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Introduction and Contact Information

This guide is intended for hospital users around the state that administer vaccine. Likewise, "hospital" users will have access to all patient level reports available in the Vermont Immunization Registry (IMR) as well as the ability to manually enter and modify a patient's profile and their vaccine record in the registry, as needed.

Access to the registry is mandated by Vermont State Law and the information contained therein must remain confidential and privileged (18 V.S.A. § 1129).

To gain access to the IMR, hospital users must submit the proper confidentiality agreement to the state, upon which the request will be reviewed, and permission provided. To learn more about the process to gain access to the IMR, please visit our website.

If you have any questions, please contact us:

Vermont Immunization Registry (Website)

Email: IMR@Vermont.Gov Phone: (888) 688-4667

Option 2 – password resets

Option 3 – general support





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First time Login

The registry will send your username to the email provided on your confidentiality agreement within two or three days after it is submitted. Be sure to check your junk and/or spam folder to make sure you received this email.

- 1. Start by clicking the link in the email to set up your password.
- 2. Enter the same email address as before and click on the button to submit a password change. This will send you an email to reset your password.
- 3. Click on the Reset Password button or link in the email. Your browser will open to the page to set up your password. Create a password that is at **least 8 characters long**. The password must also contain:
 - a. a lowercase letter
 - b. an uppercase letter
 - c. a number
 - d. a symbol.
- 4. Once you click submit, you will be directed to a page with links for Vermont Department of Health sites. Click on the Immunization Registry (IMR) link.
- 5. Log in with the username sent to you in the email from the Registry team and use the password that you just set up.
- 6. If you have difficulty logging in, please visit the following section on <u>access issue</u> troubleshooting, or contact us.





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Access Issues Troubleshooting

The Immunization registry is only supported on the Microsoft Edge, Mozilla Firefox and Google Chrome browsers. The program is incompatible with Internet Explorer, Safari, Opera, and any other web browsers and will not open if clicked. The app is not supported on mobile devices.

If you <u>click the link to our site</u> and it opens in an unsupported browser, you will need to either change your default browser through your computer's settings or you can copy and paste the link into a supported browser.

If the app is not loading in the approved browsers, there is a chance it is being interrupted by the default pop-up blocker. This setting can also affect whether reports will fully load for some users. To solve this, you will need to copy the url for the application (below) and paste it into the pop-up whitelist in the browser settings.

https://apps.health.vermont.gov/PatientProfile/default.aspx

To whitelist, or unblock, the IMR in your browser, navigate to the settings menu: typically an icon for three dots or lines in the upper right-hand corner under the "X" to close out.

In **Microsoft Edge,** click Settings, then Cookies and site permissions, followed by Pop-ups and redirects and add the link to the app into the allow list.

In **Mozilla Firefox**, click settings, followed by Privacy & Security, and scroll down to Exceptions, where you can add the link to the app to the Allow list.

In **Google Chrome**, click settings, then Privacy and Security, followed by Site settings and Pop-ups and redirects where you can add the link to the app under "Allowed to send pop-ups and use redirects"





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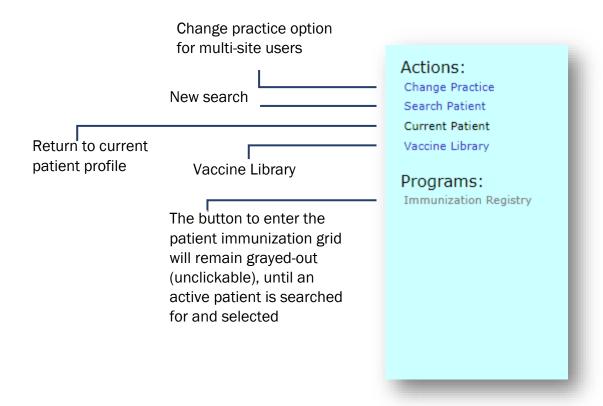
Entry Screen - Basic Toolbars

Upon logging in successfully, you should come to a blank patient search screen. This is the starting point of all actions within the IMR. You will not be able to view any information or run any reports without selecting a patient in the IMR.

