

Thank you for joining

The presentation will
begin shortly

Rise to Immunize™ Monthly Webinar

Setting Up Your Clinic for Success: A Patient Safety Program

Jeanette Holtmeyer, RN, MSN, CIC and Cynthia Hernandez, RHIA; *Mercy Clinic East Communities*

Today's Webinar

Campaign Updates

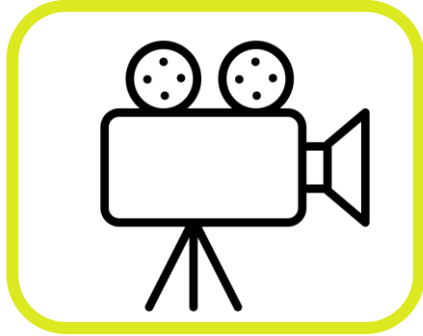
- Pneumococcal Vaccination Collaborative
- Annual Conference 2023
- RIZE Meet & Greet Breakfast
- Bonus Webinar

Setting Up Your Clinic for Success: A Patient Safety Program

- Jeanette Holtmeyer, RN, MSN, CIC
- Cynthia Hernandez, RHIA

Q&A Session

Webinar Reminders



Today's webinar recording
will be available the week of
02/20

- Will be sent via email
- Will be available on website

(RiseToImmunize.org → "Resources" → "Webinars")



Ask questions during the
webinar using the **Q&A**
feature

- Questions will be answered
at the end of the presentation

Pneumococcal Vaccination Collaborative



2023 AMGA

ANNUAL CONFERENCE



Chef José Andrés
Chef, Restaurateur, Humanitarian



Judy Faulkner
Founder & CEO, Epic



Scott Gottlieb, M.D.
23rd Commissioner of U.S. FDA



Joan Higginbotham
Retired NASA Astronaut

March 28-31, 2023

Hyatt Regency Chicago

Chicago, Illinois

amga.org/AC23

RIZE Meet & Greet Breakfast @ AC23



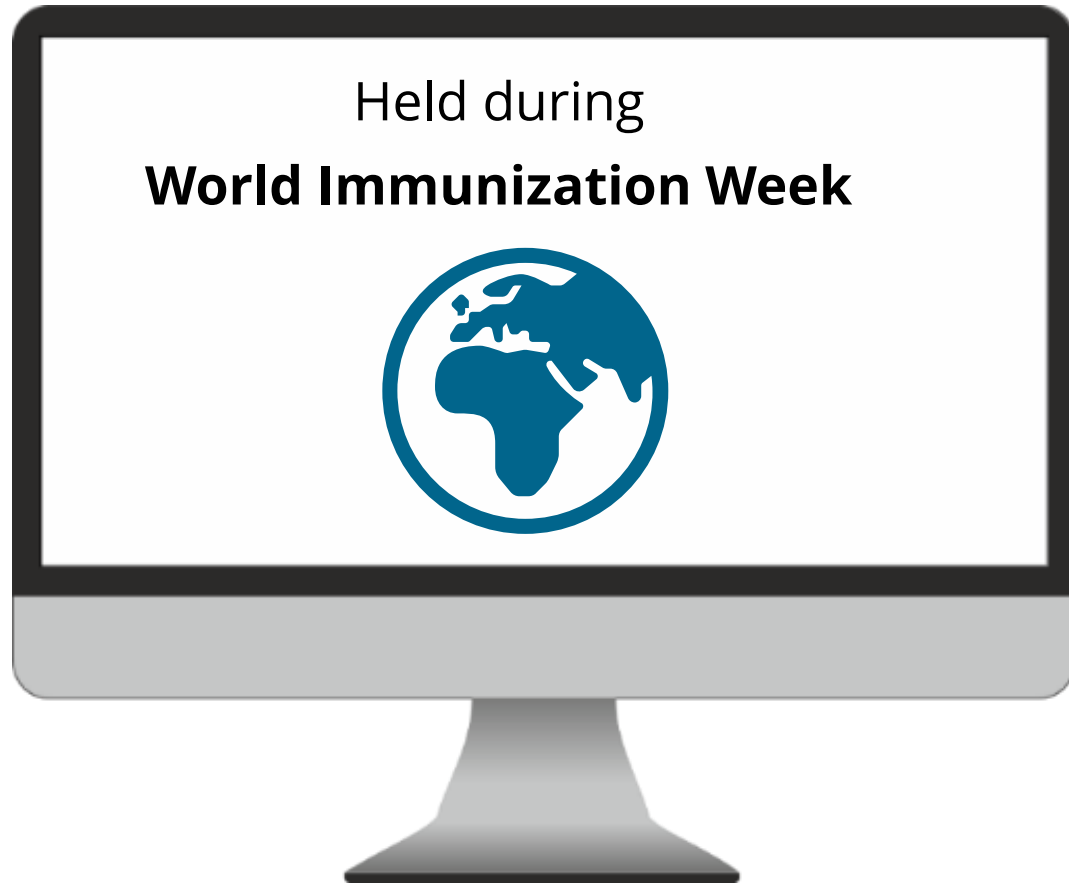
Thurs., March 30

6:45 - 7:45am CT

Randolph 1AB room

Join us and get a limited-edition RIZE power bank!

Bonus Webinar: Save the Date!



Topic & Speaker TBA

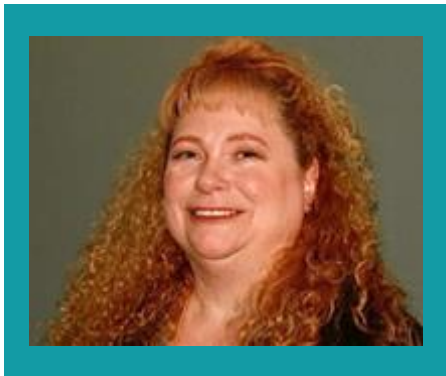
Thurs., April 27

2-3pm ET

Today's Speakers



Jeanette Holtmeyer, RN, MSN, CIC
Director of Quality and Safety, *Mercy Clinic East Communities*



Cynthia Hernandez, RHIA
Sr. Patient Safety Specialist, *Mercy Clinic East Communities*

Setting Up Your Clinic for Success:

A Patient Safety Program for Immunizations



*Cynthia Hernandez BS RHIA (Sr. Patient Safety Specialist)
Jeanette Holtmeyer MSN CIC (Director of Quality and Patient Safety East Community Clinics)*

As the Sisters of Mercy before us, we bring to life the healing ministry of Jesus through
our compassionate care and exceptional service



Your life is our life's work.



7th Largest Catholic Health Care System in the U.S.

\$242 million Traditional Charity Care

Across 4 states

2,300+ primary care and specialty physicians and
600 advanced practitioners and supporting staff

