can recommend and/or administer vaccines

HEPATITIS B VACCINATION – IMPLEMENTATION CHECKLIST

- ☐ **Select title of alert:** Adult Hepatitis B Vaccination Status

- ☐ **Create Health Maintenance Expectation Schedules, Series, and Rules based on the criteria below, which will indicate the ACIP criteria logic necessary to trigger the alert and identify patients recommended to receive hepatitis B vaccination**

- ☐ **Include key message:** Your patient is [RECOMMENDED to receive/OVERDUE for/MISSING A DOSE of] routine hepatitis B vaccination

- ☐ **Select inclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 19 years and older^{1*} **AND**
 - **Hepatitis B Vaccination History:** No history of vaccination

- ☐ **Select exclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 18 years and younger¹ **OR**
 - **Contraindications to Hepatitis B Vaccination** **OR**
 - **Hepatitis B Vaccination History:** Completion of hepatitis B vaccine series **OR**
 - **History of Hepatitis B Infection**

ACIP, Advisory Committee on Immunization Practices.

*In order to comply with Boolean logic and address shared decision making, consider flagging adults aged 60 years and older without known risk factors as *may be recommended to receive* hepatitis B vaccination.

GUIDANCE FOR THE IMPLEMENTATION OF CERNER FEATURES AND TOOLS POWERPLAN



DECISION SUPPORT TOOL > Order Entry

PowerPlans provide streamlined order entry workflow by including all necessary individual orders associated with specified clinical care outcomes into one submission, such as lab tests, x-rays, medications, and vaccinations.

CONSIDERATIONS

- Leverage unique PowerPlan capabilities for vaccination orders by including patient education, such as Vaccine Information Statements (VIS), and scheduling patients' multidose hepatitis B vaccine to ensure series completion
- Utilize narrow selection functionality when creating vaccination order fields to help streamline provider workflow – allow providers to select the preferred product as the only choice
- Activate PowerPlans for pharmacists and nurses – they may be permitted to enter PowerPlans for cosign by providers*

HEPATITIS B VACCINATION – IMPLEMENTATION CHECKLIST

- ☐ Create a new PowerPlan or update an existing one (eg, Wellness Visit, Preventive Care Interventions, Discharge Plan)
- ☐ Select inclusion criteria for vaccination eligibility based on:
 - Patient Age: Patients aged 19 years and older^{1*} **AND**
 - Hepatitis B Vaccination History: No history of vaccination
- ☐ Select exclusion criteria for vaccination eligibility based on:
 - Patient Age: Patients aged 18 years and younger¹ **OR**
 - Contraindications to Hepatitis B Vaccination **OR**
 - Hepatitis B Vaccination History: Completion of hepatitis B vaccine series **OR**
 - History of Hepatitis B Infection
- ☐ Include hepatitis B vaccine product details

ACIP, Advisory Committee on Immunization Practices.

*Not all health systems allow pharmacists and/or nurses to enter orders for cosign by providers. Check with your health system's policy before granting access to these user groups.

GUIDANCE FOR THE IMPLEMENTATION OF CERNER FEATURES AND TOOLS

VISIT SUMMARY



CHART FUNCTIONALITY > Print Document

The Visit Summary is provided to patients after a visit or hospitalization. It includes instructions, current medication list, follow-up appointments, and vaccination status.

CONSIDERATIONS

- Review the Visit Summary with each patient, leveraging the opportunity to schedule their hepatitis B vaccination prior to discharge or leaving an appointment
- Use the **Clinical View Manager Tool** to add additional, customizable content to the Visit Summary
- To ensure users receive correct vaccination schedules for their patients, confirm the vaccine product details are entered into the alert specifications
- Counsel patients on routine vaccinations at every encounter as a critical preventive care strategy