Upper toolbar elements



Sidebar elements







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Performing a Patient Search

To perform a patient search, enter the patient's **entire first name, last name, and date of birth** (**dd/mm/yyyy**). Be sure to use the "/" symbol when entering the DOB. Other patient identifiers are available, but in most cases the first name, last name, and DOB will result in the desired patient if they exist and are active in the IMR.

An effective search will reduce the chances of finding duplicates. The IMR will pull multiple names that are *close* to a search, so the DOB is the best way to make sure you find the correct patient.

	Sea	rch Patient	
	not use "wild card searches, where you ve done so in the past. These searches m		
Best practice: 6	enter last name AND first name AND dat	e of birth.	
First Name:	Sugar	Date of Birth:	2/15/2015
Last Name:	Donut		
Identifiers:		•	
Search Results	:		
	New Search	Find Cance	ıl
cl w	ne New Search button ears all the fields in the indow to allow for a ifferent patient search	Search	"Cancel" will not clear the fields but will allow a user to add a new patient if there are no results

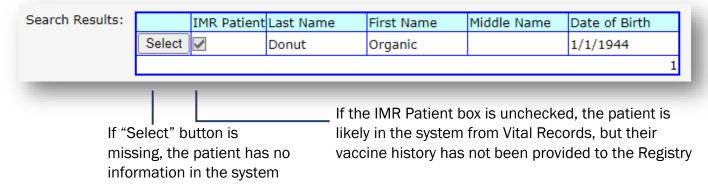




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Patient Search Troubleshooting

A correctly performed search will yield, ideally, only one result:



If the **search yields no results**, the patient may be deceased and was automatically inactivated in the system. You will need to <u>contact the Registry team</u> to retrieve or view these records.

Automatic Patient Creation: many practices are set up to have records sent automatically from their Electronic Health Record (EHR) through HL7 messaging. In this case, nothing will need to be manually entered into the Registry for a new patient.

Manual Patient Creation (see next page): for practices that have not yet been onboarded with HL7 messaging, there may be a need to manually add a patient. A note: if the search yields a similar result that is not the new patient, click "Cancel" under the search results to refresh the page with an "Add New" button.

Duplicates and spelling mistakes should be <u>brought to the attention of the Registry team</u>, as well as name changes, although changes are updated in the system from Vital Records.





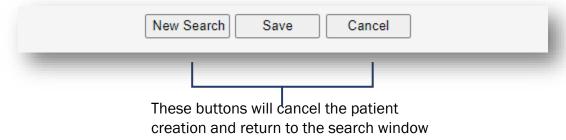
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Manual Patient Creation – the Patient Profile

Upon the manual creation of a new patient, you will first come to the patient profile, where fields should be filled as accurately as possible, including fields indicated as required in red. The practice should automatically assign to the <u>current associated practice</u>.

The IMR Status **Patient Information** The preferred Field is covered in IMR Status: Active ~ name field is a later section of *Primary Practice: Preferred Name: used to this guide *First Name: indicate former *Date of Birth: 1/1/1944 Middle Name: Male last names. *Last Name: *Residence: Addison Donut ~ such as Suffix: maiden name The Residence Field Race: Ethnicity: American Indian or Alaska Native Patient of Hispanic Origin? (Check the box that best Asian Indian describes whether patient is Spanish/Hispanic/Latino. Check the "No" box if patient is not is used for county -Black or African American Spanish/Hispanic/Latino.) level reporting Chinese Filipino ✓ No, not Spanish/Hispanic/Latina/Latino provided by the Guamanian or Chamorro Unknown Japanese Health Department Unknown ☐ Native Hawaiian Yes Yes, Cuban Other Yes, Mexican, Mexican American, Other Asian Chicana/Chicano Other Pacific Islander Yes, other Spanish/Hispanic/Latina/Latino □ Samoan Yes, Puerto Rican □ Unknown Vietnamese White Person Contact Information Address Loc.: *Street: 123 Fictional Street Address Type: Mailing Address Confidentiality: Normal *City/Town: Addison *State: *Zip: 05491 VT ~ UNITED STATES

When you finish creating or modifying the patient profile, you will need to click "Save" to submit the new patient to the Registry and/or update their information.







