Vaccine Summit

October 3, 2023: Carterville
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SESSION 1:
IDPH VFC PROGRAM
Monica Del Ciello

- MPH
- Senior Program Manager
- Ball State, UIC
Learning Objectives:

After this session participants will be able to

1. Use the Illinois Comprehensive Automated Immunization Registry Exchange (I-CARE) portal to order and maintain vaccines.

2. Describe inventory reconciliation best practices for I-CARE and VFC I-CARE mandates.

3. Implement effective vaccine storage and handling practices and keep vaccine waste to a minimum.
Overview of the VFC Program

- IL’s VFC program is federally-funded by the Centers for Disease Control and Prevention (CDC).
- Provides vaccines at no cost to children who may not otherwise get them due to cost.
- Children who are eligible to receive VFC vaccines need to be 18 years and younger and one of the following:
  - Uninsured or Underinsured
  - Medicaid Title 19 or 21 eligible.
  - American Indian or Alaskan Native.
- Children who are underinsured can access VFC vaccines at federally qualified health centers (FQHCs), rural health clinics, and some local health departments that are deputized by FQHCs or RHCs.
Benefits

Vaccines for Children
Protecting America's children every day

The Vaccines for Children (VFC) program helps ensure that all children have a better chance of getting their recommended vaccines. VFC has helped prevent disease and save lives.

CDC estimates that vaccination of children born between 1994 and 2021 will:

- prevent 472 million illnesses (29.8 million hospitalizations)
- help avoid 1,052,000 deaths
- save nearly $2.2 trillion in total societal costs (that includes $479 billion in direct costs)

- more than the current population of the entire U.S.
- greater than the population of Seattle, WA
- more than $5,000 for each American

www.cdc.gov/vaccines/vfcprogram/
VFC providers must:
✓ Be licensed in Illinois to administer vaccines to children aged 18 and younger.
✓ Be willing and able to follow all VFC program requirements, policies, and procedures, including participation in site visits and educational opportunities.
✓ Have capacity to order, receive, manage, store, and monitor the temperature of public vaccines.
✓ Be open at least four consecutive hours for three days a week to receive VFC vaccines.
The I-CARE Registry is an electronic web-based immunization data registry operated by the Illinois Department of Public Health (IDPH) as authorized by the Immunization Data Registry Act, 410 ILCS 527.

All VFC providers must be enrolled in I-CARE.
- Enrollment and vaccine management is completed in I-CARE.

Must be able to provide individual patient immunization records on how each VFC vaccine was administered.

Patient immunization records can be entered manually or electronically through the provider’s electronic medical record.
Submitting and Exchanging Data

• Share Electronic Health Record (EHR) with I-CARE using HL7 data exchange.
  o Contact EHR vendor to determine if your system is HL7 compatible.
  o May need to acquire an additional interface for your EHR to send and exchange immunization data.

For more information on HL7 please visit IDPH’s I-CARE site. If you have questions, please contact dph.icare@illinois.gov.
Provider Profile

- Providers must submit a Provider Population Profile at initial program enrollment and at least annually or when order patterns indicate a change.

- All VFC programs must determine individual provider populations served and associated vaccine need by fund type.

- This ensures publicly purchased vaccines are distributed in amounts representing the provider population served and to adjust as populations change.
VFC providers must comply with:

- Distributing the most current vaccine information statements (VISs) for all vaccines included in National Childhood Vaccine Injury Act (NCVIA).
  - [Immunize.org: Vaccine Information Statements](https://www.immunize.org) (available in 47 languages)
- Reporting adverse reactions to VAERS.
The National Childhood Vaccine Injury Act (NCVIA) and/or CDC requires physicians to document the:

- Name of vaccine administered
- Date of vaccine administration
- Vaccine manufacturer
- Vaccine lot number
- Name, title, and business address of the healthcare professional who administered the vaccine
- Date the VIS was provided to the parent/guardian and VIS version date

The AAP recommends also recording the:

- Site and route of administration
- Vaccine expiration date
- Statement indicating that the VIS was provided and discussed with the parent
- Any vaccine under CDC contract requires a VIS.

The CDC requires that patient VFC eligibility screening must take place with each immunization visit.

Maintain records for a minimum of three years or longer, if required by state law (even in the case of provider retirement or provider location closure).
Required Documentation

• Providers must complete CDC’s Provider Agreement.
• The medical director in a group practice must be authorized to administer pediatric vaccines under state law.
• The provider signing the Provider Agreement on behalf of a multi-provider practice must have authority to sign on behalf of the entity.
• All licensed providers in an enrolled practice must be listed with professional license numbers and individual NPI numbers (VFC Enrollment Form).
Recertification of Annual Enrollment

- Provider agreement forms (signed by medical director or equivalent in a group practice*).

- The practitioner will be held accountable for compliance by the entire organization and its VFC providers with the responsible conditions outlined in the Provider Enrollment Agreement.
All VFC providers must recertify their enrollment annually to continue participating in the VFC program.
• Annual enrollment is submitted in I-CARE.

Additionally, providers should:
• Review and Agree to the VFC Eligibility and the VFC Loss and Replacement Policies.
• Review, sign, and upload the VFC Provider Agreement.
Provider Unenrollment

• Either the Provider or the Illinois VFC program may decide to terminate the provider agreement at any time.

• Providers who wish to terminate the provider agreement must:
  • Complete unenrollment form.
  • Stop using VFC vaccines as of the withdrawal date.
  • Return any unused VFC vaccines back within 30 days.

• Examples of why IDPH may terminate the provider agreement include:
  • Provider has not ordered vaccine in the past 12 months.
  • A provider is on the List of Excluded Individual and Entities (LEIE) list maintained by Office of the Inspector General.
  • Failure to comply with requirements.
**Vaccine Staff and Training – Vaccine Coordinators**

**Identify:** a primary vaccine coordinator and at least one backup vaccine coordinator for each facility.

The primary and backup vaccine coordinators:

- Responsible for ordering, receiving, rotating, and monitoring vaccines.
- Responsible for ensuring all vaccines are stored and handled correctly.
- Must be fully trained on routine and emergency SOPs for vaccine ordering, storage, handling, transport, and inventory management.

More information about coordinator responsibilities can be found in the [Vaccine for Children Program Manual for Illinois VFC Providers](#).

Notify IDPH when there is a change in vaccine coordinators or medical director.
Education Requirements

• Annual vaccine storage and handling training.
  o Documentation of training must be retained and submitted with annual enrollment (reviewed during site visits).

• Education is available through:
  • Some VFC site visits.
  • This summit 😊
  • CDC online training with both of the following modules:
    • You Call The Shots – Module 10 – Storage and Handling
    • You Call the Shots – Module 16 – Vaccines for Children Program
Staff Training

• All staff members who:
  • Receive vaccine deliveries
  • Handle or administer vaccines
  should be trained in vaccine-related practices and storage and handling SOPs.
• Training must be documented on the vaccine management plan.
VFC Site-Visits

Types of Site Visits

- Enrollment
- Compliance
- Storage & Handling
- Education
VFC Enrollment Visits

• All providers (newly enrolling or re-enrolling after an absence) must have an enrollment site visit **before** being approved to order VFC vaccines.
• The purpose of this visit is to:
  o Educate providers about VFC program requirements.
  o Educate providers on proper vaccine storage and handling.
  o Certify providers have the appropriate resources to implement requirements.
• Providers should be prepared for follow-up visits during the first year.
VFC Compliance Visits

• VFC providers agree to program site visits that will determine compliance with requirements.
• A new provider must be enrolled and active in the VFC program for 3-6 months before receiving a compliance site visit.
• Compliance visit includes review of and ensuring compliance with:
  o Provider Profile.
  o Vaccine ordering and inventory management.
  o Policies and procedures and vaccine management plan.
  o Vaccine storage and handling equipment, procedures, and documentation.
  o VFC screening requirements and billing practices.
  o All ACIP vaccines are available to VFC-eligible patients.
  o VFC-related document retention.
VFC Storage & Handling Visits

- Storage and Handling visits may be announced (scheduled) or unannounced.

- IDPH is required to complete unannounced storage and handling site visits for a percentage of providers each year.

- Compliance visit includes review of and ensuring compliance with:
  - Vaccine inventory management.
  - Vaccine storage and handling equipment and monitoring.
  - Vaccine storage and handling procedures and Vaccine management plan.
  - Appropriate storage and handling related documentation.
VFC providers agree to replace vaccines purchased with state and federal funds that are deemed non-viable due to provider negligence on a dose-for-dose basis with privately purchased vaccines.
Fraud and Abuse

• By enrolling in the VFC program, you agree to comply with all program requirements.

Examples of fraud and abuse:
- Providing VFC vaccines to non-VFC eligible children.
- Billing a patient or third party for a VFC vaccine.
- Denying VFC eligible children a VFC vaccine due to inability to pay an administration fee.
- Failing to screen for and document eligibility at each visit.
- Failing to properly maintain VFC records and requirements.
- Failing to properly store and handle VFC vaccines, etc.

• The Department will investigate to determine intentional or unintentional fraud/misuse.
  - If intentional, further investigation is necessary.
Patient Eligibility Screening and Documentation

- Providers must screen, document, and verify VFC eligibility with every vaccine visit before administering vaccines.
- Use the MEDI system or equivalent system (with HFS 270/271 electronic transaction data).
- The Patient Eligibility Screening Form provides a means of recording responses to VFC eligibility questions.
  - The provider, parent, or guardian may complete the VFC eligibility portion of the form.
  - Verification of parent/guardian responses is not required.
Memorandum of Understanding (MOU) with FQHC or Rural Health Center

- Underinsured VFC-eligible children can only receive VFC vaccine from a Federally Qualified Health Center (FQHC) or Rural Health Clinic (RHC).
- A local health department (LHD) can be deputized by an FQHC or RHC to allow the LHD to vaccinate underinsured VFC-eligible children.
- A Memorandum of Understanding (MOU) form is available through IDPH. It must be signed by three parties: the LHD, the FQHC or RHC, and IDPH.
- If a provider is not a FQHC, RHC or a deputized local health department, they should refer underinsured VFC-eligible children to a qualified provider location.
Important Announcements from IDPH
Sent to VFC Providers on 9/6/2023

• Because of Medicaid Expansion, all Medicaid-enrolled children 18 years of age or younger are now VFC-eligible regardless of their Title 19, Title 21, or State-Funded Medicaid Status.

