2024 CDPH VFC Training

April 1, 2024

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Illinois State Medical Society

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Disclosure Grid

Name and Credentials	Role in Activity	Was there a relevant Financial Disclosure	List of Mitigated Disclosures
Jennifer Burns	Faculty/Presenter Planning Committee Member	No	N/A
Alexander Sloboda, MD MPH	Faculty/Presenter	No	N/A
Jacqueline Tiema-Massie, DrPH, MPH	Faculty/Presenter Planning Committee Member Content Reviewer Moderator/Facilitator	No	N/A
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Jaime Novales, MD	CME Reviewer	No	N/A
Patrick Dolan, MD	CME Reviewer	No	N/A

Agenda

8:00 AM	Check - In and Networking
8:30 AM	CDPH VFC Program
9:30 AM	Vaccine Hesitancy - *Virulent: The Vaccine War* Screening
10:30 AM	15 Minute Networking Break
10:45 AM	Vaccine Schedules
11:45 AM	Questions and Closing
12:00 PM	Adjourn

Session I:

CDPH VFC Program

Speaker: Victor Santiago

Learning Objectives

After this session participants will be able to:

Objective 1:

Outline the VFC Program recommendations, requirements, and updates.

Objective 2:

Describe inventory reconciliation & vaccine ordering best practices and other Chicago VFC mandates.

Objective 3:

Implement effective vaccine storage and handling practices and keep vaccine waste to a minimum.

Objective 4:

Overview of Immunization Information System (IIS) I-CARE

Overview of the VFC Program

- The Vaccines for Children (VFC) Program provides all routine vaccines recommended by the Advisory Committee on Immunization Practices (ACIP) at no cost to children who otherwise might not be vaccinated.

- Vaccines provided through the VFC Program must be administered according to the guidelines outlined by ACIP.

Benefits of VFC

- Many families cannot afford to pay for vaccines on their own, a common barrier in routine vaccination rates. VFC benefits include:
  - Reduces up-front costs of Chicago VFC providers because you will not have to pay to purchase vaccines for VFC program-eligible children.
  - Eliminating or reducing vaccine cost as a barrier to immunizing eligible children.
  - Enables patients to get the vaccines they need during routine appointments at their regular office.
  - Helps provide quality care to vulnerable children and adolescents.

VFC Provider Requirements

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.

Record Keeping

- 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 (available in 47 languages)
  - Reporting adverse reactions to VAERS.

Table 1. Guidance for Use of Vaccine Information Statements
(Source: AAP Committee on Medical Liability. Medical Liability for Pediatricians, 6th Edition. 2004)

Distribution	Documentation in the Patient's Medical Record
Must be provided each time a National Vaccine Injury Compensation Program (VICP)-covered vaccine is administered*	Vaccine manufacturer, lot number, and date of administration*
Given to parent, legal guardian, or patient (non-minor) to keep*	Name and business address of the physician administering the vaccine*
Must be the current version†	Vaccine Information Statement version date and date it is provided†
Can provide (not substitute) other written or audio-visual materials as necessary‡	Site (eg, deltoid area), route of administration (eg, intramuscular), and expiration date of the vaccine‡

*Required under the National Childhood Vaccine Injury Act.
†Required under Centers for Disease Control and Prevention instructions implementing the National Childhood Vaccine Injury Act.
‡Recommended by the American Academy of Pediatrics.

Record Keeping Cont.

- The National Childhood Vaccine Injury Act (NCVIA) and/or CDC requires physicians to document the:
  - Name & Date of vaccine administered
  - 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).

Knowledge Check

True or False: Patient records must be maintained for one year.

Provider Agreement

- 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.

Recertification of Annual Enrollment

- 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.

Knowledge Check

How often must VFC providers recertify their enrollment?

a. Annually.

b. Never. Enrollment is continuously ongoing.

Provider Unenrollment

- Either the Provider or the Chicago 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 CDPH may terminate the provider agreement include:
  - Provider has not ordered vaccine in the past 12 months.
  - A provider on the List of Excluded Individual and Entities (LEIE) list maintained by Office of the Inspector General.
  - Failure to comply with requirements.

Vaccine Staff & Training – Vaccine Coordinators

- **Identify** a primary VFC vaccine coordinator and at least one backup VFC 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.

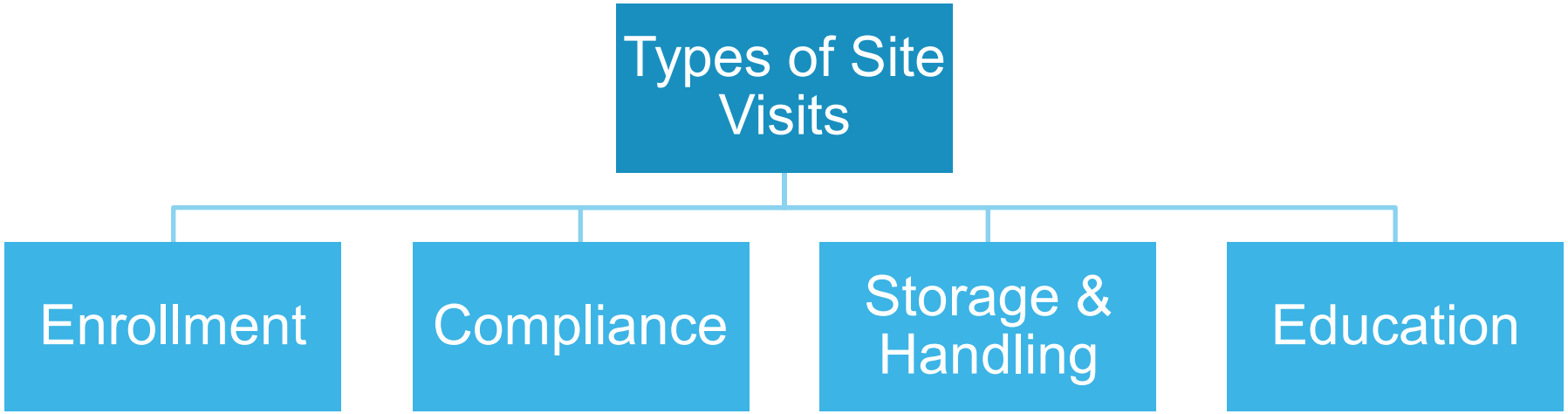
Staff Training

- 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.

Training Opportunities

- Some VFC site visits.
- This training ☺
- 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

VFC Site Visits



VFC Enrollment Visits

- VFC providers agree to VFC program site visits, which may include compliance visits, unannounced storage and handling visits, or educational site visits.
- The enrollment site visit is completed before a provider location can receive VFC vaccines. The goal of the enrollment site visit is to:
  - Educate providers about VFC program requirements.
  - Educate providers on proper vaccine storage and handling.
  - Certify provider locations have the appropriate resources to implement requirements.
  - Confirm providers know whom to contact if problems arise, especially with storage and handling issues.
  - Complete a Vaccine Management Plan.

VFC Compliance Visits

- Every year each VFC provider is required to have a comprehensive quality assurance review (QAR). This type of visit requires a thorough evaluation of the provider's compliance with all VFC program requirements including:
  - Verification of information in the provider profile
  - Review of VFC eligibility screening and documenting procedures
  - Review of vaccine storage and handling practices (including temperature logs and vaccine storage units)
  - Evaluation of provider's written procedures related to temperature monitoring, routine vaccine storage and handling and emergency vaccine storage and handling
  - Review of documentation of VIS given
  - Review of documentation for vaccine administration
  - Review of vaccine ordering and accountability
  - Verification that VFC Program policies are being properly implemented.

VFC Storage & Handling Visits

- Storage and Handling visits may be announced (scheduled) or unannounced.
- Reviewers assess individual storage units and DDLs, as well as overall storage and handling operations, based on VFC requirements and CDC's Vaccine Storage and Handling Toolkit.
- 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.

Vaccine Replacement

- 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.
- To replace each dose of VFC vaccine used on non-VFC eligible children, please submit a vaccine replacement request.
- Once the vaccine replacement request is approved, the provider's I-CARE inventory will be updated, and the provider will be notified on any changes.

Fraud & Abuse

- By enrolling in the VFC program, you agree to comply with all program requirements.
- It is your responsibility to read and understand our Fraud and Abuse Policy.
- 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.

Fraud & Abuse Cont.

- The Department will investigate to determine intentional or unintentional fraud/misuse.
- The Chicago Department of Public Health Immunization Program may take the following actions when fraud and/or abuse may have occurred:
  - Determine if a situation requires immediate referral or if educational intervention and follow-up are adequate.
  - Make decisions to refer cases to the Medicaid Integrity Group (MIG) and any other state or city agencies that are required by law to refer suspect cases.
  - Make appropriate referrals and notify CDC of referral to MIG and any other appropriate agencies.

Knowledge Check

Which group is *not* eligible to receive VFC vaccine?

a. Uninsured children under 19.

b. Underinsured children 19 and older.

Patient Eligibility Screening & Documentation

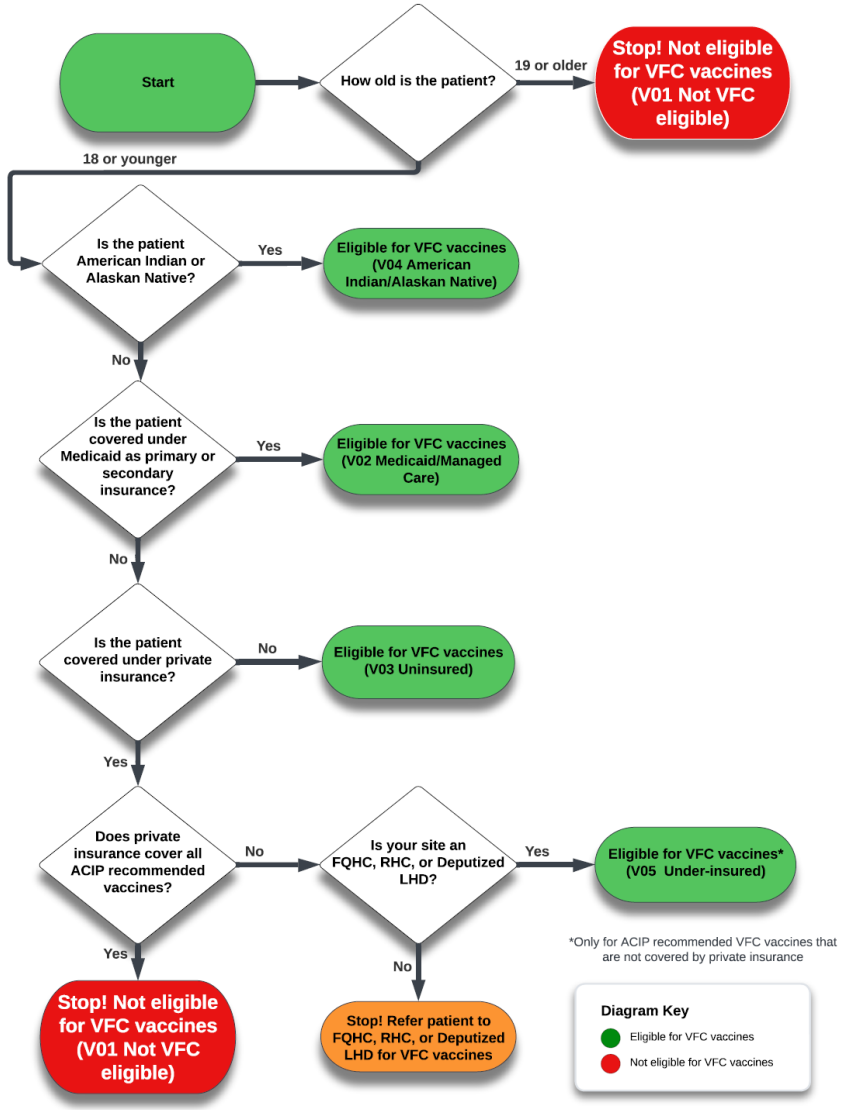
- Providers must screen and document patient eligibility screening in the patient's permanent medical record (paper-based or electronic medical record) using the VFC Patient Eligibility Screening Record or document the required elements in the electronic medical record.
- Patient eligibility screening records should be maintained on file for a **minimum of three years.**

Eligibility

- All VFC Program providers must screen for a child's eligibility to receive vaccines through the VFC Program and record the screening results during each visit. A child is eligible for the VFC Program if they are 18 years of age or younger and are one of the following:
  - Uninsured.
  - Medicaid-eligible or Medicaid-enrolled
  - American Indian or Alaska Native.
  - Underinsured.
  - *Underinsured VFC-eligible children can only receive VFC vaccine from a Federally Qualified Health Center (FQHC) or Rural Health Clinic (RHC).*

VFC ELIGIBILITY DECISION TREE

Effective 09/06/2023



Eligibility – Insured Children with Medicaid

- Some children may have a private primary health insurance plan with Medicaid as their secondary insurance.
  - These children are considered VFC-eligible because of their Medicaid enrollment.
  - Their parents are not required to participate in the VFC program.
- A provider must select and document the VFC eligibility category that will require the least amount of out-of-pocket expenses to the parent/ guardian for the child to receive necessary immunizations.

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-supplies or other vaccines purchased through CDC federal contracts.

Administration Fees

- Bill only Medicaid for the administration fee for VFC-eligible children enrolled in Medicaid.
  - 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.

Knowledge Check

True or False: The maximum vaccine administration fee for non-Medicaid VFC eligible children is $50.00.

Adolescent Vaccine Data

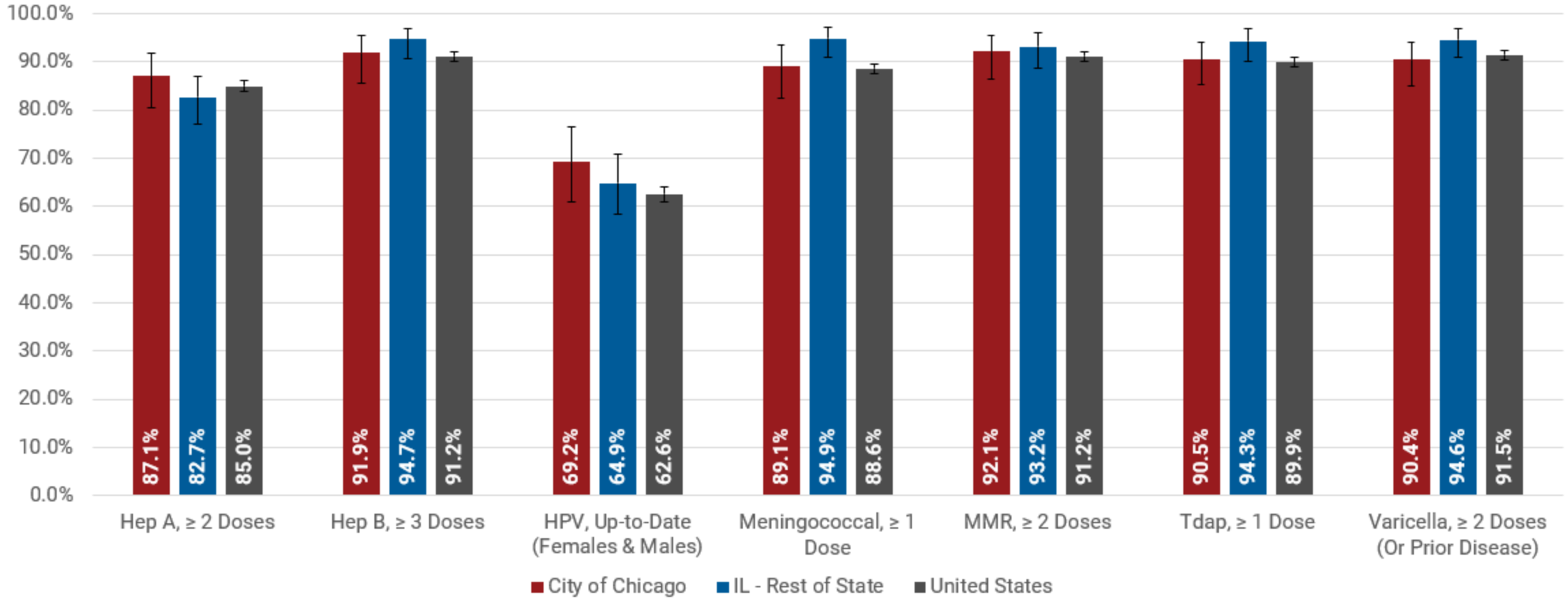
NIS – Teen: 2022 Summary

Vaccination Coverage Estimates

NIS – Teen Background

- The National Immunization Surveys (NIS) – Teen is a telephone and mailed survey from the National Center for Immunization and Respiratory Diseases
  - Respondents include the parents/guardians of ~ 45,000 adolescents aged 13 to 17 across the U.S. and their vaccination providers
- The surveys help estimate national and jurisdictional vaccination coverage for a selection of vaccines recommended for adolescents by the Advisory Committee on Immunization Practices (ACIP)
- For adolescents surveyed in the 2022 NIS – Teen:
  - Interviews and mailed surveys were completed between January 2022 and February 2023
  - Respondents were born between January 2004 and January 2010

Vaccination Coverage Among Adolescents Aged 13 – 17

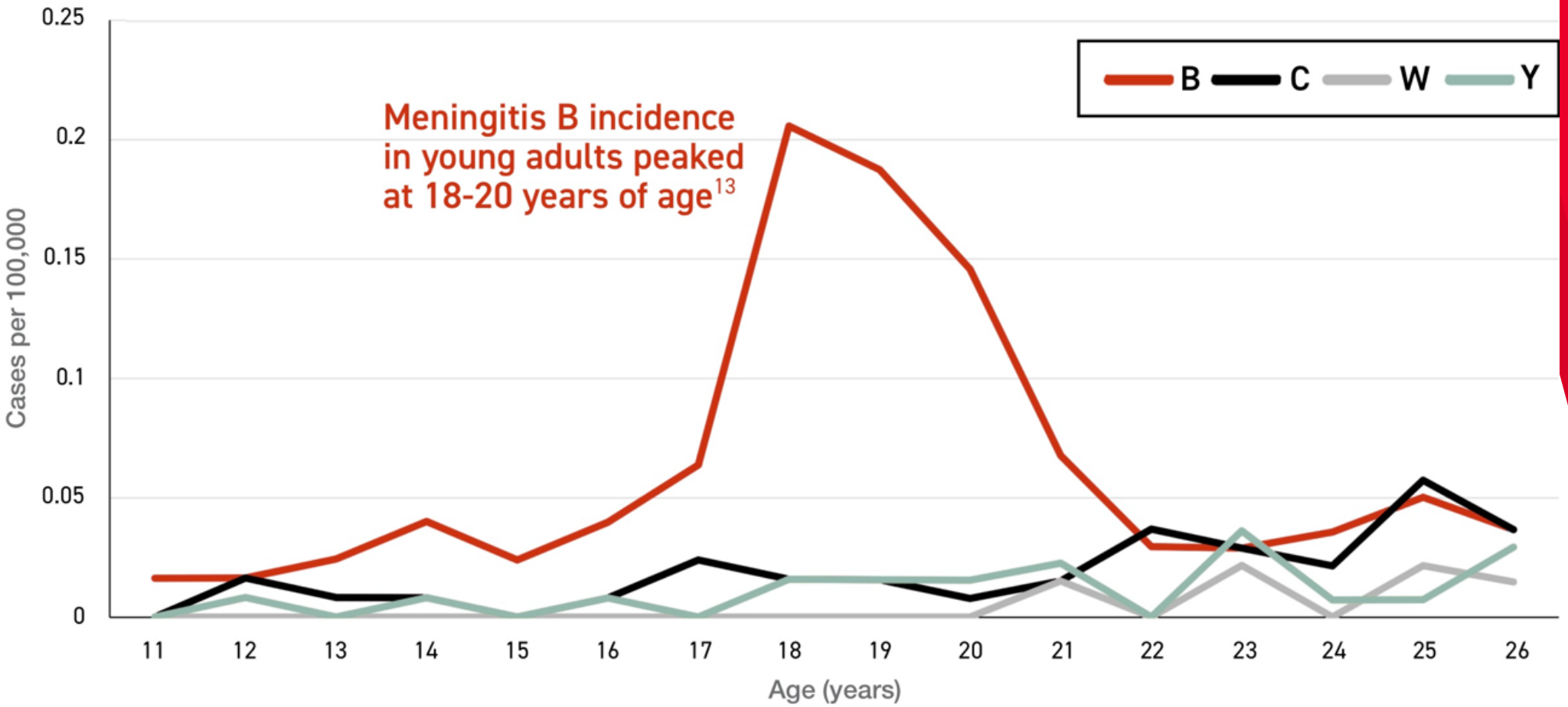


Source: National Immunization Survey – Teen 2022. Reported August 2023. Not all vaccine categories shown.
Hep A = hepatitis A vaccinate; Hep B = hepatitis B vaccine; HPV = human papilloma virus vaccine; Meningococcal = meningococcal conjugate vaccine; MMR = measles, mumps, and rubella vaccine; Tdap = tetanus toxoid, reduce diphtheria toxoid, and acellular pertussis. Varicella's estimates are inclusive of those who may have acquired chickenpox during childhood prior to being surveyed. HPV, Up-to-Date refers to receipt of 2 doses separated by 5 months for immunocompetent adolescents initiating the HPV vaccine series before their 15th birthday, and 3 doses for all others.

