

The Complete Guide to Vaccine Administration

Brian Kennedy, Romni Palmer, and Jim Smith

From Configuration to Refrigeration

1. Learn how to configure a new vaccine in PCC
2. Learn how to add new vaccines to inventory, map them to billing codes, and add them to protocols
3. Learn how to report on vaccines and use a scanner

Prepare your office for a new vaccine

1. Add your new vaccine to the **Procedures** table
2. Verify that the NDC is in this table entry
3. Call PCC Support to add the vaccine to the **Immunization and Diseases** table

Procedures – Edit

Procedure: DTaP/HepB/IPV ID: 109

Procedure Group: Immunizations

Type of Service: Medical Care

Accounting Type: Revenue

Units: 1

Drug Identification

NDC: (Format: #####-####-##)

Dose Amount:

Dose Units:

Codes and Prices

Schedule Code	Schedule Price
A: 90723	A: 0.00
Duplicate Code (A)	Duplicate Price (A)
B: 90723	B: 0.00
C: 90723	C: 0.00
D: 90723	D: 0.00
E: 90723	E: 0.00

What does PCC ask for when you call?

- Have you added the vaccine to the Procedures table?
- What is the CVX code?
- How will this vaccine appear on your immunization record form?



Why do we ask for this inoculation information?

So you can:

1. Add the vaccine to inventory
2. Map it to your billing codes
3. Add it to your protocols
4. Send it to your state registry
5. Print it on patient immunization forms

Linking procedure codes to orders

Billing Configuration

Billing Configuration

Order Mapping | Diagnosis Mapping | Default Procedures | ICD-10 Default Diagnoses

Order Mapping - Edit

Order Type: **Immunization**
Order Name: **MMR**

ICD-10 Billing Diagnoses

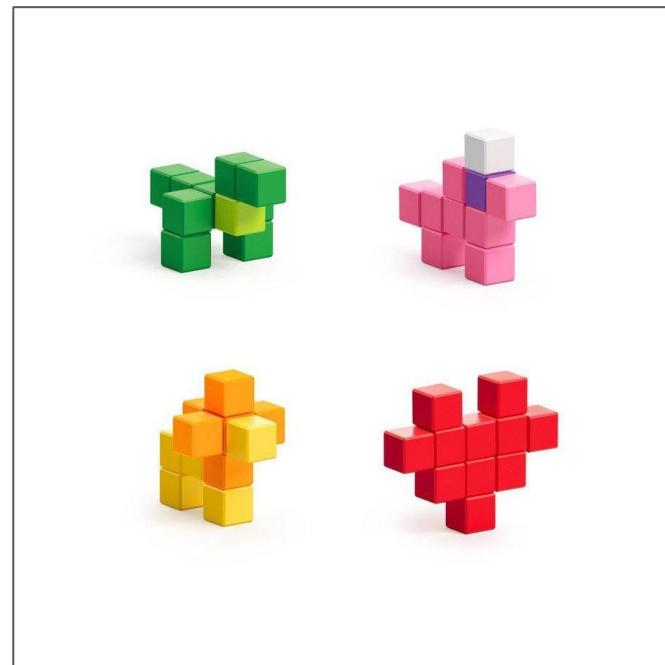
Z23 Encounter for immunization ☐ + ☒ Preselect on Billing Screen

CPT Billing Procedures

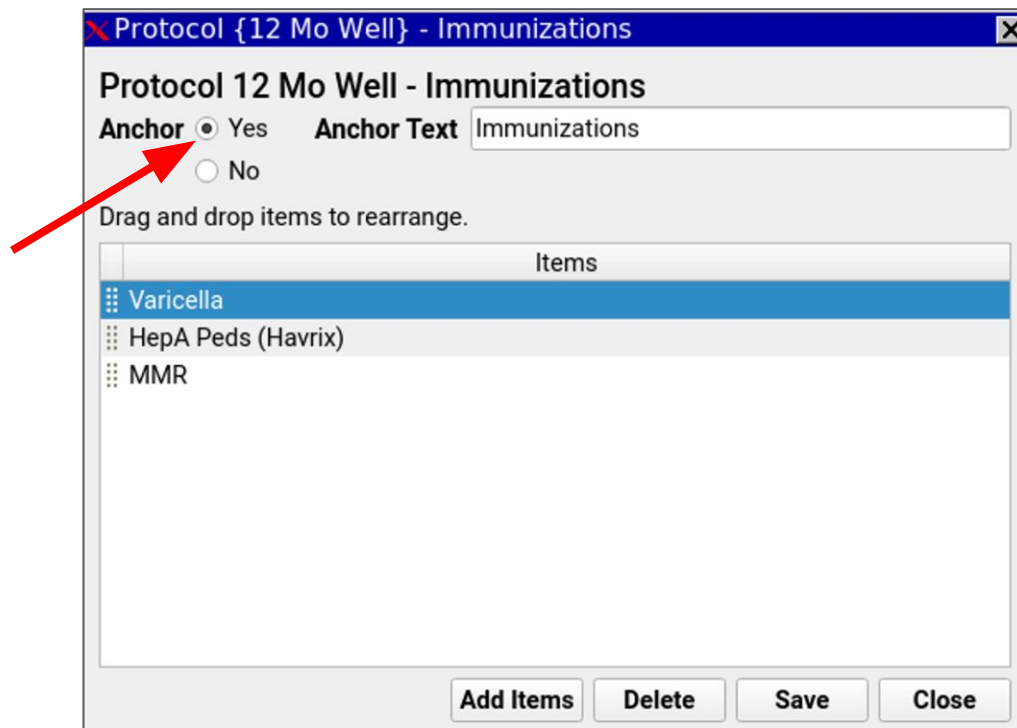
90707 MMR	<input checked="" type="checkbox"/> Preselect on Billing Screen
90460 Vaccine Admin 1st Component	<input checked="" type="checkbox"/> Preselect on Billing Screen
90461 Vaccine Admin x2 Add'l Component	<input checked="" type="checkbox"/> Preselect on Billing Screen
90471 1st Imm Inj Admin	<input type="checkbox"/> Preselect on Billing Screen
90472 Add'l Imms Inj Admin	<input type="checkbox"/> + Preselect on Billing Screen

Add new vaccine orders to visit protocols

- Customize well visit protocols
- Add immunizations to nurse-only visit protocols
- Anchor your immunization orders



Protocol configuration for well visits



Protocol {12 Mo Well} - Immunizations

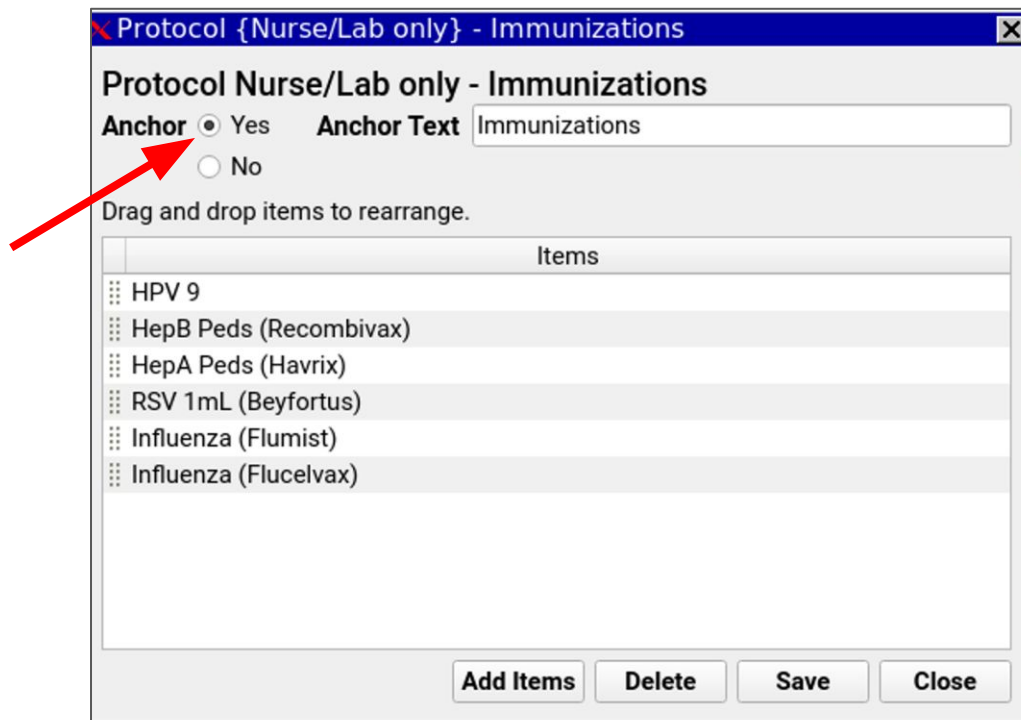
Protocol 12 Mo Well - Immunizations

Anchor ☒ Yes ☐ No **Anchor Text**

Drag and drop items to rearrange.