• How this impacts providers:
  • Medi should be checked at each encounter to ensure the patient is enrolled in Medicaid, but providers no longer need to check for Title 19, Title 21, or State Funded status.
  • When marking the patient VFC eligibility in your patient's chart and in I-CARE, the V02 Medicaid/Medicaid Manage Care status should be selected for all Medicaid-enrolled children.
<table>
<thead>
<tr>
<th>VFC Eligibility Status Code</th>
<th>VFC Code will deduct from this Inventory in I-CARE</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>V00: Eligibility not determined/unknown</td>
<td>Private</td>
<td>Do not use for public vaccine programs.</td>
</tr>
<tr>
<td>V01: Not VFC eligible</td>
<td>Private</td>
<td>Do not use for public vaccine programs.</td>
</tr>
<tr>
<td>V02: Medicaid/Medicaid Managed Care</td>
<td>VFC</td>
<td>Use for all Medicaid-enrolled children through 18 years of age.</td>
</tr>
<tr>
<td>V03: Eligible-Uninsured</td>
<td>VFC</td>
<td></td>
</tr>
<tr>
<td>V04: Eligible-American Indian/Alaska Native</td>
<td>VFC</td>
<td></td>
</tr>
<tr>
<td>V05: Eligible-Federally Qualified Health Center patient (under-insured)</td>
<td>VFC</td>
<td></td>
</tr>
<tr>
<td>V07: Local program eligibility</td>
<td>Private</td>
<td>Not currently used by Illinois or Chicago VFC.</td>
</tr>
<tr>
<td>V22: CHIP</td>
<td>VFC</td>
<td>This status is no longer applicable to Illinois or Chicago VFC patients. It will continue to deduct from VFC while providers transition to this new process, but providers should stop using this code. Use “V02: Medicaid/Medicaid Managed Care” instead.</td>
</tr>
<tr>
<td>V23: 317</td>
<td>317</td>
<td></td>
</tr>
<tr>
<td>V24: Medicare</td>
<td>Private</td>
<td>Not currently used by Illinois or Chicago VFC.</td>
</tr>
<tr>
<td>V25: State program eligibility</td>
<td>Private</td>
<td>Not currently used by Illinois or Chicago VFC.</td>
</tr>
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## Eligibility

<table>
<thead>
<tr>
<th>VFC Eligibility Criteria</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native (AI/AN)</td>
<td>This population is defined by the Indian Health Care Improvement Act (25 U.S.C. 1603). (AI/AN children are VFC-eligible under any circumstance.)</td>
</tr>
<tr>
<td>Medicaid-eligible</td>
<td>Children who are eligible for the Medicaid program. For the purposes of the VFC program, the terms “Medicaid-eligible” and “Medicaid enrolled” are used interchangeably.</td>
</tr>
<tr>
<td>Uninsured</td>
<td>Children not covered by any health insurance plan.</td>
</tr>
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</table>
| Underinsured                              | Underinsured means the child has health insurance, but the insurance policy:  
  - Does not include any vaccines;  
  - Does not include all vaccines recommended by the Advisory Committee on Immunization Practices (ACIP); or  
  - Has a fixed dollar limit or cap for vaccines.  
  Underinsured children are only eligible to receive VFC vaccines at a FQHC, RHC, or a deputized provider.                                                                                                                                                                                                                                                                                   |
Eligibility – American Indian or Alaska Native (AI/AN)

- AI/AN children are VFC-eligible under any circumstance.
- Participation is voluntary.
- When an AI/AN child also fits a second VFC eligibility category, the provider should always choose the category that will cost less for the family.
  - Depending on the facility, when an AI/AN parent chooses to have their child vaccinated, the parent may be responsible for the vaccine administration fees if the vaccines are delivered through the VFC program.
  - If the child has private insurance, it may result in fewer out-of-pocket costs for the child to receive privately purchased vaccinations since the insurance would likely cover the vaccine without cost-sharing.
  - If the AI/AN child is also Medicaid eligible, Medicaid should be used for the administration fee because it will provide the least out of pocket expense.
Eligibility – Insured Children with Medicaid

• Some children may have a private primary health insurance plan with Medicaid as their secondary insurance.
  o These children are considered VFC-eligible because of their Medicaid enrollment.
  o Their parents are not required to participate in the VFC program.

• There are billing options and the provider should choose the option that is most cost-effective for the family.
  o The parent of a child with Medicaid as secondary insurance should never be billed for a vaccine or an administration fee.
Option 1: The provider can administer VFC vaccines and bill Medicaid for the administration fee.

Considerations:
➢ Easiest way for a provider to use VFC vaccines and bill Medicaid for the administration fee.
➢ No out-of-pocket costs to the parent for the vaccine or the administration fee.

Option 2: The provider can administer private stock vaccines and bill the primary insurance carrier for both the cost of the vaccine and the administration fee.

Considerations:
➢ Provider may be reimbursed a higher dollar amount if privately purchased vaccine is administered and both the vaccine and the administration fee are billed to the primary insurer.
<table>
<thead>
<tr>
<th>Child's Insurance Status</th>
<th>VFC-Eligible?</th>
<th>VFC Eligibility Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolled in Medicaid</td>
<td>Yes</td>
<td>Medicaid (V02). The provider should choose the option that is most cost-effective for the family.</td>
</tr>
<tr>
<td>Has private health insurance plan with Medicaid as secondary insurance.</td>
<td>Yes</td>
<td>Medicaid (V02). This applies even when primary insurer would deny reimbursement for the cost of the vaccine and its administration because the plan’s deductible has not been met.</td>
</tr>
<tr>
<td>Has health insurance covering all vaccines but has not yet met plan’s deductible or paid for other services received at visit.</td>
<td>No</td>
<td>Insured (V01). This applies even when primary insurer would deny reimbursement for the cost of the vaccine and its administration because the plan’s deductible has not been met.</td>
</tr>
<tr>
<td>Has health insurance covering all vaccines, but the plan has a fixed dollar limit or cap on amount that it will cover.</td>
<td>Yes</td>
<td>Insured (V01) until the fixed dollar limit is met. Underinsured (V05) after the fixed dollar limit is reached.</td>
</tr>
<tr>
<td>Has an insurance plan that does not cover all ACIP-recommended vaccines.</td>
<td>Yes</td>
<td>Underinsured (V05). Child can only receive vaccines not covered by the plan.</td>
</tr>
<tr>
<td>Has health insurance, but plan does not cover any vaccines.</td>
<td>Yes</td>
<td>Underinsured (V05). With implementation of ACA, this situation should be rare.</td>
</tr>
<tr>
<td>Has no health insurance coverage.</td>
<td>Yes</td>
<td>Uninsured (V03).</td>
</tr>
<tr>
<td>Has private health insurance that covers all vaccinations and is AI/AN.</td>
<td>Yes</td>
<td>AI/AN (V04). The provider should choose the eligibility category most cost effective for the family.</td>
</tr>
<tr>
<td>Has Medicaid and is AI/AN.</td>
<td>Yes</td>
<td>Medicaid (V02) or AI/AN (V04). Providers should use Medicaid for the administration fee (least out-of-pocket expense for family).</td>
</tr>
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</table>
No Charge for Vaccines

- Patient cannot be charged for publicly purchased vaccine.
- Do not bill any individual or other third-party payer for the cost of VFC-supplied or other vaccines purchased through CDC federal contracts.
• Bill only Medicaid for the administration fee for VFC-eligible children enrolled in Medicaid.
  o Administration fees are per vaccine and not per antigen.
• The vaccine administration fee for non-Medicaid VFC-eligible children must not exceed $23.87 per dose.
• VFC providers may issue a single bill for the administration fee for non-Medicaid VFC-eligible children within 90 days of vaccine administration.
• Unpaid VFC vaccine administration fees may not be sent to collections and VFC providers may not refuse to vaccinate an eligible child whose parents have unpaid vaccine administration fees.
Vaccine Management

• Providers should follow VFC storage and handling requirements based on CDC’s Vaccine Storage and Handling Toolkit including:
  • Ordering vaccines.
  • Utilizing required equipment.
  • Digital data loggers.
  • Vaccine cold chain.
# Vaccine Management Plan

| Contact info for current primary and backup vaccine coordinators. | Proper storage and handling practices. | Procedures for vaccine ordering, receiving, inventory control, stock rotation, and handling vaccine loss and waste. | Procedures for emergency situations (transport, equipment malfunction, power failure, and natural disaster). | Documented training related to vaccine management. | Provider and vaccine coordinator roles & responsibilities. |

Plans must be updated annually or more frequently as needed.
Vaccine Management: Ordering Vaccine

Vaccine ordering is completed through I-CARE.

Should be up-to-date before submitting an order:
- Patient immunization records.
- Temperature logs for all appliances.
- All data logger certificates of calibration are valid and not expired.
- All temperature excursions must have a vaccine incident report on file.
- No expired vaccines are showing in the clinic’s inventory.
- The clinic’s inventory in I-CARE matches the physical inventory.
- The clinic’s inventory in I-CARE is not showing any negative balances.
- Clinic must be open at least three days a week with at least four consecutive hours a day to be able to receive a delivery.
  - Delivery hours must be entered and updated in I-CARE, including specifying lunch hours or other closures, when placing orders.
• Order and stock enough vaccine to meet patient demand for one to three months.
  o Consider patient numbers, patient age, vaccine uptake, etc.
  o Smaller, more frequent orders help reduce the impact of incidents that may contribute to vaccine loss. **Providers may order as often as necessary.**
• Ensure each VFC vaccine administered is entered into I-CARE. Options are:
  • Direct entry
  • Electronic transmission to I-CARE from an electronic health record (EHR)

To set EHR to transmit data to I-CARE: [DPH.HL7ICARE@Illinois.gov](mailto:DPH.HL7ICARE@Illinois.gov)
Vaccine Management: Borrowing Vaccine

- Borrowing between public VFC & private vaccine inventory is not allowed.
- Transfers of VFC vaccine between VFC clinics are allowable with permission from IDPH VFC Program and proper transport storage equipment.
  - A transfer request form is available in I-CARE.
Vaccine cold chain must be maintained (ensures potency and useability).
  • Helps save money and avoid re-vaccination.

Vaccine appearance is NOT a reliable indicator that vaccines have been stored in appropriate conditions.
Vaccine Management: Receiving Vaccine

- Vaccine & diluent should be immediately unpacked, stored at recommended temperatures, and documented upon arrival.
  - Do not store shipment box in vaccine storage unit – the combined storage methods may be too cold.

- Check immediately for:
  - Physical damage of shipping container.
  - Correct products were received
  - Diluent and Vaccine expiration dates.
  - Cold chain monitor, if included.

Any issues should be reported within two hours to the Illinois VFC Program Services Staff at 217-785-1455.
Vaccine Management: Storing Vaccine

- Store vaccine by funding type (check I-CARE or packing slips).
  - Separate units are not required.
    - VFC: VFC eligible patients only.
    - 317: 317-eligible adults or approved outbreak response.

https://eziz.org/assets/docs/IMM-963.pdf
Vaccine Management: Storing Vaccine

• Stock rotation and removal:
  o Rotate vaccine stock so the vials with the soonest expiration date are at the front (used first).
  o Immediately remove expired vaccine from stock.

TIP: Determine regular intervals for rotation (i.e., weekly), including when there is a vaccine delivery.
Vaccine Management: Required Equipment

- Purpose-built or pharmaceutical-grade refrigerators and freezers are preferred.
  - Still needs to be approved and met with the guidelines and re-certified by approved source.
  - Stand-alone refrigerator and freezer units may also be used.
  - The Department does not allow combination household refrigerator/freezer units for the storage of vaccines obtained through the VFC program.
  - Never store vaccine in a dorm-style or bar-style combined refrigerator/freezer unit.
**Vaccine Management: Required Equipment**

- Some purpose-built units separate public & private vaccine stock electronically.
  - If electronic, an inventory printout must be available upon request.

- Power Supply:
  - Plug in only one storage unit per electrical outlet.
  - Use a safety-lock plug or an outlet cover.
  - Post “DO NOT UNPLUG” warning signs at outlets and on storage units.
  - Label fuses and circuit breakers to alert others not to turn off these units.
  - Use caution when using power outlets that can be tripped or switched off and avoid using:
    - Built-in circuit switches (may have reset buttons).
    - Outlets that can be activated by a wall switch.
    - Multioutlet power strips.
Vaccine Management: Required Equipment Cont.

- Storage units should be placed in a well-ventilated room, between 68°F - 77°F, and without anything blocking them.
  - Refrigerators should maintain temps between 2°C - 8°C (36°F - 46°F).
  - Freezers should maintain temps between -50°C and -15°C (-58°F - +5°F).
  - Recommended to set temps in Celsius and record to 1 decimal place.
  - Temperatures should be recorded any time staff are in the clinic, at least 3x/week.
  - Record the current temp 2x/day and the min/max temps at the start of every day.
  - Doors should always remain closed – consider using locks or alarms.