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Manual Patient Creation – the Patient Profile continued (Minors)

For patients under the age of 18, the Parent/Associated Person Information fields are also required to proceed to the next screen. A note: in some cases where a patient is added to a practices EHR and sent to the Registry through HL7 Messaging, this information is missing and will be required to proceed to the next screen: it is always good to have the minor's parent information on hand when searching for a recently created patient.



If the patient's parent/associated person information is unknown, please contact us.

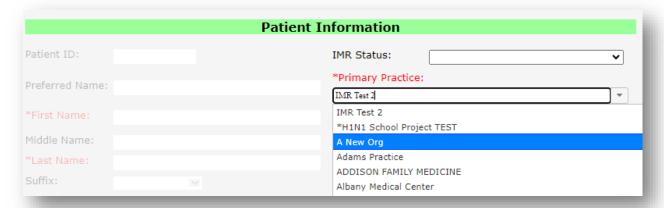




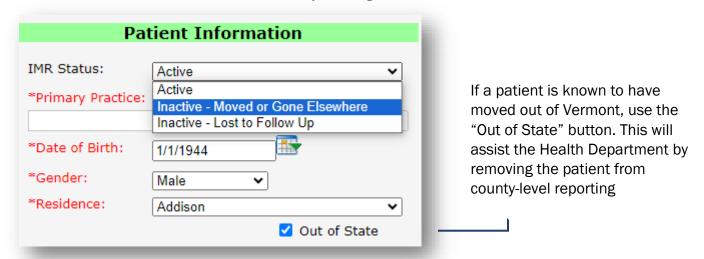
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MOGE (moved or gone elsewhere) - Patient Status

When a patient moves away or stops coming to you for care, they must still appear on your reports. To keep your rates accurate, you will need to indicate when someone is no longer your patient. **If the patient moves to another practice within Vermont**, their primary practice will be automatically updated when they receive their next shot at the new location. This can also be performed manually in the patient profile, followed by clicking save:



If the patient has moved or gone elsewhere and did not communicate where, you can use the IMR Status field to indicate their status, followed by clicking "save".



The Registry team can also <u>provide a list of patients upon request</u> who have not received any immunizations in a while to help find patients who are no longer active.



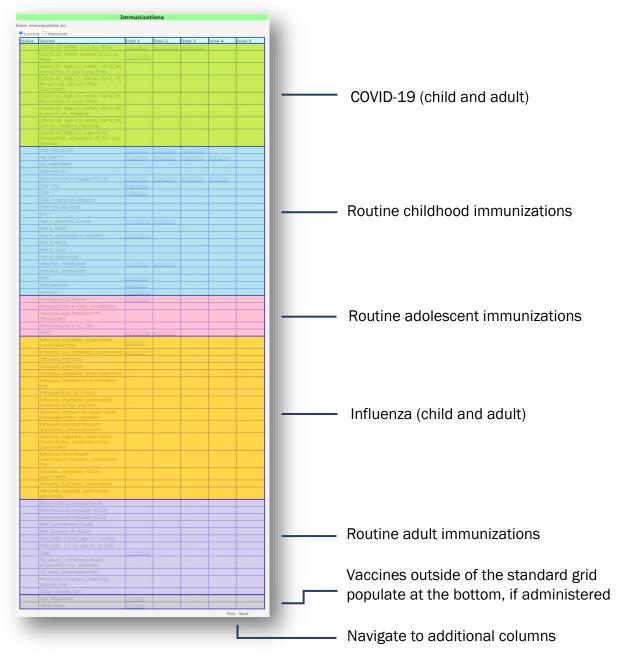


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Patient Immunization History - The Immunization Grid

Individual vaccine records are viewed in the Immunization Grid, which is accessed by clicking the <u>"Immunization Registry" link in the lefthand toolbar</u> after performing a <u>patient search</u>.