Items
Varicella
HepA Peds (Havrix)
MMR

Protocol configuration for nurse visits



Protocol {Nurse/Lab only} - Immunizations

Protocol Nurse/Lab only - Immunizations

Anchor ☒ Yes **Anchor Text**

☐ No

Drag and drop items to rearrange.

Items
HPV 9
HepB Peds (Recombivax)
HepA Peds (Havrix)
RSV 1mL (Beyfortus)
Influenza (Flumist)
Influenza (Flucelvax)

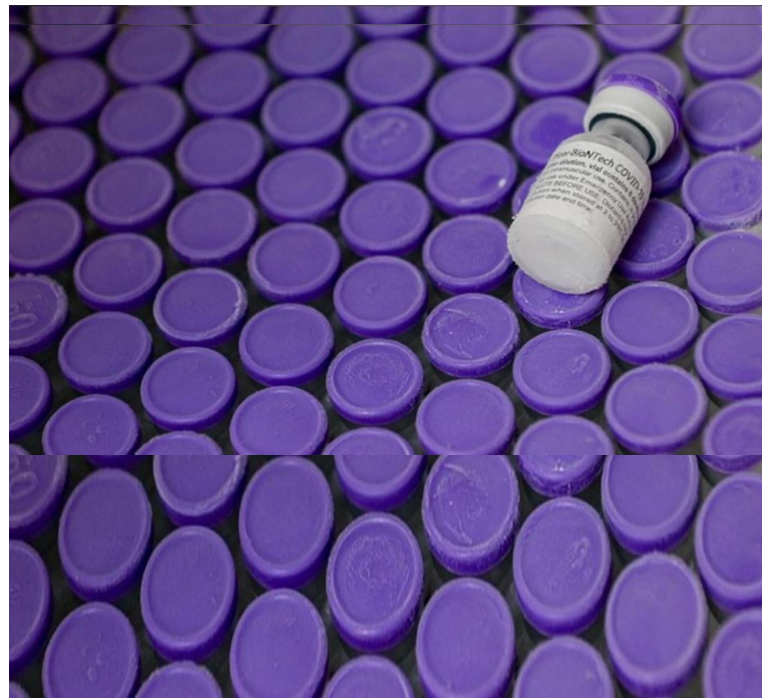
Adding your vaccines to inventory

Vaccine Lot Manager

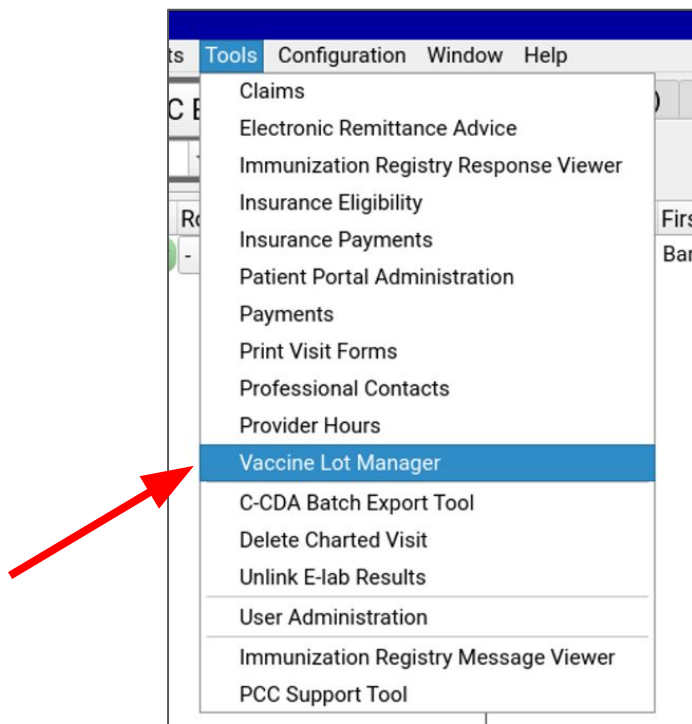
- Use scanner
- Enter manually

Scanning **automagically** brings in:

- Immunization
- Manufacturer
- NDC number
- CVX and MVX codes
- Lot number
- Expiration date



Open Vaccine Lot Manager from the Tools menu



Scan in the vaccine

Vaccine Lot Manager Lot # Search:

Immunization (CVX)	Manufacturer (MVX)	Lot Number	Expiration	Funding Source	Diluent Lot #	Diluent Exp.	Location	Status	Quantity
DTaP (Daptacel) (106)	Sanofi Pasteur (PMC)	ABC123	04/15/25	Private funds			PCC Pediatrics	Available	20
DTaP/HepB/IPV (Pediarix) (110)	GlaxoSmithKline (SKB)	BCD098	04/15/25	Private funds			PCC Pediatrics	Available	20
DTaP/Hib/IPV (Pentacel) (120)	Sanofi Pasteur (PMC)	FGH678		Private funds			PCC Pediatrics	Available	25
HPV 9 (165)	Merck and Co., Inc. (MSD)	TTT777	04/15/25	Private funds			PCC Pediatrics	Available	29
HepA Peds (Havrix) (83)	Merck and Co., Inc. (MSD)	999FFF	04/15/25	Private funds			PCC Pediatrics	Available	17
HepB Peds (Recombivax) (08)	GlaxoSmithKline (SKB)	A1B2C3	04/15/25	Private funds			PCC Pediatrics	Available	25
Hib PRP-T (Hiberix) (48)	Sanofi Pasteur (PMC)	DEF345	04/15/25	Private funds			PCC Pediatrics	Available	10
IPV (10)	Sanofi Pasteur (PMC)	HHH555	04/15/25	Private funds			PCC Pediatrics	Available	29
MMR (03)	Merck and Co., Inc. (MSD)	ZYX098	04/15/25	Private funds			PCC Pediatrics	Available	39
MMRV (94)	Merck and Co., Inc. (MSD)	YYY999		Private funds			PCC Pediatrics	Available	30
Pneumovax 23 (33)	Merck and Co., Inc. (MSD)	JKL123	04/15/25	Private funds			PCC Pediatrics	Available	20
Rotavirus (Rotarix) (119)	GlaxoSmithKline (SKB)	ERT654	04/15/25	Private funds			PCC Pediatrics	Available	30

Immunization: All Immunizations Location: PCC Pediatrics Display: Available, Reserved

Review lot details retrieved from the barcode

Vaccine Lot Manager - Add Lot

Lot

Immunization: Hepatitis A CVX: 83
Manufacturer: GlaxoSmithKline MVX: SKB
NDC: 58160-0825-01
Lot Number: 954G2
Expiration Date: 04/15/21
Funding Source: select a funding source
Location: Winooski Pediatrics

Status

☒ Available (Available lots can be selected for immunization orders)
☐ Reserved
☐ Depleted

Inventory Management

Adjustment Date: 10/20/20 1:09pm
Adjustment Reason: Increase - Shipment Received
Note:
Current Quantity: 0 Doses
Increase Quantity + 0 Doses
New Quantity: 0 Doses

Diluent

Information retrieved from barcode

Cancel Save

Lot details manual entry

The image displays three overlapping screenshots of the 'Vaccine Lot Manager - Add Lot' form, illustrating how NDC, CVX, and MVX codes are used together to identify vaccine lots. Red boxes and arrows highlight these code fields across the different screenshots.