- It can take multiple days to stabilize the temp in a new or repaired unit.
  - Min and max temps should be recorded 2x/day for 2 to 7 days.
  - Once two consecutive days of temperatures are recorded within the recommended range, the unit is stable and ready for use.
Vaccines should be stored in their original packaging with lids closed.
- Food and beverages should never be stored in the same unit as vaccines.
- Water bottles can be used in vaccine storage units to help stabilize the temperature.
- Water bottles are not recommended for use with certain pharmaceutical-grade and purpose-built units. For such units, follow the manufacturer’s guidance.
Vaccine Management: Digital Data Loggers

- Digital Data Loggers (DDLs) are required to continually monitor the temperature of vaccine.
  - Must have a valid Certificate of Calibration Testing (some units have DDLs built in).
- Data from DDLs is retrieved using special software or a website.
  - Data should be downloaded and reviewed at least weekly.
  - Records should be kept for three years.
- A back-up DDL must be available in case another fails; calibration testing is required.
Vaccine Management: Digital Data Loggers Cont.

• All data loggers must have a certificate of calibration that is current (based on the manufacturer’s recommended re-testing timeline as indicated on the certificate of calibration).

• Some purpose-built units have built-in DDLs. The purpose-built unit DDLs must meet the same requirements as DDLs for other VFC storage units.

• A back-up DDL must be available in case another fails or for emergency transportation.
  o Calibration testing is required.
  o Should have a different calibration testing date than other DDLs so they do not all go through testing at the same time.
The DDL must be equipped with:

- A temperature probe or sensor.
- An active temperature display outside the unit that can be easily read without opening the unit’s door.
- Continuous temperature monitoring and recording capabilities and capacity to routinely download data.

Additional recommended DDL features:

- Alarm for out-of-range temperatures
- Temperature display showing current, minimum, and maximum temperatures
- Low battery indicator
- Accuracy of +/-1°F (0.5°C)
- User-programmable logging interval (or reading rate) recommended at a maximum time interval of no less frequently than every 30 minutes.
Certificates of Calibration Testing must include:

- Model/device number.
- Serial number.
- Date of calibration (report or issue date).
- Confirmation the instrument passed testing (or instrument in tolerance).

Certificates of calibration must indicate at least one of the following items:

- Conforms to ISO 17025.
- Testing was performed by an ILAC/MRA Signatory body accredited laboratory.
- Is traceable to the standards maintained by NIST.
- Meets specifications and testing requirements for the American Society for Testing and Materials (ASTM) Standard E2877 tolerance Class F (0.5 °C) or better.
Temperature Excursions

- Any temperature reading outside the recommended ranges in the manufacturers’ package inserts.
  - Manufacturers will help determine if vaccine is still viable after an excursion.
- Providers should immediately review their storage and handling policies and take the appropriate actions.
- Complete the Vaccine Incident Report in I-CARE.
- Unsure if an excursion occurred?
  - Mark vaccine “DO NOT USE!”
  - Do not use or discard until manufacturer determines viability and IDPH VFC is contacted.
Vaccine Emergency Response

• Onsite generators or backup batteries can be used to prevent transporting vaccines to another storage facility in the event of an emergency like a power outage.
  o If the unit breaks down, then it may be appropriate to transport.

• Generators and backups should be tested quarterly.
Expired, Spoiled, Wasted Vaccine

- Expired, spoiled, and wasted vaccine must be reported in I-CARE within one week of the expiration date.
- **Expired** and spoiled vaccines in unopened vials or unused manufacturer pre-filled syringes should be returned to McKesson Specialty within 6 months of expiration date for Excise Tax Credit.
  - Must be unopened and in the original manufacturer vial or prefilled syringe.
- Wasted vaccines must be disposed of according to usual medical biosafety procedures, and according to your agency procedures.
  - May include open vials or prefilled syringes with or without the needles attached, vaccine that was drawn into a syringe, or vaccines compromised due to a dropped or broken container.
Transferring Vaccines

• Vaccine can occasionally be transferred between providers in these cases:
  o Vaccine is six months or less from outdate, and unable to be used by provider.
  o Area outbreak resulting in unexpected surge of walk-in patients.
  o Clinic closure requiring transfer of vaccines to other VFC providers.
  o Seasonal clinic needing to transfer vaccine to other VFC providers when closing.

• The following transfer requests will be reviewed on a case-by-case basis:
  o Vaccines are more than six months from the expiration date.
  o The provider has an immediate need for a couple of doses of vaccine before an order could be received.

• Cold chain must be maintained – required to use DDL when transferring.
• Department must review & approve transfer requests.
• Influenza vaccine cannot be transferred.
Mobile Clinics

• Same VFC storage requirements with a permanently installed unit.
  • Mobile clinic should be plugged into a power source at home site location when not in use.
  • Will be inspected as part of compliance visit.
  • Vaccine cannot be transported to city of Chicago or out-of-state.
  • Vaccine must be delivered to home site.
Temporary Off-Site Vaccine Clinics

- Temporary off-site clinics can be held.
  - Transportation, storage, and handling must meet VFC program guidelines.
  - Vaccine must be delivered to permanent location.
  - Total time for travel + clinic day should not exceed 8 hours (e.g. if transport to an off-site clinic is 1 hour each way, the clinic may run for up to 6 hours).
  - When transporting vaccines, use a portable vaccine refrigerator or freezer unit or qualified container and packout that maintains appropriate storage temperatures.
  - Use of the manufacturer shipping container or a frozen water bottle transport system is not permitted for transport to temporary, mobile, or off-site clinics.
  - Vaccine must be returned to permanent location & DDLs must be reviewed to ensure proper temperatures were maintained.

An off-site vaccine clinic notification form must be submitted in I-CARE 48 hours prior to the event.
Contacts

• Contact the VFC program at DPH.Vaccines@illinois.gov
Break

Please return by 10:15
SESSION 2: VACCINE SCHEDULES
Lauren Fore, MD

- Kirby Medical Center
- I-VAC Regional Advisor
- Monticello, Illinois
Apply the 2023 Advisory Committee on Immunizations Practices (ACIP) pediatric vaccination and catch-up schedules.

Outline new vaccine products and updates.

Summarize current routine immunization rates.

After this session participants will be able to
VFC providers must comply with:

- Current ACIP recommendations and VFC resolutions.
- Making vaccines identified in the Provider Profile based on the provider type and population served available including non-routine vaccines.
- Understanding state laws related to vaccination requirements and acceptable vaccine exemptions.
- Using ACIP recommendations and vaccine package inserts to understand contraindications for each vaccine type available through the VFC program.
State Vaccination Requirements

- State laws establish vaccination requirements for school children.
- Laws often apply to public schools, private schools and day care facilities.
- Tools for maintaining high vaccination coverage rates.
- State laws also establish mechanisms for enforcement.
  - Documentation, signatures, etc.
- All states provide medical exemptions.
  - Some states offer religious and/or philosophical exemptions.
IL Requirements

- Medical and religious exemptions.
ACIP

- Establishes:
  - Age for vaccine recommendation.
  - Number of doses and dosing interval.
  - Precautions and contraindications.
  - Technical recommendations on vaccine use and immunization practices.
  - Approves vaccines provided through VFC program.

Recommendations on the [CDC's website](https://www.cdc.gov/vaccines).
ACIP Schedule - Approving Partners

Child Adolescent Schedule
- American Academy of Pediatrics (AAP)
- National Association of Pediatric Nurse Practitioners (NAPNAP)

Both Schedules
- American Academy of Family Physicians (AAFP)
- American Academy of Physician Associates (AAPA)
- American College of Obstetricians and Gynecologists (ACOG)
- American College of Nurse-Midwives (ACNM)

Adult Schedule
- American College of Physicians (ACP)
- Society for Healthcare Epidemiology of America (SHEA)
- American Pharmacists Association (APhA)
ACIP votes on a resolution to include the vaccine change in the VFC program.

VFC resolutions passed by ACIP form the basis for VFC program policies on vaccine availability and use.

Vaccines procured through the VFC program must be administered according to the guidelines outlined by ACIP in VFC resolutions (and in accordance with state laws).

CDC establishes contracts for VFC vaccines only after a VFC resolution is in place.

VFC-ACIP Vaccine Resolutions

Print

Vaccine procured through the VFC program must be administered according to the guidelines outlined by the ACIP in VFC resolutions. VFC vaccine also may be administered in accordance with State school attendance laws.

- 10/22: [COVID-19] (1 page) Updated Oct 2022
- 6/21: [Pertussis] (1 page) Updated Jun 2021
- 10/19: [Diphtheria, Tetanus, & Pertussis] (14 pages, 508) Updated Oct 2019
- 6/19: [Hemophilus influenzae type b] (13 pages) Updated Jul 2019
- 6/19: [Hepatitis A] (2 pages) Updated Jul 2019
- 6/19: [Hepatitis B] (2 pages) Updated Jul 2019
- 10/19: [Human Papillomavirus (HPV)] (2 pages)
- 6/23: [Influenza] (13 pages) Updated Jul 2022
- 6/20: [Meningococcal] (14 pages) Updated Oct 2022
- 10/17: [MMR & Varicella] (2 pages) Updated Jun 2022
- 06/94: [Outbreak control] (1 page)
- 06/23: [Pneumococcal] (14 pages) Updated Jul 2023
- 6/19: [Polio] (2 pages) Updated Jul 2019
- 06/08: [Rotavirus] (13 pages) Updated Feb 2023
- 06/23: [RSV] (2 pages) Updated Aug 2023
- 06/23: [2 Vaccines included in VFC Program] (1 page) Updated Aug 2023

PACKAGE INSERTS on FDA website.
Immunization Schedules – Why They Matter

- There are no other alternative studied immunization schedule approve to provide to our patients.
- Protection against roughly 20 different life-threatening diseases.
- Prevention/control of infectious disease outbreaks.
- Gives children protection when they are most vulnerable.
To make vaccination recommendations, healthcare providers should:

1. Determine needed vaccines based on age (Table 1)
2. Determine appropriate intervals for catch-up, if needed (Table 2)
3. Assess for medical conditions and other indications (Table 3)
4. Review special situations (Vaccination Notes)
5. Review contraindications and precautions to vaccination (Appendix)
6. See Addendum for new or updated ACIP vaccine recommendations (Addendum) – NEW!
*There is no other alternative studied immunization schedule

## Table 2

**Recommended Catch-up Immunization Schedule for Children and Adolescents Who Start Late or Who Are More than 1 Month Behind, United States, 2023**

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. Always use this table in conjunction with Table 1 and the Notes that follow.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Minimum Age for Dose 1</th>
<th>Minimum Interval Between Doses</th>
<th>Dose 1 to Dose 2</th>
<th>Dose 2 to Dose 3</th>
<th>Dose 3 to Dose 4</th>
<th>Dose 4 to Dose 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hepatitis B</strong></td>
<td>Birth</td>
<td>8 weeks and at least 16 weeks after first dose minimum age for the final dose is 24 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Rotavirus</strong></td>
<td>6 weeks</td>
<td>4 weeks maximum age for first dose is 14 weeks, 6 days.</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Diphtheria, tetanus, and acellular pertussis</strong></td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Mumps, measles, rubella</strong></td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Pharyngeal/conjunctival</strong></td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Pneumococcal conjugate</strong></td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Inactivated poliovirus</strong></td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Measles, mumps, rubella</strong></td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Varicella</strong></td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
<tr>
<td><strong>Hepatitis A</strong></td>
<td>6 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>4 weeks</td>
<td>8 weeks</td>
<td>8 weeks</td>
</tr>
</tbody>
</table>