HEPATITIS B VACCINATION – IMPLEMENTATION CHECKLIST

- ☐ **Select recommended vaccination:** Adult Hepatitis B Vaccination
- ☐ **Sample message copy:**
 - You are **RECOMMENDED** to receive hepatitis B vaccination. Schedule an appointment to receive vaccination
 - You are **OVERDUE** for your next hepatitis B vaccination dose. Schedule an appointment to receive vaccination
 - You have **NOT COMPLETED** your routine hepatitis B vaccination series. Schedule an appointment to receive vaccination
- ☐ **Select inclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 19 years and older^{1*} **AND**
 - **Hepatitis B Vaccination History:** No history of vaccination
- ☐ **Select exclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 18 years and younger¹ **OR**
 - **Contraindications to Hepatitis B Vaccination** **OR**
 - **Hepatitis B Vaccination History:** Completion of hepatitis B vaccine series **OR**
 - **History of Hepatitis B Infection**
- ☐ **Include hepatitis B vaccine product details**
- ☐ **Select Publish to complete the Visit Summary and provide to adult patients recommended to receive hepatitis B vaccination via the [HealtheLife Patient Portal](#), email, or printed copy**

ACIP, Advisory Committee on Immunization Practices.

*In order to comply with Boolean logic and address shared decision making, consider flagging adults aged 60 years and older without known risk factors as *may be recommended to receive* hepatitis B vaccination.

GUIDANCE FOR THE IMPLEMENTATION OF CERNER FEATURES AND TOOLS HEALTHELIFE PATIENT PORTAL REMINDER



CHART FUNCTIONALITY > Patient Portal

HealthLife is Cerner's patient portal, where patients can see upcoming appointments, prescriptions due for refill, and overdue vaccinations. A messaging feature allows providers to send personalized reminder messages for vaccinations and screenings through the HealthLife Patient Portal system.

CONSIDERATIONS

- Use population health strategies, like [Discern Informatics Query](#) and [Recall Report](#), to select patients recommended to receive hepatitis B vaccination reminders through the patient portal
- Use **Clipboard forms** to encourage patients to keep their vaccination status updated in their HealthLife Patient Portal, especially whether they have received vaccination outside of your health system

HEPATITIS B VACCINATION – IMPLEMENTATION CHECKLIST

☐ **Input subject of HealthLife Reminder:** Hepatitis B Vaccination

☐ **Sample message copy:**

- You are **RECOMMENDED** to receive hepatitis B vaccination. Schedule an appointment to receive vaccination by clicking here
- You are **OVERDUE** for your next hepatitis B vaccination dose. Schedule an appointment to receive vaccination by clicking here
- You have **NOT COMPLETED** your routine hepatitis B vaccination series. Schedule an appointment to receive vaccination

☐ **Select inclusion criteria for vaccination eligibility based on:**

- **Patient Age:** Patients aged 19 years and older¹ **AND**
- **Hepatitis B Vaccination History:** No history of vaccination

☐ **Select exclusion criteria for vaccination eligibility based on:**

- **Patient Age:** Patients aged 18 years and younger¹ **OR**
- **Contraindications to Hepatitis B Vaccination** **OR**
- **Hepatitis B Vaccination History:** Completion of hepatitis B vaccine series **OR**
- **History of Hepatitis B Infection**

ACIP, Advisory Committee on Immunization Practices.

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GUIDANCE FOR THE IMPLEMENTATION OF CERNER FEATURES AND TOOLS IMMUNIZATION FORECASTER



CHART FUNCTIONALITY > Patient Chart

The Immunization Forecaster houses details of vaccination records, including those from manual entry and from medication administration records. This screen allows providers to view a patient's vaccination history as well as a list of vaccines suggested by Cerner based on the current ACIP schedule and the patient's demographics.



CONSIDERATIONS

- Direct all healthcare team members to this tab by using a [Discern Alert](#) and/or [Health Maintenance Alert](#) allowing them to help screen patient vaccination status
- To effectively leverage the Immunization Forecaster, update the patient's vaccination history by recording administered vaccines, especially those not administered within your health system – it is important to document prior hepatitis B vaccinations to track series completion!