The grid is generally laid out by vaccine age indication with a few exceptions (see below). The columns display chronological doses for each vaccine.







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Vaccine Detail - Current Dose

Current doses are immunizations that are recorded by the administering practice and have more information than a historical dose. In addition to the administration date, a current dose will include the practice/source, administration details, and further detail about the vaccine.

The practice / **Immunization Detail** source populates The date of COVID-19, mRNA, bivalent, 6+ months from the practice administration Vaccine: EHR or practice of Date: 06/06/2023 does not Practice/Source: IMR Test 2 the direct entry necessarily Vaccinator/Cred.: John Doe Route: Intramuscular user that added MFR: Site: Left Arm Moderna US, Inc match the date the record added to the Exp. Date: 02/02/2024 Lot: AB12345 registry Vaccines for Children Eligibility: American Indian or Alaska Native The name of the vaccinator will not Insured or age 19 and older (Not VFC Eligible) auto-populate for **Vaccine Information Sheets** direct entry and Date VIS Given: Please select VIS Publication Type and Date to record Vaccine Information Materials Given: must be added manually Save Delete Cancel

If fields are grayed out (un-editable)

The ability to <u>change or edit a current dose</u> depends on the original source of the record: if the username matches the Practice/Source field, then all the fields will be available to edit and the buttons to save or delete the record will appear

If the <u>current associated practice</u> does not match the Practice/Source field, the fields will be gray and not editable and only the cancel button will appear. This is because only the site that administered an immunization can delete or edit their record. If there is a confirmed mistake from another practice, <u>contact the IMR team directly</u>.

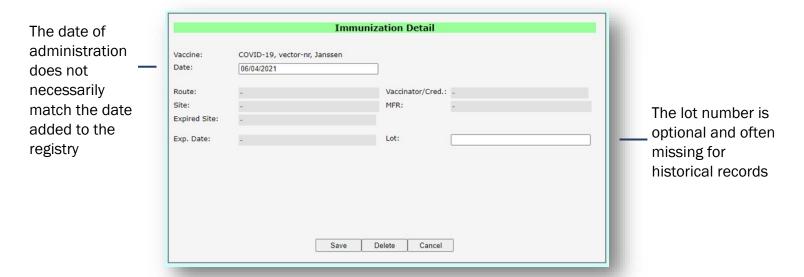




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Vaccine Detail - Historical Dose

Historical doses in the IMR are often doses administered elsewhere and, thus, do not include as much information as a <u>current (or administered) dose</u>. When historical doses are recorded, the administration date is required but the only other field available is lot number, which is optional.



Historical doses will not include the practice/source field (see current doses) and all other fields will be grayed out. While the IMR team does have the ability to look up the practice or user who added a historical shot, there is no front-end method for IMR users to view this information.





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Making Changes in the IMR

Historical Doses

In the immunization detail window for a historical dose, users will be able to edit the date and add or edit the lot number for a vaccine, even if it was added by another user/practice. This is different from <u>current (administered) doses</u>. There will also be the option to delete a historical dose, but this should only be done under specific circumstances (see section "When to Edit vs. When to Delete")

When to Edit vs. When to Delete

Immunization Registry business rules are in place to reduce the occurrence of duplicates. Because of this, there are rules built into the IMR that will prevent a user from re-entering a previously deleted shot. Therefore, **immunization records should only be deleted when the selected vaccine did not occur**, as opposed to when there are changes that need to be made.