### Chronic medical conditions

- **Children age 4 months through 6 years**
  - **Hepatitis B**
    - Dose 1 to Dose 2: 4 weeks
    - Dose 2 to Dose 3: 4 weeks
    - Dose 3 to Dose 4: 4 weeks
    - Dose 4 to Dose 5: 8 weeks
  - **Rotavirus**: 4 weeks
  - **Diphtheria, tetanus, and pertussis**: 4 weeks
  - **Mumps, measles, rubella**: 4 weeks
  - **Pharyngeal/conjunctival**
  - **Pneumococcal conjugate**: 4 weeks
  - **Inactivated poliovirus**: 4 weeks
  - **Measles, mumps, rubella**: 4 weeks
  - **Varicella**: 4 weeks
  - **Hepatitis A**: 4 weeks

### Children and adolescents age 7 through 18 years

- **Inactivated poliovirus**: 4 weeks
- **Measles, mumps, rubella**: 4 weeks
- **Varicella**: 4 weeks
- **Hepatitis B**: 4 weeks
- **Varicella**: 4 weeks
- **Hepatitis A**: 4 weeks
- **Measles, mumps, rubella**: 4 weeks
- **Varicella**: 4 weeks

### Additional notes

- **HPV** (Human papillomavirus) vaccine regimens: 2 doses or 3 doses are recommended for boys and girls, respectively.
- **Varicella** vaccine is recommended for children who have not had chickenpox or varicella vaccine.
- **Measles, mumps, rubella** vaccine is recommended for children who have not had measles, mumps, or rubella.
- **Hepatitis A** vaccine is recommended for children who have not had hepatitis A.
- **Hepatitis B** vaccine is recommended for children who have not had hepatitis B.
- **Inactivated poliovirus** vaccine is recommended for children who have not had poliovirus.
- **Measles, mumps, rubella** vaccine is recommended for children who have not had measles, mumps, or rubella.
- **Varicella** vaccine is recommended for children who have not had varicella.

---

Table 3

<table>
<thead>
<tr>
<th>VACCINE</th>
<th>.Note</th>
<th>INDICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Immunocompromised states (excluding HIV infection)</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Rotavirus</td>
<td></td>
<td>SCID²</td>
</tr>
<tr>
<td>Diphtheria, tetanus, and acellular pertussis (DTaP)</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Haemophilus influenza type b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal conjugate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inactivated poliovirus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COVID-19</td>
<td></td>
<td>See Notes</td>
</tr>
<tr>
<td>Influenza (H1N1) or</td>
<td></td>
<td>Asthma, wheezing 2–4 yrs</td>
</tr>
<tr>
<td>Influenza (H3N2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetanus, diphtheria, and acellular pertussis (Tdap)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Human papillomavirus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningooccal A CWY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningoccal B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pneumococcal polysaccharide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dengue</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Vaccination according to the routine schedule recommended
Recommended for persons with an additional risk factor for which the vaccine would be indicated
Vaccination is recommended, and additional doses may be necessary based on medical condition or vaccine. See Notes.
Precaution—vaccine might be indicated if benefit of protection outweighs risk of adverse reaction
Contraindicated or not recommended—vaccine should not be administered
No recommendation/not applicable

For additional information regarding laboratory parameters and use of live vaccines, see the ‘Guideline for Immunisation: ‘Immunocompromised’); at
www.cdc.gov/vaccines/hcp/policy/docs/immunocompromised.html and Table 4 (Footnote b) at www.cdc.gov/vaccines/hcp/policy/general-recs/contraindication.html.

a. Severe Combined Immunodeficiency
b. LAHI contraindicated for children 2–4 years of age with asthma or wheezing during the preceding 12 months

Addendum

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

In addition to the recommendations presented in the previous sections of this Immunization Schedule, ACIP has approved the following recommendations by majority vote since October 20, 2022. The following recommendations have been adopted by the CDC Director and are now official. Links are provided if these recommendations have been published in Morbidity and Mortality Weekly Report (MMWR).

<table>
<thead>
<tr>
<th>Vaccines and Other Immunizing Agents</th>
<th>Recommendation</th>
<th>Effective Date of Recommendation*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory syncytial virus (RSV)</td>
<td>- Maternal Respiratory Syncytial Virus (RSV) vaccine (ARBYSV0Y) is recommended for pregnant people during 32 through 36 weeks gestation, using seasonal administration, to prevent RSV lower respiratory tract infection in infants.</td>
<td>September 22, 2023</td>
</tr>
<tr>
<td></td>
<td>- All persons ≥6 months of age should receive 2023-2024 (noninvalent, XBB containing) COVID-19 vaccines as authorized under EUA or approved by FDA.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Bivalent mRNA COVID-19 vaccines are no longer recommended in the United States.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- For detailed information, see: <a href="http://www.cdc.gov/covid19/dose.html">www.cdc.gov/covid19/dose.html</a>.</td>
<td>September 12, 2023</td>
</tr>
<tr>
<td>Respiratory syncytial virus (RSV)</td>
<td>- All infants younger than 8 months and born shortly before or during the RSV season should receive 1 dose of nirsevimab within 1 week of birth either in hospital or outpatient setting.</td>
<td></td>
</tr>
<tr>
<td>(Nirsevimab)</td>
<td>- Infants younger than age 8 months not born prior to or entering their first RSV season should receive 1 dose of nirsevimab shortly before the start of the RSV season.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Infants aged 8-19 months with chronic lung disease of prematurity requiring medical support (e.g., chronic corticosteroid therapy, diuretic therapy, or supplemental oxygen) any time during the 6-month period before start of the second RSV season; severe immunocompromised; cystic fibrosis with weight for length &lt;80th percentile or with manifestation of severe lung disease (e.g., previous hospitalization for pulmonary exacerbation in the first year of life or abnormalities on chest imaging that persist when stable should receive 1 dose of nirsevimab shortly before start of second RSV season.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Infants 8-19 months who are American Indian or Alaska Native should receive 1 dose of nirsevimab before start of second RSV season.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Infants who are age-eligible and undergoing cardiac surgery with cardiopulmonary bypass should receive 1 additional dose of nirsevimab after surgery.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- For detailed information, see: <a href="http://www.cdc.gov/mmwr/volumes/73/wr/mm7334a4.htm">www.cdc.gov/mmwr/volumes/73/wr/mm7334a4.htm</a>.</td>
<td>August 3, 2023</td>
</tr>
<tr>
<td>Poliovirus (IPV)</td>
<td>- Adolescents age 18 years who are known or suspected to be unvaccinated or incompletely vaccinated against polio should complete a primary vaccination series with inactivated polio vaccine (IPV).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Adolescents age 18 years who have received a primary series of trivalent oral polio vaccine (OPV) or IPV in any combination and who are at increased risk of poliovirus exposure may receive another dose of IPV. Available data do not indicate the need for more than a single lifetime booster dose with IPV for adults.</td>
<td>June 27, 2023</td>
</tr>
<tr>
<td>Influenza (IIV, cIIV, RIV, LAIV)</td>
<td>- All persons ≥6 months with egg allergy should receive influenza vaccine. Any influenza vaccine (egg based or non-egg based) that is otherwise appropriate for the recipient's age and health status can be used.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Affirm the updated MMWR Recommendations and Reports, Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices—United States, 2023-24 Influenza Season.</td>
<td>June 27, 2023</td>
</tr>
<tr>
<td></td>
<td>- Use of either pneumococcal conjugate vaccine (PCV) PCV15 or PCV20 is recommended for all children aged 2-23 months according to currently recommended PCV dosing and schedules.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- For children with an incomplete PCV vaccination status, use of either PCV15 or PCV20 according to currently recommended PCV dosing and schedules is recommended for:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Healthy children aged 24-99 months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Children with specified risk conditions* aged 24 through 71 months</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- For children aged 2-18 years with any risk condition who have received all recommended doses of PCV before age 6 years</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Using ≥1 dose(s) of PCV20; No additional doses of any pneumococcal vaccine are indicated. This recommendation may be updated as additional data become available.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Using PCV13 or PCV20 (PCV20): A dose of PCV20 or PCV13/23 using previously recommended dosing and scheduling is recommended.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- For children aged 6-18 years with any risk condition who have not received any dose of PCV13, PCV15, or PCV20, a single dose of PCV13 or PCV20 is recommended. When PCV15 is used, it should be followed by a dose of PCV23 at least 8 weeks later if not previously given.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Risk conditions include cerebrospinal fluid leak; chronic heart disease; chronic kidney disease (including maintenance dialysis and nephrotic syndrome, which are included in immunocompromising conditions); chronic liver disease; chronic lung disease; mild-to-moderate persistent asthma; cochlear implant; diabetes mellitus; immunocompromising conditions (on maintenance dialysis or with nephrotic syndrome, congenital or acquired immune deficiencies; diseases and conditions treated with immunosuppressive drugs or radiation therapy, including malignant neoplasms, leukemias, lymphomas, Hodgkin disease, and solid organ transplant; HIV infection; and sickle cell disease and other hemoglobinopathies).</td>
<td></td>
</tr>
</tbody>
</table>

*The effective date is the date when the CDC director adopted the recommendation and when the ACIP recommendation became official.
Hepatitis B Vaccine

- Recommended for infants born to mothers with positive test result for hepatitis B surface antigen (HBsAg) or unknown status.
- Catch up includes Heplisav-B and PreHevbrio for age 18 years and older.
- Heplisav-B not recommended during pregnancy.
Rotavirus Vaccine

- No ACIP preference on brand
  - Rotavirus (Rotarix ™)
    - NO RECONSTITUTION NEEDED!
    - Oral-dosing applicator-only presentation.
    - Approved for use in infants 6 weeks old with the max age of the 1st dose at 14 weeks + 6 days of age and the final dose no later than 8 months + 0 days of age.
    - Single 1.5ml dose.
    - Keep in original package to protect from light, store refrigerator 2–8°C.
  - RotaTeq RV5
    - RotaTeq is a 3 dose series at age 2, 4, and 6 months.
    - Administered orally starting at 6 to 12 weeks of age, with the subsequent doses administered at 4- to 10-week intervals.
    - Third dose should not be given after 32 weeks of age.
Rotaviruses (Rotarix ™) Changes
- 2 variations of live vaccine Rotarix available until 2025 when older lyophilized formulation will retire.
- Use up current 1ml lyophilized formulation (requires reconstitution) prior to using new liquid formulation.
- New formulation contains disodium adipate & no longer contains sorbitol or phenol red.
- Clinical trials comparing the 2 formulations showed similar safety profiles.
DTaP

- 5-dose series at age 2, 4, 6, 15–18 months, 4–6 years.
- Prospectively: Dose 4 may be administered as early as age 12 months if at least 6 months have elapsed since dose 3.
- Retrospectively: A 4th dose that was inadvertently administered as early as age 12 months may be counted if at least 4 months have elapsed since dose 3.
Pneumococcal Vaccine

- Pneumococcal conjugate vaccines
  - PCV13 (Prevnar 13, Pfizer) and PCV15 (Vaxneuvance, Merck), interchangeable.
  - PCV20 (Prevnar 20, Pfizer).
  - Either PCV15 or PCV20 may be used for the full series or to complete the recommended schedule begun with PCV13.
  - If only 13-valent PCV (PCV13) is available when the child is scheduled to receive a PCV, PCV13 may be given as previously recommended.