Incidence of meningococcal disease in adolescents and young adults

INCIDENCE BY AGE | INCIDENCE BY YEAR

US Meningococcal Disease Incidence in Persons Aged 18-24 Years by Serogroup, According to CDC (2014-2016)[12]



Source: National Notifiable Diseases Surveillance System (NNDSS) data with additional serogroup data from Active Bacterial Core surveillance (ABCs) and state health departments. Unknown serogroup and other serogroups excluded.

MenB Vaccination Rates Among 17-Year-Olds[14]

According to CDC survey data from 2022:

of 17-year-olds had received at least 1 dose of a meningitis B (MenB) vaccine

of 17-year-olds had received ≥2 doses of a MenB vaccine

Follow the CDC MenB vaccination recommendation:

A primary series is recommended for adolescents not at increased risk, aged 16-23 years (preferred age 16-18 years), based on shared clinical decision-making.[6,15,16]

Shared clinical decision-making vaccinations are not recommended for everyone in a particular age or risk group. Rather, shared clinical decision-making recommendations are individually based and informed by a decision process between the healthcare provider and the patient or parent/guardian.[17]

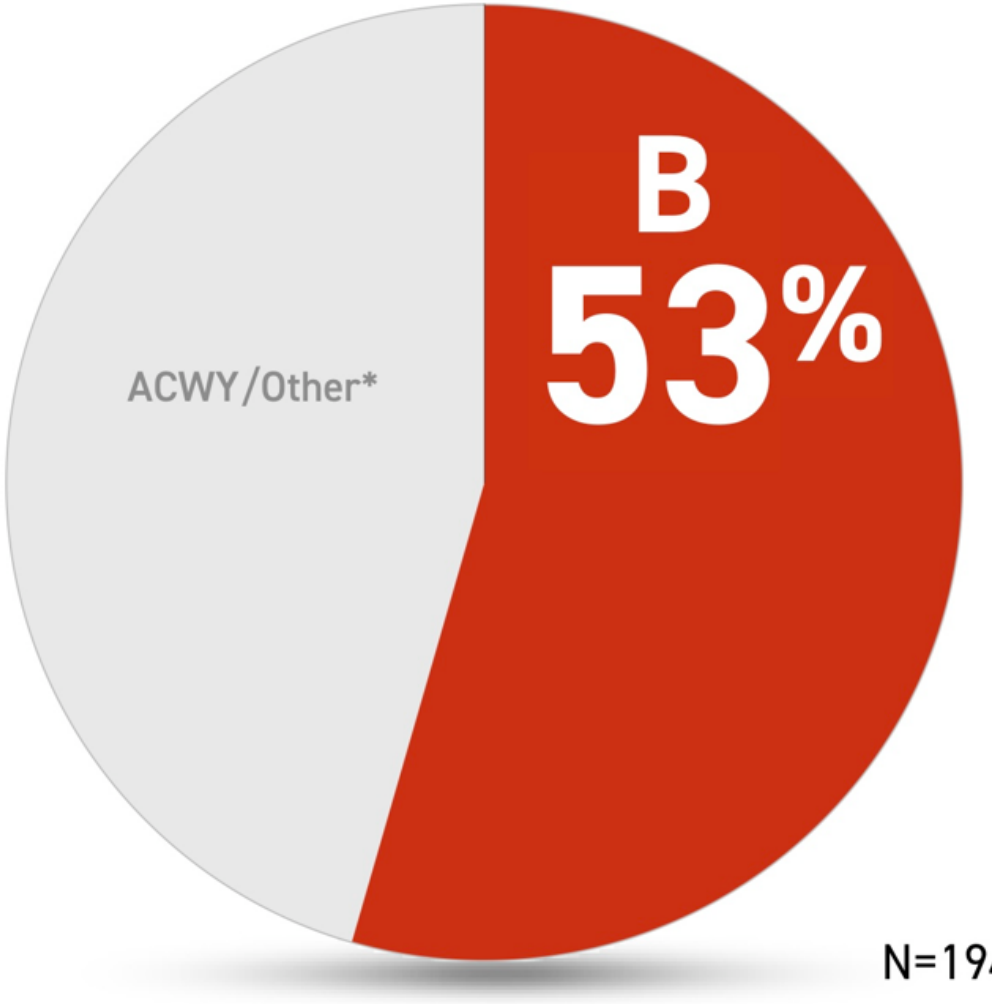
According to CDC, serogroup B caused

THE MAJORITY

of all US meningococcal disease cases in patients 16-23 years of age from 2017 to 2021[10]

Vaccines can help prevent 5 serogroups of meningococcal disease—A, B, C, W, and Y[11]

Cases of Meningococcal Disease in the US by MenB Serogroup and MenACWY Serogroups and Other* Serogroups[10]



N=194

MenACWY=meningitis ACWY; MenB=meningitis B.

*Other, nongroupable, unknown.


April 1-5
ADOLESCENT IMMUNIZATION
#AIAW24
ACTION WEEK
T
TRUST
A
ASK QUESTION
S
SCHEDULE AN APPOINTMENT
K
KNOW WHERE TO GET VACCINATED
CDPH
Chicago Department of Public Health
UNITY
United for adolescent vaccination
April 1-5
ADOLESCENT IMMUNIZATION
#AIAW24
ACTION WEEK
#AIAW24

What is IQIP?

- IQIP is CDC's national, Vaccines for Children (VFC) provider-level immunization quality improvement (QI) program. IQIP serves to assist and support health care providers by identifying opportunities to improve vaccine uptake and to help providers be:
- Motivated to try new vaccination service delivery strategies and incorporate changes into their current practices
- Supported in sustaining changes and improvement to their vaccination service delivery
- Aware of and knowledgeable about vaccination coverage and missed opportunities to vaccinate
- Able to use available data from the IIS (I-CARE) to improve services and coverage

IQIP
IMMUNIZATION QUALITY IMPROVEMENT FOR PROVIDERS

The IQIP Process

- IQIP is a 12-month process during which public health representatives from CDPH and VFC providers collaborate to implement provider-level QI strategies to increase vaccine uptake by improving and enhancing vaccination workflow.

Site Visit	2-Month and 6-Month Check-Ins	12-Month Follow-Up
• Provider's vaccination workflow is observed, and initial coverage is reviewed • QI strategies are selected • Technical assistance is provided by the IQIP consultant • Action items are chosen for strategy implementation plan	• Progress toward strategy implementation is reviewed • Technical assistance is provided by the IQIP consultant • Strategy implementation plan is reviewed and updated	• Progress toward strategy implementation is reviewed and updated • Technical assistance is provided by the IQIP consultant • Year-over-year coverage change is reviewed

Benefits of Immunization QI Projects

Quality improvement (QI) programs, such as IQIP, analyze processes and use a systematic approach to improve performance. Like other QI programs, the IQIP program is based on these basic steps:

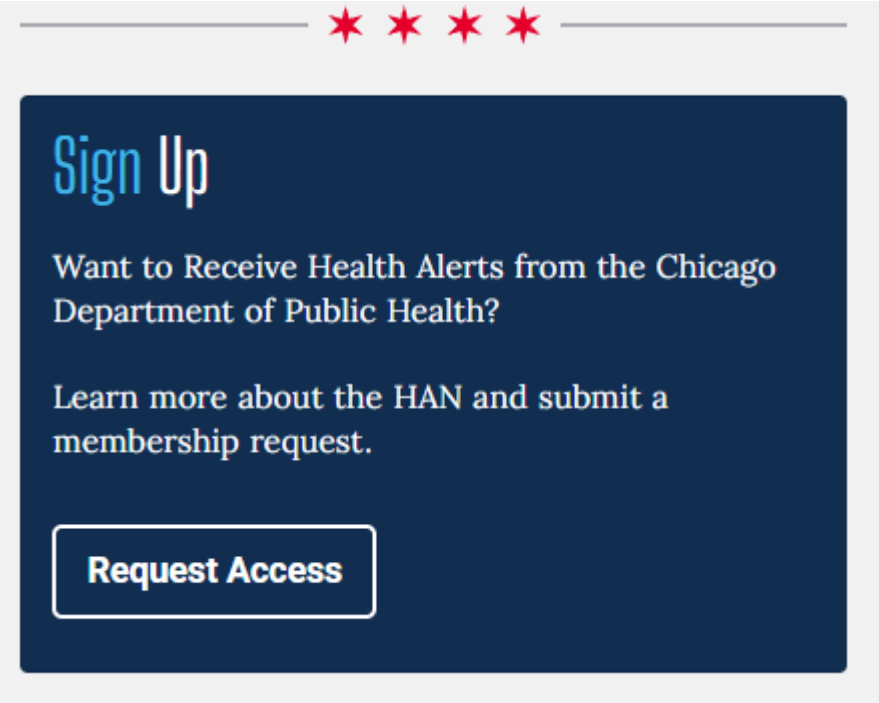
- State the problem and desired result
- Use data to understand the problem
- Identify strategies for improvement
- Implement strategies and refine as needed
- Evaluate outcome

Beyond simply increasing vaccination coverage rates, conducting immunization quality improvement can provide additional benefits. Here are some broader effects that can result from immunization QI program like IQIP.

Currently a part of a quality improvement project at your location? You may be able to get credit from CDC.

Please think about participating in IQIP and therefore become eligible for next year's VFC Vaccine Coverage Awards!

CHI | Health Alert Network



Latest Alerts

- HAN Website: chicagohan.org

VFC Program Website

Vaccines for Children - chicagohan.org/vfc

Speaker: Kevin Hansen

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 Vaccines

- Vaccine ordering is completed through I-CARE. Sites must complete these steps to place an order for vaccines in I-CARE:
  - Clear any errors from the Inventory Analysis Helper Report.
  - Run the Vaccine Accountability Report
  - Complete Temperature Log Report.
  - Review and Approve Delivery Hours for Their Site.
- COVID and Flu doses are ordered via a pre-book.
- After placing an order, allow at least **three business days** for order approval.
  - Orders may be delayed if steps for inventory accuracy are not followed.
- If you are in need of immediate vaccine supply, contact **chicagovfc@cityofchicago.org**.

Vaccine Management: Ordering Vaccines

- Order and stock enough vaccine to be able to administer vaccine for their next period (monthly, bi-monthly, quarterly) plus a 5-week safety stock.
  - Consider patient numbers, patient age, vaccine uptake, etc.
  - Smaller, more frequent orders help reduce the impact of incidents that may contribute to vaccine loss.
- 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).

Determining how much vaccine to order

In order to determine this amount, providers should use this formula:

Doses Administered (previous period)

x

2.3 (monthly), 1.6 (bi-monthly), 1.4 (quarterly)

-

Inventory

=

Amount to Order

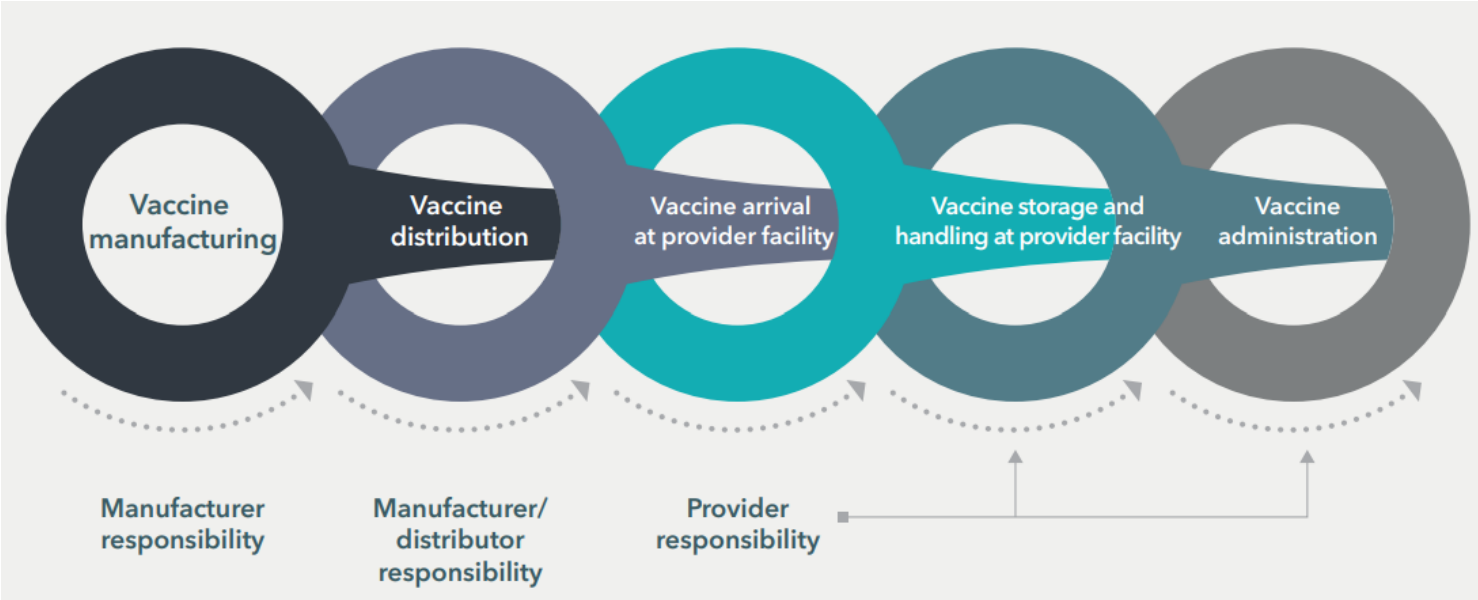
Doses Administered (previous period)	50 doses
x	
2.3 (monthly), 1.6 (bi-monthly), 1.4 (quarterly)	50 x 1.6 = 80 (bi-monthly provider)
-	
Inventory	80 – 24 = 56
=	
Amount to Order	56 (rounded up) = 60 doses

Vaccine Management: Blended Inventory & Transferring Vaccines

- Blended Inventory: CHIP and Vaccine vaccines merged into one inventory as of January 2023.
  - Benefiting eligible children and reducing administrative burden for providers.
- Vaccine Transfer Process
  - To transfer vaccine between Chicago VFC offices email chicagovfc@cityofchicago.org with site PINs, lot numbers, doses, and transfer date.
  - Ensure proper temperature monitoring during transport using digital data loggers and qualified cooler containers.

Vaccine Management: Cold Chains

- 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.

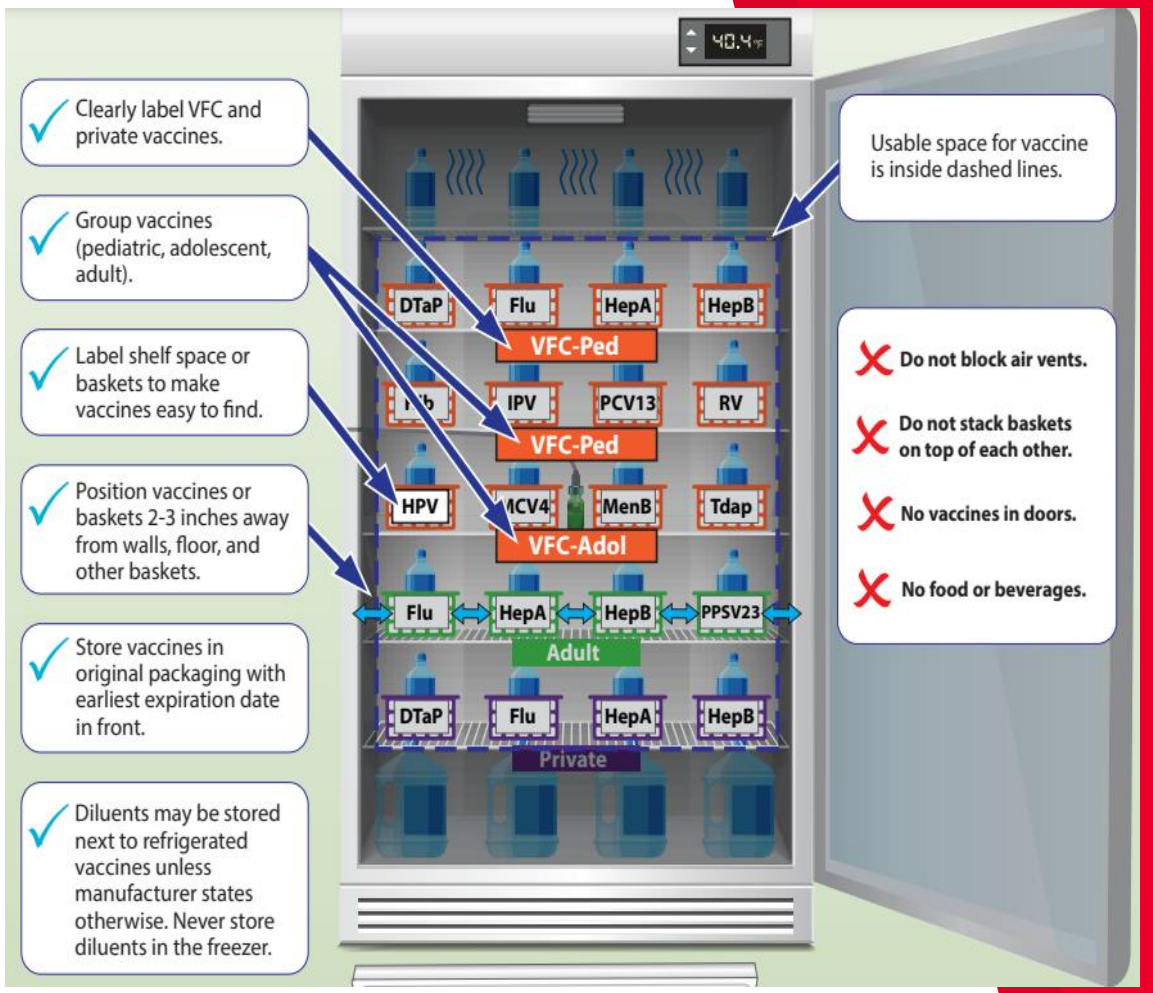
Vaccine Management: Receiving Vaccines

- 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 the packing slip matches the vaccine received.
  - Ensure correct lot numbers are shown in I-CARE inventory.
  - Physical damage of shipping container.
  - Diluent and Vaccine expiration dates.
- Frozen vaccines, flu, and COVID ship separately from other refrigerated vaccines.