900+ Facilities

Physician practices/ Outpatient

40,000+ Coworkers

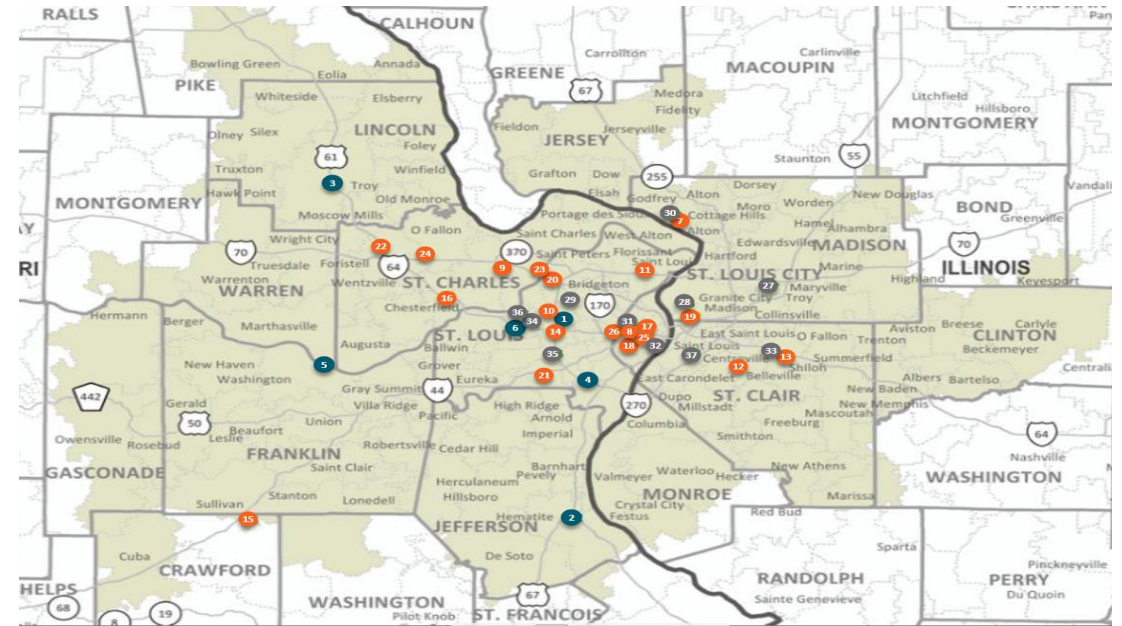
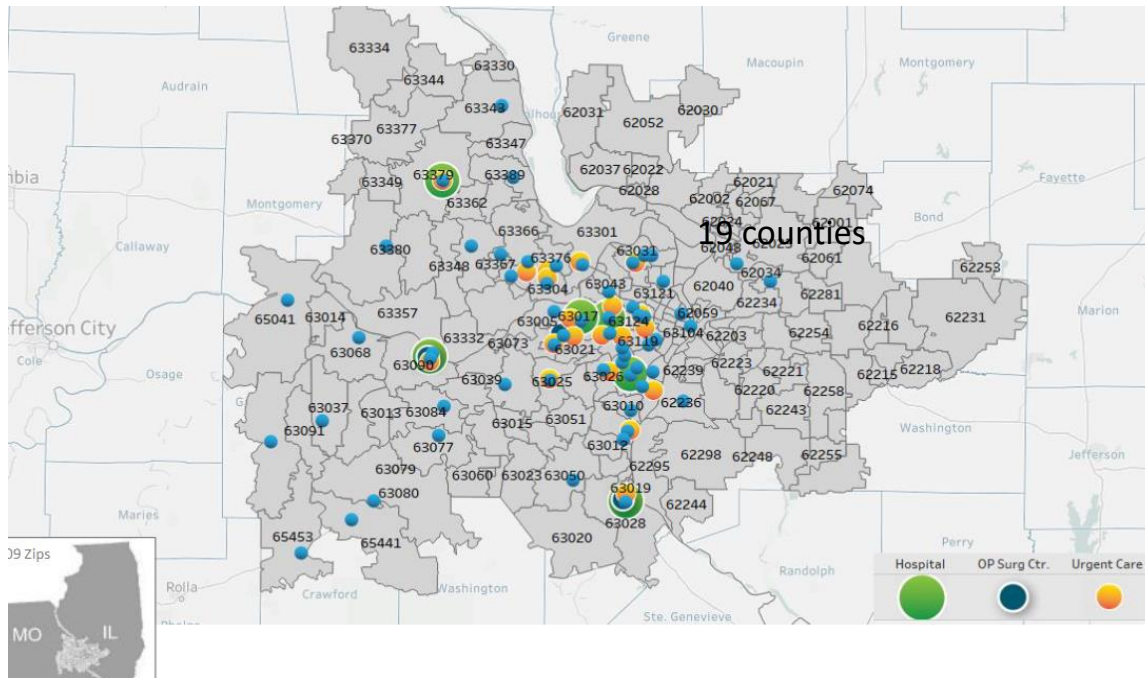


Mercy has the largest clinic footprint in the U. S.

Mercy East Community – Greater St. Louis Area

Over 100 miles, 469 clinics

2 States, 19 Counties



10+ Year Clinic Safety Program

85% increase in clinics over 10 years

Vaccinations Administered



Current FY
546,048

How to Properly set up Vaccines in a Clinic Setting

➤ Proper Storage and Handling

Education and Training

Proper Administration

How to order/charge

Patient Engagement

Protocols/Documentation – EMR driven

Safety Processes

Refrigerator Temperature Excursions

Continuous Journey



Location: Getting it right from the start



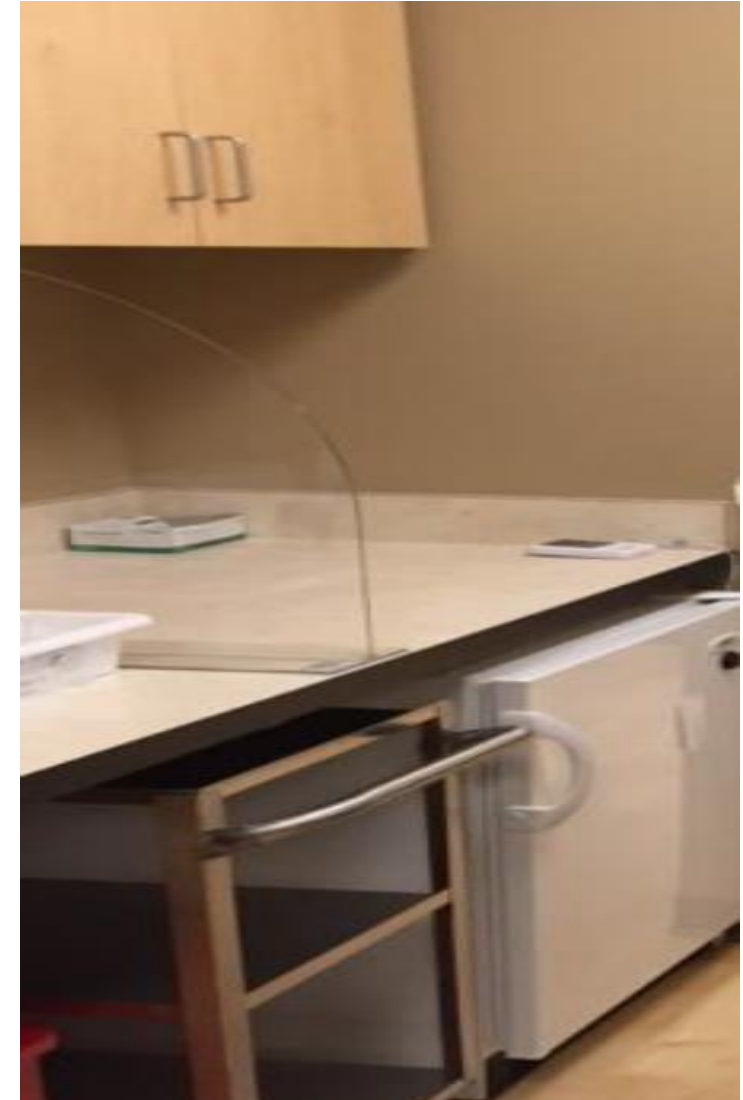
Dirty makes it all dirty

Clean

- Medications
- Vaccine draw area
- Vaccine Storage
- Bandages & Wound care supplies
- Needles & sharps

Dirty

- Urine
- Blood
- Sink
- Under sink
- Lab testing (strep)



Top to bottom must be designated clean space

Equipment

Purpose built or pharmaceutical grade units

Do not store any vaccine in a dormitory-style or bar-style combined refrigerator/freezer unit under any circumstances

To fully ensure the safety of vaccines, equipment should include a recommended unit with enough space to accommodate your maximum inventory without crowding



Medication barcode scanner



Alarm that calls office representative



Data logger (certified, calibrated)



Supply considerations



EpiPens: 2 Doses for each population (adult & pediatric)



Safety needles



Soap and hand sanitizer



Lockable and mounted biohazard sharps container



Lockable cabinets or drawers



Hand hygiene



Clean hands
save lives.

*Clean in,
clean out...
every time.*



Mercy+

Your life is our life's work.

mercy.net

Storage and Handling

- Store each type of vaccine or diluent in its original packaging and in a separate container or basket.
- Position vaccines and diluents 2 to 3 inches from the unit walls, ceiling, floor, and door.
- Label shelves and containers
- Store vaccines and diluents with similar packaging or names on different shelves
- Separate pediatric and adult vaccines on different shelves
- Whenever possible, store diluent with the corresponding refrigerated vaccine. Never store diluent in a freezer.
- Arrange vaccines and diluents in rows and allow space between them to promote air circulation.
- Place vaccines and diluents with the earliest expiration dates in front of those with later expiration dates
- Avoid placing or storing any items other than vaccines, diluents, and water bottles inside storage units

The vaccine coordinator (or other designated person) should rotate vaccine and diluent stock at least once a week, as well as each time your facility receives a vaccine delivery. This will ensure that vaccines expiring sooner are used first.



Would you feel safe using this pharmacy?