Screenshot 1 (Left): Shows the 'Lot' section with 'Immunization' set to 'Hib-PRP-T' (CVX: 48), 'Manufacturer' set to 'select a manufacturer', and 'NDC' set to 'select NDC'. A list of lot numbers is shown below, including 49281-0545-03, 49281-0545-05, 49281-0547-58, 58160-0726-15, 58160-0806-01, 58160-0806-05, 58160-0816-01, 58160-0816-03, 58160-0816-05, and 58160-0818-11. A red box highlights 'CVX: 48' and an arrow points to the 'NDC' field.

Screenshot 2 (Middle): Shows the 'Lot' section with 'Immunization' set to 'Hib-PRP-T' (CVX: 48), 'Manufacturer' set to 'Sanofi Pasteur' (MVX: PMC), and 'NDC' set to 'select NDC'. A list of lot numbers is shown below, including 49281-0545-03, 49281-0545-05, and 49281-0547-58. A red box highlights 'MVX: PMC' and an arrow points to the 'NDC' field.

Screenshot 3 (Right): Shows the 'Lot' section with 'Immunization' set to 'Hib-PRP-T' (CVX: 48), 'Manufacturer' set to 'GlaxoSmithKline' (MVX: SKB), and 'NDC' set to 'select NDC'. A list of lot numbers is shown below, including 58160-0726-15, 58160-0806-01, 58160-0806-05, 58160-0816-01, 58160-0816-03, 58160-0816-05, and 58160-0818-11. A red box highlights 'MVX: SKB' and an arrow points to the 'NDC' field.

Status: ☒ Available (Available lots can be selected for immunization orders)
☐ Reserved
☐ Depleted

Inventory Management
Adjustment Date: 05/27/25 4:43pm
Adjustment Reason: Increase - Shipment Received
Note:
Current Quantity: 0 Doses
Increase Quantity + 0 Doses
New Quantity: 0 Doses

Cancel Save

Remember the NDC, CVX and MVX codes work together

Select funding source and adjust quantity

Vaccine Lot Manager - Add Lot

Lot

Immunization: CVX: 49

Manufacturer: MVX: MSD

NDC:

Lot Number:

Expiration Date:

Funding Source:

Location:

► Diluent

Status

☒ Available (Available lots can be selected for immunization orders)

☐ Reserved

☐ Depleted

Inventory Management

Adjustment Date:

Adjustment Reason:

Note:

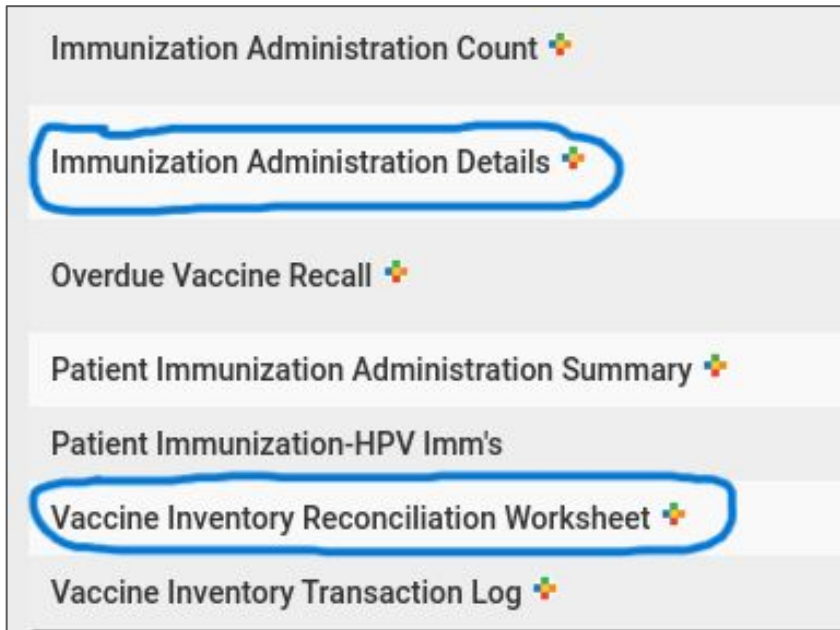
Current Quantity: Doses


Increase Quantity + ± Doses


New Quantity: Doses


Vaccine reporting


- What's in the fridge?
- Who gave it?
- Who got it?




Immunization Administration Count 


Immunization Administration Details 

Overdue Vaccine Recall 

Patient Immunization Administration Summary 

Patient Immunization-HPV Imm's

Vaccine Inventory Reconciliation Worksheet 

Vaccine Inventory Transaction Log 

What's in your fridge?

Vaccine Inventory Reconciliation Worksheet

Compare PCC EHR vaccine inventory with vaccine inventory in the refrigerator.

Edit Categories Clinical, Immunization

Lot Status

Available, Reserved

Lot Funding Source

All Lot Funding Sources

Lot Location

All Lot Locations

Vaccine Inventory Reconciliation Worksheet

Compare PCC EHR vaccine inventory with vaccine inventory in the refrigerator.

Lot Status: Available, Reserved
Lot Funding Source: All
Lot Location: All

Columns: All 9 Displayed

Group By: None

Search Filter:

Immunization (CVX)	Lot Number	Expiration Date	Lot Status	Lot Funding Source	Lot Location	Expected Inventory	Actual Inventory	Difference
DTaP- Infanrix GSK Syringe (20)	9PT2F	03/10/2026	Available	Private funds	Office	10		
DTaP/HepB/IPV- Pediarix GSK (110)	LM99N	03/04/2026	Available	Private funds	Office	10		
DTaP/HepB/IPV- Pediarix GSK (110)	TC47K	03/29/2026	Available	Private funds	Office	22		
DTaP/IPV- Kinrix GSK Syringe (130)	47Y5M	06/26/2026	Available	Private funds	Office	10		
DTaP/IPV- Kinrix GSK Syringe (130)	34MF9	02/13/2026	Available	Private funds	Office	3		
DTaP/IPV- Kinrix GSK Syringe (130)	Y49BZ	05/17/2026	Available	Private funds	Office	10		
HepA Peds- Havrix GSK Syringe (83)	423NL	11/16/2025	Available	Private funds	Office	12		
HIB PRP-T Hibrix- GSK (48)	Y9PC3	03/17/2026	Available	Private funds	Office	28		
HPV9 Gardasil Merck (165)	2018414	12/11/2025	Available	Private funds	Office	9		
MenB-Bexsero GSK (162)	ZH7SN	01/31/2027	Available	Private funds	Office	11		
Meng Conj- Menveo GSK (136)	AMVA988A	11/30/2024	Available	Private funds	Office	1		
Meng Conj- Menveo GSK (136)	AMVA994Z	12/31/2024	Available	Private funds	Office	5		
MMR- Merck (03)	494YE	12/01/2024	Available	Private funds	Office	12		
MMRV- Proquad Merck (94)	Y003884	08/05/2025	Available	Private funds	Office	6		
MMRV- Proquad Merck (94)	Y005461	02/09/2026	Available	Private funds	Office	10		
Prevnar 20 (216)	HN5978	08/31/2025	Available	Private funds	Office	10		
Prevnar 20 (216)	HE6174	03/31/2025	Available	Private funds	Office	0		



Is your fridge...

- Old?
- Filled with water bottles?
- Regulated by an old or misconfigured temperature probe?

Who gave the vaccine and to who?

Report Library

Immunization Administration Details

View vaccine administration details for a given date range, including funding source, VFC eligibility, insurance policies and administering user.