✓ HEPATITIS B VACCINATION – IMPLEMENTATION CHECKLIST

- ☐ Create a [Discern Alert](#) and/or [Health Maintenance Alert](#) to remind your healthcare team to review the Immunization Forecaster
- ☐ Select inclusion criteria for vaccination eligibility based on:
 - Patient Age: Patients aged 19 years and older^{1*} **AND**
 - Hepatitis B Vaccination History: No history of vaccination
- ☐ Select exclusion criteria for vaccination eligibility based on:
 - Patient Age: Patients aged 18 years and younger¹ **OR**
 - Contraindications to Hepatitis B Vaccination **OR**
 - Hepatitis B Vaccination History: Completion of hepatitis B vaccine series **OR**
 - History of Hepatitis B Infection

ACIP, Advisory Committee on Immunization Practices.

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GUIDANCE FOR THE IMPLEMENTATION OF CERNER FEATURES AND TOOLS DISCERN INFORMATICS QUERY AND RECALL REPORT



POPULATION HEALTH STRATEGY > Database

Discern Informatics Queries and Recall Reports allow providers to create Patient Lists that help identify patients who may be recommended to receive vaccination by searching patient databases within a health system as per selected criteria (eg, demographics, previous vaccinations).

CONSIDERATIONS

- Develop a Patient List that tracks hepatitis B vaccinations within your health system
- Utilize the **Report Design** and **Discern Analytics** to create a custom list with relevant filters to select/sort patients within the electronic health record
- Encourage all healthcare team members to review the Patient List and determine appropriate next steps for vaccination

HEPATITIS B VACCINATION – IMPLEMENTATION CHECKLIST

- ☐ **Select title for list:** Adult Hepatitis B Vaccination Status
- ☐ **Select inclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 19 years and older^{1*} **AND**
 - **Hepatitis B Vaccination History:** No history of vaccination
- ☐ **Select exclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 18 years and younger¹ **OR**
 - **Contraindications to Hepatitis B Vaccination** **OR**
 - **Hepatitis B Vaccination History:** Completion of hepatitis B vaccine series **OR**
 - **History of Hepatitis B Infection**
- ☐ **Set up filters to extract relevant data for user, including but not limited to:**
 - **Associated provider**
 - **Patient population**
 - Adults aged 19–59 years
 - Adults aged 60 years and older with risk factors[†]
 - Adults aged 60 years and older without known risk factors
 - **Patient location (eg, adult outpatient clinic, emergency department)**
 - **Vaccine product and doses completed**
 - **Date range**

ACIP, Advisory Committee on Immunization Practices; MMWR, *Morbidity and Mortality Weekly Report*.

*In order to comply with Boolean logic and address shared decision making, consider flagging adults aged 60 years and older without known risk factors as *may be recommended to receive* hepatitis B vaccination.

[†]Please refer to the hepatitis B vaccination guidelines noted in the MMWR publication for the specific factors that increase risk for hepatitis B.¹

GUIDANCE FOR THE IMPLEMENTATION OF CERNER FEATURES AND TOOLS

HEALTHeINTENT



POPULATION HEALTH STRATEGY > Database

HealtheIntent is a population health management platform that gives healthcare teams the ability to explore outcomes data at the health-system level.

CONSIDERATIONS

- Utilize HealtheIntent to cleanse and organize large-scale data that capture hepatitis B vaccination in your entire health system's patient population
- Streamline patient identification by creating appropriate reports and notifications for your healthcare team based on HealtheIntent data analysis

HEPATITIS B VACCINATION – IMPLEMENTATION CHECKLIST

- ☐ **Select inclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 19 years and older^{1*} **AND**
 - **Hepatitis B Vaccination History:** No history of vaccination
- ☐ **Select exclusion criteria for vaccination eligibility based on:**
 - **Patient Age:** Patients aged 18 years and younger¹ **OR**
 - **Contraindications to Hepatitis B Vaccination** **OR**
 - **Hepatitis B Vaccination History:** Completion of hepatitis B vaccine series **OR**
 - **History of Hepatitis B Infection**
- ☐ **Set up filters to extract relevant data for user, including but not limited to:**
 - **Associated provider**
 - **Patient population**
 - Adults aged 19–59 years
 - Adults aged 60 years and older with risk factors[†]
 - Adults aged 60 years and older without known risk factors
 - **Patient location (eg, adult outpatient clinic, emergency department)**
 - **Vaccine product and doses completed**
 - **Date range**

ACIP, Advisory Committee on Immunization Practices; MMWR, *Morbidity and Mortality Weekly Report*.