- If the wrong vaccine name was selected (such as a Moderna COVID-19 record that was
 recorded as a Pfizer shot), add in the correct vaccine before you delete the incorrect shot. You
 will receive the message "There is another instance of an immunization containing the same
 antigen recorded within 24 days of this date. If you believe this is a duplicate, please go back
 and DELETE the extra immunization."
- Only if an immunization did not occur should it be deleted.
- If there are fields that are incorrect for a historical record or your practice matches the Practice/Source field for a current record, correct the information by clicking on the date of the vaccine and then click save.
- If there are fields that are incorrect for a current record from another user or practice that need to be modified, contact the Registry team.
- If you delete a dose that should have been modified, you will receive the message "Entry for ____ is a duplicate and will not be saved" if you attempt to re-enter the vaccine. If this occurs, you will need to contact the Registry team.
- As always, the Registry Team is available to ensure the highest quality information is submitted to the IMR. If you are unsure of how to modify a record, <u>please do not hesitate to reach out</u>.



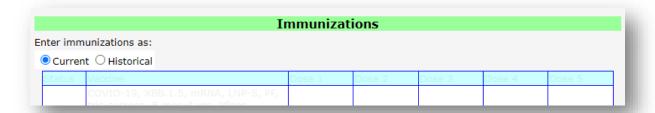


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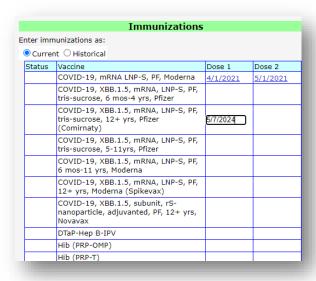
Manual Entry

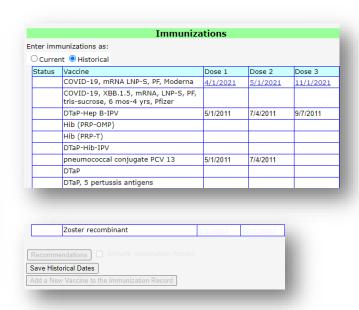
Most larger practices likely have already been onboarded for HL7 Messaging, and both current and historical doses will be automatically sent over when entered in the practice's EHR.

For smaller practices and some situations where the manual entry of records is necessary: Start by toggling between the Current and Historical radio buttons at the top of the vaccine grid.



<u>Current doses require more information</u> and must be added one at a time (click "Enter" on your keyboard to save), while <u>historical doses require less information</u> and can be added all at once, just scroll to the bottom of the grid and click "Save Historical Dates"





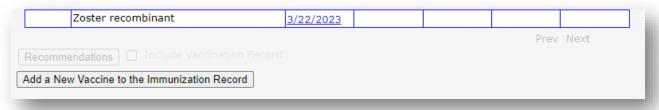




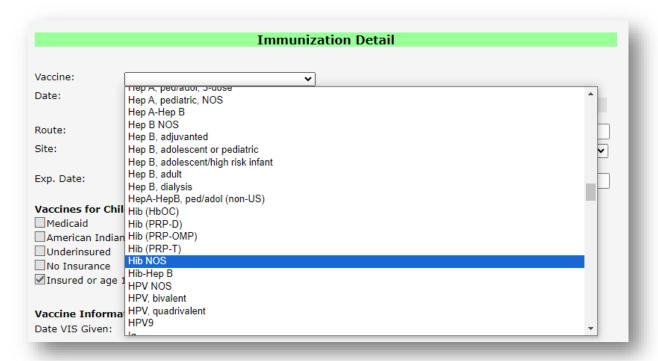
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Manual Entry Continued - Vaccines not in the standard grid

If you need to add a vaccine that is not included in the standard grid, you will need to click the button "Add a New Vaccine to the Immunization Record" under the immunization grid. A note, to add a non-standard historical dose, toggle the <u>historical radio button</u> at the top of the grid before clicking the button.



From here, an Immunization Detail window will open where all relevant details can be added.



Not Specified (NOS) vaccines can <u>change the outcome for the vaccine forecaster</u>, and should be used sparingly and only in cases where the vaccine is truly unknown beyond the general group.





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The Vaccine Library – Streamlining Manual Entry

Practices that have a larger load of manual entry records may want to use the Vaccine Library. To access the library, <u>click the link on the lefthand toolbar</u>.