- Pneumococcal polysaccharide vaccine.
  - PPSV23 (Pneumovax23, Merck).

- Pneumococcal Vaccine added to the catch-up schedule, with 8 weeks marking the final dose. Age 12-59 months, regardless of risk.
• Special situations -
  o Adolescents aged 18 years at increased risk of exposure.
    o No evidence of complete polio vaccination series (at least 3 doses) → administer remaining doses to complete a 3-dose series.
    o Evidence of completed polio vaccination series (at least 3 doses) → may administer 1 lifetime IPV booster.
Influenza Vaccine

• Recommended for everyone 6 months+.
• Any licensed influenza vaccine appropriate by age and health status can be used.
• The AAP does not prefer any product over another for children and adolescents with no contraindications.
• Not given to individuals in close contact to immunocompromised people needing a protective environment.
• CAN be given to those with an egg allergy in medical setting where severe allergic reactions can be managed.
### Influenza Vaccine Products for the 2023–2024 Influenza Season

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>Trade Name (vaccine abbreviation)*</th>
<th>How Supplied</th>
<th>Mercury Content (mcg Hg/0.5 ml)</th>
<th>Age Range</th>
<th>CVX Code</th>
<th>Vaccine Product Billing Code†</th>
</tr>
</thead>
<tbody>
<tr>
<td>AstraZeneca</td>
<td>Flumist (LAIV4)</td>
<td>0.2 mL (single-use nasal spray)</td>
<td>0</td>
<td>2 through 49 years</td>
<td>149</td>
<td>90672</td>
</tr>
<tr>
<td>GSK</td>
<td>Fluarix (IVI4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>6 months &amp; older†</td>
<td>150</td>
<td>90686</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluviril (IVI4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>6 months &amp; older†</td>
<td>150</td>
<td>90686</td>
<td></td>
</tr>
<tr>
<td>Sanofi</td>
<td>Fluzone (IVI4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>0 to 18 years &amp; older‡</td>
<td>185</td>
<td>90682</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.5 mL (single-dose vial)</td>
<td>6 months &amp; older†</td>
<td>150</td>
<td>90686</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL multi-dose vial (0.25 mL, 0.5 mL)</td>
<td>6 through 35 months¹</td>
<td>158</td>
<td>90687</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL multi-dose vial (0.5 mL, 0.5 mL)</td>
<td>6 months &amp; older</td>
<td>158</td>
<td>90688</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluzone High-Dose (IVI4-HD)</td>
<td>0.7 mL (single-dose syringe)</td>
<td>0 to 65 years &amp; older</td>
<td>197</td>
<td>90662</td>
<td></td>
</tr>
<tr>
<td>Seqirus</td>
<td>Afluria (IVI4)</td>
<td>5.0 mL multi-dose vial (0.25 mL, 0.5 mL)</td>
<td>6 through 35 months¹</td>
<td>158</td>
<td>90687</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL multi-dose vial (0.5 mL, 0.5 mL)</td>
<td>6 months &amp; older</td>
<td>158</td>
<td>90688</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.5 mL (single-dose syringe)</td>
<td>3 years &amp; older‡</td>
<td>150</td>
<td>90686</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluid (alIVI4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>65 years &amp; older</td>
<td>205</td>
<td>90694</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluocel (clIVI4)</td>
<td>0.5 mL (single-dose syringe)</td>
<td>6 months &amp; older†</td>
<td>171</td>
<td>90674</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.0 mL multi-dose vial (0.5 mL, 0.5 mL)</td>
<td>6 months &amp; older</td>
<td>186</td>
<td>90756</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES**

1. LAIV = egg-based quadrivalent inactivated influenza vaccine (injectable); where necessary to refer to cell-culture based vaccine, the prefix “al” is used (e.g., alIVI4); IIIIV = quadrivalent recombinant hemagglutinin influenza vaccine (injectable); clIVI4 = quadrivalent inactivated influenza vaccine.

2. An administration code should always be reported in addition to the vaccine product code. Note: Third-party payers may have specific policies and guidelines that might require providing additional information on their claim forms.

3. Dosing for infants and children age 6 through 35 months:
   - Afluria 0.25 mL
   - Fluazil 0.5 mL
   - Fluocel 0.5 mL
   - Fluzeze 0.25 mL or 0.5 mL

4. Afluria is approved by the Food and Drug Administration for intramuscular administration with the PharmLok Straths Needle-Free Injection System for persons age 10 through 64 years.
• 2-dose series at age 12–15 months, age 4–6 years.
• MMR or MMRV may be administered.
• Note: For dose 1 in children age 12–47 months, it is recommended to administer MMR and varicella vaccines separately. MMRV may be used if parents or caregivers express a preference.
• 2-dose series at age 12–15 months, 4–6 years
• VAR or MMRV may be administered*
• Dose 2 may be administered as early as 3 months after dose 1 (a dose inadvertently administered after at least 4 weeks may be counted as valid).
• *Note: For dose 1 in children age 12–47 months, it is recommended to administer MMR and varicella vaccines separately. MMRV may be used if parents or caregivers express a preference.
Hepatitis A

- 2-dose series (minimum interval: 6 months) at age 12–23 months.
- For persons traveling to or working in countries with high or intermediate endemic hepatitis A.
  - Infants age 6–11 months: 1 dose before departure; revaccinate with 2 doses (separated by at least 6 months) between age 12–23 months.
  - Unvaccinated age 12 months or older: Administer dose 1 as soon as travel is considered.
HPV

• Routinely recommended at age 11–12 years (can start at age 9 years) and catch-up HPV vaccination recommended for all persons through age 18 years if not adequately vaccinated.

• 2- or 3-dose series depending on age at initial vaccination:
  • Age 9 –14 years at initial vaccination: 2-dose series at 0, 6–12 months (minimum interval: 5 months; repeat dose if administered too soon).
  • Age 15 years+ at initial vaccination: 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 12 weeks / dose 1 to dose 3: 5 months; repeat dose if administered too soon).

• If vaccination schedule is interrupted, the series does not need to be restarted.

• No additional doses recommended.
Meningococcal Vaccines

- No ACIP preference statement on brand
  - MenACWY-TT (MenQuadfi™).
    - Licensed down to 9 months of age.
    - Studies: To get approval down to 6 months.

- Menveo™ (GSK) will still be available.
- 2 different vial formulations.
  - 2 vials-reconstitute, age 2mon-55yo (lyophilized).
  - 1 vial-no reconstitution, only approved for 10-55yo (liquid).
    - One vial and diluent together; decreases vaccine errors.

- MenQuadfi vs Menveo-immune non-inferiority based on seroresponse for all 4 serogroups.
Meningococcal Vaccines

• Reminders
  o MenQuadfi® and Menveo can be given regardless of DTaP.
  o MenACWY vaccines may be administered simultaneously with MenB vaccines if indicated, but at a different anatomic site, if feasible.
  o In children under 10 years needing a meningitis vaccine for travel, Menveo liquid is not appropriate for use.
  o Give vaccine at 11-12 y.o. then adolescent boosters at 16 y.o
Monoclonal antibody injection (Nirsevimab) approved by CDC in August, expected availability in fall.
- Will be covered by VFC.

For neonates and infants born during or entering their first RSV season.

Dosage is based on body weight:
- <5 kg should be administered a 50 mg dose.
- ≥5 kg should be administered a 100 mg dose.

For children up to 24 months of age who remain vulnerable to severe RSV disease through their second RSV season:
- Single 200 mg dose administered as 2 IM injections.
• Children who have received Nirsevimab **should not** receive Palivizumab for the same RSV season.
  • If palivizumab was administered initially for the RSV season and < 5 doses were administered, 1 dose of nirsevimab may be administered. No further palivizumab should be administered.
• If nirsevimab is not available, palivizumab should be administered

• CDC [Immunization Information Statement](https://www.cdc.gov/vaccines/schedules/hcp/imz/index.html) to be given as VIS
• **Timing**
  - For infants born just before or during the RSV season (October – March): Administer 1 dose at birth or as soon as possible.
  - For infants born outside of the RSV season (April – September): Within the first months of the RSV season.
  - Administration can occur during birth hospitalization or in the outpatient setting.

• **Coadministration**
  - Simultaneous administration of Nirsevimab with age-appropriate vaccines is recommended.

• Provides passive immunization that extends through 5 months regardless of infant birth month.
Additional RSV Products

- Maternal (Abrysvo)
  - FDA & CDC approved.
  - Administered at 32-36 weeks gestational age as a single IM dose for prevention of lower respiratory tract disease in infants from birth to 6 months
  - Infant will not require nirsevimab
    - Unless born <14 days after the mother’s vaccination

- Older Adults (Arexvy & Abrysvo)
  - FDA & CDC approved.
  - Single dose for adults 60+.
  - Using shared clinical decision-making.
Products in the Pipeline

- Meningococcal (pentavalent)
  - In June, ACIP reviewed the potential uses of a new pentavalent meningococcal vaccine that would protect against serotypes A, B, C, W, & Y
- PCV20 is now available for ordering.
Schedule Changes

• Provider sites should have a process established for informing staff of any changes to ACIP recommendations.
  o Have 1 person in charge of tracking updates.
  o Have monthly trainings to review clinical guidance updates.
Illinois Coverage

ABLE. Estimated* coverage† with measles, mumps, and rubella; diphtheria, tetanus, and acellular pertussis; poliovirus; and varicella vaccines; grace period or provisional enrollment§; and any exemption¶,** among kindergartners, by immunization program — United States,†† 2021–22 school year

<table>
<thead>
<tr>
<th>Immunization program</th>
<th>Kindergarten population§§</th>
<th>Surveyed***</th>
<th>2 Doses MMR,*** %</th>
<th>5 Doses DTaP,††† %</th>
<th>4 Doses polio,†† †‡ %</th>
<th>2 Doses VAR,‡‡‡ %</th>
<th>Grace period or provisional enrollment, %</th>
<th>Any exemption, %</th>
<th>Percentage point change in any exemption, 2020–2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>National estimate****</td>
<td>3,837,259</td>
<td>92.2</td>
<td>93.5</td>
<td>93.1</td>
<td>93.5</td>
<td>92.8</td>
<td>2.4</td>
<td>2.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Median*****</td>
<td>—</td>
<td>—</td>
<td>92.9</td>
<td>92.0</td>
<td>92.7</td>
<td>92.6</td>
<td>1.9</td>
<td>2.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Illinois††††,++++</td>
<td>137,699</td>
<td>100.0</td>
<td>92.1</td>
<td>91.9</td>
<td>91.9</td>
<td>91.8</td>
<td>NR</td>
<td>≥1.7</td>
<td>NA</td>
</tr>
</tbody>
</table>

†††† The proportion surveyed is reported as 100% but might be <100% if based on incomplete information about the actual current enrollment.
§§§§ Philosophical exemptions were not allowed.

https://www.cdc.gov/mmwr/volumes/72/wr/mm7202a2.htm?s_cid=mm7202a2_w
Series Completion Coverage

- Recent study published in *Pediatrics* found that 17% of toddlers who started seven recommended vaccine series did not complete 1 or more:
  - 4 doses – diphtheria, tetanus, and acellular pertussis (DTaP).
  - 4 doses – pneumococcal conjugate vaccine (PCV).
  - 3 to 4 doses – haemophilus type b (Hib).
  - 3 doses – hepatitis B (HepB).
  - 3 doses – polio (IPV).
  - 1 dose – measles, mumps, rubella (MMR).
  - 1 dose – varicella (VAR).
Strategies for Increasing Uptake

• Simplify Scheduling:
  o Alert patients when vaccines are coming.
  o Self-scheduling through patient portal.
  o Automatically schedule return visits.
  o Site options – mass vaccination clinics, drive-thru vaccination, sites at local high school, or empty store fronts.
Strategies for Increasing Uptake

- Streamline Operations:
  - Pre-made vaccine card labels.
  - Only carry one vaccine manufacturer.