Disorganized medication storage can lead to patients receiving:

- Wrong drug
- Wrong dose
- Wrong dose form
- Wrong strength/concentration
- Another patient's medication
- Expired medication
- Deteriorated medication

Labeling is vital to patient safety

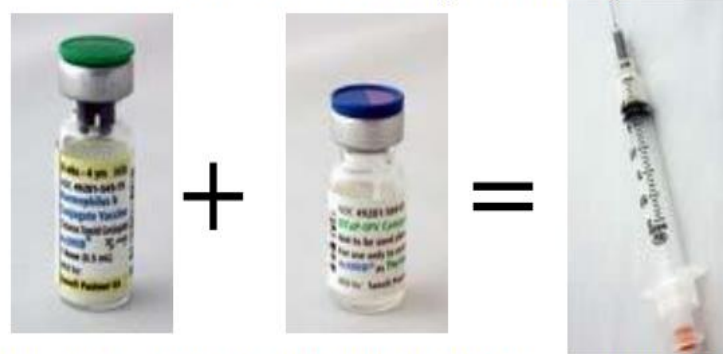
DTaP-IPV-Hib (Pentacel)

Ages: 6 weeks through 4 years
Use for: DTaP and IPV: Doses #1, #2, #3, and/or #4
Hib: Any dose in the series
Route: Intramuscular (IM) injection

Reconstitute Hib powder ONLY with manufacturer-supplied DTaP-IPV liquid diluent

**Use immediately after reconstitution
Do NOT administer DTaP-IPV w/o Hib**

DTaP-IPV/HIB (Pentacel)



Lyophilized Hib component + Manufacturer's DTaP-IPV liquid component = Pentacel vaccine
Should be used immediately after reconstitution

Staff can easily become confused about vaccines within the storage unit because there are so many brands and formulations available.

Labeling the area where vaccines are stored can help staff quickly locate and choose the correct vaccine.

[Vaccine Label Examples \(cdc.gov\)](http://www.cdc.gov/vaccine-label-examples/)

HepA-HepB (Twinrix)

Ages: 18 years and older
Contains: HepA = Pediatric dosage
HepB = Adult dosage
Schedule: 0, 1, and 6 months
Alternate Schedule: 0, 7, and 21 to 30 days, followed by booster at 12 months
Route: Intramuscular (IM) injection

VAR (Varivax)



Lyophilized VAR component + Manufacturer's sterile water diluent = Varivax vaccine
Beyond Use Time: Discard reconstituted vaccine if not used within 30 minutes.

Organized with Vaccines clearly labeled

Label shelves and containers to easily identify where each type of vaccine and diluent is stored.

Store vaccines and diluents with similar packaging or names on different shelves

Pediatric and adult formulations on different shelves.



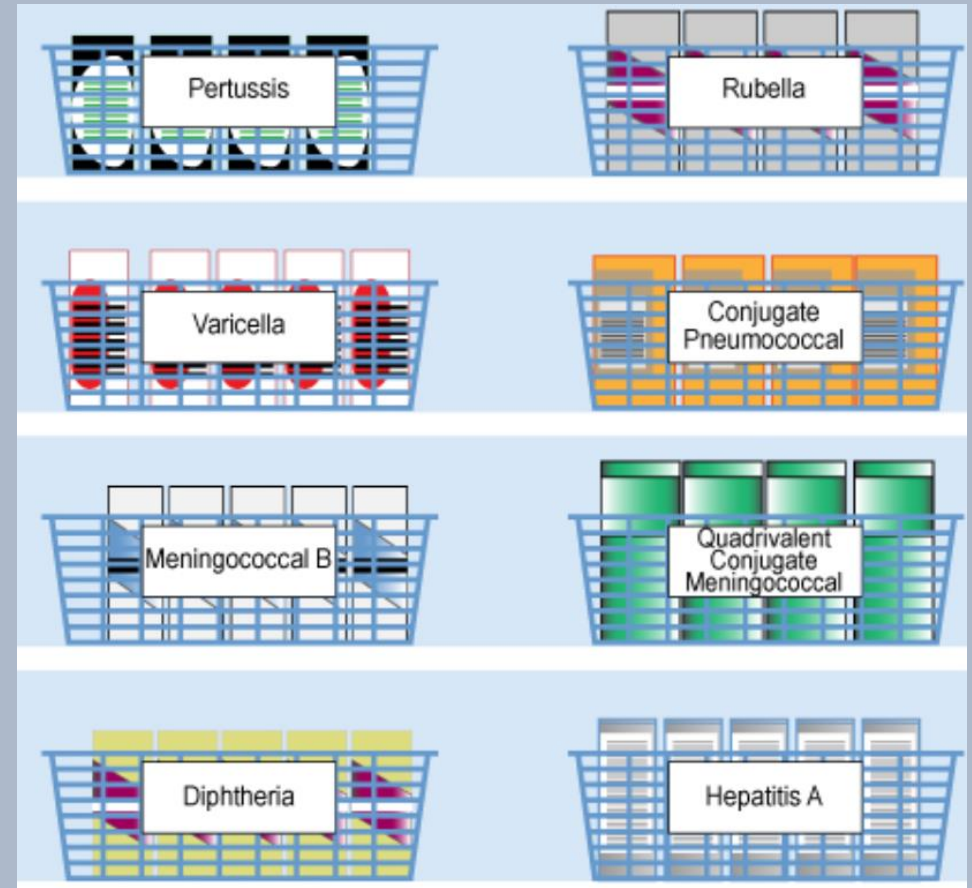
Expiration Dates

The vaccine coordinator (or other designated person) should remove expired vaccine and diluent immediately from the inventory.



Are your medications

- ? Organized
- ? Adult and Ped separated
- ? Clearly labeled
- ? Earliest expiration in front
- ? Checked for expiration
- ? Properly stored
- ? Sound alike/ look alike separated
- ? Stored in Clean space
- ? Not overly crowded in refrigerator
- ? Temperature monitored



Safe by choice,
Not by chance

How to Properly set up Vaccines in a Clinic Setting

Proper Storage and Handling

➤ Education and Training

Proper Administration

How to order/charge

Patient Engagement

Protocols/Documentation – EMR driven

Safety Processes

Refrigerator Temperature Excursions

Continuous Journey



Education

Orientation

Onboarding education

Preceptor

Online training

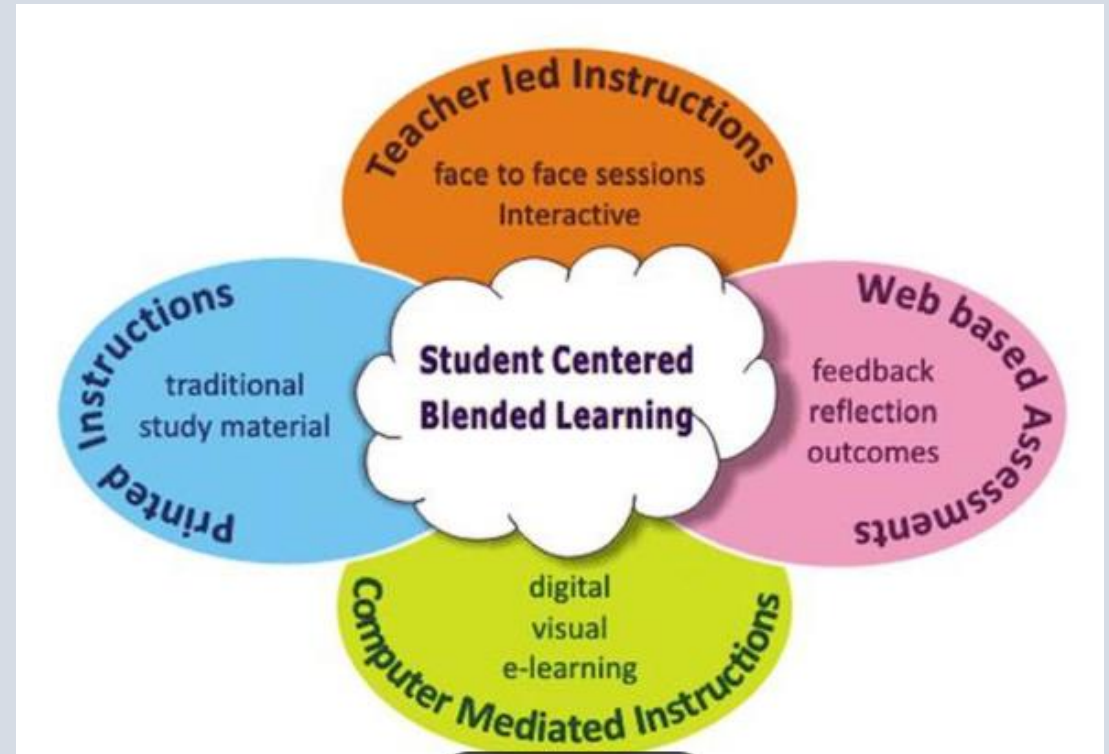
- Mandatory
- Available for self-assignment
- QR code attached

Bi-annual conferences

- Attended by office representative and shared with staff

Onsite rounding

As needed



Helpful tips

Offer through multiple means
Share and reference with all
Reinforce
Always include the "Why"