Any issues to the shipment (incorrect or missing), please email chicagovfc@cityofchicago.org within one day of the delivery.

Vaccine Management: Storing Vaccine

- To ensure viability of VFC vaccines, locations must have:
  - Storage units that maintain correct temperatures at all times.
  - Refrigerator temperature between 2ºC and 8ºC (36ºF and 46ºF).
  - Freezer temperature between -50ºC and -15ºC (-58ºF and +5ºF).
  - Digital data loggers (DDLs) with continuous monitoring capabilities and a current and valid Certificate of Calibration Testing for each unit, as well as at least one backup.



Vaccine Management: Storing Vaccine

- Storage units must have enough room to store the largest inventory a provider location might have at the busiest point in the year without crowding.
- Stock rotation and removal:
  - Rotate vaccine stock so the vials with the soonest expiration date are at the front (used first).
  - 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 meet 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 DISCONNECT” 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

- 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, min/max temps, and the initials of the person recording the temps
  - 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.

Vaccine Management: Required Equipment

- Vaccines should be stored in their original packaging with lids closed.
  - Never store food or beverage in a unit with vaccines.
  - Do not store vaccines in the deli, fruit, or vegetable bins, in the doors or on the floor of the unit, or under or near cooling vents.
  - Place water bottles throughout the units – against walls, in the back, on the floor, and in the doors – to help stabilize temperatures.

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).
  - Review temperatures of VFC vaccine storage units twice daily. Record minimum, maximum, and current temperatures on paper log.
- Data from DDLs is retrieved using special software or a website.
  - CDPH recommends downloading data weekly, but at least once monthly
  - Records should be kept for at least three years.

A back-up DDL must be available in case another fails; calibration testing is required.

Vaccine Management: Digital Data Loggers

- 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.
  - Calibration testing is required.
  - Should have a different calibration testing date than other DDLs so they do not all go through testing at the same time.

Knowledge Check

True or False: CDPH recommends downloading DDL data weekly.

Vaccine Management: Digital Data Loggers

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.

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.

Vaccine Management: Digital Data Loggers

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).

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

- Conforms to ISO 17025.
- Testing was performed by an ILAC/MRS 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 ^{o}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.
- Must notify chicagovfc@cityofchicago.org each time your unit goes out of range.
  - Email should include: site's VFC PIN, include DDL tag summary, fridge or freezer excursion, reason for being out of range, and if the unit is back in range.
- If unit's temperature goes out of range, pause administering affected vaccines until a VFC staff member confirms usability.

Speaker: David Juen

Topics

1. The Value of IIS

2. 2024 IIS Updates

The Value of IIS

1 Provides Consolidated Records

Comprehensive records containing immunizations administered at a previous provider office, hospital, pharmacy or school clinic give healthcare providers the full story, preventing patients from receiving too many or too few vaccines.

2 Manages Vaccine Inventory

Vaccine ordering, tracking, and administration are all managed in one tool.

3 Minimizes Waste

Ensures every vaccine is accounted for and prevents the administration of unnecessary doses of vaccines.

4 Forecasts Immunizations

Helpful alerts notify providers to assist with clinical decisions and management of the complex immunization schedule.

I-CARE

- 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 Chicago 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.

Topics – 2024 IIS Updates

1. New I-CARE Enrollment
2. Quick Assist
3. Data Modernization
4. HL7 onboarding (Checking EMR messages to I-CARE)
5. Chicago HAN
6. I-CARE Training Videos

New I-CARE Enrollment

Welcome!

Welcome to the Illinois Comprehensive Automated Immunization Registry Exchange (I-CARE) Enrollment website.

On this website, you will find tools and resources to complete the following:

- **New Organizations** can complete site enrollments and designate a Portal Registration Authority (PRA)
- **Current Organizations** can report site updates and PRA changes
- **Individuals** can request I-CARE Access

Please note that I-CARE will not enroll organizations outside of Illinois, enroll for the purpose of research, or human resource departments for employee immunization verification.

I-CARE
Illinois Comprehensive Automated Immunization Registry Exchange

Have Questions? Contact Us

View the I-CARE Glossary

New Organizations*

Current Organizations

Individual I-CARE Access

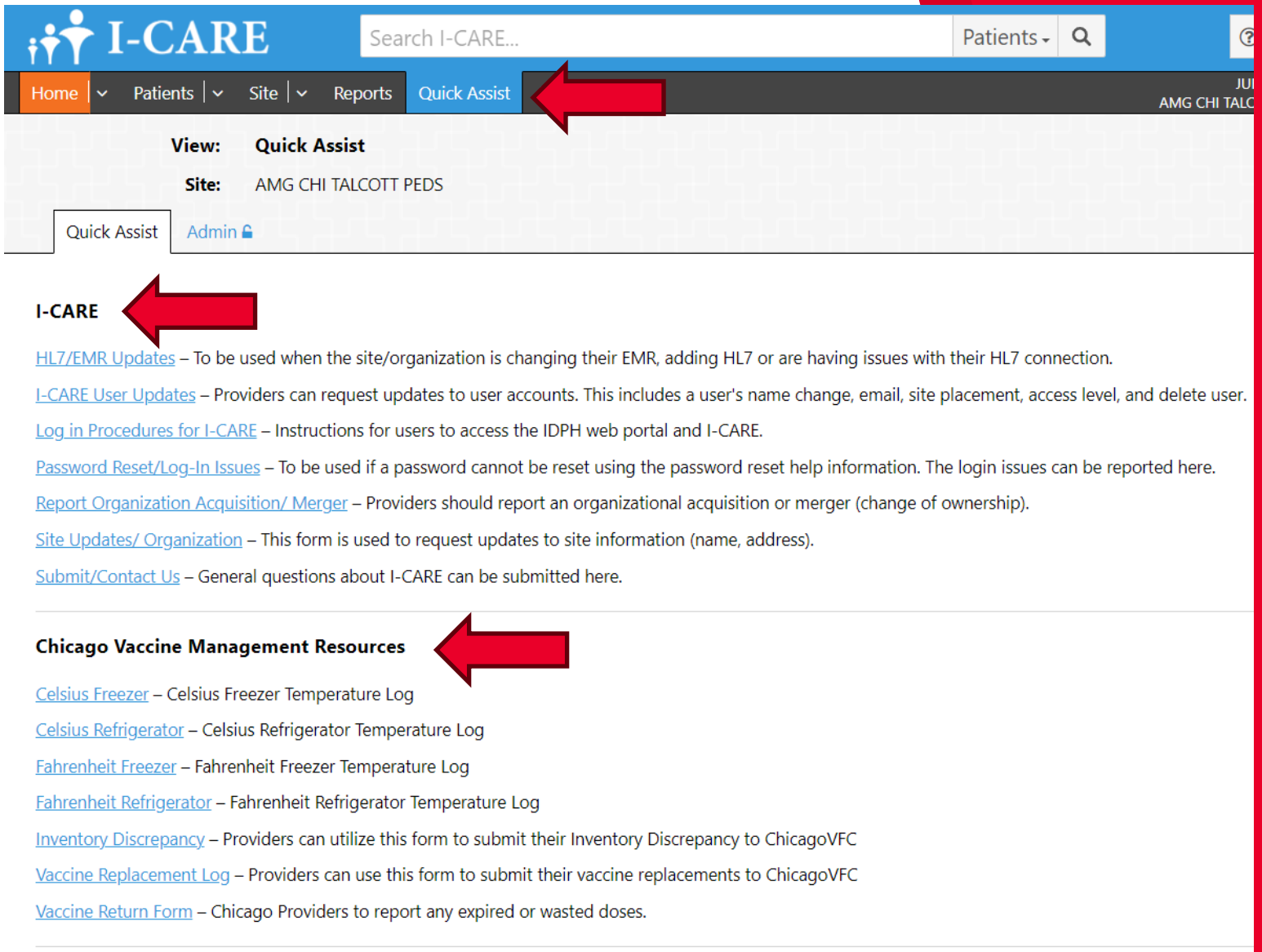
[No Title]

*** New organizations are those with no prior enrollment in I-CARE**
Not sure if your organization is enrolled? Please contact us.

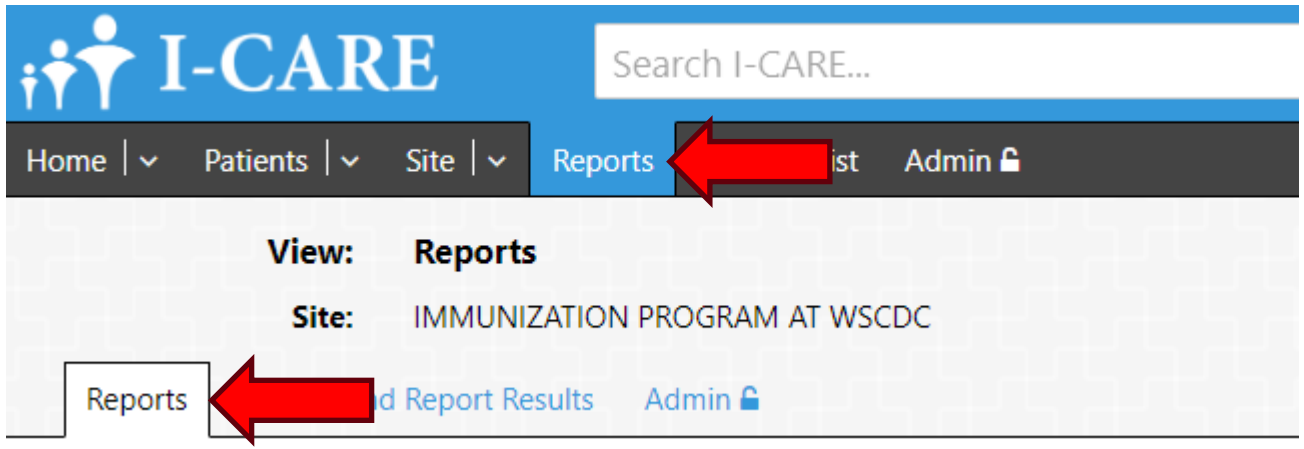
Access the new site here

Quick Assist

- Quick Assist is a new tab in I-CARE dedicated to provider support
- Password Reset
- Frequently used forms



Data Modernization – Data Quality



Site Reports

Bad Address – Generate a list of active patients with an invalid primary address.

Invalid Doses – Generate a list of patients with invalid doses.

Missed Opportunities Detail – Generate a report of missed opportunites for a site. A missed opportunity for a patient is calculated by finding the most recent shot date for a patient, and then listing all forecasted shots where the forecasted date is before the most recent shot date.

Missed Opportunities Summary – Generate a summary report of missed opportunites for a site.

Missing Lots – Generate a list of patients with missing lot numbers on immunizations.

Monthly Statistics – Generate a monthly statistics report for patients aged 24 - 35 months or for patients aged 9 - 26 years. This report will always run as a background process.

Patient List Export – Generate a comma-delimited text file of patients that match the search criteria.

Shot Refusals – Generate a list of shots refusals reported by a site within a given time period.

HL7 Logs – Generate a HL7 Logs Report. View all HL7 upload errors and warnings.

Submitting & Exchanging Data

- Share Electronic Health Record (EHR) with I-CARE using HL7 data exchange.
  - Contact EHR vendor to determine if your system is HL7 compatible.
  - 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 CDPH.HL7@illinois.gov or DPH.HL7@illinois.gov.

HL7 Onboarding and Ongoing Monitoring

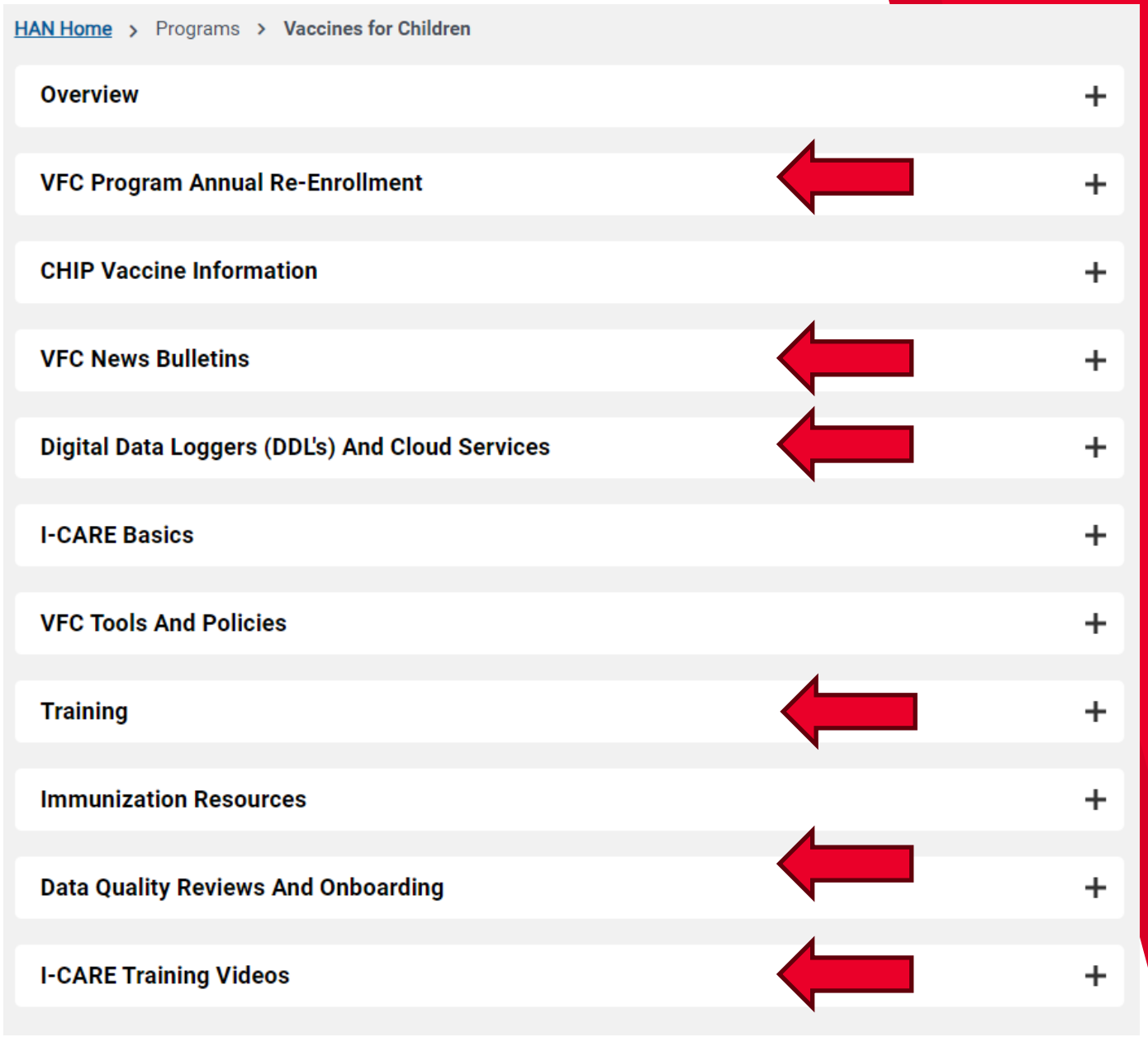
- We launched a new process to onboard new providers to message their immunization data into the I-CARE Immunization Registry
- We provide guidance to your clinical, EMR, and integration team on messaging your immunization data into the registry
- Complete our survey on the Chicago HAN to sign up for review
- We can address any of your questions at CDPH.HL7@cityofchicago.org

HL7 Onboarding and Ongoing Monitoring

Chicago HAN

Highlighting some of the new and improved areas of the Chicago HAN.

https://www.chicagohan.org/vfc



Chicago HAN IIS Resources

Chicago HAN I-CARE Trainings

- We have created video training tutorials for a variety of I-CARE topics.
- This is a great resource if you need a refresher
- Also great for onboarding new staff who have not used I-CARE before.

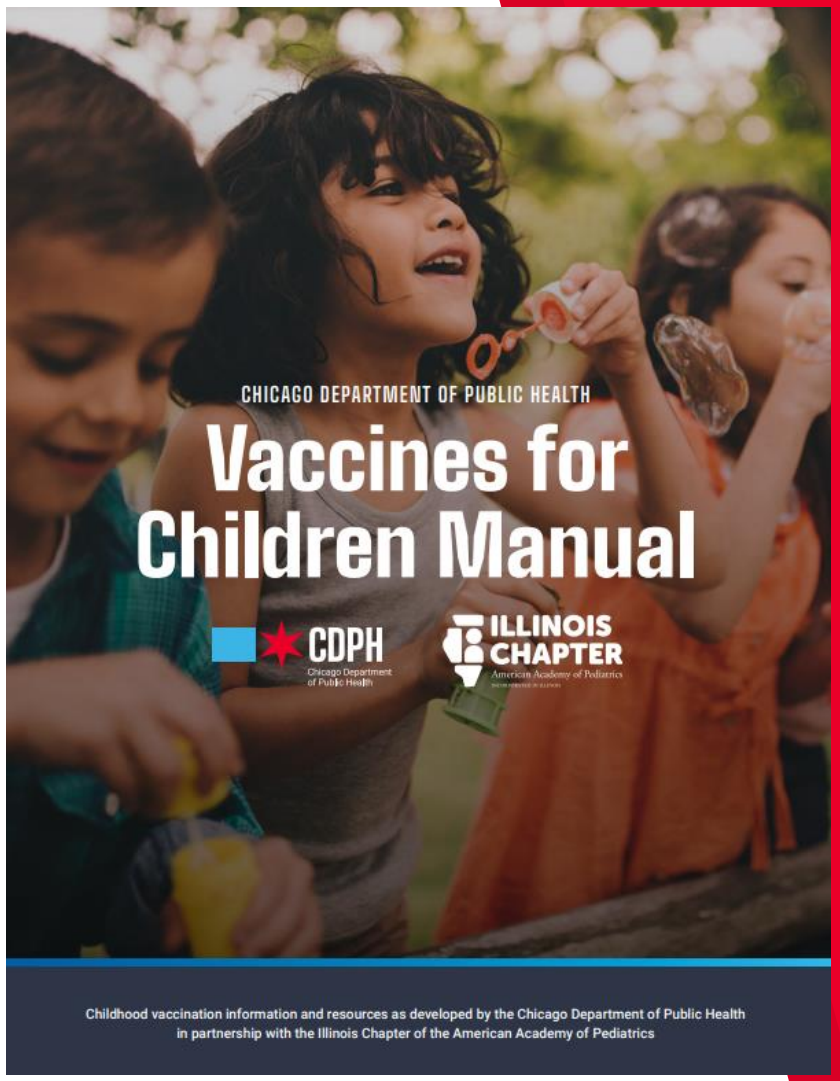
https://www.chicagohan.org/vfc

I-CARE Training Videos

- I-CARE Login : How to log into I-CARE and get started
- Patient Module : A comprehensive system for managing patient information related to immunization. It provides tools for adding new patients, searching for patient records, and updating patient information.
- Shots - Add View Edit Delete : How to view, add, edit, and delete shots
- Shots - Immunizations and Contraindications : How to add immunities, contraindications, and adverse events to a patient's profile
- Shots - Overrides and Refusals : How to override a shot and what to do when a patient refuses a shot
- I-CARE Training VFC Tab Overview : A brief overview of the processes and systems within the VFC tab: VFC, Vaccine Requests, Staff, and Enrollment.
- VFC Vaccine Ordering : How to order VFC Vaccines via the VFC tab in I-CARE
- Bad Address Report : How to run a bad address report in I-CARE
- Immunizations Due/Given Reports : How to run the immunizations due and immunizations given reports in I-CARE
- COVID Immunizations Activity/Due Reports : How to run the COVID Immunization Activity report and COVID Immunizations Due report
- Reminder Recall : How to remind patients who are due or overdue for a vaccination to make an appointment with your office
- Patient Immunization History : How to access and understand a patient's immunization history.