- Create a culture of vaccine confidence:
  - Staff townhalls so everyone stays up-to-date.
  - Empower vaccine champions.
  - Everyone in the office (clinical and non-clinical) should be trained on how to address patient concerns about vaccines.
Strategies for Increasing Uptake

• Celebrate Vaccination!
  o Show off “I’m vaccinated!” stickers, pins, or posters.
  o Marketing materials in waiting rooms and social media.
  o Offer/talk about vaccinations at every visit.
  o For hesitant people – treat it as an ongoing conversation.
SESSION 3: COVID-19 VACCINES
Learning Objectives:

After this session participants will be able to


2. Outline storage and expiration date information for each vaccine manufacturer.

Booster Vaccination Rates

<table>
<thead>
<tr>
<th>People with an Updated (Bivalent) Booster Dose*</th>
<th>Count</th>
<th>Percent of U.S. Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>56,478,510</td>
<td>17.0%</td>
</tr>
<tr>
<td>Population ≥ 5 Years of Age</td>
<td>56,352,709</td>
<td>18.0%</td>
</tr>
<tr>
<td>Population ≥ 12 Years of Age</td>
<td>54,974,636</td>
<td>19.4%</td>
</tr>
<tr>
<td>Population ≥ 18 Years of Age</td>
<td>52,996,306</td>
<td>20.5%</td>
</tr>
<tr>
<td>Population ≥ 65 Years of Age</td>
<td>23,699,191</td>
<td>43.3%</td>
</tr>
</tbody>
</table>

*Vaccination coverage reporting is no longer required as of May 2023
Data as of 5/10/23
Commercialization

• Commercialization – the transition from direct government purchase to purchase by public and private consumers.

• How are patients impacted by commercialization?
  o COVID-19 vaccines are no longer free to everyone.
  o Children eligible for VFC are able to receive COVID-19 vaccines at no cost.
  o Adults eligible for Bridge Access Program are able to receive COVID-19 vaccines at no cost.
  o Patients with private insurance will access COVID-19 vaccines the same way they access other vaccinations.
Why Do We Need the Bridge Access Program for COVID-19 Vaccines?

There are 25-30 million adults (ages 18-64) without insurance, and additional adults whose insurance will not provide no-cost coverage for COVID-19 vaccines after these products are commercialized.

This program will serve as temporary bridge to the permanent and comprehensive Vaccines for Adults Program proposed in the FY23 and FY24 President’s Budgets.

*Uninsured is defined here as related to vaccination coverage. 
1. Data are internal CDC estimates.
Fall 2023/2024 Vaccines

- A monovalent formula.
- Why?
  - WHO is not seeing any evidence that the earliest variant is still circulating.
  - We can drop that from the formula.
  - Including it could hurt as we keep teaching our immune system to recognize the old version of the virus rather than the new one.
On September 11, 2023, the FDA...

- Approved the supplemental Biologics License Application for COMIRNATY or Pfizer and SPIKEVAX or Moderna’s mRNA COVID-19 vaccine for those ages 12+
- Gave emergency use authorization (EUA) for Pfizer–BioNTech and Moderna’s COVID-19 Vaccine (2023-2024 Formula) for those 6 months through 11 years of age.
On September 12, 2023, CDC’s Advisory Committee on Immunization Practices (ACIP) met and voted in favor recommending the 2023 – 2024 COVID-19 vaccine formulation for everyone 6 months and older.

The CDC also adopted this recommendation.
Deauthorized Vaccines

- Bivalent Moderna and Pfizer-BioNTech COVID-19 vaccines are no longer authorized for use in the United States.

- Per IDPH SIREN (9/13/23): Medical waste disposal requirements are set by state or local environmental agencies and may vary by jurisdiction.
  - Remove the current mRNA vaccines from your physical inventory immediately and dispose in compliance with vaccine disposal regulations.

- The original Novavax COVID-19 vaccine remains authorized for use as a 2-dose primary series for those ages 12+ and as a booster dose for those ages 18+ in limited situations.
  - Authorizations or approvals for 2023 – 2024 Novavax COVID-19 vaccine will be determined by FDA with CDC recommendations to follow.
• **Step 1:** Excess remaining bivalent mRNA COVID-19 vaccine inventory must now be reported using the wastage transaction in I-CARE. This reporting requirement is for inventory purposes only and such wastage data will not be used to penalize providers.

• **Step 2:** You may continue to administer doses ancestral Novavax COVID-19 vaccine to individuals who the provider has determined should not wait for an updated Novavax COVID-19 vaccine, and who otherwise are contraindicated for receipt of an updated mRNA COVID-19 vaccine or refuse an mRNA COVID-19 vaccine.

• **Step 3:** Providers must check the CDC Provider Agreement Update Website (https://www.cdc.gov/vaccines/covid-19/vaccination-provider-support.html) for any additional required steps in closing out their participation in the CDC COVID-19 Vaccination Program.
- **Step 4:** Providers may use inventory of ancillary supplies at no cost to you through the CDC COVID-19 Vaccination Program for administration of your commercially purchased vaccines.
  - Unexpired ancillary kits or the items contained within cannot be sold, but can be shared domestically, at no charge, with other immunization programs.
  - This includes other clinics within the practice, other sites offering healthcare services, or veterinary clinics.
- **Step 5:** Vaccines.gov is transitioning to becoming an information source for locating providers who are administering the updated 2023-2024 monovalent XBB.1.5 variant COVID-19 vaccines available in both the private commercial marketplace and through the CDC Bridge Access Program.
More than 90% of currently circulating viruses are XBB lineage viruses with 1-2 additional substitutions in RBD in comparison to XBB.1.5

BA.2.86 is a newly detected lineage with > 30 amino acid substitutions in spike
- Thus far, the number of viruses detected is still low
- Sequence numbers are too low to calculate proportion (<0.05%)

Preliminary pseudovirus neutralization data generated by multiple labs do not indicate a large reduction in neutralizing activity against BA.2.86

CDC has generated a BA.2.86 isolate, is currently working on titrations before neutralization and has begun distribution to external laboratories for further examination

March 1, 2020–August 26, 2023

Rates highest in ≥75 years, followed by infants <6 months and adults 65–74 years

Vaccination Status by Age Group among Infants, Children and Adolescents Ages ≤17 Years Hospitalized for COVID-19 — COVID-NET, January–June 2023

Data are limited to hospitalizations where COVID-19 is a likely primary reason for admission. **Unvaccinated**: No recorded doses of COVID-19 vaccine. **Vaccinated, but no bivalent booster**: Completed a primary series with or without ≥1 booster dose but did not receive an updated bivalent booster dose. **Updated bivalent booster**: Received updated bivalent booster dose. **Partially vaccinated**: Received at least one dose of COVID-19 but was not considered fully vaccinated at the time of a positive SARS-CoV-2 test. Persons with unknown vaccination status are excluded.
### Pediatric vaccine preventable diseases: Deaths per year in the United States prior to recommended vaccines compared to COVID-19

<table>
<thead>
<tr>
<th></th>
<th>Hepatitis A&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Meningococcal (ACWY)&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Varicella&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Rubella&lt;sup&gt;4&lt;/sup&gt;</th>
<th>Rotavirus&lt;sup&gt;5&lt;/sup&gt;</th>
<th>COVID-19&lt;sup&gt;6&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>&lt;20 years</td>
<td>11–18 years</td>
<td>5–9 years</td>
<td>All ages</td>
<td>&lt;5 years</td>
<td>6 months–&lt;18 years</td>
</tr>
<tr>
<td><strong>Average deaths per year</strong></td>
<td>3</td>
<td>8</td>
<td>16</td>
<td>17</td>
<td>20</td>
<td>≤1 year: 156, 1–4 years: 101, 5–19 years: 292</td>
</tr>
</tbody>
</table>

---


Summary
Benefits and Harms

- Monovalent XBB containing COVID-19 vaccines increase the immune response against the currently circulating variants
- Last year’s updated vaccine was effective at preventing medically attended COVID-19, hospitalization due to COVID-19, and death due to COVID-19
- Accumulating evidence that COVID-19 vaccination reduces Post-COVID Conditions among both children and adults
- COVID-19 vaccines have a high degree of safety
  - Rare events of myocarditis and anaphylaxis have been seen in post-authorization studies
  - Unlikely that updating the formulation would increase adverse event rates
- Benefits are anticipated in all age groups; benefits of COVID-19 vaccines vary by age and incidence of COVID-19 hospitalizations
- Benefits outweigh risks in age groups for which risk of myocarditis is highest
- Modeling projects more hospitalizations and deaths averted when updated doses are universally recommended compared to no recommendation or recommended only for persons ≥65 years
## 2023–2024 COVID-19 Vaccine Ordering

**Monovalent XBB.1.5**  
Last updated September 13, 2023. Information is subject to change.

<table>
<thead>
<tr>
<th>FORMULATION</th>
<th>CPT CODE</th>
<th>PRESENTATION</th>
<th>MINIMUM ORDER QTY</th>
<th>HOW TO ORDER</th>
<th>COST</th>
<th>DELIVERY TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novavax</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Patient age 12 years and older | 01304 | Multi-dose vials containing 5 doses | 50 doses | • Through VFC and other state programs  
• Wholesaler/distribution channels | Unknown - Prices will depend on the contract or group affiliation | Varies |
| Pfizer      |          |              |                    |              |      |               |
| Patient age 6 months–4 years | 01318 | Multi-dose vials containing 3 doses | 30 doses | • Through VFC and other state programs  
• Pfizer Prime: 15% of an order that is received can be returned  
• Wholesaler/distribution channels | Unknown - Prices will depend on the contract or group affiliation | Varies |
| Patient age 5 years–11 years | 01319 | Single-dose vials | 10 doses |                  |      |               |
| Patient age 12 years and older | 01320 | Single-dose vials or single-dose prefilled syringes* | |                  |      |               |
| Moderna     |          |              |                    |              |      |               |
| Patient age 6 months–11 years | 01321 | Single-dose vials that come in 10-count cartons | 10 doses | • Through VFC and other state programs  
• Moderna Direct: 10% of an order that is received can be returned  
• Wholesaler/distribution channels | Unknown - Prices will depend on the contract or group affiliation | Varies; Moderna would begin shipping the vaccines after FDA approval |
| Patient age 12 years and older | 01322 | Single-dose prefilled syringes sold in 10-count cartons with a blister pack option | |                  |      |               |

*There will be limited quantities of prefilled syringes and they will not be available for initial stocking orders.

Sources:  
[https://publications.aap.org/ajc/2021/08/31/2021-08-31-AACI-2021-08-31-AACI-FDA-Advisory-Committee-Meeting-08-31-2021](https://publications.aap.org/ajc/2021/08/31/2021-08-31-AACI-2021-08-31-AACI-FDA-Advisory-Committee-Meeting-08-31-2021)
Ordering

• Ordering link: https://app.smartsheet.com/b/form/18197dd31cac4ddf89607bda34521708 (I-CARE ordering coming soon).
• Indicate whether a brand substitution will be accepted orders cannot be fulfilled with preferred brand.
• Provider Agreement will apply to products available through the VFC Program.
• The number of doses is limited at this time.
• Private stock: The same way other commercialized vaccines are ordered, order through manufacturer. Moderna Direct and Pfizer Prime.