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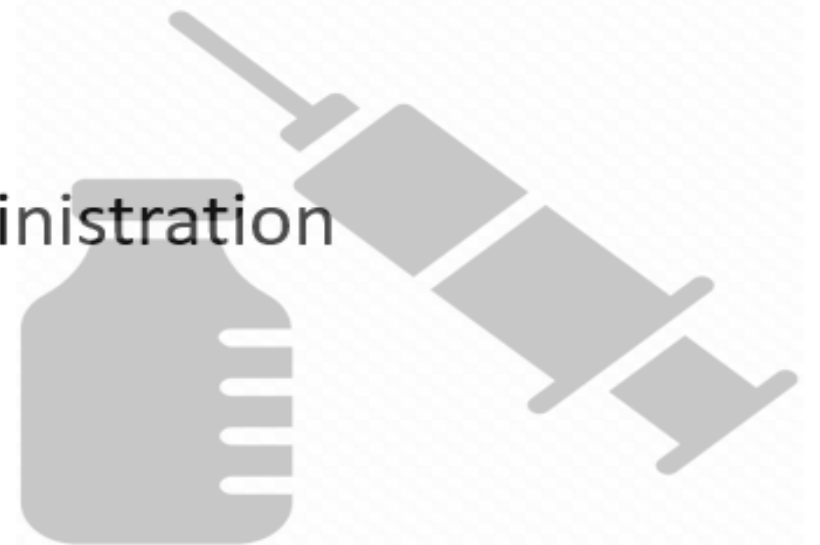
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Continuous Journey



Reducing Medication Errors

- Decrease distractions
- Don't be afraid to ask for help/ask questions
- Minimize the use of verbal orders
- Reconcile the patient's medications
- Provide patient teaching/education
- Follow the 10 Rights of Medication Administration



Vaccine Information Statements

Dates of Current VISs

Check your stock of VISs against this list. If you have outdated VISs, get current versions.

Adenovirus	1/8/20	MMRV	8/6/21
Anthrax	1/8/20	Multi-vaccine	10/15/21
Cholera	10/30/19	PCV	2/4/22
Dengue	12/17/21	PPSV	10/30/19
DTaP	8/6/21	Polio	8/6/21
Ebola	6/30/22	Rabies	6/2/22
Hepatitis A	10/15/21	Rotavirus	10/15/21
Hepatitis B	10/15/21	Smallpox/monkeypox	11/14/22
Hib	8/6/21	Td	8/6/21
HPV	8/6/21	Tdap	8/6/21
Influenza	8/6/21	Typhoid	10/30/19
J. enceph.	8/15/19	Varicella	8/6/21
MenACWY	8/6/21	Yellow fever	4/1/20
MenB	8/6/21	Zoster	2/4/22
MMR	8/6/21		

PRINT VERSION 

You Must Provide Patients with Vaccine Information Statements (VISs) – It’s Federal Law!

Federal law requires that VISs must be used for patients of ALL ages when administering these vaccines:

- DTaP (includes DT) • MMR and MMRV • Td and Tdap • meningococcal (MenACWY, MenB) • hepatitis A • pneumococcal conjugate • hepatitis B • polio • Hib • rotavirus • HPV • varicella (chickenpox) • influenza (inactivated and live, intranasal)

What are Vaccine Information Statements (VISs)?

Vaccine Information Statements (VISs) are documents produced by the Centers for Disease Control and Prevention (CDC), in consultation with panels of experts and parents, to properly inform vaccinees (or their parents/legal representatives) about the risks and benefits of each vaccine. VISs are not meant to replace interactions with healthcare providers, who should address any questions or concerns that the vaccinee (or parent/legal representative) may have

VISs can be given to patients in a variety of ways. In most medical settings, VISs are provided to patients (or their parents/legal representatives) in paper form. However, VISs also may be provided using electronic media. Regardless of the format used, the goal is to provide a current VIS just prior to vaccination

One needle, One syringe, One Time One and Only Campaign

One and Only Campaign | Injection Safety | CDC

- Information and Posters available



INJECTION SAFETY CHECKLIST

The following Injection Safety checklist items are a subset of items that can be found in the *CDC Infection Prevention Checklist for Outpatient Settings: Minimum Expectations for Safe Care*.

The checklist, which is appropriate for both inpatient and outpatient settings, should be used to systematically assess adherence of healthcare providers to safe injection practices. Assessment of adherence should be conducted by direct observation of healthcare personnel during the performance of their duties.

Injection Safety	Practice Performed?	If answer is No, document plan for remediation
Proper hand hygiene, using alcohol-based hand rub or soap and water, is performed prior to preparing and administering medications.	Yes No	
Injections are prepared using aseptic technique in a clean area free from contamination or contact with blood, body fluids, or contaminated equipment.	Yes No	
Needles and syringes are used for only one patient (this includes manufactured prefilled syringes and cartridge devices such as insulin pens).	Yes No	
The rubber septum on a medication vial is disinfected with alcohol prior to piercing.	Yes No	
Medication vials are entered with a new needle and a new syringe, even when obtaining additional doses for the same patient.	Yes No	
Single-dose or single-use medication vials, ampules, and bags or bottles of intravenous solution are used for only one patient.	Yes No	
Medication administration tubing and connectors are used for only one patient.	Yes No	
Multi-dose vials are dated by healthcare when they are first opened and discarded within 28 days unless the manufacturer specifies a different (shorter or longer) date for that opened vial. <i>Note: This is different from the expiration date printed on the vial.</i>	Yes No	
Multi-dose vials are dedicated to individual patients whenever possible.	Yes No	
Multi-dose vials to be used for more than one patient are kept in a centralized medication area and do not enter the immediate patient treatment area (e.g., operating room, patient room/cubicle). <i>Note: If multi-dose vials enter the immediate patient treatment area, they should be dedicated for single-patient use and discarded immediately after use.</i>	Yes No	

The *One & Only Campaign* is a public health effort to eliminate unsafe medical injections. To learn more about safe injection practices, please visit www.cdc.gov/injectionsafety/1anonly.html.



Can vaccines be pre-drawn?

Draw up vaccines only at the time of administration.

- The practice of prefilling syringes is discouraged for several reasons. However, there may be rare instances when the only option is to pre-draw vaccine.

If vaccines must be pre-drawn, adhere to the following best practices:

- Set up a separate administration station for each vaccine type
- Draw up vaccines only after arriving at the clinic site or mass vaccination event. Drawing up doses days or even hours before administering them is not a best practice because general-use syringes are not designed for storage.
- Each person administering vaccines should draw up no more than one MDV or 10 doses at one time.
- Once each pre-drawn dose is prepared, label the syringe with the vaccine name and dosage, the beyond-use date and time, lot number, and the preparer's initials.
- Monitor patient flow to avoid drawing up unnecessary doses.
- Pre-draw reconstituted vaccine into a syringe only when you are ready to administer it. If a pre-drawn vaccine is not used within 30 minutes of being reconstituted, follow manufacturer guidance for storage conditions and time limits.
- Pre-drawn syringes must be stored at the manufacturer-recommended temperatures throughout the clinic day.
- Discard any remaining vaccine in pre-drawn syringes at the end of the workday. Never transfer pre-drawn reconstituted vaccine back into a vial for storage.

***As an alternative to pre-drawing vaccines, use manufacturer-filled syringes for large vaccination clinics.**

Preparation

Prepare vaccines in a designated area away from any space where potentially contaminated items are placed.

Only prepare vaccines when you are ready to administer them.

Before preparing the vaccine, always check the:

- Vial to ensure it is the correct vaccine
- Expiration date or beyond-use date/time to ensure it has not passed
- Label the syringe if not pre-labeled
- Confirm that you have selected the correct vaccine.
- Only administer vaccines you have prepared.
 - This is a quality control and patient safety issue and a best practice standard of medication administration.

Preparing for an Injection

Verify orders

Assess patient allergies

Perform hand hygiene

Verify correct patient, drug, dose, route, time

Assist the patient to a comfortable position

Select site and clean with alcohol swab

Do not blow or fan the clean area!

Adverse reactions

Potential for Adverse effects/ Allergic reactions to immunizations

- Clinics should only stock EpiPens or EpiPens Jr.
 - Safer due to no dosing or filter needle
- 2 doses per patient type (Ex. Family med offices should have 2 adult and 2 junior)
- VAERS: Vaccine Adverse Event Reporting System
 - Reporting system for adverse events (possible side effects) after a person has received a vaccination
 - Vaccine Adverse Event Reporting System (VAERS) (hhs.gov)

Managing Adverse Vaccine Reactions

Vaccines are intended to produce active immunity to specific antigens. An adverse reaction is an undesirable side effect that occurs after a vaccination. Vaccine adverse reactions are classified as 1) local, 2) systemic, or 3) allergic. Local reactions (e.g., redness) are usually the least severe and most frequent. Systemic reactions (e.g., fever) occur less frequently than local reactions, and severe allergic reactions (e.g., anaphylaxis) are the least frequent reactions. Severe adverse reactions are rare.