Immunization Administration Date: From 06/13/2024 to 06/20/2024
Immunization: All
Appointment Location: All
Administering User: All
Immunization Status: Administered

Columns: 19 DisplayedGroup By: NoneSearch Filter:

Patient Name	Patient PCC#	Patient DOB	Patient Sex	Patient Age at Admin	Immunization (CVX)	Lot Number	Admin Date	Admin Time	Immunization Status	Site	Route	Admin By	VFC Eligibility Status	Funding Source	Insurance at Time of Service	Current Pri Insurance	Current Sec Insurance	Appt Location
			F	1y	VFC HepA Peds (83)	G79C4	06/19/2024	12:14pm	Administered	Right Thigh	Intramuscular		VFC eligible - Medicaid/Medicaid Managed Care	State funds	Geisinger Family Plan \$ 0 (Box 160)	Geisinger Family Plan \$ 0 (Box 160)		Office
			F	1y	VFC Prevnar 20 (216)	HH9322	06/19/2024	12:14pm	Administered	Left Thigh	Intramuscular		VFC eligible - Medicaid/Medicaid Managed Care	State funds	Geisinger Family Plan \$ 0 (Box 160)	Geisinger Family Plan \$ 0 (Box 160)		Office
			F	1y	VFC Varicella (21)	X023323	06/19/2024	12:15pm	Administered	Left Thigh	Subcutaneous		VFC eligible - Medicaid/Medicaid Managed Care	State funds	Geisinger Family Plan \$ 0 (Box 160)	Geisinger Family Plan \$ 0 (Box 160)		Office
			F	1y	VFC MMR (03)	342RC	06/19/2024	12:15pm	Administered	Right Thigh	Subcutaneous		VFC eligible - Medicaid/Medicaid Managed Care	State funds	Geisinger Family Plan \$ 0 (Box 160)	Geisinger Family Plan \$ 0 (Box 160)		Office
			M	4m 1w	VFC Prevnar 20 (216)	HH9322	06/14/2024	9:33am	Administered	Left Thigh	Intramuscular		VFC eligible - Medicaid/Medicaid Managed Care	State funds	Geisinger Family Plan \$ 0 (Box 160)	Geisinger Family Plan \$ 0 (Box 160)	Medical Assistance	Office
			M	4m 1w	VFC Rotavirus - Rotarix (119)	737J5	06/14/2024	9:33am	Administered		Oral		VFC eligible - Medicaid/Medicaid Managed Care	State funds	Geisinger Family Plan \$ 0 (Box 160)	Geisinger Family Plan \$ 0 (Box 160)	Medical Assistance	Office

Reporting: Vaccine Lot Manager

Vaccine Lot Manager

Vaccine Lot Manager - Edit Lot

Lot

Immunization: MMR- Merck
Manufacturer: GlaxoSmithKline
NDC: select NDC
Lot Number: 494YE
Expiration Date: 12/01/24
Funding Source: Private funds
Location:

CVX: 03
MVX: SKB

Status

☒ Available (Available lots can be selected for immunization orders)
☐ Reserved
☐ Depleted

Inventory Management

Adjustment Date: 06/20/24 7:29am
Adjustment Reason: select an adjustment reason
Note:
Current Quantity: 12 Doses
0 Doses
New Quantity: 12 Doses

Diluent

Vaccine Inventory Transaction Log


Open in Report Library

Adjustment Date/Time	Adjustment Reason	Adjustment Note	Adjustment User	Patient Name	Patient PCC #	Patient DOB	Patient Sex	Adjustment Increase Amount	Adjustment Decrease Amount	Balance of Doses
04/02/2024 10:20am	Increase - Shipment Received							10		10
04/23/2024 8:29am	Decrease - Administered								1	9
05/01/2024 4:14pm	Decrease - Administered								1	8
05/06/2024 12:22pm	Decrease - Administered								1	7
05/06/2024 3:29pm	Decrease - Administered								1	6
05/07/2024 2:22pm	Increase - Shipment Received							10		16
05/13/2024 4:04pm	Decrease - Administered								1	15
05/14/2024 10:01 am	Decrease - Administered								1	14
05/14/2024 10:56am	Decrease - Administered								1	13

Other helpful vaccine reports

Immunization Administration Count 

Immunization Administration Details 

Overdue Vaccine Recall 

Patient Immunization Administration Summary 

Patient Immunization-HPV Imm's

Vaccine Inventory Reconciliation Worksheet 

Vaccine Inventory Transaction Log 

Emergency plan



EMERGENCY! The power is out or the fridge quit. Do you have a plan?

Pre-Break Takeaways

1. When you receive a new vaccine, add it to your Procedures table then call PCC Support.
2. After PCC Support updates your Immunization and Diseases table, you can add the vaccine to inventory, map it to billing codes, and add it to your visit protocols.
3. Use a vaccine scanner to enter new inventory quickly and accurately.

Take a break!



From Giving Shots to Reconciling Lots

1. Learn how to record vaccine administrations accurately.
2. Learn how to report vaccines to schools and registries.
3. Learn best practices for keeping tidy, accurate vaccine records.

Giving the shot

- Review the patient's immunization record
- Review forecasting recommendations
- Confirm the patient's VFC status
- Order and administer the vaccine



Review the patient's immunization record

Immunizations					Print	
Vaccines						
DTaP						
Hepatitis A						
Hepatitis B	10/22/06	10/10/17	12/12/17			
HPV	10/10/16	10/01/17				
Influenza	07/20/19	REFUSED 01/14/20				
MMR	10/25/07	09/25/09				
Varicella	10/25/07	09/25/09				
~Meningococcal Unspec	10/06/18					
HIB	CI 01/19/19					
Meningococcal, Unknown	10/01/17	10/10/17				
Hep A, live attenuated	05/26/08					
Cholera, WC-rBS	01/14/20					
Ordered	IPV					
Diseases						
Measles	10/17/16					

Red text with a "REFUSED" or CI" label indicates a contraindicated or refused immunization

The Ordered line shows pending immunizations that have been ordered but not yet administered

The diseases line indicates a diagnosis or problem list entry of a vaccine preventable disease

Review forecasting recommendations

Forecasting Results Last updated: 10/20/23 04:01pm ☒ Show Informational Warnings(0) Refresh

Vaccine Family	Dose #	Recommended Date	Minimum Date	Past Due Date	Maximum Date
Flu	3rd	07/01/2023 (9y 9m)	07/01/2023	09/21/2133	09/21/2133
COVID-19	1st	10/20/2023 (10y)	10/20/2023	09/21/2133	09/21/2133
HPV	1st	09/21/2024 (11y)	09/21/2022	10/18/2026	09/21/2133
Hep-A	1st	09/21/2014 (1y)	09/21/2014	10/18/2015	09/21/2133
DTaP/DT/Td/Tdap	6th	09/21/2024 (11y)	09/21/2024	10/18/2026	09/21/2133
Meningococcal	1st	09/21/2024 (11y)	09/21/2024	10/18/2026	09/21/2133

Forecasting Warnings

Vaccine	Date	Message
Hepatitis B 08	03/03/2014	Invalid Vaccine: This patient was below the minimum age for this dose. (CVX 08)

Forecast results are not intended to replace clinical decision making

- Review the next expected dose (1st, 2nd, 3rd, etc.)
- Check the recommended date and the patient's age on that date
- Review the minimum, maximum, and past due dates

Verify and select the patient's VFC status

▼ Vaccines For Children

Insurance and Race as of 01/28/20

Primary: Health America HMO \$10/20 (Copay \$10)

Eligibility Status:

- Not VFC eligible (V01)
- VFC eligible - Medicaid/Medicaid Managed Care (V02)
- VFC eligible - Uninsured (V03)
- VFC eligible - American Indian/Alaskan Native (V04)
- VFC eligible - Federally Qualified Health Center Patient (under-insured) (V05)
- Local-specific eligibility (V07)
- CHIP (V22)
- 317 (V23)
- Medicare (V24)
- State Program Eligibility (V25)

Order and administer the vaccine

Immunization Orders

Select Vaccine Lots

EDITING Refuse

➔ IPV

To: Gary Ross

VFC: select an eligibility status

Dose: 0.5 mL

Lot #: Scan

VIS: Polio Vaccine VIS (Edition 07/20/16) + VIS Given: mm/dd/yy

Note: enter a note

☐ Administered Route: select a route Site: select a site

☐ Refused Reason: select a reason

☐ Contraindicated Reason: select a reason

☐ Canceled

Administered by: Unknown mm/dd/yy hh:mm

DISCARD CHANGES SAVE CHANGES

If empty, select the patient's eligibility status.