CDPH VFC Manual

- Updated VFC Manual for Chicago providers is now available!
- https://illinoisaap.org/vaccines-for-children/



Session II

Vaccine Misinformation and Hesitancy

Speaker

Stephanie Atella, MPH, CHES

Learning Objectives

After this session participants will be able to:

Objective 1:

Describe vaccine hesitancy, misinformation, and disinformation.

Objective 2:

Demonstrate strategies for combatting vaccine misinformation and disinformation.

Objective 3:

Outline ways to discuss vaccine hesitancy with patients.

Unfortunate Theme

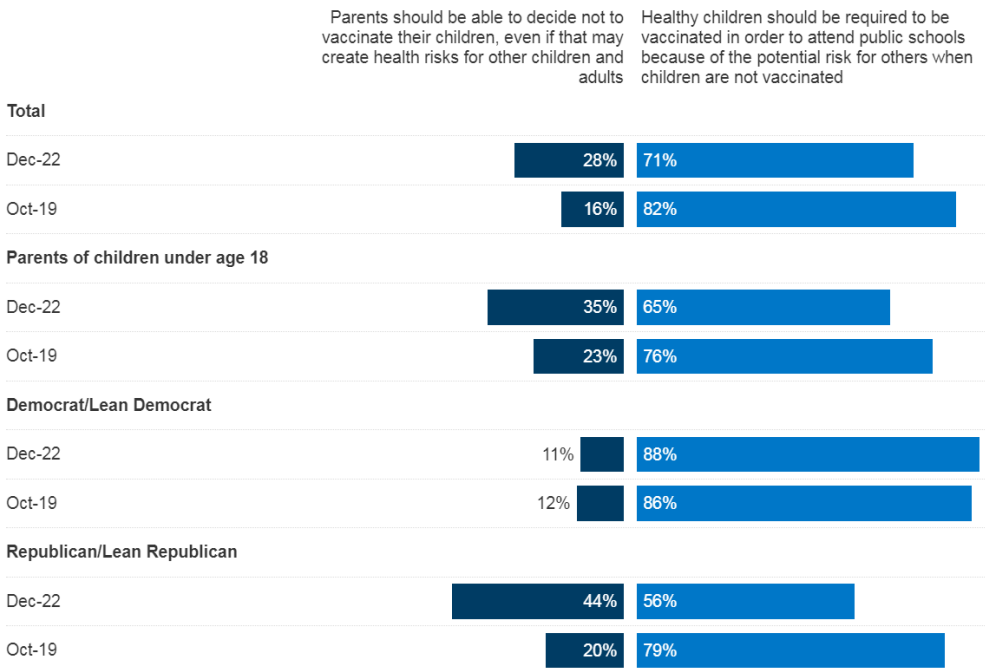
- Vaccination rates are still low post-pandemic
  - CDC report: kindergarten vaccination rates have not rebounded from the COVID-19 pandemic, and school exemptions reached an all-time high during the 2022-'23 school year.
- Many toddlers aged 19-35 months in the U.S. do not complete their full, recommended vaccine series.
  - Only 73% of toddlers finish all vaccine series. 10% of toddlers never initiate the vaccines, while 17% start the series, but never complete it.

Implications

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

Which comes closer to your views about childhood vaccines for measles, mumps, and rubella, even if neither is exactly right?



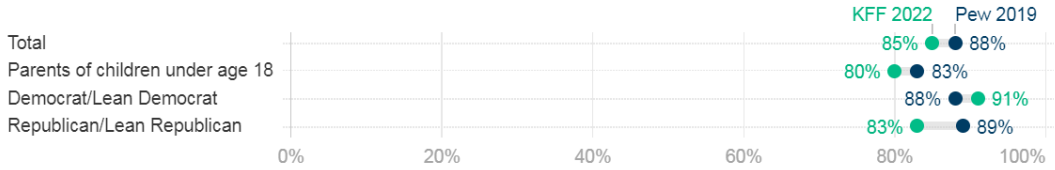
NOTE: See topline for full question wording.
SOURCE: KFF COVID-19 Vaccine Monitor (Nov 29-Dec 8, 2022) and Pew Research Center (Oct 1-13, 2019) • PNG

KFF COVID-19 Vaccine Monitor

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:



NOTE: See topline for full question wording.
SOURCE: KFF COVID-19 Vaccine Monitor (Nov 29-Dec 8, 2022) and Pew Research Center (Oct 1-13, 2019) • PNG

KFF COVID-19 Vaccine Monitor

www.kff.org/coronavirus-covid-19/poll-finding/kff-covid-19-vaccine-monitor-december-2022/

Misinformation vs. Disinformation

Misinformation

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

Disinformation

- Disinformation is crafted and disseminated with the **intent to mislead** others.

Misinformation & Myths

Figure 3

Adults Without A College Degree, Republicans, And Independents Are More Likely To Say COVID-19 And Vaccine Misinformation Is Definitely Or Probably True

Percent who say each of the following false claims is **probably true** or **definitely true**:

	The COVID-19 vaccines have caused thousands of sudden deaths in otherwise healthy people	Ivermectin is an effective treatment for COVID-19	The COVID-19 vaccines have been proven to cause infertility	The MMR vaccines have been proven to cause autism in children	More people have died from the COVID-19 vaccines than have died from the COVID-19 virus
Total	34%	31%	27%	24%	20%
Education					
High school or less	43%	32%	36%	31%	30%
Some college	35%	40%	26%	23%	20%
College degree	23%	24%	20%	16%	9%
Race/Ethnicity					
Black	43%	32%	31%	35%	29%
Hispanic	37%	33%	29%	25%	24%
White	32%	31%	26%	21%	17%
Gender					
Men	33%	29%	26%	22%	18%
Women	35%	34%	29%	25%	22%
Age					
18-29	33%	25%	26%	23%	24%
30-49	39%	36%	34%	29%	23%
50-64	38%	34%	28%	25%	17%
65+	23%	27%	17%	15%	13%
Party ID					
Republicans	47%	46%	39%	29%	24%
Independents	42%	32%	34%	34%	28%
Democrats	18%	17%	13%	14%	12%
Community type					
Rural	42%	34%	39%	25%	28%
Suburban	34%	32%	28%	23%	19%
Urban	32%	30%	22%	24%	18%

NOTE: Persons of Hispanic origin may be of any race but are categorized as Hispanic for this analysis; other groups are non-Hispanic. Partisans include independents who lean to either party. Independents are pure independents. See topline for full question wording.
SOURCE: KFF Health Misinformation Tracking Poll Pilot (May 23-June 12, 2023)

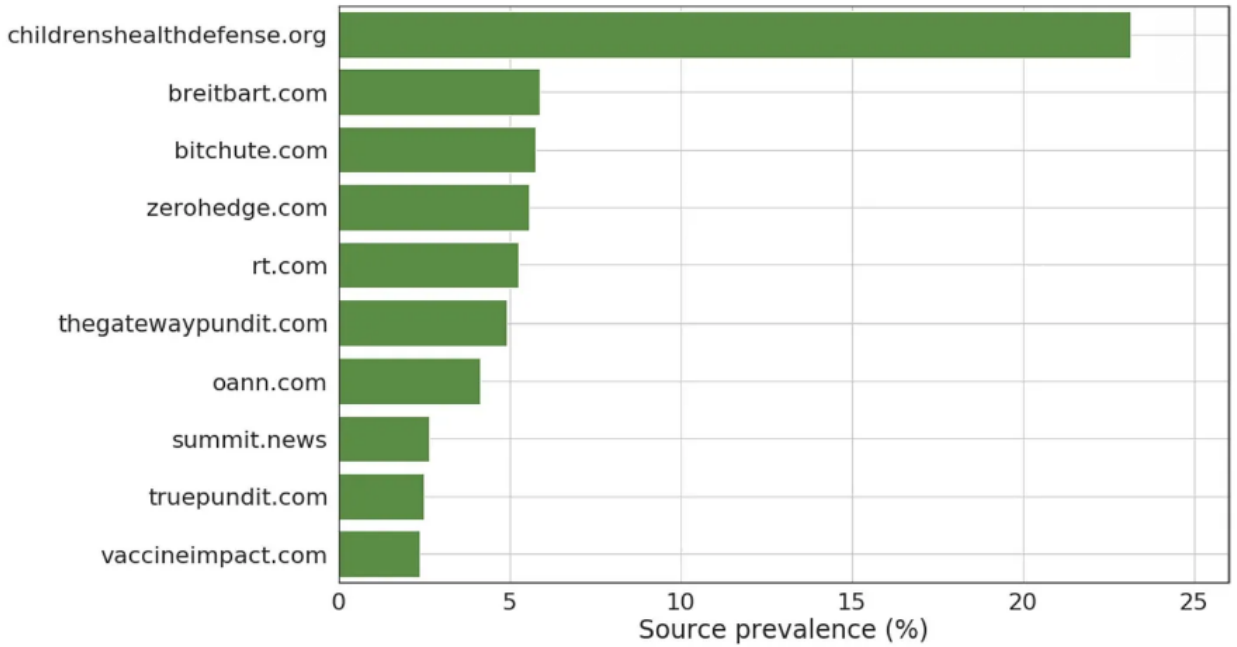
KFF

https://www.kff.org/coronavirus-covid-19/poll-finding/kff-health-misinformation-tracking-poll-pilot/

Vaccine Landscape

“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



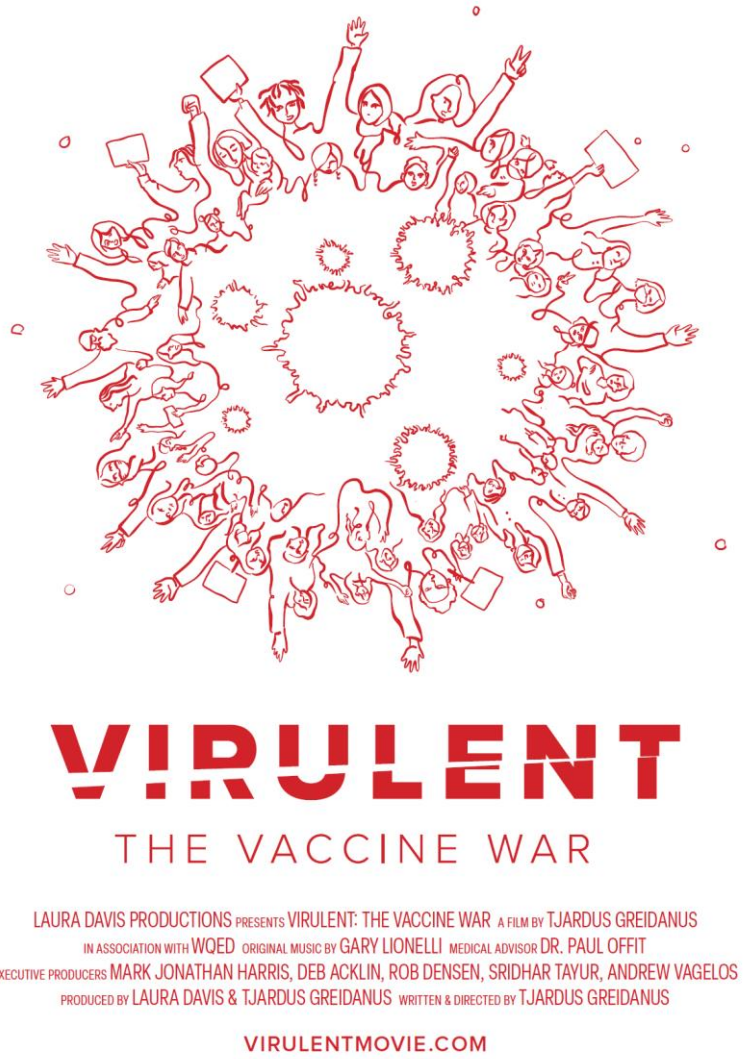
Tweets shared by users geolocated in the U.S. that link to a low-credibility source. Sources are ranked by percentage of the tweets considered.

yourlocalepidemiologist.substack.com/p/the-science-and-business-behind-covid

Strategies for Addressing Hesitancy

- **Give your strong recommendation**
  - Healthcare professionals remain the most trusted source for vaccine-related information
- **Presumptive approach**
  - Start each vaccine conversation with a strong, positive “You are due for x vaccine today”
- **Motivational interviewing**
  - Readiness scaling to learn what is preventing someone from getting vaccinated
- **Show your vaccine confidence**
  - Display posters in clinic spaces with vaccine confident messages
  - Share your own stories of why you got vaccinated and why you recommend vaccines

About the Film



BREAK

Please return at 10:45

Session III

Vaccine Schedules

Speaker

Jennifer Burns, CPNP

Learning Objectives

After this session participants will be able to:

Objective 1:

Apply current pediatric and adolescent vaccine recommendations.

Objective 2:

Outline new vaccine products and updates.

Objective 3:

Apply the 2024 Advisory Committee on Immunizations Practices (ACIP) pediatric vaccination and catch-up schedules.

Objective 4:

Summarize current routine immunization rates.

Immunization Schedules – Why They Matter

- Protection against roughly 20 different life-threatening diseases.
- Prevention/protection of infectious disease outbreaks.
- Gives children protection when they are most vulnerable.
- There are no other alternative studied immunization schedules approved to provide to our patients.

Value of the Immunization Program

- An AAP study demonstrated that routine childhood vaccines help prevent unnecessary morbidity and mortality, as well as have cost-saving impacts.
- From 2017-2021, the ACIP-recommended schedule for routine childhood immunization has targeted 14 vaccine-preventable disease.
  - Diphtheria, Hib, hepatitis A and B, flu, MMR, pertussis, invasive Streptococcus pneumoniae, polio, rotavirus, tetanus, varicella
- Using this recommended schedule and the 2017 birth cohort, it was demonstrated that immunizations prevented over 17 million cases of disease and 31,000 deaths.
- Estimated vaccines costs of $8.5 billion were entirely offset by the avoided $63.6 billion in disease-related costs.

https://publications.aap.org/pediatrics/article/150/3/e2021056007/188497/Value-of-the-Immunization-Program-for-Children-in?autologincheck=redirected

Using the ACIP Schedule

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. Review new or updated vaccine guidance (Addendum).

Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

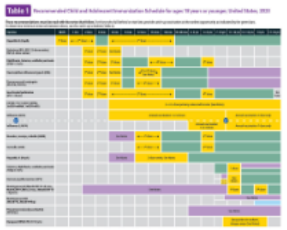
Search | Vaccines site

Immunization Schedules

For Healthcare Providers

Child and Adolescent Schedule

Recommended vaccination schedule for ages 18 years or younger



Birth to 18 Years

Clinical Vaccination Resources

Download Schedule App for Healthcare Providers

Vaccination Resources for Healthcare Providers

Adult Schedule

Recommended vaccination schedule for ages 19 years or older

19 Years or Older

Interim COVID-19 Immunization Schedule for Ages 6 months and older

Guidance for COVID-19 vaccination schedules based on age and medical condition

COVID-19 Vaccination Schedule

Scan me to access the schedules on your phone

https://www.cdc.gov/vaccines/schedules/index.html

Approving Partners

Child/Adolescent Schedule	Both Schedules	Adult Schedule
American Academy of Pediatrics (AAP)	American Academy of Family Physicians (AAFP)	American College of Physicians (ACP)
National Association of Pediatric Nurse Practitioners (NAPNAP)	American Academy of Physician Associations (AAPA)	Society for HealthCare Epidemiology of American (SHEA)
	American College of Obstetricians and Gynecologists (ACOG)	American Pharmacists Association (APhA)
	American College of Nurse-Midwives (ACNM)	

ACIP Recommended Child & Adolescent Schedule 2024

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger

UNITED STATES 2024

Vaccines and Other Immunizing Agents in the Child and Adolescent Immunization Schedule*

Monoclonal antibody	Abbreviation(s)	Trade name(s)
Respiratory syncytial virus monoclonal antibody (Nirsevimab)	RSV-mAb	Beyfortus™
Vaccine	**Abbreviation(s)**	**Trade name(s)**
COVID-19	1vCOV-mRNA	Comirnaty®/Pfizer-BioNTech COVID-19 Vaccine Spikevax®/Moderna COVID-19 Vaccine
	1vCOV-aPS	Novavax COVID-19 Vaccine
Dengue vaccine	DEN4CYD	Dengvaxia®
Diphtheria, tetanus, and acellular pertussis vaccine	DTaP	Daptacel® Infanrix®
Haemophilus influenzae type b vaccine	Hib (PRP-T) Hib (PRP-OMP)	ActHIB® Hiberix® PedvaxHIB®
Hepatitis A vaccine	HepA	Havrix® Vaqta®
Hepatitis B vaccine	HepB	Engerix-B® Recombivax HB®
Human papillomavirus vaccine	HPV	Gardasil 9®
Influenza vaccine (inactivated)	IIV4	Multiple
Influenza vaccine (live, attenuated)	LAIV4	FluMist® Quadrivalent
Measles, mumps, and rubella vaccine	MMR	M-M-R II® Priorix®
Meningococcal serogroups A, C, W, Y vaccine	MenACWY-CRM MenACWY-TT	Menveo® MenQuadfi®
Meningococcal serogroup B vaccine	MenB-4C MenB-FHbp	Bexsero® Trumenba®
Meningococcal serogroup A, B, C, W, Y vaccine	MenACWY-TT/MenB-FHbp	Penbraya™
Mpox vaccine	Mpox	Jynneos®
Pneumococcal conjugate vaccine	PCV15 PCV20	Vaxneuvance™ Prevnar 20®
Pneumococcal polysaccharide vaccine	PPSV23	Pneumovax 23®
Poliovirus vaccine (inactivated)	IPV	Ipol®
Respiratory syncytial virus vaccine	RSV	Abrysvo™
Rotavirus vaccine	RV1 RV5	Rotarix® RotaTeq®
Tetanus, diphtheria, and acellular pertussis vaccine	Tdap	Adacel® Boostrix®
Tetanus and diphtheria vaccine	Td	Tenivac® Tdvax™
Varicella vaccine	VAR	Varivax®
Combination vaccines *(use combination vaccines instead of separate injections when appropriate)*		
DTaP, hepatitis B, and inactivated poliovirus vaccine	DTaP-HepB-IPV	Pediarix®
DTaP, inactivated poliovirus, and *Haemophilus influenzae* type b vaccine	DTaP-IPV/Hib	Pentacel®
DTaP and inactivated poliovirus vaccine	DTaP-IPV	Kinrix® Quadracel®
DTaP, inactivated poliovirus, *Haemophilus influenzae* type b, and hepatitis B vaccine	DTaP-IPV-Hib-HepB	Vaxelis®
Measles, mumps, rubella, and varicella vaccine	MMRV	ProQuad®

*Administer recommended vaccines if immunization history is incomplete or unknown. Do not restart or add doses to vaccine series for extended intervals between doses. When a vaccine is not administered at the recommended age, administer at a subsequent visit. The use of trade names is for identification purposes only and does not imply endorsement by the ACIP or CDC.