WHAT TO DO IF AN ADVERSE REACTION OCCURS: The charts below provide the steps for treating adverse reactions in Children & Teens (pink) and Adult Patients (green).

CHILDREN AND TEENS: MEDICAL MANAGEMENT OF ADVERSE VACCINE REACTIONS		
REACTION	SYMPTOMS	MANAGEMENT
Localized	Soreness, redness, itching, or swelling at the injection site	Apply a cold compress to the injection site. Consider giving an analgesic (pain reliever) or anti pruritic (anti-itch) medication
	Slight bleeding	Apply an adhesive compress over the injection site.
	Continuous bleeding	Place thick layer of gauze pads over site and maintain direct and firm pressure; raise the bleeding injection site (e.g. arm) above the level of the patient's heart.
Psychological fright and syncope (fainting)	Fright before injection is given.	Have patient sit or lie down for the vaccination.
	Extreme paleness, sweating, coldness of the hands and feet, nausea, light-headedness, dizziness, weakness, or visual disturbances	Have patient lie flat or sit with head between knees for several minutes. Loosen any tight clothing and maintain an open airway. Apply cool, damp cloths, to patient's face and neck.
	Fall, without loss of consciousness	Examine the patient to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated.
	Loss of consciousness	Check the patient to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated. Call 911 if patient does not recover immediately.

Culture of Safety

Event reporting helps improve patient and coworker safety

Gives us the opportunity to:

- Address concerns
- Review, update, and strengthen processes
- Prevent similar events from occurring
- Provide education
- Trend issues
- Identify successes

Examples of events related to vaccination:

- Wrong drug
- Wrong dose

Events to discuss:

- Syncopal events
- Multiple patients in room



Supportive Program Recommendations

Safety Champions
Standardized education
Standardized tools
Huddle topics
Onsite safety rounding



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How to Order & Charge for your Vaccines?

- Direct from Mercy Outpatient Pharmacy
- Sanofi Pasteur - [Order your vaccines easily with us | Sanofi Pasteur](#)

The screenshot shows the Sanofi Pasteur website header with navigation links: HOME > PUBLIC > WAYS TO ORDER. A call number is provided: CALL SANOFI PASTEUR: 0800 854 430 (option 1). The main content area is titled 'TWO WAYS TO ORDER' and includes a sub-header 'You can now CHECK PRODUCT AVAILABILITY before placing an order'. Two options are listed: 1. VAXISHOP, described as a newly enhanced e-ordering and e-accounting site, with a 'SHOP ONLINE' button; and 2. Call ordering, with a 'Call Sanofi Pasteur: 0800 854 430(option 1)' button.

- Pfizer [Vaccine Site \(pfizer.com\)](#)

The screenshot shows the Pfizer Prime Vaccines login page. On the left, a vertical navigation menu includes icons for ORDER, TRACK, and PAY. The main content area features the Pfizer Prime logo with the tagline 'order-track-pay'. Below the logo are input fields for 'Email' and 'Password', a 'LOG IN →' button, a 'Forgot Password?' link, and a 'Register For Prime' button.

Charging Electronic Medical Record
*****Correct NDC Numbers in EMR for Crosswalk**
Influenza Vaccines for 2022-2023

NDC	Age	Procedure to Order	Brand Name	Dose and source	CPT
49281-122-88	65 yr up	IMM10057 - Influenza Vaccine High Dose quadrivalent 65 yr up PF-IM	FLUZONE HIGH-DOSE QUAD	0.7 mL SYRINGE x 1	90662

- *Use the inner (syringe/vial) NDCs and not the outer NDCs (box/carton)*
- *Charges for Correct vaccine and administration fee is dropped once the vaccine is documented.*

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Patient Engagement

- Care Signal - Text Messages Reminders
- MyMercy Reminders
- Mercy. Net

- Office Visit – Provider Recommends
“ These are immunizations for today”
- Drive Thru Flu Vaccine Clinics in the Fall all regions
- Radio/TV with Mercy providers recommending vaccines
- 36- Mercy Outpatient Pharmacies - walk-ins welcomed

Mercy Facebook Page

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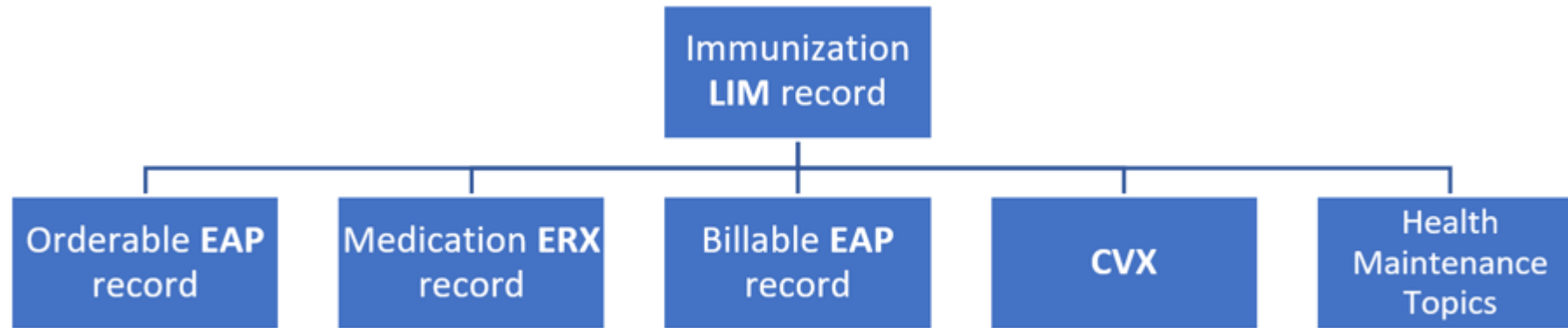
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- Immunization High Level Build





Complex Build -Multiple Pieces of Build Involving Multiple Teams.
Ambulatory, Willow, Professional Billing, HIM and Interfaces.

“Snapshot” EPIC – Check this first upon entering EPIC chart to ensure accuracy of Immunization prompts.

Click **ORANGE** link and immunizations from Missouri Immunization Registry Auto drops into Historical Field of EPIC

Immunizations/Injections

 Immunizations from outside sources need reconciliation. 

(MODERNA)(12 YRS UP PRIMARY SERIES) COVID-19 VACCINE - EMERGENCY USE AUTHORIZATION, MRNA-1273(PF) 100 MCG/0.5 ML IM SUSP 11/23/2021

(PFIZER BIVALENT)(12 YR UP BOOSTER) COVID-19 VACCINE - EMERGENCY USE AUTHORIZATION, MRNA, LNP-S(PF) 30 MCG/0.3 ML SUSP 9/23/2022

(PFIZER TRIS)(12 YR UP PRIMARY SERIES) COVID-19 VACCINE - EMERGENCY USE AUTHORIZATION, MRNA, TRIS(PF) 30 MCG/0.3 ML IM SUSP 4/29/2022

(PFIZER)(12 YR UP) COVID-19 VACCINE - EMERGENCY USE AUTHORIZATION, MRNA, BNT162B2(PF) 30 MCG/0.3 ML IM SUSP 4/13/2021, 3/21/2021

INFLUENZA VACCINE QUADRIVALENT 6 MOS UP IM 5/13/2021

Influenza Seasonal Unspecified Formulation IM 10/13/2021, 11/1/2019

Zoster Recomb Adjuv 50+ Pf Im 5/13/2021

Health Maintenance

- Due dates for upcoming and overdue doses appear in the Health Maintenance activity and in SnapShot reports so that clinicians can easily identify patients who are due for immunizations.