Assign the task to another user.

Mark the order as complete by selecting a status., and fill out the appropriate dropdown menu items.

Click the dropdown to select a lot or open the lot manager. Click "scan" to scan the vial.

Select Vaccine Information Statement (VIS)

The screenshot shows a software interface for administering an IPV vaccine. It includes fields for VFC status, dose, lot number, and a dropdown for the Vaccine Information Statement (VIS). A list of available VIS options is displayed below the dropdown. Annotations with arrows point to the dropdown menu and the '+' button used to add a second VIS line.

IPV To: Nurse

VFC: select an eligibility status

Dose: 0.5 mL

Lot #: Scan

VIS: Polio Vaccine VIS (Edition 07/20/16) +

VIS Given: 01/31/20

Note:

- Multi Pediatric Vaccines VIS (Edition 11/05/15)
- Ad Polio Vaccine VIS (Edition 10/30/19)
- Ref Multiple Vaccines VIS (Edition 11/16/12)
- Multiple Vaccines VIS (Edition 10/22/14)
- Cor Polio Vaccine VIS (Edition 07/20/16)
- Can Polio VIS (Edition 11/08/11)

Administered by: Unknown mm/dd/yy hh:mm

DISCARD CHANGES SAVE CHANGES


Select a Vaccine Information Statement

Click to add a second VIS line

Share the VIS from Patient Education


- Open Patient Education from the Reports menu
- Find the VIS
- Print, save it to the visit, or send it through the portal

COVID-19 Vaccine Fact Sheet




How does the COVID-19 Vaccine work?

These vaccines inject a piece of messenger RNA, a strand of protein that gives instructions to your own cells to create the "spike protein" of the coronavirus. Once made, your cells then display this protein and your body recognizes that it does not belong, so your body makes antibodies against it. With antibodies made, if any virus enters the body your immune system can immediately attack it, protecting you from getting sick with COVID-19.




What are the risks?

Anaphylaxis is a rare outcome when receiving any vaccine, including the COVID-19 vaccines. The CDC has reports that some people have experienced severe allergic reactions—also known as anaphylaxis—after getting a COVID-19 vaccine. To date, in early January 2021, anaphylaxis has happened with 11 people receiving the Pfizer vaccine and one person receiving the Moderna vaccine. All were treated and there were no deaths out of the more than 73,000 participants in the studies.




How is the vaccine administered?

Persons age 18 years and older should receive 2 doses at least 28 days apart (Moderna). Second doses administered up to 4 day before the recommended date (24 or more days after the first dose) are considered valid. Second doses should be administered as close to the recommended interval as possible. There is no maximum interval between the first and second dose.




Can someone get COVID-19 from the vaccine?

No. The COVID vaccines do not contain a live virus, thus will not carry a risk of causing the infection.




Is the vaccine safe?

Both of the major vaccines (Moderna and Pfizer) have been subjected to rigorous large, three phase clinical trials which included at least 40,000+ test candidates. Each of these vaccines have demonstrated high efficacy (Moderna 94.1% & Pfizer 95%) at preventing laboratory-confirmed COVID-19 illness in people who received two doses and who had no evidence of prior infection. As a result, the Food and Drug Administration has determined these vaccines to be safe for public use.




Can I get my flu shot and COVID-19 shot at the same time?

No. No other vaccines should have been received in the last 2 weeks (14 days) prior to the vaccine. No other vaccines can be scheduled for the 2 weeks (14 days) following the vaccine.



If I get the vaccine, will I still have to wear a mask?

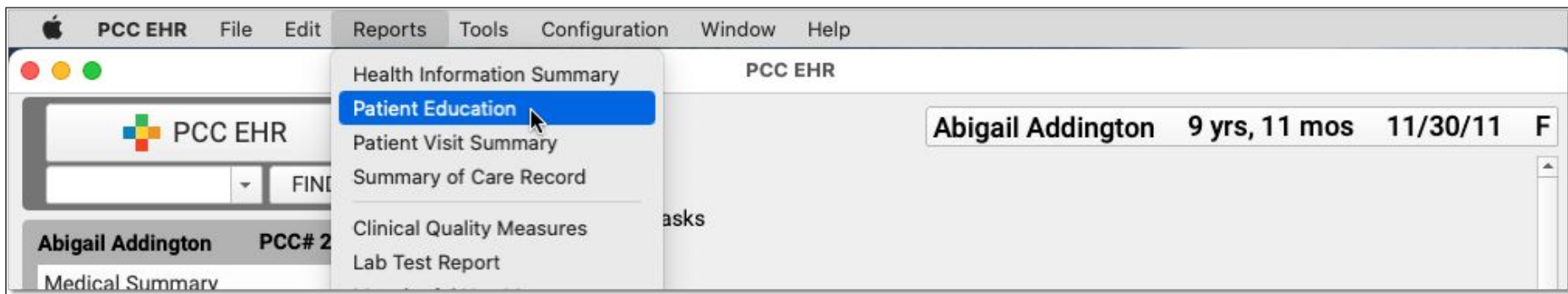
Yes. Both of these vaccines protect from the disease symptoms, but there isn't enough data yet to determine if it halts spread of virus. It is important to continue to practice public health protective measures to allow for safety of the individual and anyone they contact or interact with.



For how long will I be protected?

Presently, there isn't enough data to give a clear time frame of the vaccine's long-term protection capabilities. Repeat vaccination may be required similar to an annual flu shot, or it may be sufficient after the first round. We just don't know yet. Continue using recommended public health safety measures.

Open Patient Education from the Reports menu



Find VIS, then print and/or save

The screenshot shows a software window titled "Patient Education". At the top, there's a search bar with the text "select a patient's problem, diagnosis, medication, or lab test". To the right, it says "John Canning" and "M". Below the search bar, there's a tab labeled "vis, vaccine information statement | Page 1 | Search Results | Pediatr...". The main content area displays a "Vaccine Information Statement: Tdap" document. The document has a dark header with the text "VACCINE INFORMATION STATEMENT". Below this, the title "Tdap (Tetanus, Diphtheria, Pertussis) Vaccine: *What You Need to Know*" is prominently displayed. To the right of the title, there's a note: "Many vaccine information statements are available in Spanish and other languages. See [www.immunize.org/vis](\"http://www.immunize.org/vis\")". Below the title, there's a section titled "1. Why get vaccinated?". The text under this section reads: "Tdap vaccine can prevent tetanus, diphtheria, and pertussis. Diphtheria and pertussis spread from person to person. Tetanus enters the body through cuts or wounds. • TETANUS (T) causes painful stiffening of the". To the right of this section, there's additional text: "Also, adults should receive a booster dose of either Tdap or Td (a different vaccine that protects against tetanus and diphtheria but not pertussis) every 10 years, or after 5 years in the case of a severe or dirty wound or burn. Tdap may be given at the same time as other vaccines." At the bottom right of the document area, there are buttons for "Save As Document", "Print", and "Close". The bottom of the window shows a taskbar with "start", "PCC EHR", and "Patient Education" icons, along with a clock showing "09:27AM".

Patient Education

John Canning M

Source: AAP

vis, vaccine information statement | Page 1 | Search Results | Pediatr... Vaccine Information Statement: Tdap

Vaccine Information Statement: Tdap 1 / 2

VACCINE INFORMATION STATEMENT

Tdap (Tetanus, Diphtheria, Pertussis) Vaccine: *What You Need to Know*

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Tdap vaccine can prevent tetanus, diphtheria, and pertussis.

Diphtheria and pertussis spread from person to person. Tetanus enters the body through cuts or wounds.

- TETANUS (T) causes painful stiffening of the

Also, adults should receive a booster dose of either Tdap or Td (a different vaccine that protects against tetanus and diphtheria but not pertussis) every 10 years, or after 5 years in the case of a severe or dirty wound or burn.

Tdap may be given at the same time as other vaccines.