If you believe that you placed a VFC vaccine order but do not see it in I-CARE, please contact dph.vaccines@illinois.gov

VFC, 317, and COVID-19 vaccines deliveries will not be available on Columbus Day / Indigenous Peoples’ Day Monday, October 9th
Pfizer: 6 months – 4 years vaccine has a yellow cap and yellow label.

Pfizer: 5-11 vaccine has a blue cap and blue label.
Pfizer: 12+ vaccine has a gray cap and gray label.

COMIRNATY® (COVID-19 Vaccine, mRNA) 2023-2024 Formula
Ages 12 years and older
Single Dose Vials

Date of EXPIRY is printed on the vial label

COMIRNATY® (COVID-19 Vaccine, mRNA) 2023-2024 Formula
Ages 12 years and older
Prefilled Syringes*

Important Considerations for Prefilled Syringes

Dose: 30 mcg/0.3 mL

Storage During Use**:
- After thawing:
  - If thawed in the carton, syringes can be stored:
    - Refrigerator (2-8°C) 10 weeks
    - Room temperature (8-25°C): 12 hours prior to use
  - If individual frozen syringes are thawed at room temperature (i.e. outside of the carton), they must be used within 4 hours of thawing

After opening the tip cap and attaching an appropriate needle, the prefilled syringe should be used immediately.
- If it cannot be used immediately, it must be used within 4 hours.
2023 – 2024 Packaging: Moderna

Moderna: Vaccine for ages 6 months – 11 years has a dark blue cap and a green label border.

Moderna: Vaccine for ages 12 years and older has a blue cap and a blue label border.
# 2023–2024 COVID-19 Vaccine

## Monovalent XBB.1.5

Last updated September 15, 2023

<table>
<thead>
<tr>
<th>Age Indications and Formulation</th>
<th>Moderna</th>
<th>Pfizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 Months–11 Years</td>
<td>12+ Years</td>
<td>6 Months–4 Years</td>
</tr>
<tr>
<td>Vial Cap Color</td>
<td>Dark Blue</td>
<td>Yellow</td>
</tr>
<tr>
<td>Vial Label Border Color</td>
<td>Green</td>
<td>Dark Blue</td>
</tr>
<tr>
<td>Preparation</td>
<td>Do Not Dilute</td>
<td>Dilute</td>
</tr>
<tr>
<td>Dose</td>
<td>25 mcg/0.25 mL dosage</td>
<td>50 mcg/0.5 mL dosage</td>
</tr>
<tr>
<td>Doses per Vial</td>
<td>1</td>
<td>1 – Single-dose Vial or Prefilled Syringe</td>
</tr>
<tr>
<td>Ult Freezer (-90°C to -60°C)</td>
<td>DO NOT STORE</td>
<td>DO NOT STORE</td>
</tr>
<tr>
<td>Freezer (-50°C to -15°C)</td>
<td>Until Expiration</td>
<td>Until Expiration</td>
</tr>
<tr>
<td>Refrigerator (2°C to 8°C)</td>
<td>30 Days</td>
<td>30 Days</td>
</tr>
<tr>
<td>Room Temperature (8°C to 25°C)</td>
<td>24 Hours</td>
<td>24 Hours</td>
</tr>
<tr>
<td>After First Puncture (2°C to 25°C)</td>
<td>N/A</td>
<td>12 Hours or Discard After Single Use</td>
</tr>
<tr>
<td>Thaw Time</td>
<td>In Refrigerator: 45 mins</td>
<td>Single-Dose Vial: 1 hour</td>
</tr>
<tr>
<td></td>
<td>At Room Temp: 15 mins</td>
<td>At Room Temp: 30 mins</td>
</tr>
</tbody>
</table>

*Thawed in carton: 12 hours prior to use. Thawed outside of carton: Use within 4 hours of thawing.
<table>
<thead>
<tr>
<th>TYPE</th>
<th>DESCRIPTION</th>
<th>ITEM AND PACKING INFORMATION</th>
</tr>
</thead>
</table>
| Prefilled Syringe    | • 0.5 mL single-dose pre-filled syringe  
                             • 10-count carton (blister pack)  
                             • 12+ years of age                | Carton: Weight (lbs) 0.24  
                                                Depth (in) 2.25  
                                                Width (in) 5.25  
                                                Height (in) 3.43  
                                                Volume (in³) 38.84 |
| Prefilled Syringe    | • 0.6 mL single-dose pre-filled syringe  
                             • 10-count carton  
                             • 12+ years of age                | Carton: Weight (lbs) 0.20  
                                                Depth (in) 4.90  
                                                Width (in) 4.14  
                                                Height (in) 1.42  
                                                Volume (in³) 2430 |
| Single-Dose Vial     | • 0.6 mL single-dose vial  
                             • 10-count carton  
                             • 12+ years of age                | Carton: Weight (lbs) 0.21  
                                                Depth (in) 3.69  
                                                Width (in) 1.54  
                                                Height (in) 2.20  
                                                Volume (in³) 11.76 |

* lbs = pounds. Note that gross weight is under evaluation.
Proposed 2023 – 2024 COVID-19 vaccine recommendations for mRNA COVID-19 vaccines

Unvaccinated

- 2 doses Moderna OR 3 doses Pfizer-BioNTech
- 6 months – 4 years
- 1 dose Moderna OR 1 dose Pfizer-BioNTech
- ≥ 5 years

Previously vaccinated

- 1 dose Moderna OR 1 dose Pfizer-BioNTech
- ≥ 6 months

Note: Those ages 6 months – 4 years who have previously received a single dose of Pfizer-BioNTech would need 2 additional doses. Additional doses are recommended for persons with immunocompromising conditions.
Dosing and Administration

COVID-19 VACCINATION SCHEDULE AND DOSING
AGES 6 MONTHS TO 4 YEARS

UNVACCINATED
doze/injection volume
Moderna 2023-2024: (Do NOT mix vaccines)
Dark Blue Cap (green label)
Pfizer 2023-2024: (place before use)
Yellow Cap

PREVIOUSLY VACCINATED

doze/injection volume
Previously Received COVID-19 Vaccines
Moderna 2023-2024: (Do NOT mix vaccines)
Dark Blue Cap (green label)
Pfizer 2023-2024: (place before use)
Yellow Cap

I-VAC
ILLINOIS VACCINATES AGAINST COVID-19
A partnership by Cook County Hospital of the American Academy of Pediatrics
COVID-19 VACCINATION SCHEDULE AND DOSING
AGES 6 MONTHS TO 4 YEARS IMMUNOCOMPROMISED

**UNVACCINATED**

Dose/injection volume:
- Moderna 2023-2024: 35 µg/0.5 mL
- Pfizer 2023-2024: 3 µµg/0.3 mL

PREVIOUSLY VACCINATED

Dose/injection volume:
- Moderna 2023-2024: 20 µg/0.5 mL
- Pfizer 2023-2024: 3 µµg/0.3 mL

**PLEASE NOTE**

Complete at least a three-dose series with a COVID-19 vaccine, each dose one month apart. At least one dose should be with a COVID-19 vaccine (2023-2024 formula).

Additional age-appropriate doses may be administered at the discretion of the healthcare provider, taking into consideration the individual’s clinical circumstances. The timing of the additional doses may be based on the individual’s clinical circumstances.
Dosing and Administration

COVID-19 VACCINATION SCHEDULE AND DOSING
AGES 5 TO 11 YEARS

UNVACCINATED
dose/injection volume
Moderna 2023-2024:
(Do NOT dilute before use)
Dark Blue Cap (green label)
Pfizer 2023-2024:
(Do NOT dilute before use)
Blue Cap

2023-2024 MODERNA
25 μg/0.5 mL
Up-to-date

PREVIOUSLY VACCINATED
dose/injection volume
Previously Received
COVID-19 Vaccines

1st DOSE
Modern or Pfizer
In at least 8 weeks

2023-2024 MODERNA
25 μg/0.5 mL

OR

2023-2024 PFIZER
10 μg/0.3 mL
Up-to-date
COVID-19 VACCINATION SCHEDULE AND DOSING
AGES 5 TO 11 YEARS IMMUNOCOMPROMISED

UNVACCINATED
Dose/injection volume
Modern 2023-2024:
Do NOT (blue before use and
Dark Blue Cap (green label)
Pfizer 2023-2024:
Blue Cap (Do NOT draw before use)

PREVIOUSLY
VACCINATED
Dose/injection volume
Previously Received
COVID-19 Vaccines

PLEASE NOTE
Complete at least a three-dose series with a COVID-19 vaccine, each dose one month apart. At least one dose should be with a COVID-19 vaccine (2023-2024 Formula).
Additional age-appropriate doses may be administered at the discretion of the healthcare provider, taking into consideration the individual’s clinical circumstances. The timing of the additional doses may be based on the individual’s clinical circumstances.
Dosing and Administration

COVID-19 VACCINATION SCHEDULE AND DOSING
AGES 12 YEARS AND OLDER

UNVACCINATED
dose/injection volume:
Moderna 2023-2024:
(De NIT skin before use)
Dark Blue Cap (With Blue Label)
Pfizer 2023-2024:
(De NIT skin before use)
Gray Cap

PREVIOUSLY VACCINATED
dose/injection volume:
Previously received COVID-19 Vaccines
Moderna 2023-2024:
(De NIT skin before use)
Dark Blue Cap (With Blue Label)
Pfizer 2023-2024:
(De NIT skin before use)
Gray Cap

14 DOSE Moderna or Pfizer
In at least 8 weeks
2023-2024 Moderna or Pfizer
In at least 8 weeks
2023-2024 Pfizer
Dosing and Administration

COVID-19 VACCINATION SCHEDULE AND DOSING
AGES 12 YEARS AND OLDER IMMUNOCOMPROMISED

UNVACCINATED
dose/injection volume
Moderna 2023-2024:
(Dose 1: 100 mcg/mL)
(Dose 2: 100 mcg/mL)
Pfizer 2023-2024:
(No Dose 1: 30 mcg/mL)

PREVIOUSLY VACCINATED
dose/injection volume
Previously Received COVID-19 Vaccines
Moderna 2023-2024:
(No Dose 1: 100 mcg/mL)
Pfizer 2023-2024:
(No Dose 1: 30 mcg/mL)

PLEASE NOTE
Complete at least a three-dose series with a COVID-19 vaccine, each dose one month apart. At least one dose should be with a COVID-19 vaccine (2023-0034 Formula).