Health Maintenance ? ×

[Address Topic](#)
[Remove Override](#)
[Document Past Immunization](#)
[Edit Modifiers](#)
[Report](#)
[Update HM](#)
[Guidelines](#)

Topic	Due Date	Frequency	Date Completed
Upcoming			
HPV (1 - Male 2-dose series)	Next due on 1/1/2023	Imm Details	
Meningococcal (ACWY) (1 - 2-dose series)	Next due on 1/1/2023	Imm Details	
DTaP-Tdap-Td (6 - Tdap)	Next due on 1/1/2023	Imm Details	1/21/2016 7/19/2013 7/14/2012 5/2/2012 3/7/2012
Completed or No Longer Recommended			
Rotavirus	Completed	Imm Details	7/14/2012 5/2/2012 3/7/2012
Hepatitis B	Completed	Imm Details	7/14/2012 3/7/2012 1/3/2012
Hib	Completed	Imm Details	1/5/2013 7/14/2012 5/2/2012 3/7/2012
Hepatitis A	Completed	Imm Details	7/19/2013 1/5/2013
Polio	Completed	Imm Details	1/21/2016 7/14/2012 5/2/2012 3/7/2012
MMR	Completed	Imm Details	1/21/2016 1/5/2013
Varicella	Completed	Imm Details	1/21/2016 1/5/2013

Standard Orders are embedded into Encounter Guide (EPIC)

- Immunization Schedule built into Encounter Guide

The screenshot displays the EPIC Encounter Guide for a pediatric patient. The interface is divided into several sections:

- Header:** Patient information including name (Encounterguide, Pediatrics), ID (E1304572637), age (2 y.o.), gender (Female), and date (1/31/17). Clinical data such as weight (13.6 kg), allergies, and POA status are also visible.
- Encounter Guide:** A central panel showing a list of tasks under the heading "Encounter Guide". Tasks include "DTAP VACCINE AAP Immunization Refusal Form", "Autism Screen (18 & 24 mos)", and "Flu Vaccine Due". Each task has options to "Open SmartSet", "Add Allergy", "Postpone", or "IMM HX".
- SmartSets:** A panel on the right showing "Immunizations" with a "From BestPractice" dropdown and a list of DTAP vaccine options (e.g., "DTAP HEP B IPV COMBINED VACCINE IM").
- Allegies/Contraindications:** A section showing "No Known Allergies" and "Never Updated (History)".
- Home Medications:** A section showing "No medications on file".
- Right Panel:** A summary section titled "This Visit" containing:
 - Encounter Guide Review:** A link to review the guide.
 - Gaps in Care Tasks:** A list of tasks that are due, including "Flu Vaccine Due", "DTAP Vaccine Due", and "Autism Screen, 18 & 24 mos".
 - Last Vital Signs/BMI:** A table showing BP and WT readings from the last three encounters.
 - % Weight Change:** A section for weight change from last filed data.
 - Orders Placed:** A section showing "None".
 - Chronic Conditions Needing Addressed:** A section stating "All Current Chronic Diagnosis Have Been Addressed".
 - Estimated Risk Adjustment:** A table showing potential, current, and gap risk adjustment scores.

Immunizations

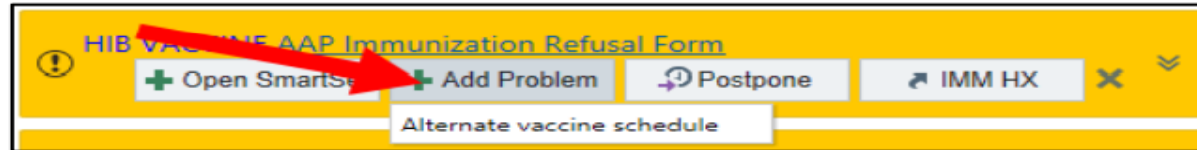
When addressing a gap in care, such as Immunizations, you can click on Open SmartSet

The screenshot shows the 'Encounter Guide' interface. At the top, there is a header 'Encounter Guide' with a pencil icon and a 'Expand/Collapse All' button with a refresh icon. Below this, the section 'Immunizations (Measures: 4)' is displayed with an upward arrow icon. A yellow highlighted row contains the text 'HIB VACCINE AAP Immunization Refusal Form' with an information icon on the left and four action buttons on the right: '+ Open SmartSet', '+ Add Problem', 'Postpone', and 'IMM HX' with a close icon.

The screenshot shows the expanded 'HIB VACCINE AAP Immunization Refusal Form' window. The title bar includes an information icon, the title text, and the same four action buttons as the previous screenshot. The main content area displays the following information:
HIB VACCINES last satisfied: Not on file
No related orders found in patient record
Apply **one** of the following _____
Below this, there are three rows of options, each with a button and a text label:
1. '+ Open SmartSet' button followed by 'Immunizations Preview'
2. '+ Add Problem' button followed by 'Alternate vaccine schedule Edit details' with a dropdown arrow
3. 'Postpone' button followed by 'HIB VACCINES (#1[1 of 1 - Start at 15 months series) Edit details' with a dropdown arrow and 'Until 2/2/2019'
Below these options is the text 'IMM HX' with an external link icon.
At the bottom, there is a section titled 'Acknowledge Reason' followed by two buttons: 'Parent/Guardian Refusal' and 'Special population/situation'.

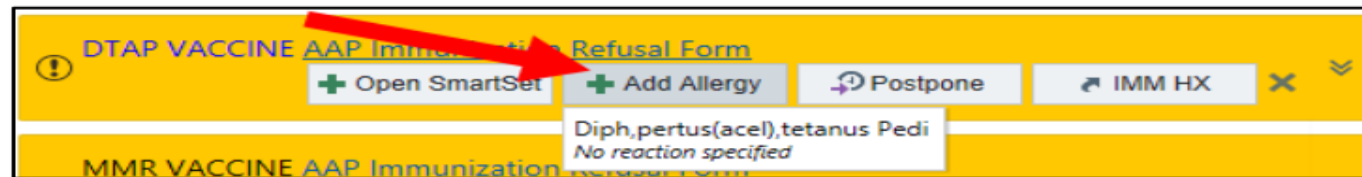
Contraindication

If a contraindication or patient is on an alternative vaccine schedule, which needs to be added to a problem list, click on drop down arrow on Add Problem button to pick from a pre-set list of problems relevant to that measure.



Continued on next page.

If an allergy needs to be added to the patients chart, click drop down arrow on Add Allergy button to pick from a pre-set list of allergies relevant to that measure. You will need to specify a reaction.



To document a patient refusal, click on the link in the BPA. It will open the form to print and sign.

Refusal of Vaccine



Refusal to Vaccinate

Child's Name _____ Child's ID# _____

Parent's/Guardian's Name _____

My child's doctor/nurse _____ has advised me that my child (named above) should receive the following vaccines:

Recommended	Declined
<input type="checkbox"/> Hepatitis B vaccine	<input type="checkbox"/>
<input type="checkbox"/> Diphtheria, tetanus, acellular pertussis (DTaP or Tdap) vaccine	<input type="checkbox"/>
<input type="checkbox"/> Diphtheria tetanus (DT or Td) vaccine	<input type="checkbox"/>
<input type="checkbox"/> Haemophilus influenzae type b (Hib) vaccine	<input type="checkbox"/>
<input type="checkbox"/> Pneumococcal conjugate or polysaccharide vaccine	<input type="checkbox"/>
<input type="checkbox"/> Inactivated poliovirus (IPV) vaccine	<input type="checkbox"/>
<input type="checkbox"/> Measles-mumps-rubella (MMR) vaccine	<input type="checkbox"/>

- That some vaccine-preventable diseases are common in other countries and that my unvaccinated child could easily get one of these diseases while traveling or from a traveler.
- If my child does not receive the vaccine(s) according to the medically accepted schedule, the consequences may include
 - Contracting the illness the vaccine is designed to prevent (the outcomes of these illnesses may include one or more of the following: certain types of cancer, pneumonia, illness requiring hospitalization, death, brain damage, paralysis, meningitis, seizures, and deafness; other severe and permanent effects from these vaccine-preventable diseases are possible as well).
 - Transmitting the disease to others (including those too young to be vaccinated or those with immune problems), possibly requiring my child to stay out of child care or school

How to Properly set up Vaccines in a Clinic Setting

Proper Storage and Handling

Education and Training

Proper Administration

How to order/charge

Patient Engagement

Protocols/Documentation – EMR driven

 Safety Processes

Refrigerator Temperature Excursions

Continuous Journey



New Vaccine – Examples -PCV 20, COVID Pediatrics dosing



Need to Educate Providers/Managers
New vaccine available

Quality, Safety, Value committee for providers

Provider Newsletter

Will send out communication when available to providers and managers



EPIC

Work with Vaccine manager for Mercy – availability

*** Notify managers ability to order the vaccine

NDC Crosswalk for EPIC built for charging

Encounter Guide Build



Important to follow correct sequence

1) Availability

2) EPIC build – NDC, Encounter Guide

3) Ordering for clinics

4) Administration

Benefits of 2 –D Bar Code Scanning and EMR Decision Support

1) Match Vaccine Order to :

- A. Patient characteristics
 - 1) Patient's age
 - 2) Patient's allergies
 - 3) Patients' immunization history
- B. Current ACIP/AAP vaccine recommendations

2) Input and document critical information

- A. NDC
- B. Lot Number
- C. ...etc.

3) Check that correct patient is getting the correct ordered vaccination.

- (When patient checks in receives a patient identifier that is scanned prior to vaccine administration?)

4) Identify outdated or expired product

5) Inventory control

- A. Just in time ordering
- B. Decrease vaccine inventory (less risk of loss)

6) VFC stock management

Medication barcode scanner



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Can you tell the difference?