Save As Document Print Close

start PCC EHR Patient Education 09:27AM

Display the VIS in the portal

Patient Education
Document Viewer

John Canning M

Document Viewer

Thumbnails

VACCINE INFORMATION STATEMENT

Tdap (Tetanus, Diphtheria, Pertussis) Vaccine: What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis
Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

1. Why get vaccinated?

Tdap vaccine can prevent tetanus, diphtheria, and pertussis.

Diphtheria and pertussis spread from person to person. Tetanus enters the body through cuts or wounds.

- **TETANUS (T)** causes painful stiffening of the muscles. Tetanus can lead to serious health problems, including being unable to open the mouth, having trouble swallowing and breathing, or death.
- **DIPHTHERIA (D)** can lead to difficulty breathing, heart failure, paralysis, or death.
- **PERTUSSIS (aP)**, also known as "whooping cough," can cause uncontrollable, violent coughing that makes it hard to breathe, eat, or drink. Pertussis can be extremely serious especially in babies and young children, causing pneumonia, convulsions, brain damage, or death. In teens and

Also, adults should receive a booster dose of either Tdap or Td (a different vaccine that protects against tetanus and diphtheria but not pertussis) **every 10 years**, or after 5 years in the case of a severe or dirty wound or burn.

Tdap may be given at the same time as other vaccines.

3. Talk with your health care provider

Tell your vaccination provider if the person getting the vaccine:

- Has had an **allergic reaction** after a previous dose of any vaccine that protects against tetanus, diphtheria, or pertussis, or has any severe, life-threatening allergies
- Has had a **coma**, decreased level of consciousness, or **prolonged seizures** within 7 days after a

Page 1 of 2

Vaccine_Information_Statement_TdaPpdf 06/21/24 09:43am

Rotate Page Rotate Document Fit Width Zoom to Fit

Tags

Title
Vaccine Information Statement: TdaP

Category
Patient Education

☐ Attach Document
select a visit, phone note, etc...

☒ File as Unattached Document
Document Date:

☐ Display in the Visit History Index

Needs to be Signed by Provider:
select a provider

☒ Display in Portal Documents
Document will be visible to all portal users attached to the patient.

Note (Internal)

▼ Tasks

Task:
select a task

To:
select a user

Due: 06/21/24

Note:

Print Sign Discard Save

Save As Document Print Close

start PCC EHR Patient Education Document Viewer 99:43AM

Immunization record form

- Different entities (states, school districts, camps) have different requirements
- Keep it simple by grouping like vaccines together

Immunization Configuration

Immunization Configuration

Immunization History Screen
Diseases

Immunization History Screen

Drag and drop immunizations to re-arrange their sequence in Immunization History.

Display	Immunization
<input checked="" type="checkbox"/>	DTaP/IPV/Hib
<input checked="" type="checkbox"/>	DTaP-IPV-Hib-HepB(Vaxelis)
<input type="checkbox"/>	~DTaP/IPV,Hib
<input type="checkbox"/>	~Pentacel
<input type="checkbox"/>	DTaP/Hib/Hep B
<input checked="" type="checkbox"/>	DTaP/IPV,Hep B
<input type="checkbox"/>	DTP
<input type="checkbox"/>	Pedi DT
<input checked="" type="checkbox"/>	DTaP
<input checked="" type="checkbox"/>	DTaP/IPV
<input type="checkbox"/>	DTaP/IPV syringe
<input type="checkbox"/>	~DTaP/IPV Quadracel
<input type="checkbox"/>	OPV
<input checked="" type="checkbox"/>	IPV
<input checked="" type="checkbox"/>	Tdap
<input checked="" type="checkbox"/>	Td
<input type="checkbox"/>	Tetanus Toxoid
<input type="checkbox"/>	Prenvar 7

Immunization Configuration

Immunization History Screen
Diseases

Diseases

Select diseases to be displayed on the immunization history, included on patient reports*, and sent to the immunization registry.

Disease	Display Disease on Imms History	Include Disease on Patient Reports	Send Disease to the Immunization Registry
Acute poliomyelitis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Anthrax	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Diphtheria	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Disease caused by Rotavirus	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Haemophilus influenzae infection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hepatitis A immune	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hepatitis B immune	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Human papilloma virus infection	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Influenza	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Japanese encephalitis virus disease	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Measles	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Measles immune	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Meningococcal infectious disease	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mumps	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Mumps immune	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pertussis	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Pneumococcal infectious disease	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Rabies	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Why aren't my vaccines grouped together?



Immunization Forecasting

- HLN and the Immunization Calculation Engine (ICE)
- The forecaster is a clinical decision AID
- Calculates vaccine forecasts using DOB, immunization CVX code, administration date, gender, evaluation date (always today's date)
- Forecasts in the EHR vs Retrieve Imms
- Future development: immunity, titers, contraindications

Immunization Registry

- Workflow
- Key elements
 - Demographics
 - Immunization
- Review reports
- Review responses



Immunization Registry Workflow for **New Patients**

- Add all demographics
 - Name, DOB, Share with Registry (if applicable), Race, Ethnicity, Language, Birth Order (if applicable), Mother's Maiden Name
 - Home account, Address, Phone,
 - Personal Contacts
- Add immunization history

Immunization Registry Workflow for **Existing** Patients

- Confirm/update demographic information
- Query or Update any immunization history
- Add/update VFC eligibility for any immunizations ordered that day

Demographics



Demographics Check!

Demographics

Patient Check-In		John Canning 16 yrs, 7 mos 10/17/08 M	
Patient Demographics			
★John Canning			
First Name:	John		
Nickname:			
Middle Name:	Jingleheimer		
Last Name:	Canning		
Suffix:			
★Date of Birth:	10/17/08		
★Sex:	Male		
Deceased:	<input checked="" type="radio"/> No <input type="radio"/> Yes <input type="text" value="enter date"/>		
Birth History			
GA at Birth:	<input type="text" value=""/> weeks <input type="text" value=""/> days		
★Multiple Birth:	<input type="radio"/> No <input checked="" type="radio"/> Yes <input type="text" value="2nd"/>		
Race, Ethnicity, and Preferred Language			
★Race:	White		
★Ethnicity:	Not Hispanic or Latino		
★Pref. Language:	English		
Patient Information			
Patient Flags:			
PCP:	Mark Williams, M.D.		
Care Center:			
Other ID:			
School:			
Note:			
Old PM ID #:			
Relation to Bill Payer:	Child		
★Mother's Maiden Name			
First Name:	Bev		
Middle Name:			
Last Name:	Schmidt		

Patient Demographics

Demographics

Patient Check-In

John Canning16 yrs, 7 mos10/17/08M

Personal Contacts

Bev Canning (Custodian, Mother)

Home Phone:802-555-0130

Work Phone:802-555-0115

Phone Notification:

Email Notification:

Note:

Address: 1 Main Street

Suite 7

Winooski, VT 05404

EDIT CONTACT

REMOVE

select a personal contact

Personal Contacts

Demographics

Patient Check-In		John Canning 16 yrs, 7 mos 10/17/08 M	
Account Demographics			
Home and Billing Account		Reassign Account	
★ Bev Canning (Account # 1965)			
First Name:	Bev		
Last Name:	Canning		
★ Address			
1 Main Street			
Suite 7			
Winooski	VT	05404	
★ Phone			
Home Phone:	802-555-0130		
Work Phone:	802-555-0115		
Cell Phone:			
Emg Phone:			
★ Email: bev.canning@pcc.com			
Account Information			
Account Flags:	Cash Only		
EMG Contact:			
EMG Phone #:			
Alt Last Name:			
Mother Employer:			
Father Employer:			
Pharmacy #:			
Recent Financial History			
Last Service:	11/15/24		
Last Bill Sent:			
Last Pers. Pmt:			
Last Ins. Pmt:			
Hold Bill Until:			
Budget Amt:	\$		

Account Demographics

Demographics

Communication Preferences

Patient's Confidential Communication Preference

Contact Name:

Method: ☐ Cell Phone ☐ Work Phone ☐ Home Phone ☐ Text

☐ Email

☐ Mailing Address

☒ No Preference

★Immunization Registry Communication Preferences

Share with Registry: ☐ Undetermined ☒ Yes ☐ No

Preferred Contact Method for the Immunization Registry:

Journey to the IIS



*Immunization Information System, a.k.a. your state immunization registry

Journey to the IIS

The screenshot shows a web-based form for entering an immunization order. At the top, it indicates a green checkmark for 'HPV' administered on '06/21/24' to 'Maria Horn'. The form includes several dropdown menus for 'VFC' (VFC eligible - Medicaid/Medicaid Managed Care (V02)), 'Dose' (0.5 mL), 'Lot #' (78965 (Federal funds)), and 'VIS' (Human papillomavirus Vaccine (Gardasil) VIS (E)). There is a 'Scan' button next to the lot number. A 'Note' field is present with the placeholder text 'enter a note'. Below this, there are radio buttons for 'Administered', 'Refused', 'Contraindicated', and 'Canceled'. The 'Administered' option is selected, and it has associated dropdowns for 'Route' (Intramuscular) and 'Site' (Left Deltoid). The 'Refused' and 'Contraindicated' options have a 'Reason' dropdown menu. At the bottom, there are fields for 'Administered by' (Zelda Zen, LNA), 'Date' (06/21/24), and 'Time' (3:58pm). At the very bottom, there are two buttons: 'DISCARD CHANGES' and 'SAVE CHANGES', with the latter highlighted by a red rectangle.

✓ HPV Administered 06/21/24 To: Maria Horn

VFC: VFC eligible - Medicaid/Medicaid Managed Care (V02)

Dose: 0.5 mL

Lot #: 78965 (Federal funds) Scan

VIS: Human papillomavirus Vaccine (Gardasil) VIS (E) + VIS Given: 06/21/24

Note: enter a note

☒ Administered Route: Intramuscular Site: Left Deltoid

☐ Refused Reason: select a reason

☐ Contraindicated Reason: select a reason

☐ Canceled

Administered by: Zelda Zen, LNA 06/21/24 3:58pm

DISCARD CHANGES SAVE CHANGES

Complete the immunization order. Once saved, it is queued to be sent.

Immunization Order

Journey to the IIS

Queued immunization records are batched and sent to the PCC Immunization Hub



Journey to the IIS

The PCC hub
sorts...



...and
transforms all
the messages
received.

Journey to the IIS

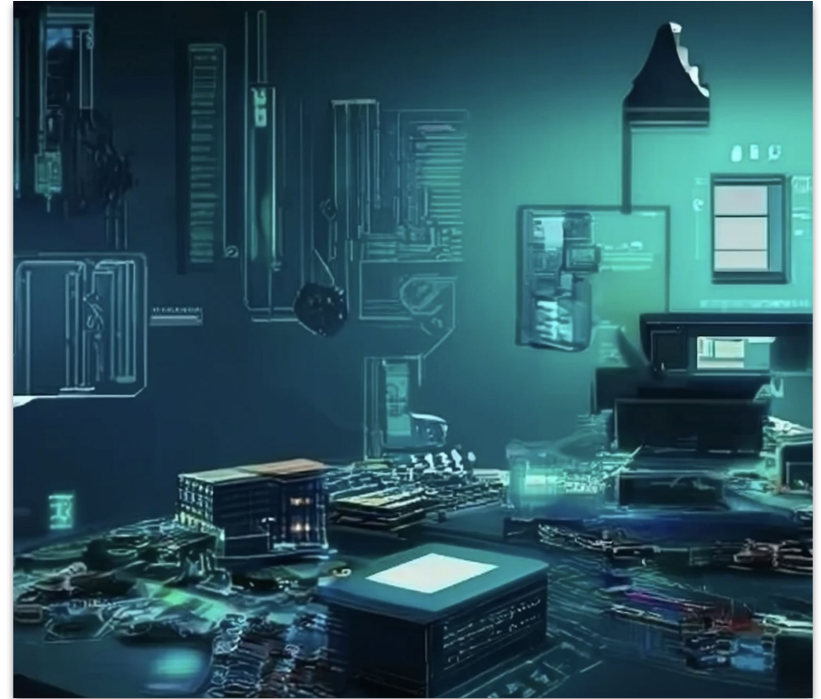


PCC Hub sends all the transformed messages to each IIS.

In some states they go to a Health Information Exchange (HIE) who sends them on to the IIS.

Journey to the IIS

The IIS processes the messages and add the records to the patients listed in the registry.



Journey to the IIS

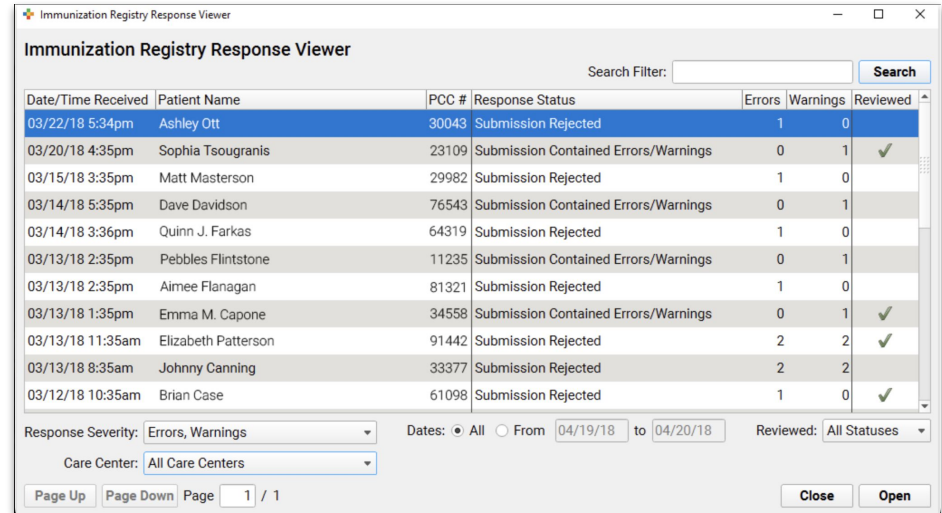
ACKnowledgement
message...



...returned from
the registry
through the PCC
hub

Journey to the IIS

These **ACK** messages can be reviewed through the **Immunization Registry Response Viewer** with information on what records were imported along with any additional warnings and errors.



Immunization Registry Response Viewer

Search Filter:

Date/Time Received	Patient Name	PCC #	Response Status	Errors	Warnings	Reviewed
03/22/18 5:34pm	Ashley Ott	30043	Submission Rejected	1	0	
03/20/18 4:35pm	Sophia Tsougranis	23109	Submission Contained Errors/Warnings	0	1	✓
03/15/18 3:35pm	Matt Masterson	29982	Submission Rejected	1	0	
03/14/18 5:35pm	Dave Davidson	76543	Submission Contained Errors/Warnings	0	1	
03/14/18 3:36pm	Quinn J. Farkas	64319	Submission Rejected	1	0	
03/13/18 2:35pm	Pebbles Flintstone	11235	Submission Contained Errors/Warnings	0	1	
03/13/18 2:35pm	Aimee Flanagan	81321	Submission Rejected	1	0	
03/13/18 1:35pm	Emma M. Capone	34558	Submission Contained Errors/Warnings	0	1	✓
03/13/18 11:35am	Elizabeth Patterson	91442	Submission Rejected	2	2	✓
03/13/18 8:35am	Johnny Canning	33377	Submission Rejected	2	2	
03/12/18 10:35am	Brian Case	61098	Submission Rejected	1	0	✓

Response Severity: Dates: ☐ All ☐ From 04/19/18 to 04/20/18 Reviewed:

Care Center:

Page 1 / 1

Decoding IIS Responses

- **PID - Patient Identification:** Patient's Name, DOB, Sex, Race, Ethnicity; Patient's custodial account's Address, Phone, Email
- **PD1 - Patient Additional Demographics:** Share with registry, Preferred Contact Method for the Immunization Registry, Patient's Immunization Registry Status
- **NK1 - Next of Kin / Associated Parties:** Comes from Personal Contacts listed on the patient

Decoding IIS responses

- **ORC - Order:** Provider of visit and provider placing the order
- **RXA - Administration:** What, when, and who administered the vaccine or why it wasn't
- **RXR - Route:** Where it was administered on the patient
- **OBX - Additional details:** VIS, Funding, VFC, Contraindication Reasons

Retrieving Immunization Records



Retrieving Immunization Records



The screenshot shows a software interface for viewing immunization history. At the top, the title 'Immunization History' is on the left, and patient information 'Janis Joplin 4 yrs, 10 mos 3/01/16 F' is on the right. Below the title is a 'Vaccines' section with a table. To the right of the table are two buttons: 'Retrieve Imms' and 'Print'. A mouse cursor is pointing at the 'Retrieve Imms' button.