Additional age-appropriate doses may be administered at the discretion of the healthcare provider, taking into consideration the individual's clinical circumstances. The timing of the additional doses may be based on the individual's clinical circumstances.
Recipient and Caregiver Handouts

EUA Fact Sheets for Recipients and Caregivers

• Moderna COVID-19 Vaccine (6 months through 11 years)
  • Fact sheet for recipients and caregivers: emergency use authorization of Moderna COVID-19 vaccine in individuals 6 months through 11 years of age

• Pfizer-BioNTech COVID-19 Vaccine (6 months through 11 years)
  • Fact sheet for recipients and caregivers: emergency use authorization of Pfizer-BioNTech COVID-19 vaccine in individuals 6 months through 11 years of age

Recipient/Caregiver Information for individuals 12 years and older – use in lieu of VIS until the VIS is available:

• Spikevax (COVID-19 Vaccine, mRNA) (12 years+)
  • Spikevax Information for Recipients and Caregivers

• Comirnaty (COVID-19 Vaccine, mRNA) (12 years+)
  • Comirnaty Information for Recipients and Caregivers

VIS link on CDC – check back here for updates
Clinical Guidance Resources

- [COVID Vaccine Dosing QuickReference.pdf](aap.org) (aap.org)
- [Clinical Guidance for COVID-19 Vaccination | CDC](https://www.cdc.gov/vaccines/covid-19/)
- [CDC product information](https://www.cdc.gov/vaccines/dates/planning/)
- [CDC’s guidance based on age and medical condition](https://www.cdc.gov/vaccines/hpv/)
## Expiration Dates

<table>
<thead>
<tr>
<th>Manufacturer</th>
<th>How to find it</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderna (Spikevax)</td>
<td>• Scan QR code on the vial or carton.</td>
</tr>
<tr>
<td></td>
<td>• Website: <a href="#">Look up tool</a></td>
</tr>
<tr>
<td>Pfizer</td>
<td>• Website: Look up tool.</td>
</tr>
<tr>
<td></td>
<td>• See EUA fact sheets for providers.</td>
</tr>
<tr>
<td>Novavax</td>
<td>• Scan QR code on outer carton.</td>
</tr>
<tr>
<td></td>
<td>• Website: <a href="#">Look up tool</a></td>
</tr>
</tbody>
</table>
Per Illinois' Immunization Registry Code, Section 689.40(d):

• “Providers shall report all COVID-19 immunizations administered in Illinois to the registry.”
• This includes both publicly available and privately purchased COVID-19 vaccines.
Reporting to VAERS

Required by law to report the following to VAERS:

1. Vaccine administration errors, whether or not associated with an adverse event (AE)
   • If the incorrect mRNA COVID-19 vaccine product was inadvertently administered for a second dose in a 2-dose series, VAERS reporting is required.

2. Cases of myocarditis after a Pfizer-BioNTech, Moderna, or Novavax vaccine.

3. Cases of pericarditis after a Pfizer-BioNTech, Moderna, or Novavax vaccine.

**VAERS reporting is not required for:**
• Mixed series is given intentionally (e.g., due to hypersensitivity to a vaccine ingredient).

https://www.cdc.gov/vaccinesafety/hcpproviders/reportingadverseevents.html
Reporting to VAERS

4. Serious AEs regardless of whether the reporter thinks the vaccine caused the AE:
   • Death
   • A life-threatening AE
   • Inpatient hospitalization or prolongation of existing hospitalization
   • A persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions
   • A congenital anomaly/birth defect
   • An important medical event that based on appropriate medical judgement may require medical or surgical intervention to prevent one of the outcomes listed above

5. Cases of Multisystem Inflammatory Syndrome in adults or children.
6. Cases of COVID-19 that result in hospitalization or death.

Report to VAERS any clinically significant AEs following vaccination, even if you are not sure whether the vaccine caused the event.

https://vaers.hhs.gov/reportevent.html
Reporting to VAERS

• Fill out a separate form for each patient.
• List any medicines, supplements, and remedies the patient is taking or using.
• List any allergies.
• List acute illnesses and chronic conditions the patient may have.
• Fill out the information of the person filling out the form and contact information of the provider to contact, correctly and completely.
• Call 1-800-822-7967 or email info@vaers.org for help or information.
• Misinformation vs. disinformation
  • When people spread misinformation, they often believe what they are sharing
  • Disinformation is intended to mislead others.

• Address hesitancy and misinformation by increasing vaccine confidence:
  • Create vaccine champions of your staff
  • Help simplify scheduling for patients and alert them when vaccines are available.
  • Streamline operations for your staff.
  • Be empathetic, compassionate, and sensitive to culture, family dynamics, and circumstances that may influence how patients view vaccines.

• Motivational interviewing is an evidence-based and culturally sensitive way of speaking with unvaccinated patients about getting vaccinated.
**Discussion**

- Case scenario: You are carrying both the Moderna and Pfizer products for all ages at your clinic. What are some ways you can minimize vaccine administration errors?
- 5 minutes to discuss different strategies at your tables.
- What are some ways you minimize vaccine administration errors in your own practice?
- 5 minutes to present one strategy to the group.
Lunch
Please return by 12:35
SESSION 4:
OTHER TOPICS
Learning Objectives:

After this session participants will be able to

1. Describe vaccine hesitancy, misinformation, and disinformation.
2. Demonstrate strategies for combatting vaccine misinformation and disinformation.
3. Outline ways to discuss vaccine hesitancy with patients.
• 23 million children missed out on basic childhood vaccines through routine health services in 2020.
  • The highest number since 2009 and 3.7 million more than in 2019.

• Children were on track to miss an estimated 9 million vaccination doses in 2020, a decrease of up to 26% in childhood vaccination doses compared to 2019.
The Blue Cross Blue Shield Association Reports Steep Decline in Childhood Vaccinations Due to COVID-19 Pandemic, Putting Community Protection at Risk | Blue Cross Blue Shield (bcbs.com)

<table>
<thead>
<tr>
<th>Vaccination</th>
<th>BCBS 2020 estimated vax rate</th>
<th>BCBS % decrease from 2019</th>
<th>CDC herd immunity thresholds</th>
<th>BCBS 2020 est. vax rate vs herd immunity thresholds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measles</td>
<td>88.2%</td>
<td>-26%</td>
<td>94%</td>
<td>-4.8</td>
</tr>
<tr>
<td>Pertussis</td>
<td>79.3%</td>
<td>-26%</td>
<td>92%</td>
<td>-12.7</td>
</tr>
<tr>
<td>Polio</td>
<td>88.9%</td>
<td>-16%</td>
<td>86%</td>
<td>+2.9</td>
</tr>
</tbody>
</table>
Vaccination coverage among kindergartners nationwide:

- Lower during the 2020-21 school year compared with 2019-20 school year (95% to ~94%).
- Lower during the 2021-22 school year compared with the 2020-21 school year (~94% to ~93% for all state-required vaccines).
- Non-exempt, undervaccinated students often attend school while in a grace period or are provisionally enrolled.
- In many states, exemption policies were expanded either formally or informally during the 2020-21 school year.

https://www.cdc.gov/mmwr/volumes/71/wr/mm7116a1.htm
https://www.cdc.gov/mmwr/volumes/72/wr/mm7202a2.htm?s_cid=mm7202a2_w
https://www.cdc.gov/mmwr/volumes/71/wr/mm7116a1.htm
Since we do not have vaccines to protect against every disease, it is even more important to use the vaccines that we do have to keep children out of the hospital.

**Preliminary interim estimates—NVSN**

- Through January 25, 2023, influenza vaccination significantly reduced laboratory confirmed medically attended influenza
  - 68% (95% CI: 46, 81) against pediatric hospitalizations
  - 42% (95% CI: 25, 56) against pediatric ED visits
- Important protection against both A/H3N2 and A/H1N1 associated illness
School Exemptions

Measles Case Summary: Central Ohio Outbreak
(As of: Wednesday, January 25, 2023 9:56 AM)
Data Source: Ohio Disease Reporting System (ODRS). All data are preliminary and subject to change.

Case information for confirmed measles cases who are part of the current central Ohio outbreak:

Since the start of the outbreak in November 2022, we have seen:

85 cases (of which 36 were hospitalized and 0 have died)

Vaccination status:

- Unvaccinated: 80
- Partially vaccinated (1 dose): 4
- Fully vaccinated (2 doses): 0
- Unknown vaccination status: 1

65% of cases are 1-5 years old.
- <1 year old: 25
- 1-2 years old: 36
- 3-5 years old: 19
- 6-17 years old: 5
- 18+ years old: 0

48% of cases are female and 52% of cases are male.
- Female: 41
- Male: 44
- Unknown: 0

Cases by Date of Rash Onset:

Implications

Figure 1
Most Adults, Including Majorities Across Partisans, Say Benefits Of Childhood MMR Vaccines Outweigh Risks
Percent who say that the benefits of childhood vaccines for measles, mumps, and rubella outweigh the risks:

<table>
<thead>
<tr>
<th>Total</th>
<th>KFF 2022</th>
<th>Per 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>83%</td>
<td>83%</td>
<td>83%</td>
</tr>
</tbody>
</table>

Parents of children under age 18
Democrat/Lean Democrat
Republican/Lean Republican

NOTE: See toplines for full question wording.
SOURCE: KFF COVID-19 Vaccine Monitor (Nov 20-Dec 8, 2022) and Pew Research Center (Oct 1-13, 2019) • PNG

Figure 3
Compared To 2019, More Adults Now Say Parents Should Be Able To Decide Not To Vaccinate Their Children For Measles, Mumps, And Rubella

Parents should be able to decide not to vaccinate their children, even if that may create health risks for other children and adults.
Healthy children should be required to be vaccinated in order to attend public schools because of the potential risk for others when children are not vaccinated.

Total
Dec-20 38% 71%
Oct-19 48% 52%

Parents of children under age 18
Dec-20 36% 64%
Oct-19 25% 29%

Democrat/Lean Democrat
Dec-20 11% 88%
Oct-19 12% 88%

Republican/Lean Republican
Dec-20 44% 56%
Oct-19 20% 79%

NOTE: See toplines for full question wording.
SOURCE: KFF COVID-19 Vaccine Monitor (Nov 20-Dec 8, 2022) and Pew Research Center (Oct 1-13, 2019) • PNG

Misinformation vs. Disinformation

• When people spread misinformation, they often believe the information they are sharing.

• Disinformation is crafted and disseminated with the intent to mislead others.
Percent in each vaccine intention group who say they **have heard** at least one myth surrounding the COVID-19 vaccines, and either say it is true or are not sure if it is true:

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>54%</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Women</td>
<td>58%</td>
</tr>
<tr>
<td>Men</td>
<td>50%</td>
</tr>
<tr>
<td>Party</td>
<td></td>
</tr>
<tr>
<td>Democrats</td>
<td>44%</td>
</tr>
<tr>
<td>Independents</td>
<td>56%</td>
</tr>
<tr>
<td>Republicans</td>
<td>58%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>58%</td>
</tr>
<tr>
<td>30-49</td>
<td>59%</td>
</tr>
<tr>
<td>50-64</td>
<td>53%</td>
</tr>
<tr>
<td>65+</td>
<td>44%</td>
</tr>
</tbody>
</table>

NOTE: See topline for full question wording.
Pandemic + Overload of Information = Infodemic

“Disinformation campaigns are deliberate, often orchestrated, and highly effective in confusing people enough to change behaviors, like not getting the COVID-19 vaccine.”

Top low-credibility Sources

Tweets shared by users geolocated in the U.S. that link to a low-credibility source. Sources are ranked by percentage of the tweets considered.
About the Film

Virulent: The Vaccine War
Documentary Discussion Questions

- What are your reactions to this documentary?
- What has been the most challenging part about vaccinating since 2020?
- What vaccine misinformation/disinformation patterns have you seen in the past?
  - What are the sources for this information?
  - How have these patterns changed?
- What has your clinic/organization done to respond to misinformation/disinformation?
  - Among staff (internally)
  - Among patients/families (externally)
- How do you initiate conversations about vaccines with patients?
  - How do you address misinformation/ myths with a patient?
  - How do you address vaccine hesitancy?
- What strategies to address vaccine hesitancy have worked?
  - What hasn’t worked?
Next Steps

- Make sure you signed in
- Fill out your evaluation (needed for CME)
- Let us know if you want additional outreach materials
JOIN ICAAP FOR THE 2023

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November 9 & 10, 2023
Northern Illinois University Naperville

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➔ Hear the latest on “hot topics” and recent practical advances on a variety of subspecialty areas.

➔ Keynote topics include: *Pediatric Firearm Injuries and Fatalities* & *Pediatric Mental Health*

Register today!
Thank You