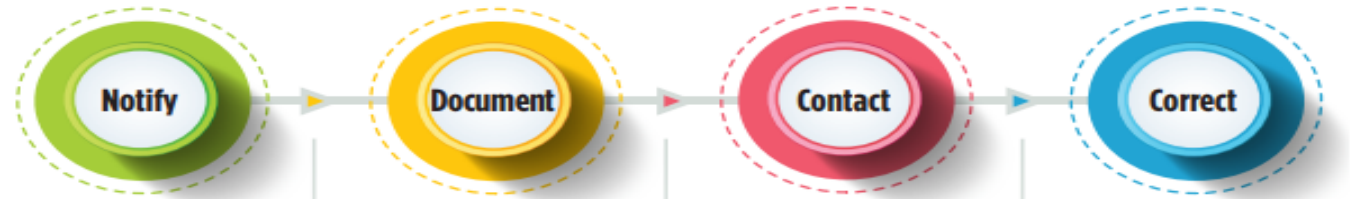
**Properly stored
vaccine
Full potency**



**Improperly stored
vaccine
Diminished potency**

Handling a Temperature Excursion in Your Vaccine Storage Unit

Any temperature reading outside ranges recommended in the manufacturers' package inserts is considered a temperature excursion. Identify temperature excursions quickly and take immediate action to correct them. This can prevent vaccine waste and the potential need to revaccinate patients.



- » Notify the primary or alternate vaccine coordinator immediately or report the problem to a supervisor.
- » Notify staff by labeling exposed vaccines, "DO NOT USE," and placing them in a separate container apart from other vaccines in the storage unit. Do not discard these vaccines.

- » Document details of the temperature excursion:
 - Date and time
 - Storage unit temperature (including minimum/maximum temperatures during the time of the event, if available)
 - Room temperature, if available
 - Name of the person completing the report
 - General description of the event (i.e., what happened)
 - If using a digital data logger (DDL), determine the length of time vaccine may have been affected
 - Inventory of affected vaccines
 - List of items in the unit other than vaccines (including water bottles)
 - Any problems with the storage unit and/or affected vaccines before the event
 - Other relevant information

- » Contact your immunization program and/or vaccine manufacturer(s) for guidance per your standard operating procedures (SOPs).
- » Be prepared to provide the immunization program or manufacturer with documentation and DDL data so they can offer you the best guidance.

Contact manufacturer for excursions:	
Dynavax	1-844-375-4728
GlaxoSmithKline	1-888-825-5249
Massachusetts Biological Labs	1-888-825-5249
MedImmune	1-877-633-4411
Merck	1-800-672-6372
Pfizer	1-800-438-1985
Sanofi Pasteur	1-800-822-2463
Seqirus	1-855-358-8966

- » If the temperature alarm goes off repeatedly, do not disconnect the alarm until you have determined and addressed the cause.
- » Check the basics, including:
 - Power supply
 - Unit door(s)
 - Thermostat settings
- » If the excursion was the result of a temperature fluctuation, refer to the section, "Vaccine Storage and Temperature Monitoring Equipment," in CDC's Vaccine Storage and Handling Toolkit for detailed guidance on adjusting storage unit temperature to the appropriate range.
- » If you believe the storage unit has failed, implement your emergency vaccine storage and handling SOPs. Never allow vaccines to remain in a nonfunctioning unit following a temperature excursion.

Handling Temperature Excursion

- Possible Alternative Sites
 - Pharmacies (even not affiliated pharmacies)
 - Ambulance Districts
 - Hospital Pharmacies
 - Other nearby clinics

DO NOT BRING VACCINES HOME TO YOUR REFRIGERATOR!



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CHECKLIST FOR EMERGENCY VACCINE STORAGE, HANDLING, AND TRANSPORT

All contact information in Checklist for General Information as well as up-to-date contact information for:

Alternative vaccine storage facility (one or more)

Transportation of vaccines » Vaccine storage unit specifications (type, brand, model number, serial #)

Diagram of facility showing important elements, including doors, flashlights, packing materials, batteries, circuit breakers

Keep a copy of emergency SOPs with emergency supplies and at multiple off-site locations such as homes of vaccine coordinator and alternate coordinator and with building manager, security staff, and alternative storage facility.

» Protocols for:

Monitoring vaccines during a power outage

Packing vaccines and diluents for emergency transport

Transporting vaccines to and from an alternative vaccine storage facility

Assessing whether vaccine can be used after an emergency

Assessing your building and facility after hours

Emergency Response Worksheet

What to do in case of a power failure or other event that results in vaccine storage outside of the recommended temperature range

For information on COVID-19 vaccine storage, see the COVID-19 Vaccine Addendum in CDC's Vaccine Storage and Handling Toolkit at www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf.

Follow these procedures:

1. Close the door tightly.
2. Ensure the vaccine is kept at appropriate temperatures. Make sure the refrigerator or freezer is plugged in and working properly, or move the vaccines into proper storage conditions as quickly as possible.
3. Do NOT discard the affected vaccines unless directed to by your state/local health department and/or the manufacturer(s). Label the vaccines "Do Not Use" so that the potentially compromised vaccines can be easily identified.

4. Notify the state/local health department or call the manufacturer (see manufacturers' phone numbers below).
5. Document the inventory of affected vaccines below and document the circumstances of the event and the actions taken on the Vaccine Storage Troubleshooting Record (see www.immunize.org/catg.d/p3041.pdf).

Vaccines Stored in Refrigerator

Vaccine	Manufacturer	Lot #	Expiration Date	# of Doses (i.e., net # of vials)

Vaccines Stored in Freezer

Vaccine	Manufacturer	Lot #	Expiration Date	# of Doses (i.e., net # of vials)

Important Contact Information:

Vaccine Manufacturers

AstraZeneca	(877) 633-4411	GlaxoSmithKline	(877) 356-8368	Sanofi Pasteur	(800) 822-2463
Bavarian Nordic ¹	(844) 422-8274	MassBiologics	(617) 474-3220	Seqirus	(855) 358-8966
Dynavax Technologies	(844) 375-4728	Merck & Co., Inc.	(800) 672-6372	Valneva ⁴	(301) 556-4500
Emergent BioSolutions ²	(866) 300-7602	Pfizer Inc. ³	(800) 438-1985		

Manufacturer for less commonly used vaccine:

1. Bavarian Nordic: Rabavert (rabies), Jynneos (smallpox and monkeypox)
2. Emergent BioSolutions: Biothrax (anthrax), Vaxchora (cholera), Vivovif (typhoid)
3. Pfizer: Ticovac (tick-borne encephalitis)
4. Valneva: Isaxo (Japanese encephalitis)

Health Departments

Local Health Department phone _____

State Health Department phone _____

Adapted by Immunize.org, courtesy of the Michigan Department of Community Health.



FOR PROFESSIONALS www.immunize.org / FOR THE PUBLIC www.vaccineinformation.org
www.immunize.org/catg.d/p3051.pdf • Item #3051 (6/22)

Vaccine Storage Troubleshooting Record (check one) Refrigerator Freezer Ultra-Cold Freezer

Use this form to document any unacceptable vaccine storage event, such as exposure of refrigerated vaccines to temperatures that are outside the manufacturers' recommended storage ranges.

Date & Time of Event	Storage Unit Temperature	Room Temperature	Person Completing Report
If multiple, related events occurred, see Description of Event below.	at the time the problem was discovered	at the time the problem was discovered	
Date:	Temp when discovered:	Temp when discovered:	Name:
Time:	Minimum temp: Maximum temp:	Comment (optional):	Title: Date:
Description of Event (If multiple, related events occurred, list each date, time, and length of time out of storage.)			
<ul style="list-style-type: none"> • General description (i.e., what happened?) • Estimated length of time between event and last documented reading of storage temperature in acceptable range (2° to 8°C [36° to 46°F] for refrigerator; -50° to -15°C [-58° to 5°F] for freezer; -80° to -60°C [-112° to -76°F] for ultra-cold freezer (may be used for Pfizer COVID-19 vaccine). • Inventory of affected vaccines, including (1) lot #'s and (2) whether purchased with public (for example, VFC) or private funds (Use separate sheet if needed, but maintain the inventory with this troubleshooting record.) • At the time of the event, what else was in the storage unit? For example, were there water bottles in the refrigerator and/or frozen coolant packs in the freezer? • Prior to this event, have there been any storage problems with this unit and/or with the affected vaccine? • Include any other information you feel might be relevant to understanding the event. 			
Action Taken (Document thoroughly. This information is critical to determining whether the vaccine might still be viable.)			
<ul style="list-style-type: none"> • When were the affected vaccines placed in proper storage conditions? (Note: Do not discard the vaccine. Store exposed vaccine in proper conditions and label it "do not use" until after you can discuss with your state/local health department and/or the manufacturer(s).) • Who was contacted regarding the incident? (For example, supervisor, state/local health department, manufacturer—list all.) • IMPORTANT: What did you do to prevent a similar problem from occurring in the future? 			
Results			
• What happened to the vaccine? Was it able to be used? If not, was it returned to the distributor? (Note: For public-purchase vaccine, follow your state/local health department instructions for vaccine disposition.)			