11/16/2023

How to use the child and adolescent immunization schedule

1. Determine recommended vaccine by age **(Table 1)**
2. Determine recommended interval for catch-up vaccination **(Table 2)**
3. Assess need for additional recommended vaccines by medical condition or other indication **(Table 3)**
4. Review vaccine types, frequencies, intervals, and considerations for special situations **(Notes)**
5. Review contraindications and precautions for vaccine types **(Appendix)**
6. Review new or updated ACIP guidance **(Addendum)**

Recommended by the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/acip) and approved by the Centers for Disease Control and Prevention (www.cdc.gov), American Academy of Pediatrics (www.aap.org), American Academy of Family Physicians (www.aafp.org), American College of Obstetricians and Gynecologists (www.acog.org), American College of Nurse-Midwives (www.midwife.org), American Academy of Physician Associates (www.aapa.org), and National Association of Pediatric Nurse Practitioners (www.napnap.org).

Report

- Suspected cases of reportable vaccine-preventable diseases or outbreaks to your state or local health department
- Clinically significant adverse events to the Vaccine Adverse Event Reporting System (VAERS) at www.vaers.hhs.gov or 800-822-7967

Questions or comments

Contact www.cdc.gov/cdc-info or 800-CDC-INFO (800-232-4636), in English or Spanish, 8 a.m.–8 p.m. ET, Monday through Friday, excluding holidays

Download the CDC Vaccine Schedules app for providers at www.cdc.gov/vaccines/schedules/hcp/schedule-app.html

Helpful information

- Complete Advisory Committee on Immunization Practices (ACIP) recommendations: www.cdc.gov/vaccines/hcp/acip-recs/index.html
- ACIP Shared Clinical Decision-Making Recommendations: www.cdc.gov/vaccines/acip/acip-scdm-faqs.html
- *General Best Practice Guidelines for Immunization* (including contraindications and precautions): www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html
- Vaccine information statements: www.cdc.gov/vaccines/hcp/vis/index.html
- Manual for the Surveillance of Vaccine-Preventable Diseases (including case identification and outbreak response): www.cdc.gov/vaccines/pubs/surv-manual

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

Scan QR code for access to online schedule

CS310020-D

https://www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Major Updates: 2024 Child and Adolescent Immunization Schedules

- **Changes to Format**
  - Changed headers from “Vaccine” to “Vaccines and other Immunizing Agents”
  - Cover page: COVID-19 is added. As well as Trade name Priorix for MMR and Vaxneuvance (PCV15) for pneumococcal conjugate vaccine.
- **Changes to Vaccination Notes**
  - RSV-mAb (nirsevimab)
  - RSVPreF (Abrysvo)
  - Jynneos (mpox)
  - Influenza
  - COVID-19
  - Meningococcal A, C, W, Y
  - Meningococcal B
  - Pneumococcal
  - Polio
- **Changes to Appendix**
  - Column Header
  - Influenza
  - Hepatitis B
  - HPV
  - Measles, Mumps an d Rubella
  - Varicella

https://publications.aap.org/aapnews/news/27351/CDC-releases-2024-immunization-schedules?autologincheck=redirected

Table 1 Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, United States, 2024

These recommendations must be read with the notes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars.
To determine minimum intervals between doses, see the catch-up schedule (Table 2).

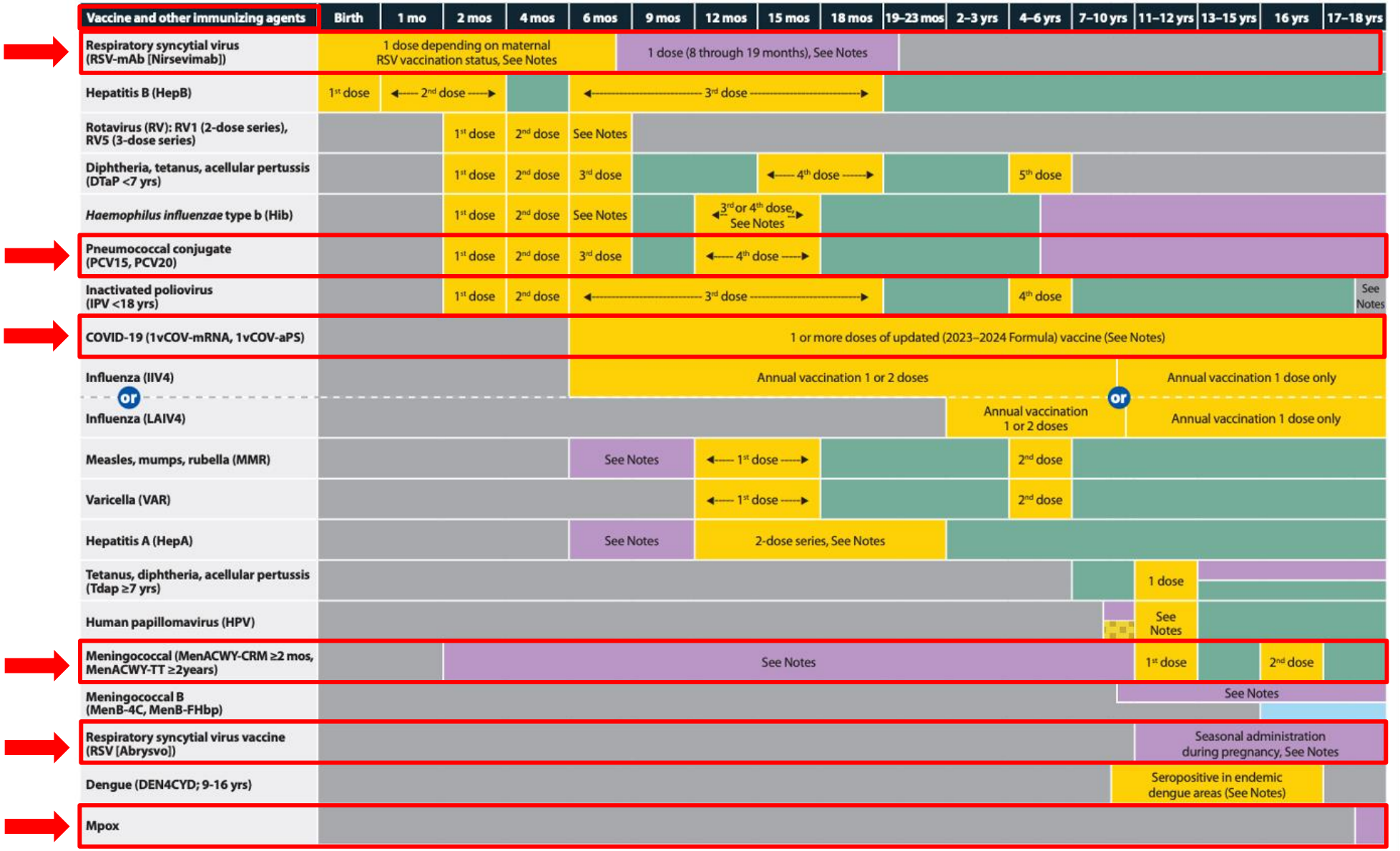


Table 2 Recommended Catch-up Immunization Schedule for Children and Adolescents Who Start Late or Who Are More than 1 Month Behind, United States, 2024

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.**

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Children age 4 months through 6 years					
Hepatitis B	Birth	**4 weeks**	**8 weeks *and* at least 16 weeks after first dose** minimum age for the final dose is 24 weeks		
Rotavirus	6 weeks Maximum age for first dose is 14 weeks, 6 days.	**4 weeks**	**4 weeks** maximum age for final dose is 8 months, 0 days		
Diphtheria, tetanus, and acellular pertussis	6 weeks	**4 weeks**	**4 weeks**	**6 months**	**6 months** A fifth dose is not necessary if the fourth dose was administered at age 4 years or older ***and*** at least 6 months after dose 3
Haemophilus influenzae type b	6 weeks	**No further doses needed** if first dose was administered at age 15 months or older. **4 weeks** if first dose was administered before the 1st birthday. **8 weeks (as final dose)** if first dose was administered at age 12 through 14 months.	**No further doses needed** if previous dose was administered at age 15 months or older **4 weeks** if current age is younger than 12 months ***and*** first dose was administered at younger than age 7 months ***and*** at least 1 previous dose was PRP-T (ActHib®, Pentacel®, Hiberix®), Vaxelis® or unknown **8 weeks *and* age 12 through 59 months (as final dose)** if current age is younger than 12 months ***and*** first dose was administered at age 7 through 11 months; **OR** if current age is 12 through 59 months ***and*** first dose was administered before the 1st birthday ***and*** second dose was administered at younger than 15 months; **OR** if both doses were PedvaxHIB® and were administered before the 1st birthday	**8 weeks (as final dose)** This dose only necessary for children age 12 through 59 months who received 3 doses before the 1st birthday.	
Pneumococcal conjugate	6 weeks	**No further doses needed** for healthy children if first dose was administered at age 24 months or older **4 weeks** if first dose was administered before the 1st birthday **8 weeks (as final dose for healthy children)** if first dose was administered at the 1st birthday or after	**No further doses needed** for healthy children if previous dose was administered at age 24 months or older **4 weeks** if current age is younger than 12 months ***and*** previous dose was administered at <7 months old **8 weeks (as final dose for healthy children)** if previous dose was administered between 7–11 months (wait until at least 12 months old); **OR** if current age is 12 months or older ***and*** at least 1 dose was administered before age 12 months	**8 weeks (as final dose)** This dose is only necessary for children age 12 through 59 months regardless of risk, or age 60 through 71 months with any risk, who received 3 doses before age 12 months.	
Inactivated poliovirus	6 weeks	**4 weeks**	**4 weeks** if current age is <4 years **6 months (as final dose)** if current age is 4 years or older	**6 months (minimum age 4 years for final dose)**	
Measles, mumps, rubella	12 months	**4 weeks**			
Varicella	12 months	**3 months**			
Hepatitis A	12 months	**6 months**			
Meningococcal ACWY	2 months MenACWY-CRM 2 years MenACWY-TT	**8 weeks**	See Notes	See Notes	
Children and adolescents age 7 through 18 years					
Meningococcal ACWY	Not applicable (N/A)	**8 weeks**			
Tetanus, diphtheria; tetanus, diphtheria, and acellular pertussis	7 years	**4 weeks**	**4 weeks** if first dose of DTaP/DT was administered before the 1st birthday **6 months (as final dose)** if first dose of DTaP/DT or Tdap/Td was administered at or after the 1st birthday	**6 months** if first dose of DTaP/DT was administered before the 1st birthday	
Human papillomavirus	9 years	**Routine dosing intervals are recommended.**			
Hepatitis A	N/A	**6 months**			
Hepatitis B	N/A	**4 weeks**	**8 weeks *and* at least 16 weeks after first dose**		
Inactivated poliovirus	N/A	**4 weeks**	**6 months** A fourth dose is not necessary if the third dose was administered at age 4 years or older ***and*** at least 6 months after the previous dose.	A fourth dose of IPV is indicated if all previous doses were administered at <4 years **OR** if the third dose was administered <6 months after the second dose.	
Measles, mumps, rubella	N/A	**4 weeks**			
Varicella	N/A	**3 months** if younger than age 13 years. **4 weeks** if age 13 years or older			
Dengue	9 years	**6 months**	6 months		

Table 3 Recommended Child and Adolescent Immunization Schedule by Medical Indication, United States, 2024

Always use this table in conjunction with Table 1 and the Notes that follow. Medical conditions are often not mutually exclusive. If multiple conditions are present, refer to guidance in all relevant columns. See Notes for medical conditions not listed.

Vaccine and other immunizing agents	Pregnancy	Immunocompromised (excluding HIV infection)	HIV infection CD4 percentage and count[a]		CSF leak or cochlear implant	Asplenia or persistent complement component deficiencies	Heart disease or chronic lung disease	Kidney failure, End-stage renal disease or on Dialysis	Chronic liver disease	Diabetes
			<15% or <200mm	≥15% and ≥200mm						
RSV-mAb (nirsevimab)		2nd RSV season		1 dose depending on maternal RSV vaccination status, See Notes			2nd RSV season for chronic lung disease (See Notes)	1 dose depending on maternal RSV vaccination status, See Notes		
Hepatitis B										
Rotavirus		SCID[b]								
DTaP/Tdap	DTaP Tdap: 1 dose each pregnancy									
Hib		HSCT: 3 doses	See Notes			See Notes				
Pneumococcal										
IPV										
COVID-19		See Notes								
IIV4										
LAIV4							Asthma, wheezing: 2–4 years[c]			
MMR	*									
VAR	*									
Hepatitis A										
HPV	*	3 dose series. See Notes								
MenACWY										
MenB										
RSV (Abrysvo)	Seasonal administration, See Notes									
Dengue										
Mpox	See Notes									

- Recommended for all age-eligible children who lack documentation of a complete vaccination series
- Not recommended for all children, but is recommended for some children based on increased risk for or severe outcomes from disease
- Recommended for all age-eligible children, and additional doses may be necessary based on medical condition or other indications. See Notes.
- Precaution: Might be indicated if benefit of protection outweighs risk of adverse reaction
- Contraindicated or not recommended *Vaccinate after pregnancy, if indicated
- No Guidance/ Not Applicable

a. For additional information regarding HIV laboratory parameters and use of live vaccines, see the General Best Practice Guidelines for Immunization, "Altered Immunocompetence," at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html and Table 4-1 (footnote J) at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html.

b. Severe Combined Immunodeficiency

c. LAIV4 contraindicated for children 2–4 years of age with asthma or wheezing during the preceding 12 months

Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2024

For vaccination recommendations for persons ages 19 years or older, see the Recommended Adult Immunization Schedule, 2024.

Additional Information

- For calculating intervals between doses, 4 weeks = 28 days. Intervals of ≥4 months are determined by calendar months.
- Within a number range (e.g., 12–18), a dash (–) should be read as "through."
- Vaccine doses administered ≤4 days before the minimum age or interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum age or minimum interval should not be counted as valid and should be repeated as age appropriate. **The repeat dose should be spaced after the invalid dose by the recommended minimum interval.** For further details, see Table 3-2, Recommended and minimum ages and intervals between vaccine doses, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html.
- Information on travel vaccination requirements and recommendations is available at www.cdc.gov/travel/.
- For vaccination of persons with immunodeficiencies, see Table 8-1, Vaccination of persons with primary and secondary immunodeficiencies, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html, and Immunization in Special Clinical Circumstances (In: Kimberlin DW, Barnett ED, Lynfield Ruth, Sawyer MH, eds. *Red Book: 2021–2024 Report of the Committee on Infectious Diseases*. 32nd ed. Itasca, IL: American Academy of Pediatrics; 2021:72–86).
- For information about vaccination in the setting of a vaccine-preventable disease outbreak, contact your state or local health department.
- The National Vaccine Injury Compensation Program (VICP) is a no-fault alternative to the traditional legal system for resolving vaccine injury claims. All vaccines included in the child and adolescent vaccine schedule are covered by VICP except dengue, PPSV23, RSV, and COVID-19 vac… COVID-19 vaccines that are authorized or approved by the FDA are covered by the Countermeasures Injury Compensation Program (CICP). For more information, see www.hrsa.gov/vaccinecompensation or www.hrsa.gov/cicp.

COVID-19 vaccination (minimum age: 6 months [Moderna and Pfizer-BioNTech COVID-19 vaccines], 12 years [Novavax COVID-19 Vaccine])

Routine vaccination

Age 6 months–4 years

- Unvaccinated:
  - 2-dose series of updated (2023–2024 Formula) Moderna at 0, 4–8 weeks
  - 3-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 3–8, 11–16 weeks
- Previously vaccinated† with 1 dose of any Moderna: 1 dose of updated (2023–2024 Formula) Moderna 4–8 weeks after the most recent dose
- Previously vaccinated† with 2 or more doses of any Moderna: 1 dose of updated (2023–2024 Formula) Moderna at least 8 weeks after the most recent dose
- Previously vaccinated† with 1 dose of any Pfizer-BioNTech: 2-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 8 weeks (minimum interval between previous Pfizer-BioNTech and dose 1: 3–8 weeks)
- Previously vaccinated† with 2 or more doses of any Pfizer-BioNTech: 1 dose of updated (2023–2024 Formula) Pfizer-BioNTech at least 8 weeks after the most recent dose

Age 5–11 years

- Unvaccinated: 1 dose of updated (2023–2024 Formula) Moderna or Pfizer-BioNTech vaccine
- Previously vaccinated† with 1 or more doses of Moderna or Pfizer-BioNTech: 1 dose of updated (2023–2024 Formula) M… (re…

Age …

- Pr… (1 …) va…

Special situations

Persons who are moderately or severely immunocompromised**

Age 6 months–4 years

- Unvaccinated:
  - 3-dose series of updated (2023–2024 Formula) Moderna at 0, 4, 8 weeks
  - 3-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 3, 11 weeks
- Previously vaccinated† with 1 dose of any Moderna: 2-dose series of updated (2023–2024 Formula) Moderna at 0, 4 weeks (minimum interval between previous Moderna and dose 1: 4 weeks)
- Previously vaccinated† with 2 doses of any Moderna: 1 dose of updated (2023–2024 Formula) Moderna at least 4 weeks after the most recent dose
- Previously vaccinated† with 3 or more doses of any Moderna: 1 dose of updated (2023–2024 Formula) Moderna at least 8 weeks after the most recent dose
- Previously vaccinated† with 1 dose of any Pfizer-BioNTech: 2-dose series of updated (2023–2024 Formula) Pfizer-BioNTech at 0, 8 weeks (minimum interval between previous Pfizer-BioNTech and dose 1: 3 weeks)
- Previously vaccinated† with 2 or more doses of any Pfizer-BioNTech: 1 dose of updated (2023–2024 Formula) Pfizer-BioNTech at least 8 weeks after the most recent dose

Age 5–11 years

- Unvaccinated:
  - 3-dose series of updated (2023–2024 Formula) Moderna at 0, 4, 8 weeks

The National Vaccine Injury Compensation Program (VICP)is a no-fault alternative to the traditional legal system for resolving vaccine injury claims. All vaccines included in the child and adolescent vaccine schedule are covered by VICP except dengue, PPSV23, **RSV**, and COVID-19 vaccines. COVID-19 vaccines that are authorized or approved by the FDA are covered by the Countermeasures Injury Compensation Program (CICP). For more information, see www.hrsa.gov/vaccinecompensation or www.hrsa.gov/cicp.

Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2024

Influenza vaccination
(minimum age: 6 months [IIV], 2 years [LAIV4], 18 years [recombinant influenza vaccine, RIV4])

Routine vaccination

- Use any influenza vaccine appropriate for age and health status annually:
  - **Age 6 months–8 years** who have received **fewer** than 2 influenza vaccine doses before July 1, 2023, or whose influenza vaccination history is unknown: 2 doses, separated by at least 4 weeks. Administer dose 2 even if the child turns 9 years between receipt of dose 1 and dose 2.
  - **Age 6 months–8 years** who have received **at least** 2 influenza vaccine doses before July 1, 2023: 1 dose
  - **Age 9 years or older:** 1 dose
- For the 2023-2024 season, see www.cdc.gov/mmwr/volumes/72/rr/rr7202a1.htm.
- For the 2024–25 season, see the 2024–25 ACIP influenza vaccine recommendations.

Special situations

- **Close contacts (e.g., household contacts) of severely immunosuppressed persons who require a protected environment:** these persons should not receive LAIV4. If LAIV4 is given, they should avoid contact with for such immunosuppressed persons for 7 days after vaccination

Note: Persons with an egg allergy can receive any influenza vaccine (egg-based and non-egg-based) appropriate for age and health status.

Added information for vaccinating persons with a history of egg allergy.

Notes Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2024

- Deleted MenACWY-D (Menactra) recommendations from all sections.
- Added MenABCWY (Penbraya)

Meningococcal serogroup A,C,W,Y vaccination (minimum age: 2 months [MenACWY-CRM, Menveo], 2 years [MenACWY-TT, MenQuadfi]), 10 years [MenACWY-TT/MenB-FHbp, Penbraya])

Routine vaccination

- 2-dose series at age 11–12 years; 16 years

Catch-up vaccination

- Age 13–15 years: 1 dose now and booster at age 16–18 years (minimum interval: 8 weeks)
- Age 16–18 years: 1 dose

Special situations

Anatomic or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:

- **Menveo®***
  - Dose 1 at age 2 months: 4-dose series (additional 3 doses at age 4, 6, and 12 months)
  - Dose 1 at age 3–6 months: 3- or 4-dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)
  - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart
- **MenQuadfi®**
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart

Travel to countries with hyperendemic or epidemic meningococcal disease, including countries in the African meningitis belt or during the Hajj (www.cdc.gov/travel/):

Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2024

- Children less than age 24 months:
  - **Menveo** * **(age 2–23 months)**
    - Dose 1 at age 2 months: 4-dose series (additional 3 doses at age 4, 6, and 12 months)
    - Dose 1 at age 3–6 months: 3- or 4-dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)
    - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
- Children age 2 years or older: 1 dose Menveo* or MenQuadfi*

First-year college students who live in residential housing (if not previously vaccinated at age 16 years or older) or military recruits:

- 1 dose **Menveo** * or **MenQuadfi**

Adolescent vaccination of children who received MenACWY prior to age 10 years:

- **Children for whom boosters are recommended** because of an ongoing increased risk of meningococcal disease (e.g., those with complement component deficiency, HIV, or asplenia): Follow the booster schedule for persons at increased risk.
- **Children for whom boosters are not recommended** (e.g., a healthy child who received a single dose for travel to a country where meningococcal disease is endemic): Administer MenACWY according to the recommended adolescent schedule with dose 1 at age 11–12 years and dose 2 at age 16 years.

**Menveo has two formulations: lyophilized and liquid. The liquid formulation should not be used before age 10 years. See www.cdc.gov/vaccines/vpd/mening/downloads/menveo-single-vial-presentation.pdf.*

Note: For MenACWY **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.

Children age 10 years or older may receive a single dose of Penbraya™ as an alternative to separate administration of MenACWY and MenB when both vaccines would be given on the same clinic day, and a single injection with Penbraya™ is preferred (see "Meningococcal serogroup B vaccination" section below for more information).

Meningococcal serogroup B vaccination (minimum age: 10 years [MenB-4C, Bexsero®; MenB-FHbp, Trumenba®])

Shared clinical decision-making

- **Adolescents not at increased risk** age 16–23 years (preferred age 16–18 years) based on shared clinical decision-making:
  - **Bexsero** ®: 2-dose series at least 1 month apart
  - **Trumenba** ®: 2-dose series at least 6 months apart (if dose 2 is administered earlier than 6 months, administer a 3rd dose at least 4 months after dose 2)

Special situations

Anatomic or functional asplenia (including sickle cell disease), persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:

- **Bexsero** ®: 2-dose series at least 1 month apart
- **Trumenba** ®: 3-dose series at 0, 1–2, 6 months (if dose 2 was administered at least 6 months after dose 1, dose 3 not needed; if dose 3 is administered earlier than 4 months after dose 2, a 4th dose should be administered at least 4 months after dose 3)

Note: Bexsero ® and **Trumenba** ® are not interchangeable; the same product should be used for all doses in a series.

For MenB **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.

Children age 10 years or older may receive a dose of Penbraya™ as an alternative to separate administration of MenACWY and MenB when both vaccines would be given on the same clinic day, and a single injection with Penbraya™ is preferred. If using Penbraya™ for dose 1 MenB, subsequent MenB doses must be either MenB-FHbp (Trumenba) or Penbraya™ (minimum interval between Penbraya™ doses: 6 months). Children age 10 years or older recommended to receive booster doses of MenACWY and MenB less than 6 months after a dose of Penbraya™ should receive MenACWY and MenB-FHbp (Trumenba) separately.

Mpox vaccination (minimum age: 18 years [Jynneos®])

Special situations

- **Age 18 years and at risk for Mpox infection:** 2-dose series, 28 days apart.

Risk factors for Mpox infection include:

- Persons who are gay, bisexual and other MSM, transgender or nonbinary people who in the past 6 months have had:
  - At least 1 sexually transmitted disease
  - More than 1 sex partner
  - Sex at a commercial sex venue
  - Sex in association with a large public event in a geographic area where Mpox transmission is occurring
- Persons who are sexual contacts of the persons described above
- Persons who anticipate experiencing any of the situations described above.
- Persons deemed at risk by public health authorities in mpox outbreak settings

- **Pregnancy:** There is currently no ACIP recommendation for Jynneos use in pregnancy due to lack of safety data in pregnant persons. Pregnant persons with any risk factor described above may receive Jynneos.

For detailed information, see: www.cdc.gov/poxvirus/mpox/interim-considerations/jynneos-vaccine.html.

Pneumococcal vaccination (minimum age: 6 weeks [PCV15], [PCV 20]; 2 years [PPSV23])

Routine vaccination with PCV

- 4-dose series at 2, 4, 6, 12–15 months

Catch-up vaccination with PCV

- Healthy children ages 2–4 years with any incomplete* PCV series: 1 dose PCV
- For other catch-up guidance, see Table 2.

Note: Either PCV15 or PCV20 can be used when PCV is indicated. PCV20 is not indicated for children who have received 4 doses of PCV13 or PCV15 or another age appropriate complete PCV series.

Special situations

- **Age 18 years and at risk for Mpox infection:** 2-dose series, 28 days apart.

Risk factors for Mpox infection include:

- Added bullet on use of Jynneos in pregnant persons

Mpox vaccination
(minimum age: 18 years [Jynneos®])

Special situations

- **Age 18 years and at risk for Mpox infection:** 2-dose series, 28 days apart.

Risk factors for Mpox infection include:

- Persons who are gay, bisexual, and other MSM, transgender or nonbinary people who in the past 6 months have had:
  - A new diagnosis of at least 1 sexually transmitted disease.
  - More than 1 sex partner.
  - Sex at a commercial sex venue.
  - Sex in association with a large public event in a geographic area where Mpox transmission is occurring.
- Persons who are sexual partners of the persons described above.
- Persons who anticipate experiencing any of the situations described above.

- **Pregnancy:** There is currently no ACIP recommendation for Jynneos use in pregnancy due to lack of safety data in pregnant persons. Pregnant persons with any risk factor described above may receive Jynneos.

For detailed information, see: https://www.cdc.gov/vaccines/acip/meetings/downloads/slides-2023-10-25-26/04-MPOX-Rao-508.pdf

February ACIP Meeting Updates

- COVID-19: ACIP recommends that persons ≥ 65 years of age should receive an additional dose of 2023-2024 Formula COVID-19 vaccine.

- Chikungunya: Chikungunya vaccine is recommended for persons aged ≥18 years traveling to a country or territory where there is an outbreak and for laboratory workers with potential for exposure to chikungunya virus.

- Diphtheria, Tetanus, and Pertussis: Approve the VFC resolution for diphtheria, tetanus, and pertussis to (1) add Td vaccine for use in children < 7 years of age for whom receipt of the pertussis component is contraindicated and to (2) update the language regarding the Tdap booster to align with ACIP recommendations.

- Updates to the meningococcal vaccine schedule may come later this year.

RSV Prevention Products

- Nirsevimab (Beyfortus)
- Abrysvo
- Arexvy

Niservimab (Beyfortus) - RSV Monoclonal Antibody)

- Infants born shortly before or during RSV season (October – March)
  - Administer 1 dose nirsevimab within 1 week of birth if mother did not receive Abrysvo, mother's RSV vaccination status is unknown, or if mother received Abrysvo less than 14 days prior to delivery
  - May be given in birth hospital or PCP office
- Infants born April–September entering their first RSV season
  - Mother did not receive RSV vaccine OR mother's RSV vaccination status is unknown: administer 1 dose nirsevimab shortly before start of RSV season
- May consider giving nirsevimab to children 8 - 19 months who are entering their 2nd RSV season who are at increased for severe disease related to RSV infection.

RSV Vaccines:
Abrysvo (Pfizer), Arexvy (GSK)

Pregnancy:

- All pregnant people should only receive Abrysvo (Pfizer)
- One dose should be administered during RSV season (September-January) for those between 32 – 36 weeks gestation
- Currently, there is no data on revaccinating with every pregnancy like Tdap – studies are ongoing

Older Adults:

- Arexvy and Abrysvo are recommended for adults 60 years and older
- One dose recommended before onset of fall/winter RSV season
- Currenly, the recommendation is one dose - Studies are ongoing to assess if boosters are needed in older adults

RSV Season

- Abrysvo ordering through the CDPH VFC program is no longer available,
- All remaining VFC doses of Abrysvo and nirsevimab have expiration dates that will allow them to be used for parts or all of the next RSV season.
- The CDC recommends administering nirsevimab to eligible newborns through March 31, 2024.
- Pediatricians can also now reserve private doses of Beyfortus for the 2024-2025 respiratory virus season through Sanofi's new reservation program.
  - Does not apply to VFC program - Sanofi continues to engage with CDC to ensure supply for the VFC program

Knowledge Check

Which product do you administer to infants?

a. Nirsevimab (Beyfortus)

b. Abrysvo

Hepatitis B Vaccine

- **Routine vaccination:**
  - 3-dose series at age 0, 1–2, 6–18 months (use monovalent HepB vaccine for birth dose and any doses administered before age 6 weeks).
  - Additional steps dependent on mother's HBsAg status.
- Heplisav-B and PreHevbrio may be used for catch up for age 18 years and older.
- Heplisav-B not recommended during pregnancy.

Hepatitis B Vaccine cont.

- Providers are required to refer pregnant women who are HBsAg-positive **within 7 days** after receipt of the test result to the local health department for case management.

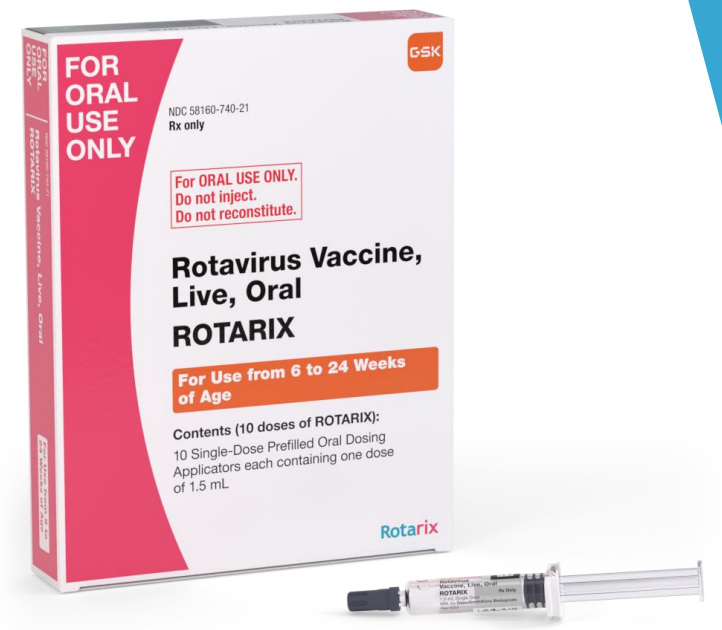
- Chicago providers can fulfill this reporting requirement by providing contact information for the patient, along with demographics, and HBsAg test date via CDPH's secure online reporting form on REDCap. This is especially important if providers use a commercial lab.

Rotavirus Vaccine

- **Products**
  - RotaTeq® (RV5)
  - Rotarix® (RV1)
- **Routine Vaccination:**
  - Rotarix®: 2-dose series at age 2 and 4 months
  - RotaTeq®: 3-dose series at age 2, 4, and 6 months
  - If any dose in the series is either RotaTeq® or unknown, default to 3-dose series.
- **Catch-Up Vaccination:**
  - Do not start the series on or after age 15 weeks, 0 days.
  - The maximum age for the final dose is 8 months, 0 days.

Rotavirus Vaccine

- Rotavirus (Rotarix ™)
  - **<u>NO RECONSTITUTION NEEDED!</u>**
  - Oral-dosing applicator-only presentation.
  - FDA approved in Nov 2022.
  - There are 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.



Pneumococcal Vaccine

- **Products:**
  - Pneumococcal conjugate vaccines (PCVs, specifically PCV15 and PCV20) – ACIP has not made a preferential statement
  - Pneumococcal polysaccharide vaccine (PPSV23)
- **Routine Vaccination with PCV:**
  - 4-dose series at 2, 4, 6, 12–15 months
- **Catch-Up Vaccination with PCV:**
  - Healthy children ages 2–4 years with any incomplete* PCV series: 1 dose PCV
  - Note: Either PCV15 or PCV20 can be used when PCV is indicated. For children without risk conditions, PCV20 is not indicated if they have received 4 doses of PCV13 or PCV15 or another age appropriate complete PCV series

Pneumococcal Vaccine cont.

- PCV13 is no longer distributed or recommended for use in the U.S

- Pneumococcal polysaccharide vaccine PPSV23 (Pneumovax23, Merck)
  - No longer routinely recommended for all children and adolescents aged ≥2 years at increased risk for invasive pneumococcal disease. It is still recommended in certain circumstances

COVID-19

- 2023 – 2024 Pfizer, Moderna, and Novavax COVID-19 vaccines were authorized and recommended in September 2023.

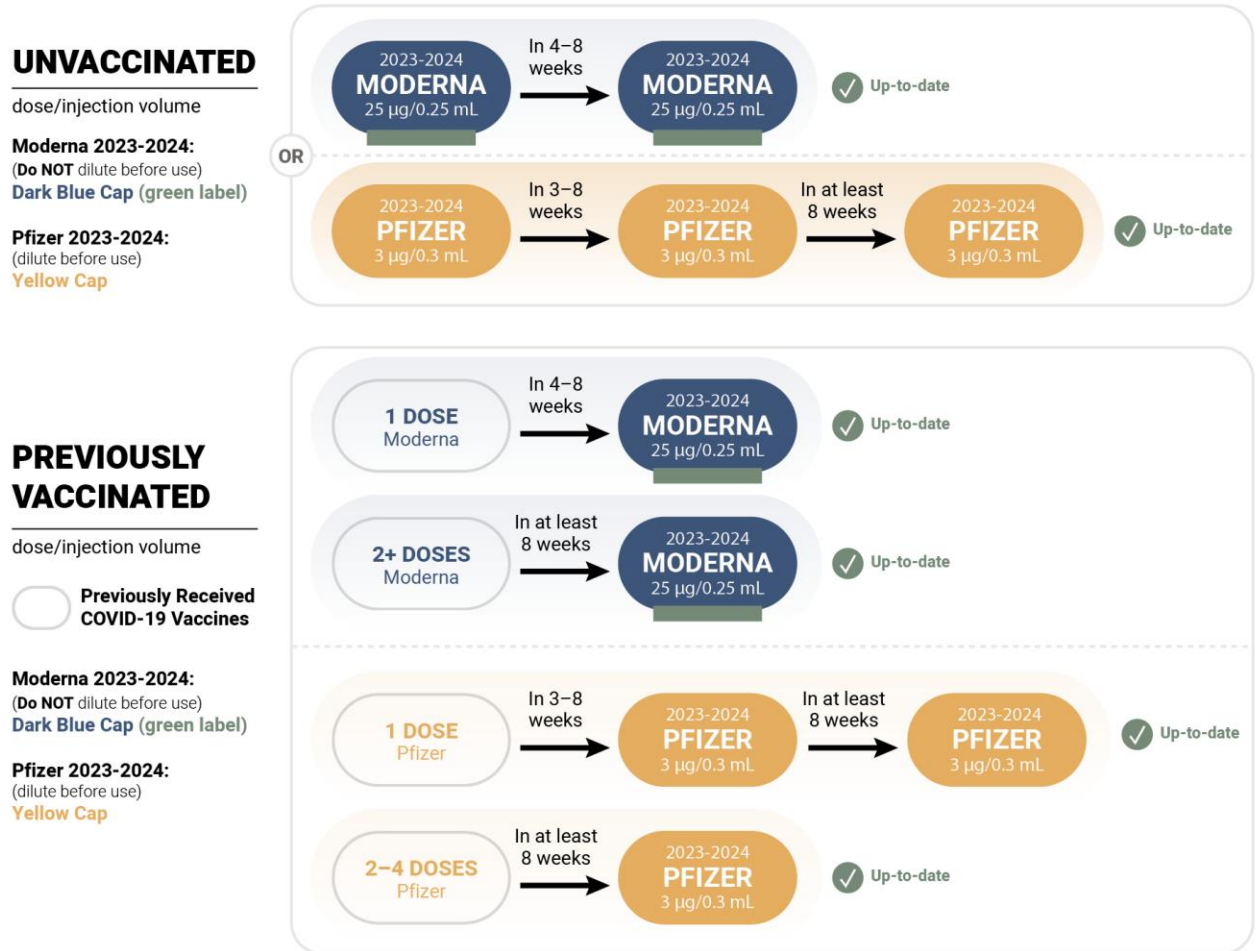
- Everyone 6 months and older should receive a COVID-19 vaccine
  - Most people only require one dose
  - Children 6 months to 4 years will need multiple doses if they are starting a series or having not completed a primary series.

- All VFC providers are required to stock and recommend COVID vaccines
  - VFC providers are required to meet the private inventory requirement no later than March 31, 2024.