		Vaccine Lib	orary					
Vaccine	Manufacturer	Administration Route	ExpDate	Lot	Source	Order Qty	Ship Qty	
COVID-19, mRNA, bivalent, 6+ months, blue cap, Moderna	Moderna US, Inc.		2/10/2025	12345	State Supplied	0	0	<u>Ed</u>
COVID-19, XBB.1.5, mRNA, LNP-S, PF, tris-sucrose, 12+ yrs, Pfizer (Comirnaty)	Pfizer, Inc	Intramuscular	6/15/2024 (*)	123485	State Supplied	О	0	Ed
Influenza, injectable, quadrivalent, preservative free	GlaxoSmithKline	Intramuscular	5/15/2027	12345678	Not State Supplied	О	0	Ed
Monkeypox Smallpox (JYNNEOS), Vaccinia, live	Bavarian Nordic A/S	Subcutaneous	10/31/2024	FDPnnn2n	State Supplied	0	0	Ed
Monkeypox Smallpox (JYNNEOS), Vaccinia, live	Bavarian Nordic A/S		9/30/2024	FDP00015	State Supplied	0	0	<u>Ed</u>
Tdap	Bavarian Nordic A/S		6/2/2024 (*)	123456	State Supplied	0	0	Ed

If your practice receives vaccine from the state, it should automatically be loaded into your library. If you have privately ordered vaccine, click the button "Add a New Vaccine to the Vaccine Library", this will bring up a vaccine detail window with the <u>fields for a Current Vaccine</u>, where information such as lot number, manufacturer, and expiration date can be entered.

The lot number for vaccines in the library will be selectable when <u>entering a current vaccine dose</u>, reducing the time spent adding information and reducing the chances of manual entry errors.

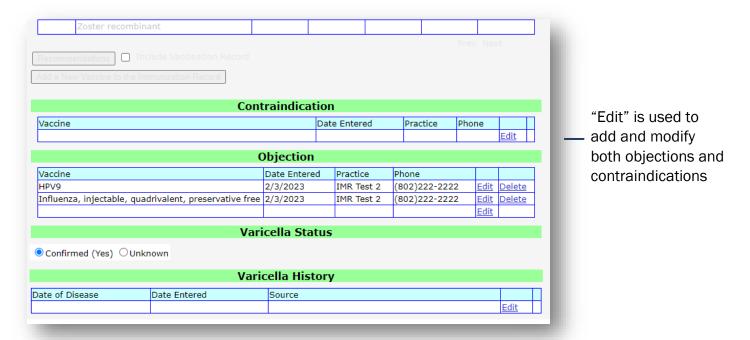




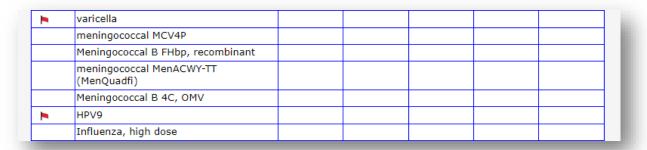
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Objections and Contraindications

Objections and contraindications are located below the immunization grid and can be added manually or via HL7 messaging. These are cases where a patient refuses a vaccine, either for religious (objection) or medical (contraindication) reasons as permitted in Vermont. A history of varicella disease is also located here and is the only history of disease that affects the up-to-date status of a patient. Titers are not recorded in the Registry.



Objections, contraindications, and history of varicella are denoted with a red flag in the leftmost column in the vaccine grid.