*In order to comply with Boolean logic and address shared decision making, consider flagging adults aged 60 years and older without known risk factors as *may be recommended to receive* hepatitis B vaccination.

[†]Please refer to the hepatitis B vaccination guidelines noted in the MMWR publication for the specific factors that increase risk for hepatitis B.¹

CERNER REFERENCE GUIDE

TAKE THE NEXT STEP

Help your team implement the ACIP adult hepatitis B vaccine recommendations.

Health System Decision Makers



COMMUNICATE

What will you tell your teams?



EDUCATE

What does your team need to learn to routinely protect eligible adults against hepatitis B?



EVALUATE

What, when, and how will you measure your team's success?

Immunizers



IDENTIFY

all eligible adults^{1*}



RECOMMEND PROTECTION



VACCINATE

with a hepatitis B vaccine¹

EXAMPLE OF A STRONG RECOMMENDATION



Many eligible patients are overdue for hepatitis B vaccination. Hepatitis B can lead to liver diseases like liver cancer.^{1,4†}

Based on your age, I recommend you get vaccinated today.



Hepatitis B vaccines do not treat liver diseases such as cancer.⁵

ACIP, Advisory Committee on Immunization Practices; HBV, hepatitis B virus.

*As of April 2022, the ACIP updated its guidelines to recommend that all adults aged 19–59 years should receive hepatitis B vaccination. Additionally, all adults aged 60 years and older with risk factors for hepatitis B infection should be vaccinated. Adults aged 60 years and older without known risk factors may receive hepatitis B vaccination. This recommendation does not apply to adults who have received a complete hepatitis B vaccine series in their lifetime or have a history of HBV infection.¹

†For most people, the hepatitis B virus clears on its own. But for those who don't clear the virus, it can progress to chronic hepatitis B and potentially life-threatening consequences such as liver cancer. From 2018–2023, there were an estimated 13,000–22,000 cases of acute hepatitis B annually in the US.^{4,6}

References: 1. Weng MK, Doshani M, Khan MA, et al. Universal hepatitis B vaccination in adults aged 19–59 years: updated recommendations of the Advisory Committee on Immunization Practices — United States, 2022. *MMWR Morb Mortal Wkly Rep.* 2022;71(13):477–483. 2. Murthy N, Wodi AP, Bernstein H, McNally V, Cineas S, Ault K. Advisory Committee on Immunization Practices recommended immunization schedule for adults aged 19 years or older — United States, 2022. *MMWR Morb Mortal Wkly Rep.* 2022;71:229–233. 3. Data on file. Dynavax Technologies Corporation. Flow model for universal hepatitis B vaccination (version 4.5) assumptions. May 24, 2021. 4. Centers for Disease Control and Prevention. Clinical overview of hepatitis B. Accessed July 7, 2025. <https://www.cdc.gov/hepatitis-b/hcp/clinical-overview/index.html> 5. Centers for Disease Control and Prevention. Recommended adult immunization schedule for ages 19 years or older, United States, 2025. Accessed April 26, 2025. <https://www.cdc.gov/vaccines/hcp/imz-schedules/downloads/adult/adult-combined-schedule.pdf> 6. Centers for Disease Control and Prevention. Number of reported cases and estimated infections of acute hepatitis B — United States, 2016–2023. Accessed May 2, 2025. <https://www.cdc.gov/hepatitis-surveillance-2023/hepatitis-b/figure-2-1.html>

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