How to Transport During Emergency

If an alternative vaccine storage facility is not available

If you cannot find an alternative vaccine storage facility within a reasonable distance, or if you cannot reach your alternative facility, you can use portable vaccine refrigerator/ freezer units (if power source is available), qualified containers and packouts, or a hardsided insulated container or Styrofoam™ using the Packing Vaccines for Transport during Emergencies tool.

Always place a TMD with the vaccines and carefully monitor the TMD to ensure vaccines remain within the appropriate temperature range.

Temporary storage containers should remain closed, and vaccines can only be stored safely for as long as the containers are validated to maintain proper storage temperatures

Packing Vaccines for Transport during Emergencies

Be ready BEFORE the emergency

Equipment failures, power outages, natural disasters—these and other emergency situations can compromise vaccine storage conditions and damage your vaccine supply. **It's critical to have an up-to-date emergency plan with steps you should take to protect your vaccine.** In any emergency event, activate your emergency plan immediately, and if you can do so safely, follow the emergency packing procedures for refrigerated vaccines.

1 Gather the Supplies



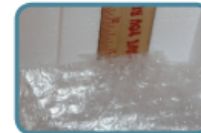
Hard-sided coolers or Styrofoam™ vaccine shipping containers

- Coolers should be large enough for your location's typical supply of refrigerated vaccines.
- Can use original shipping boxes from manufacturers if available.
- Do NOT use soft-sided collapsible coolers.



Conditioned frozen water bottles

- Use 16.9 oz. bottles for medium/large coolers or 8 oz. bottles for small coolers (enough for 2 layers inside cooler).
- Do NOT reuse coolant packs from original vaccine shipping container, as they increase risk of freezing vaccines.
- Freeze water bottles (can help regulate the temperature in your freezer).
- Before use, you must condition the frozen water bottles. Put them in a sink filled with several inches of cool or lukewarm water until you see a layer of water forming near the surface of bottle. The bottle is properly conditioned if ice block inside spins freely when rotated in your hand.



Insulating material — You will need two of each layer

- **Insulating cushioning material** - Bubble wrap, packing foam, or Styrofoam™ for a layer above and below the vaccines, at least 1 in thick. Make sure it covers the cardboard completely. Do NOT use packing peanuts or other loose material that might shift during transport.
- **Corrugated cardboard** - Two pieces cut to fit interior dimensions of cooler(s) to be placed between insulating cushioning material and conditioned frozen water bottles.



Temperature monitoring device - Digital data logger (DDL) with buffered probe. Accuracy of $\pm 1^{\circ}\text{F}$ ($\pm 0.5^{\circ}\text{C}$) with a current and valid certificate of calibration testing. Pre-chill buffered probe for at least 5 hours in refrigerator. Temperature monitoring device currently stored in refrigerator can be used, as long as there is a device to measure temperatures for any remaining vaccines.

Why do you need cardboard, bubble wrap, and conditioned frozen water bottles?

Conditioned frozen water bottles and corrugated cardboard used along with one inch of insulating material such as bubble wrap keeps refrigerated vaccines at the right temperature and prevents them from freezing. **Reusing vaccine coolant packs from original vaccine shipping containers can freeze and damage refrigerated vaccines.**



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

Distributed by

Visit www.cdc.gov/vaccines/SandH
for more information, or your state
health department.

CS249275J August 2016

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Continuous Journey



Challenges



High turn over (manager/coworker)



Keeping clinics current on newest safety recommendations



Time



Cost to acquire equipment/instruments



Distance between clinics



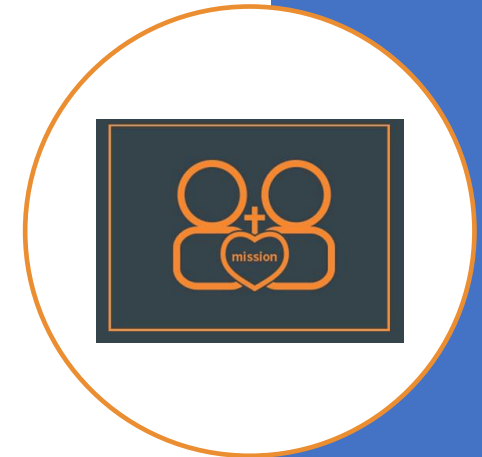
Onboarding newly acquired clinics to clinic safety program



Software (EPIC)- has limited best practice alerts for patient safety

Working In Partnership

- Leadership, Finance, Operations
- Medical Chairs, Providers (Physicians & APPs) Coworkers
- Pharmacy
- Supply Chain, Couriers
- New Construction
- Legal, Risk, Compliance, Mission, Technology



A Continuous Journey of Improvement

- Standard Processes
 - Provider Reminders, (EMR)
 - Standing Orders,
 - Reminder Calls,
 - State Immunization Registry
 - Text Messages
 - Patient Portal Reminders
 - Social Media, - Facebook, Twitter

• *Evidence-based strategies to increase vaccination uptake: a review J.R. Cataldi, M.E. Kerns, S.T. O'Leary, Curr Opin Pediatr . 2020 Feb;32(1):151-159.doi: 10.1097/MOP.0000000000000843. Retrieved 1/16/23*

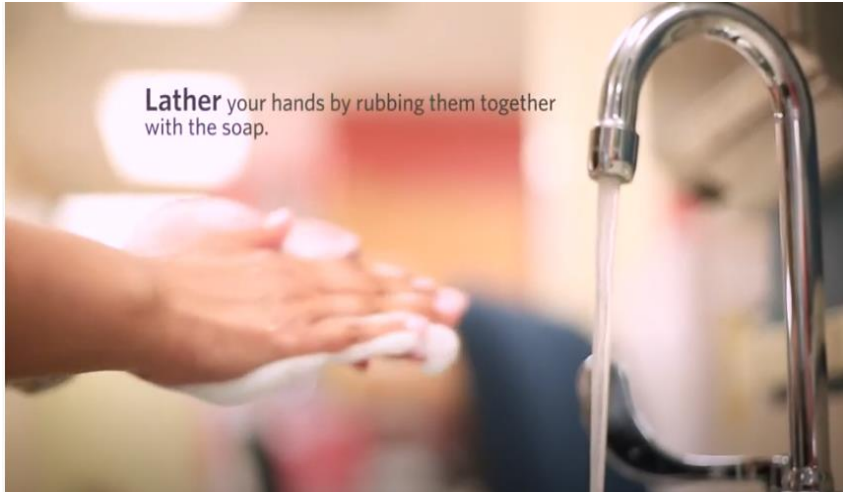
Safety Expectations with Immunizations

- Orientation and Training
- Plan on how to handle allergic reactions
- Storage and Handling
- Medication Grade Refrigerators/ Freezers
- Correct needle sizes
- EPIC – Prompts
- Follow the 10 Rights of Medication Administration
- Hand Hygiene
- 2 D Bar code scanning
- Plan on how to handle emergency outages

Clinic Hand Hygiene Video

Features 5 Physicians, Tesson Ferry Peds office, RN, MA, and child of Peds manager

<https://youtu.be/pN6RJXsTLFE>



Prayer at end of Hand Hygiene Video

*Oh God, Healer of all, wash the sin and imperfection
From these hands and make them instruments
Of the healing touch of Jesus.*

*Let these hands be an extension of your healing power
As we serve our Patients and you!*

14,428 Views!!!

"Great video, but got to say that I love the ending (prayer)"
"I love this video!"





A good beginning is
of great importance.

CATHERINE MCAULEY

Resources

[Vaccine Storage and Handling Toolkit - January 2023 \(cdc.gov\)](#)

[Immunization Action Coalition \(IAC\): Vaccine Information for Health Care Professionals \(immunize.org\)](#)

Article and CDC reference for use of commercial autoinjectors: (Epi pens)

[Anaphylaxis: Recognition and Management | AAFP](#), M.C. Pflipsen, K.M. Vega 2020;102(6):355-362

[Management of Anaphylaxis at COVID-19 Vaccination Sites | CDC](#)



Thank you, what
questions do you have
for us?

Upcoming Webinar



Topic: Vaccine Equity: Putting Strategies into Practice



Date/ Time: Thursday, March 16 at 2pm ET



Presenters: Laura Lee Hall, PhD, Iyabode Beysolow, MD, PMH, FAAP, and Sandra Quinn, PhD

Questions?



Submit your questions using the **Q&A feature** at the bottom of the screen