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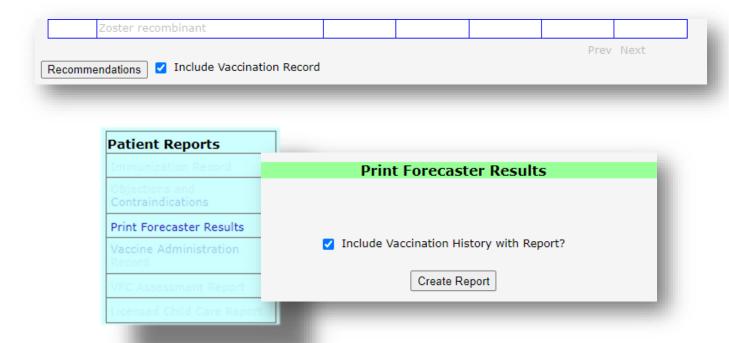
The Vaccine Forecaster (overview)

The forecaster tool provides clinicians with guidance in collaboration with the Advisory Committee on Immunization Practices (ACIP) for recommended immunizations. Recommendations are provided for each patient based on age, immunization history, and the CDC Immunization Schedule. Conditionally recommended doses for people with health conditions that might call for additional protection are also provided.

The forecaster tool consists of three components. The **evaluated history** provides an indication of whether each immunization administered in the past was in accordance with ACIP guidance. **Forecaster Recommendations** include an indication of whether a vaccine is due at a visit as well as indicating the earliest date that the dose can be given and the date it is overdue. Finally, **Conditional Recommendations** provide the clinician with a general flag for additional recommendations to consider based on what they know of their patient.

Opening the evaluated history and forecaster

At the bottom of the Immunizations Grid in a patient record, toggle "Include Vaccination Record" to <u>include the evaluated history</u> and click the "Recommendations" button to run the forecaster. For a printout version, "Print Forecaster Results" in the patient report section of the lefthand toolbar (click "Include Vaccination History with Report" in the dialogue box to <u>include the evaluated history</u> in the printout).







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The Vaccine Forecaster - Evaluated History

The evaluated history is used in combination with the vaccine forecaster to provide context for how vaccine groups are evaluated for up-to-date status. When selected, it will provide an evaluation for every vaccine in the patient's history based on their age and the latest ACIP recommendations. It is especially useful in situations where you expect a patient to be up to date, but the forecaster still recommends an additional dose.

Vaccination Record				
Vaccine Group (Vaccine)	Date Administered	Status	Evaluation Reason	
COVID-19 (COVID-19, mRNA LNP-S, PF, Moderna)	12/25/2021	VALID		
COVID-19 (COVID-19, mRNA LNP-S, PF, Moderna)	1/30/2022	VALID		
COVID-19 (COVID-19, mRNA, 6yrs-11yrs / >= 12yrs, bivalent booster, Moderna)	12/25/2022	VALID		
DTP (DTaP)	6/10/2010	INVALID	This patient was below the minimum age for this dose.	
DTP (DTaP)	10/21/2010	VALID		
DTP (DTaP)	12/25/2010	VALID		
DTP (DTaP)	8/30/2011	VALID		
DTP (Tdap)	8/30/2021	VALID		
Hep A (Hep A ped/adol 2 dose)	8/30/2011	VALID		
Hep A (Hep A ped/adol 2 dose)	1/30/2012	INVALID	This immunization event occurred prior to the specified minimum interval for this dose.	
Hep B (Hep B peds, less than 20yrs)	6/3/2010	VALID		

In this example, the patient was given two vaccines outside of the standard schedule: one from the DTP vaccine group and a dose of Hep A. Even though this patient has received the required amount of Hep A doses, because the second dose was given too close to the first, they are considered not up to date for this vaccine group and an additional dose will be recommended by the forecaster.

The evaluation rules and schedule are updated constantly, so it is important to <u>check our website</u> <u>for the latest updates and notices</u>. If you have any questions or find an evaluation that does not match what is expected, please <u>contact us</u>.





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The Vaccine Forecaster

Forecaster Recommendations include the earliest date that the dose can be given, recommended date (**highlighted in green** if the latest dose is due at the date the report is run) and the date it is overdue (**highlighted in blue** to indicate an additional dose is overdue). If the recommended date is in the future, no highlighting will be applied.