COVID-19 VACCINATION SCHEDULE AND DOSING

AGES 6 MONTHS TO 4 YEARS

I-VAC
ILLINOIS VACCINATES AGAINST COVID-19
A project led by the Illinois Chapter of the American Academy of Pediatrics

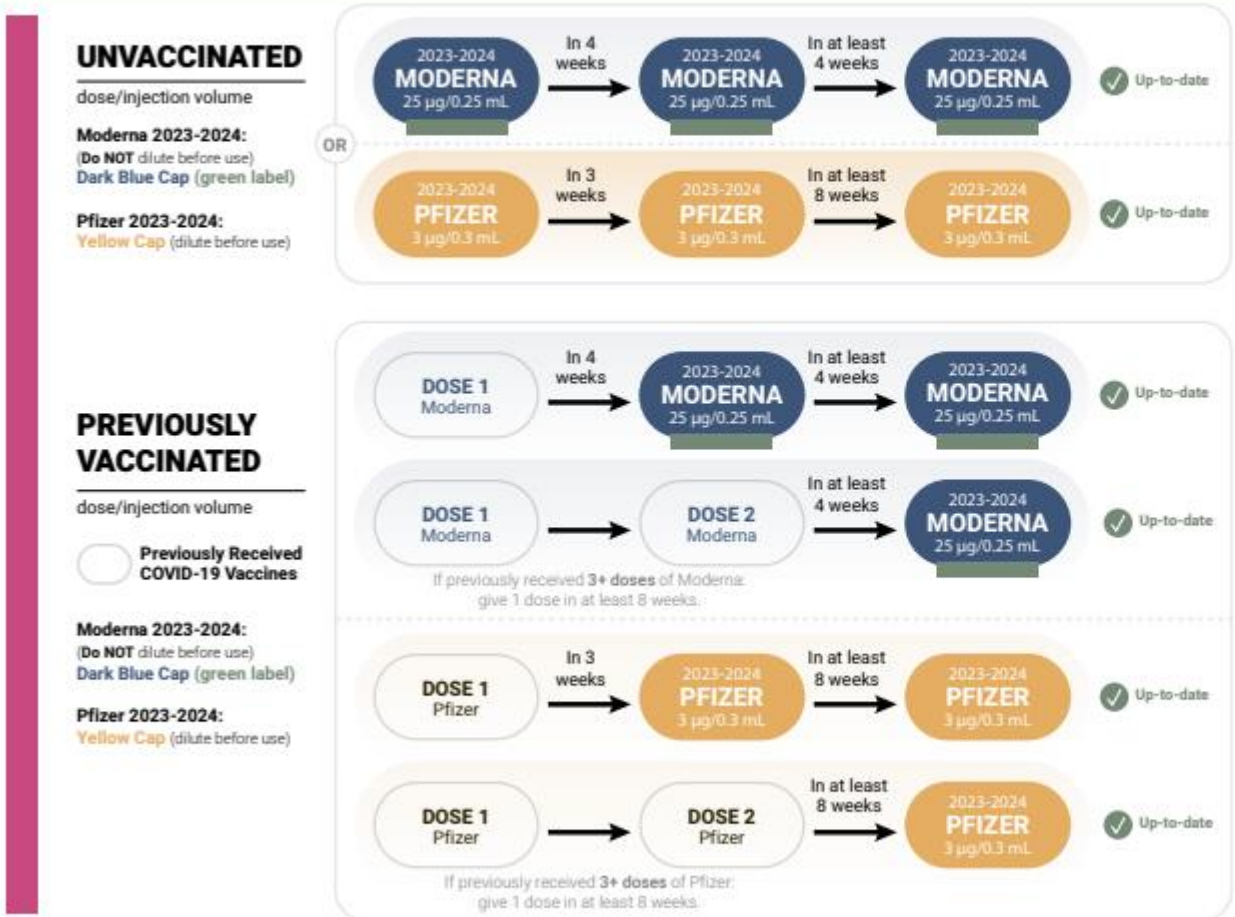


https://www.illinoisvaccinates.com/vaccine-resources/#handouts

COVID-19 VACCINATION SCHEDULE AND DOSING

AGES 6 MONTHS TO 4 YEARS IMMUNOCOMPROMISED

I-VAC
ILLINOIS VACCINATES AGAINST COVID-19
A project led by the Illinois Chapter of the American Academy of Pediatrics



PLEASE NOTE

Children ages 6 months–4 years who are moderately or severely immunocompromised may receive 1 additional dose of a homologous updated (2023–2024 Formula) mRNA vaccine at least 2 months after the last updated (2023–2024 Formula) mRNA vaccine dose. Further additional homologous updated (2023–2024 Formula) mRNA dose(s) may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. Any further additional doses should be administered at least 2 months after the last updated (2023–2024 Formula) mRNA vaccine dose. For Moderna, administer 0.25 mL/25 ug (dark blue cap; green label); for Pfizer-BioNTech, administer 0.3 mL/3 ug (yellow cap; yellow label).

https://www.illinoisvaccinates.com/vaccine-resources/#handouts

COVID-19 VACCINATION SCHEDULE AND DOSING

AGES 5 TO 11 YEARS

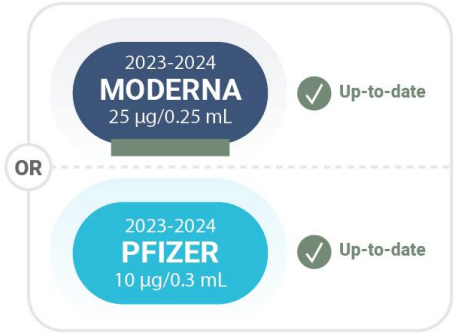
I-VAC
ILLINOIS VACCINATES AGAINST COVID-19
A project led by the Illinois Chapter of the American Academy of Pediatrics

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



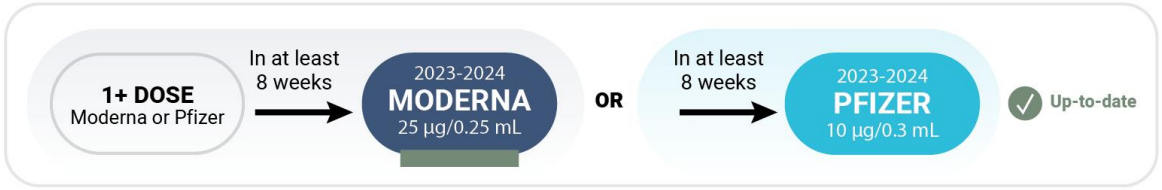
PREVIOUSLY VACCINATED

dose/injection volume

Previously Received COVID-19 Vaccines

Moderna 2023-2024:
(**Do NOT** dilute before use)
Dark Blue Cap (green label)

Pfizer 2023-2024:
(**Do NOT** dilute before use)
Blue Cap



https://www.illinoisvaccinates.com/vaccine-resources/#handouts

COVID-19 VACCINATION SCHEDULE AND DOSING

AGES 5 TO 11 YEARS IMMUNOCOMPROMISED

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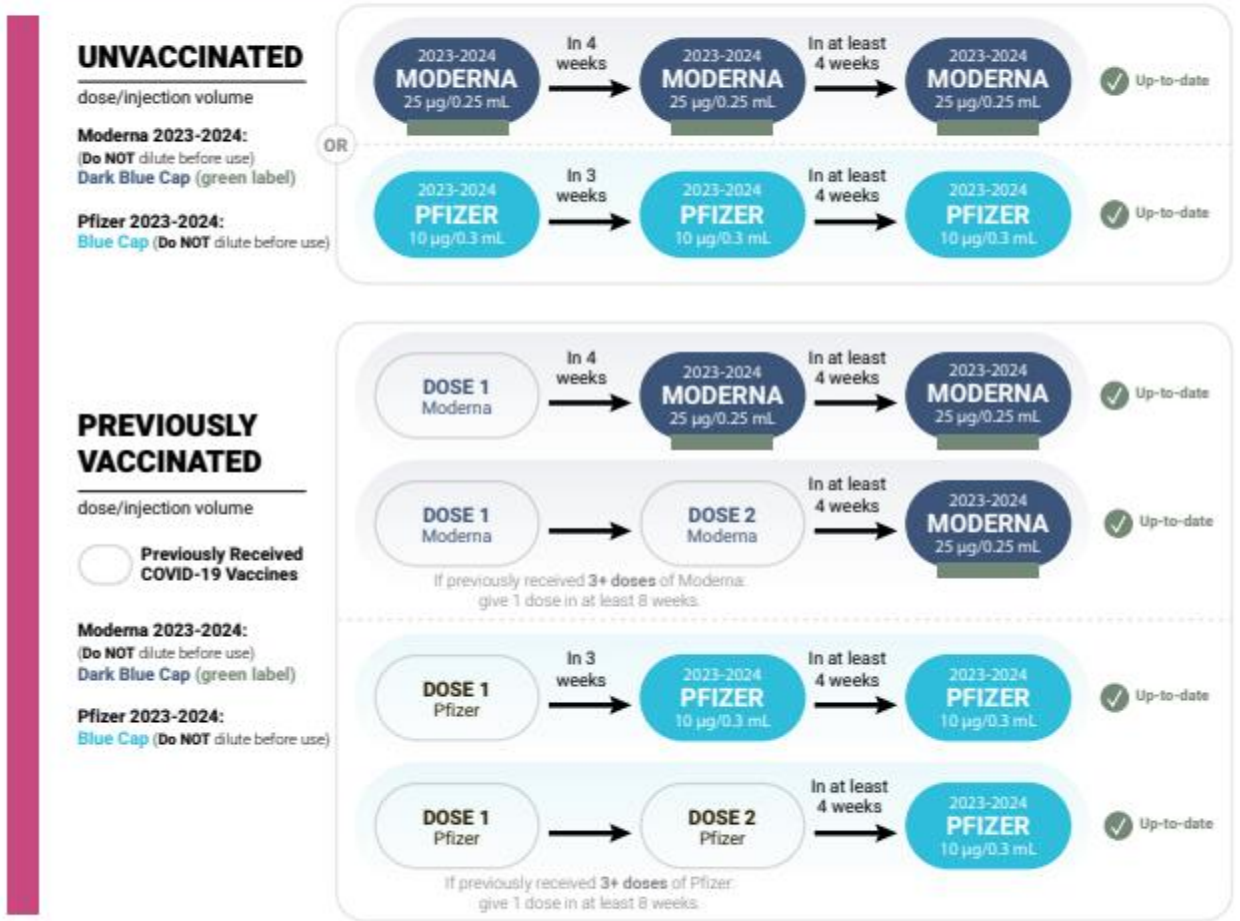


PLEASE NOTE

Children ages 5–11 years who are moderately or severely immunocompromised may receive 1 additional dose of updated (2023–2024 Formula) Moderna COVID-19 Vaccine, 0.25mL/25 ug (dark blue cap; green label) or updated (2023–2024 Formula) Pfizer-BioNTech COVID-19 Vaccine, 0.3 mL/10 ug (blue cap; blue label) at least 2 months after the last updated (2023–2024 Formula) mRNA vaccine dose. Further additional dose(s) may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. Any further additional doses should be administered at least 2 months after the last updated (2023–2024 Formula) mRNA vaccine dose.

https://www.illinoisvaccinates.com/vaccine-resources/#handouts

COVID-19 VACCINATION SCHEDULE AND DOSING

AGES 12 YEARS AND OLDER

I-VAC
ILLINOIS VACCINATES AGAINST COVID-19
A project led by the Illinois Chapter of the American Academy of Pediatrics

UNVACCINATED

dose/injection volume

Moderna 2023-2024:
(**Do NOT** dilute before use)
Dark Blue Cap (dark blue label)

Pfizer 2023-2024:
(**Do NOT** dilute before use)
Gray Cap

PREVIOUSLY VACCINATED

dose/injection volume

Previously Received COVID-19 Vaccines

Moderna 2023-2024:
(**Do NOT** dilute before use)
Dark Blue Cap (dark blue label)

Pfizer 2023-2024:
(**Do NOT** dilute before use)
Gray Cap

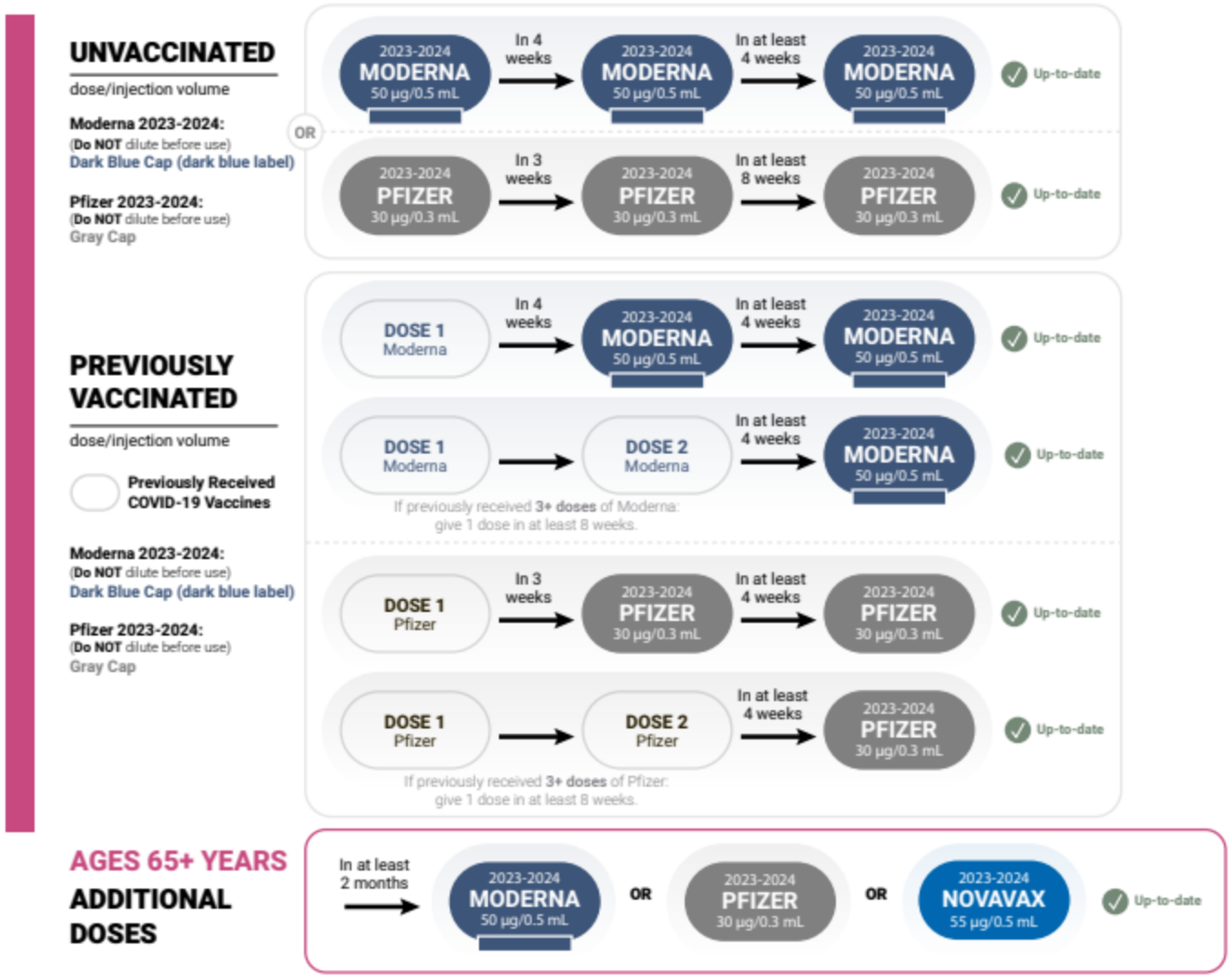
AGES 65+ YEARS ADDITIONAL DOSES

https://www.illinoisvaccinates.com/vaccine-resources/#handouts

COVID-19 VACCINATION SCHEDULE AND DOSING

AGES 12 YEARS AND OLDER IMMUNOCOMPROMISED

I-VAC
ILLINOIS VACCINATES AGAINST COVID-19
A project led by the Illinois Chapter of the American Academy of Pediatrics



PLEASE NOTE

People ages 12–64 years who are moderately or severely immunocompromised may receive 1 additional dose of any updated (2023–2024 Formula) COVID-19 vaccine (i.e., Moderna, Novavax, Pfizer-BioNTech) at least 2 months after the last dose of updated (2023–2024 Formula) COVID-19 vaccine. Further additional doses may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. Any further additional doses should be administered at least 2 months after the last updated (2023–2024 Formula) COVID-19 vaccine dose.

https://www.illinoisvaccinates.com/vaccine-resources/#handouts

COVID-19 VACCINATION SCHEDULE AND DOSING

AGES 12 YEARS AND OLDER

I-VAC
ILLINOIS VACCINATES AGAINST COVID-19
A project led by the Illinois Chapter of the American Academy of Pediatrics

UNVACCINATED

dose/injection volume

Novavax 2023-2024:
(**Do NOT** dilute before use)
Royal Blue Cap

2023-2024 **NOVAVAX** 55 µg/0.5 mL → In 3-8 weeks → 2023-2024 **NOVAVAX** 55 µg/0.5 mL → Up-to-date

PREVIOUSLY VACCINATED

dose/injection volume

Previously Received COVID-19 Vaccines

Novavax 2023-2024:
(**Do NOT** dilute before use)
Royal Blue Cap

1+ DOSE Any COVID-19 Vaccine → In at least 8 weeks → 2023-2024 **NOVAVAX** 55 µg/0.5 mL → Up-to-date

AGES 65+ YEARS ADDITIONAL DOSES

In at least 4 months → 2023-2024 **MODERNA** 50 µg/0.5 mL **OR** 2023-2024 **PFIZER** 30 µg/0.3 mL **OR** 2023-2024 **NOVAVAX** 55 µg/0.5 mL → Up-to-date

https://www.illinoisvaccinates.com/vaccine-resources/#handouts

COVID-19 VACCINATION SCHEDULE AND DOSING

AGES 12 YEARS AND OLDER IMMUNOCOMPROMISED

I-VAC
ILLINOIS VACCINATES AGAINST COVID-19
A project led by the Illinois Chapter of the American Academy of Pediatrics

UNVACCINATED

dose/injection volume

Novavax 2023-2024:
(**Do NOT** dilute before use)
Royal Blue Cap

2023-2024 NOVAVAX 55 µg/0.5 mL → In 3 weeks → 2023-2024 NOVAVAX 55 µg/0.5 mL → Up-to-date

PREVIOUSLY VACCINATED

dose/injection volume

Previously Received COVID-19 Vaccines

Novavax 2023-2024:
(**Do NOT** dilute before use)
Royal Blue Cap

1+ DOSE Any COVID-19 Vaccine → In at least 8 weeks → 2023-2024 NOVAVAX 55 µg/0.5 mL → Up-to-date

AGES 65+ YEARS ADDITIONAL DOSES

In at least 2 months →
2023-2024 MODERNA 50 µg/0.5 mL **OR** 2023-2024 PFIZER 30 µg/0.3 mL **OR** 2023-2024 NOVAVAX 55 µg/0.5 mL → Up-to-date

PLEASE NOTE

People ages 12–64 years who are moderately or severely immunocompromised may receive 1 additional dose of any updated (2023–2024 Formula) COVID-19 vaccine (i.e., Moderna, Novavax, Pfizer-BioNTech) at least 2 months after the last dose of updated (2023–2024 Formula) COVID-19 vaccine. Further additional doses may be administered, informed by the clinical judgement of a healthcare provider and personal preference and circumstances. Any further additional doses should be administered at least 2 months after the last updated (2023–2024 Formula) COVID-19 vaccine dose.