Immunization History	
Janis Joplin 4 yrs, 10 mos 3/01/16 F	
Vaccines	
DTaP	
Tdap	
Hepatitis A	

Retrieve Imms Print

NAME

ADDRESS

DOB

And if there is a single match...

Retrieving Immunization Records

Retrieve Immunizations

Retrieve Immunizations - Confirm Patient Match

Patient Demographics	PCC EHR	CAIR
Patient Name	Janis Joplin	JANIS JOPLIN
Date of Birth	03/01/2016	03/01/2016
Sex	Female	F
Home Address	16 Moonbeam Half Moon Bay, CA 94019	16 MOONBEAM HALF MOON BAY, CA 94019
Mother's Maiden Name		JULIE JOPLIN
Multiple Birth	No	No

Cancel Next

Retrieve Immunizations

Retrieve Immunizations - Results

Janis Joplin 4 yrs, 10 mos 3/01/16 F

Vaccine History (CAIR)

DTaP-HepB-IPV	05/01/2016	07/01/2016
Hib-PRP-T	05/01/2016	07/01/2016
PCV13	05/01/2016	07/01/2016

Diseases (CAIR)

No vaccine-preventable diseases reported for this patient

Forecasting Results (CAIR)

Vaccine Family	Dose #	Recommended Date	Minimum Date	Past Due Date	Maximum Date
DTP/aP	3rd	09/01/2016 (6m)	07/29/2016		
HepA	1st	03/01/2017 (1y)	03/01/2017		
HepB	3rd	09/01/2016 (6m)	08/26/2016		
Hib	4th	03/01/2017 (1y)	03/01/2017		
Influenza-seasn1	1st	08/01/2020 (4y 5m)	09/01/2019		
MMR	0th	03/01/2017 (1y)	03/01/2017		
PneumoConjugate	4th	03/01/2017 (1y)	03/01/2017		
Polio	4th	03/01/2020 (4y)	03/01/2020		
Varicella	1st	03/01/2017 (1y)	03/01/2017		

Back Close Next

... you can see what the registry has on record for the patient...

Retrieving Immunization Records

The screenshot shows a window titled "Retrieve Immunizations" with a subtitle "Retrieve Immunizations - Import". At the top right, patient information is displayed: "Janis Joplin", "4 yrs, 10 mos", "3/01/16", and "F". Below this, a message states: "Selected immunizations will be added to the patient's Immunization History." The main area contains three immunization entries, each with a checkbox, a name, and a date. The first entry is "DTaP-HepB-IPV (CVX 110)" with a dropdown menu showing "VFC DTaP-HepB-IPV", and it has two checked dates: "05/01/2016" and "07/01/2016". The second entry is "PCV13 (CVX 133)" with a dropdown menu showing "Pevnar 13", and it has one checked date: "07/01/2016". The third entry is "Hib-PRP-T (CVX 48)" with a dropdown menu showing "Not configured in PCC EHR", and it has two unchecked dates: "05/01/2016" and "07/01/2016". At the bottom right, there are three buttons: "Back", "Close", and "Import". A mouse cursor is pointing at the "Import" button.

Retrieve Immunizations

Retrieve Immunizations - Import Janis Joplin 4 yrs, 10 mos 3/01/16 F

Selected immunizations will be added to the patient's Immunization History.

☒ DTaP-HepB-IPV (CVX 110) as VFC DTaP-HepB-IPV

☒ 05/01/2016

☒ 07/01/2016

☒ PCV13 (CVX 133) as Pevnar 13

☒ 07/01/2016

☐ Hib-PRP-T (CVX 48) - Not configured in PCC EHR

☐ 05/01/2016

☐ 07/01/2016

Back Close Import

... and import it into the patient's chart.

Best practices for submitting and retrieving records with your Immunization Registry

- Use CVX codes that match the immunizations being administered example: DTaP could be 106 or 20
- NDC codes can help confirm the CVX/MVX code match.
- Have patient demographics complete **before** adding immunizations to their chart.
- Know your state specific immunization reporting requirements: VFC eligibility, Funding Source, opt-in/out...
- Review reports in the EHR and your registry regularly.

Immunization Registry Helpful Links

- [Cross reference your vaccines by product name to find the CVX and MVX code \(CDC\)](#)
- [CVX, MVX, VIS, and NDC Codes in PCC EHR](#)
- [Manage Immunization Lots and Track Vaccine Inventory](#)
- [Review responses from immunization record submissions](#)
- [Look Up and Import Patient Immunization Records from Your Local Registry](#)

Charge posting

- Z23 selection
- Check for modifiers
- Verify Counseling
- Confirm 90461 pricing
- Why do my VFC vaccines have \$0.01?
- What to do about takebacks

Diagnoses

Include Dx on Claim	ICD-10	Description	Linked Procedures
<input checked="" type="checkbox"/>	Z23	Encounter for immunization	<input type="button" value="All"/> <input type="button" value="None"/> <input type="button" value="Select"/>
<input checked="" type="checkbox"/>	Z23	Encounter for immunization	<input type="button" value="All"/> <input type="button" value="None"/> <input type="button" value="Select"/>
<input checked="" type="checkbox"/>	Z23	Encounter for immunization	<input type="button" value="All"/> <input type="button" value="None"/> <input type="button" value="Select"/>

select an ICD-10 diagnosis

Procedures

Primary: Capital Blue Cross

Procedures	Units	Price	Insurance	Ins Due	Ins Adj	Pers Due	Discount	Source
<input checked="" type="checkbox"/> 90707 MMR Vaccine ▼ Dx: <input type="checkbox"/> Z23 Encounter for immunization <input type="checkbox"/> Z23 Encounter for immunization <input type="checkbox"/> Z23 Encounter for immunization	1	80.00	Primary	80.00	0.00	0.00	0.00	Post Charges
<input checked="" type="checkbox"/> 90700 DTaP ▼ Dx: <input type="checkbox"/> Z23 Encounter for immunization <input type="checkbox"/> Z23 Encounter for immunization <input type="checkbox"/> Z23 Encounter for immunization	1	50.00	Primary	50.00	0.00	0.00	0.00	Post Charges
<input checked="" type="checkbox"/> 90670 Prevnar 13 ▼ Dx: <input type="checkbox"/> Z23 Encounter for immunization <input type="checkbox"/> Z23 Encounter for immunization <input type="checkbox"/> Z23 Encounter for immunization	1	170.00	Primary	170.00	0.00	0.00	0.00	Post Charges
Totals:		300.00		300.00	0.00	0.00	0.00	

Coding

90460 vs. 90471

- With Counseling = 90460
 - Code for each vaccine
- Without Counseling = 90471
 - Code for first vaccine only

90461 vs. 90472

- Use one 90461 for each additional component
 - MMRV = 90460 x 1, 90461 x 3
 - MMR + Varicella = 90460 x 2, 90461 x 2
- Use one 90472 for each additional vaccine
 - MMR + Varicella = 90471 x1, 90472 x 1

Takeaways

1. After you administer a vaccine, it goes to the registry, updates the patient's vaccine forecast, appears in the patient's history, prints on vaccine forms, and can be billed.
2. Reduce registry submission errors by following best practice when recording patient demographics and vaccine administrations.
3. Use the Report Library, the Immunization Registry Response Viewer, and the Vaccine Lot Manager to answer questions about vaccine administrations, inventory, and registry communications.

Please fill out the course survey in the
app

Questions?