The forecaster recommends **influenza** beginning on the first of July because the forecaster includes a seasonal reset, based on June 30th of each year as the close of one flu season and July 1st as the opening of the next.

Vaccines Recommended by Tracking Schedule				
Vaccine	Earliest Date	Recommended Date	Overdue Date	Status
COVID-19	9/12/2023	9/12/2023		Recommended
DTP	5/1/2012	5/1/2012	5/1/2012	Recommended
Нер А	4/1/2004	4/1/2004	4/1/2004	Recommended
Нер В	4/19/2023	4/19/2023	4/19/2023	Recommended
Influenza	7/1/2023	7/1/2023		Recommended
MMR	9/1/1965	9/1/1965	1/28/1966	Recommended
Zoster recombinant	4/19/2023	5/17/2023	11/18/2023	Recommended
Pneumococcal		9/1/2029		Future Recommendation

Note - The forecaster supports "routinely administered vaccine groups." There is currently no forecaster support for travel vaccines, or vaccines not routinely given in the U.S. These include rabies, yellow fever, typhoid, and adenovirus. You will see record of these immunizations at the bottom of the immunization grid if the patient has received them, but the forecaster does not have the capability at this point to assess these groups or recommend the next appropriate dose.





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The Vaccine Forecaster - Conditional recommendations

The next section of the forecaster, "Vaccines Not Recommended or Conditionally Recommended by Tracking Schedule", provides the clinician with a general flag for additional recommendations to consider based on what they know of their patient. Vaccines that are no longer recommended for a patient due to series completion or age will be highlighted in red.

		tionally Recommended by Tracking Schedule
Vaccine	Status	Message
Hib	Conditionally Recommended	Recommended for high-risk groups.
Meningococcal	Conditionally Recommended	Recommended for high-risk groups.
Meningococcal B	Conditionally Recommended	Recommended for high-risk groups.
Orthopoxvirus	Conditionally Recommended	Recommended for high-risk groups.
Polio	Conditionally Recommended	Recommended for high-risk groups.
Varicella	Conditionally Recommended	Recommended for high-risk groups.
HPV	Not Recommended	Vaccine not recommended at this age.
Rotavirus	Not Recommended	Vaccine not recommended at this age; too old to initiate.

The Immunization Registry does not capture information about specific health conditions. When a patient has particular health conditions, the ACIP guidance may call for additional doses or early administration of some vaccine groups. Conditional Recommendations list some other vaccines that might be appropriate if the patient had certain health conditions, was a health care provider, or had other risk factors. Determination of whether conditionally recommended vaccines should be administered is at the discretion of the health care provider.





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Reports in the IMR - Overview

Reports in the IMR are located in the <u>lefthand toolbar</u> and are broken down into patient-level and practice-level. Like the immunization grid, reports cannot be reached without first <u>performing a patient search</u>. Access to these reports is based on user permissions: if you do not have access to a report that you believe you should, please <u>contact us</u>.

Patient Level Reports

Patient-Level reports are run for the current selected patient (see the top toolbar) and have more simple inputs that will always result in a printable PDF.

Patient Reports	Optional	Description of report
Print Forecaster Results	Include Vaccination History with Report?	A printout of the <u>vaccine forecaster</u> with the option to select for the <u>evaluated history</u> .
Vaccine Administration Record	Provide Covid-19 Vaccination Record	A list of all vaccines received, including date of dose, manufacturer, and lot number. Option to print out a patient's Covid-19 history as proof of vaccination.
VFC Assessment Report	n/a	A list of VFC selections (from the immunization detail window) for all vaccines received.

Practice-Level reports are run for the <u>current selected practice</u>. Many practice-level reports will also default to PDF but some will allow for Microsoft Excel output.





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Practice Level –Immunizations Given by Practice

Practice Reports	Input(s)	Optional output(s)	Description of report
Immunizations Given by Practice	Date Range	n/a	 Vaccine Age brackets Total A method to approximate the number of vaccines given for vaccine ordering. Can also help to identify selection errors when the age indication is unexpected in a bracket.