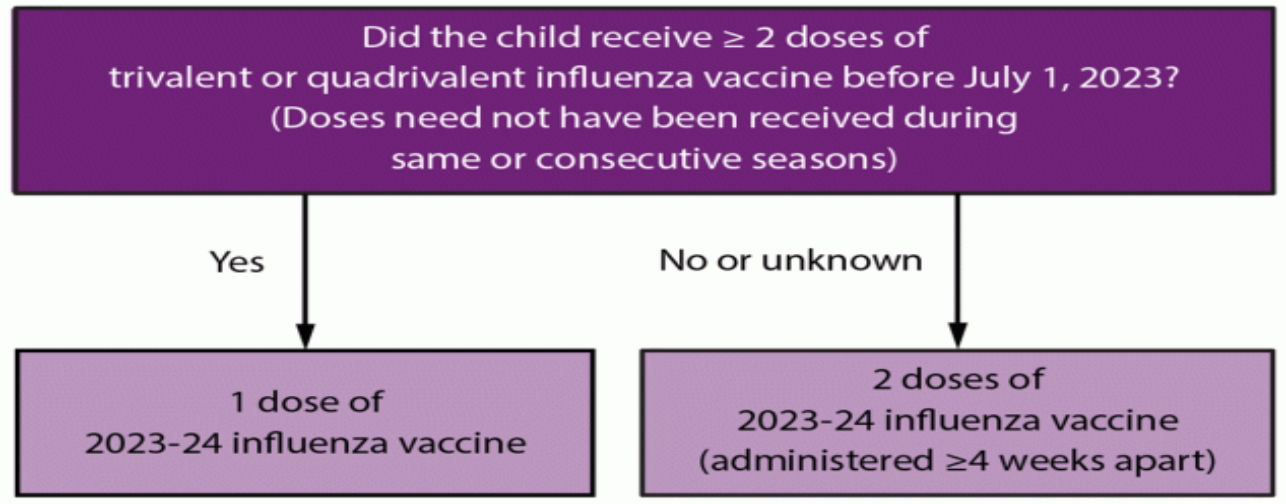
https://www.illinoisvaccinates.com/vaccine-resources/#handouts

Knowledge Check

True or False: COVID-19 vaccine administration should stop at the end of March until October.

Influenza Vaccine

- Annual vaccination of 1 or 2 doses recommended for everyone 6 months and older.



- **People with a history of egg allergy of any severity can be vaccinated with any influenza vaccine** indicated for the recipient's age and health status with no additional safety considerations.
  - If using egg-based IIV4 or LAIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions.

https://www.cdc.gov/flu/season/faq-flu-season-2023-2024.htm

Influenza Vaccine

- Flu vaccines for 2024 – 2025 will be trivalent

- AAP continues to recommend everyone 6 months+ be vaccinated and does not express a product preference.

AAP recommending flu vaccination for everyone 6 months and older with updated trivalent vaccines in 2024-'25 season

2024 Chicago Measles Outbreak

- March 2024 – Adult tests positive for measles with no clear source of exposure
  - Adult had multiple community exposures (eg using CTA buses) during their infectious period
- March 7– Confirmed case of measles in a young child at a new arrival shelter in Pilsen
  - Child was exposed to measles in Chicago
- March 8 – CDPH launches mass vaccination efforts in shelters across the city
- March 11 – CPS announces a child who attended a CPS school tested positive
- March 26 – A least 31 confirmed cases – most among children ages 0 – 4 years old
  - **We expect more...**

MMR Vaccine

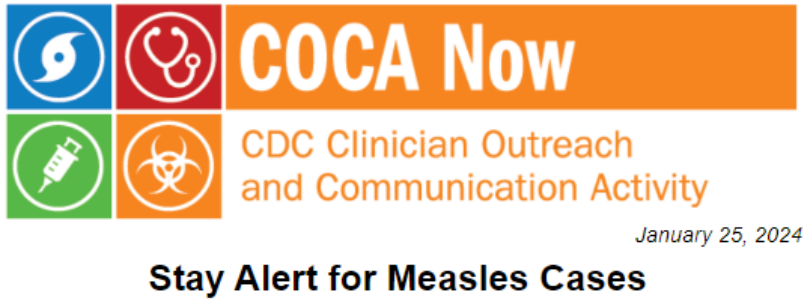
- **Products:**
  - M-M-R II® (MMR) vaccine Merck & Co, Inc.
  - PRIORIX® (GSK).
  - ProQuad® (MMRV) vaccine.

- **Routine Vaccination:**
  - 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.
  - *Note: If MMRV is used, the minimum interval between MMRV doses is 3 months.
  - Recommendation for the MMRV to be separated for the 1st dose is because there was a slight increase in febrile seizures seen in the combination vaccine.

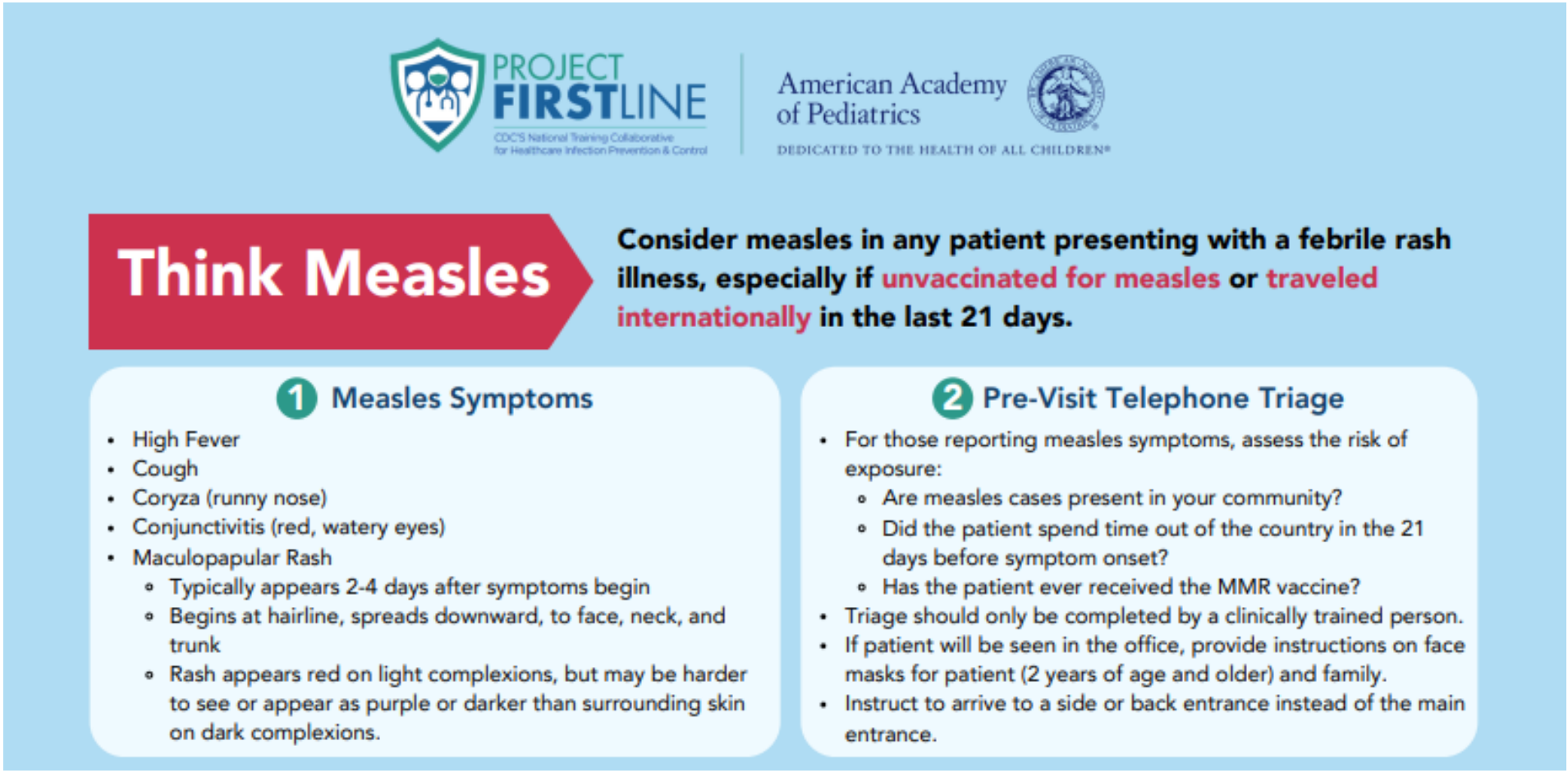
MMR Vaccine

- **Catch Up Vaccination:**
  - Unvaccinated children and adolescents: 2-dose series at least 4 weeks apart.
  - The maximum age for use of MMRV* is 12 years.
  - *Note: If MMRV is used, the minimum interval between MMRV doses is 3 months.

- Providers should ensure everyone is up-to-date with MMR vaccine
  - Especially tin the context of international travel and local outbreaks



Measles Reminder

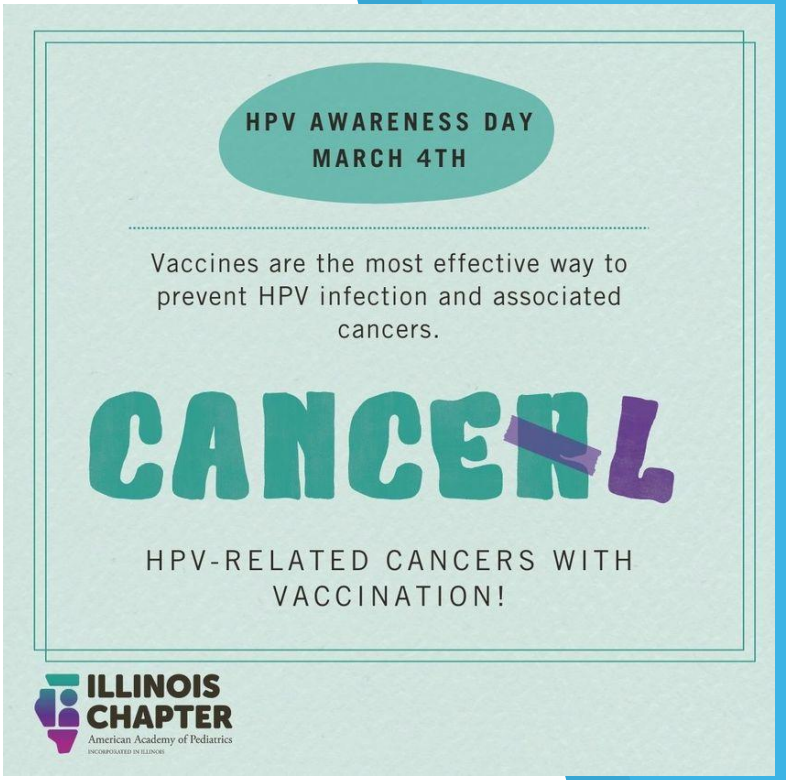


Measles Resources

- Illinois Chapter, American Academy of Pediatrics (ICAAP) handouts: What You Should Know About Measles During an Outbreak - English and Spanish
- CDPH Measles Dashboard
- CDPH handout: FAQs in English/Spanish
- CDC: Educational Resources for Parents and Childcare Providers
- Top 4 Things Parents Need to Know about Measles: English, Spanish
- Measles and the Vaccine (Shot) to Prevent It: English, Spanish
- HealthyChildren.org: How to Protect Your Children During a Measles Outbreak and Protecting Your Baby From a Measles Outbreak FAQ
- ICAAP's Measles Updates & Resources webpage

HPV

- HPV vaccination is cancer prevention
  - Cervical, oropharyngeal, anal, and others
- Recommended for both girls and boys
- Routinely recommended starting at 11 but administration can start at 9
  - Starting HPV vaccine discussions at age 9 gives more time for parents to make the decision to vaccinate
- View the HPV vaccine schedule on the next slide



HPV

If your child is 9- to 14-years-old, your child's doctor will determine whether your child needs a 2-dose or 3-dose schedule of GARDASIL 9.

[a]If the second shot is given earlier than 5 months after the first shot, your child will need to get a third shot at least 4 months after the second shot was given.

For individuals 15- to 45-years-old

https://www.gardasil9.com/adolescents/what-is-gardasil-9/hpv-vaccine-schedule/

Meningococcal Vaccines

- **Products:**
  - Meningococcal conjugate or MenACWY vaccines (Menveo® and MenQuadfi®).
  - Serogroup B meningococcal or MenB vaccines (Bexsero® and Trumenba®).
  - Pentavalent meningococcal or MenABCWY vaccine (PenbrayaTM).
- **Routine Vaccination:**
  - 2-dose series at age 11-12 years; 16 years.
- **Catch-Up Vaccination:**
  - Age 13-15 years; 1 dose now and booster at age 16-18 years (minimum interval: 8 weeks).
  - Age 16-18 years: 1 dose.

https://www.cdc.gov/vaccines/vpd/mening/index.html

Meningococcal Vaccines Cont.

- MenACWY (Menactra) not recommended or distributed.
- Pfizer's pentavalent meningococcal vaccine (Penbraya) approved by ACIP in October 2023 for use in adolescents and young adults ages 10 to 25 years. The vaccine includes serogroups A, B, C, W, and Y.
  - Approved for the VFC program.
- MenQuadfi® and Menveo can be given regardless of DTaP.
- MenACWY vaccines may be administered simultaneously with MenB vaccines if indicated, but at a different anatomic site, if feasible.
- In children under 10 years needing a meningitis vaccine for travel, Menveo liquid is not appropriate for use.

https://www.fda.gov/media/137306/download

Mpox Vaccine

- Since December 1, 2023, 22 mpox cases have been reported in Chicago; of which 17 (77%) have been reported since January 14th, 2024.
- Age 18 years and at risk for Mpox infection: 2-dose series, 28 days apart.
- Risk factors for Mpox infection include:
  - Persons who are gay, bisexual, and other MSM, transgender or nonbinary people who in the past 6 months have had:
  - A new diagnosis of at least 1 sexually transmitted disease.
  - More than 1 sex partner.
  - Sex at a commercial sex venue.
  - Sex in association with a large public event in a geographic area where Mpox transmission is occurring.
  - Persons who are sexual partners of the persons described above.
  - Persons who anticipate experiencing any of the situations described above.
- This vaccine has not yet been studied in pregnancy.

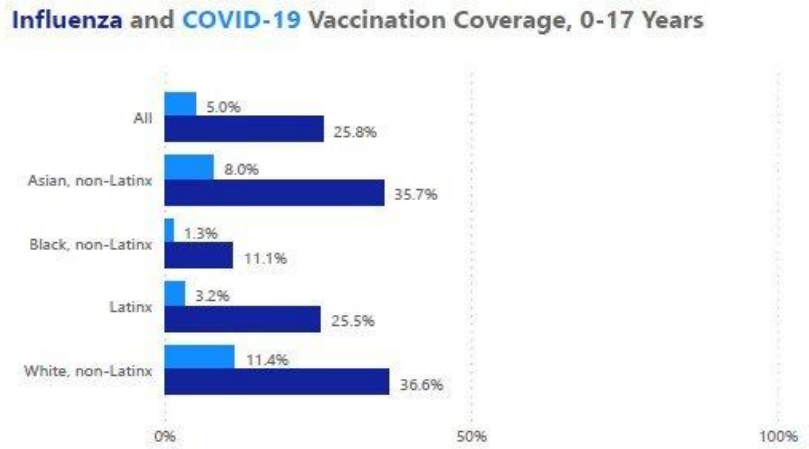
Start vaccinating now, before spring and summer festivals!

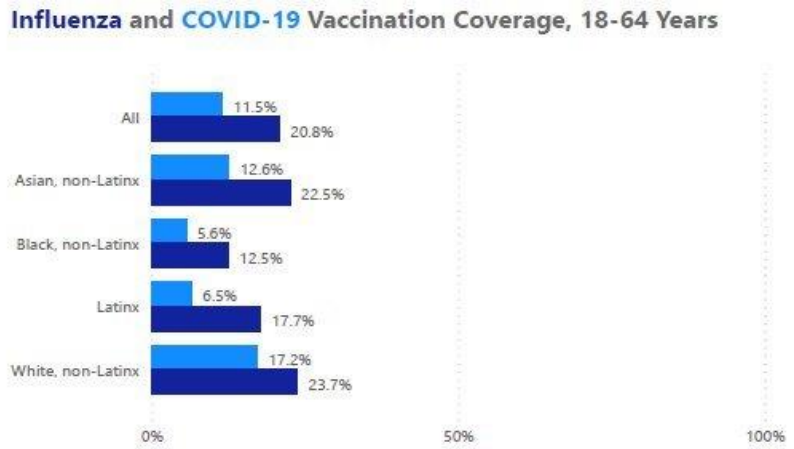
VAERS Reminder

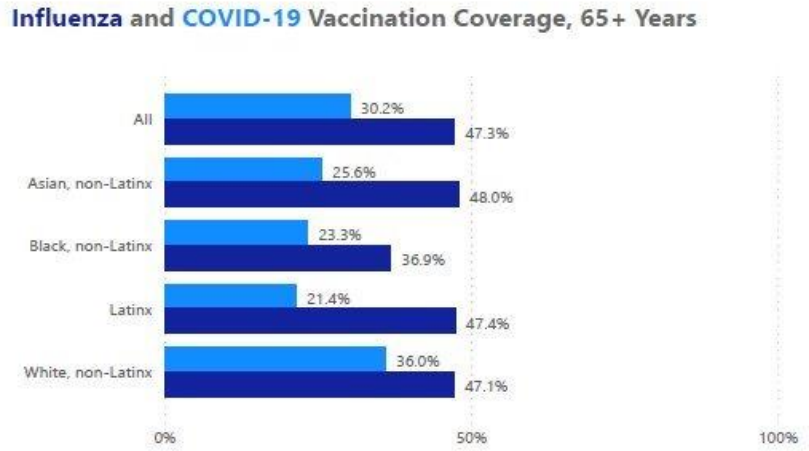
- Healthcare providers are **required by law** to report to VAERS:
  - Any adverse event listed in the VAERS Table of Reportable Events Following Vaccination that occurs within the specified time period after vaccinations.
  - An adverse event listed by the vaccine manufacturer as a contraindication to further doses of the vaccine.

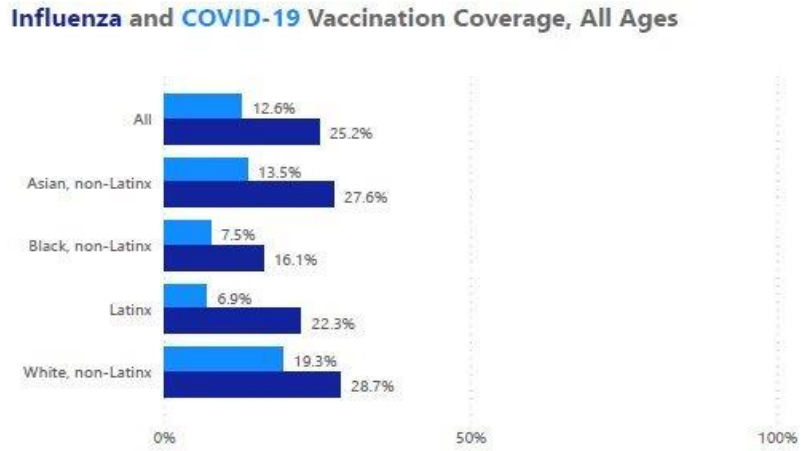
- Healthcare providers are **strongly encouraged** to report to VAERS:
  - Any adverse event that occurs after the administration of a vaccine licensed in the United States, whether it is or is not clear that a vaccine caused the adverse event.
  - Vaccine administration errors.

Chicago Vaccine Disparities









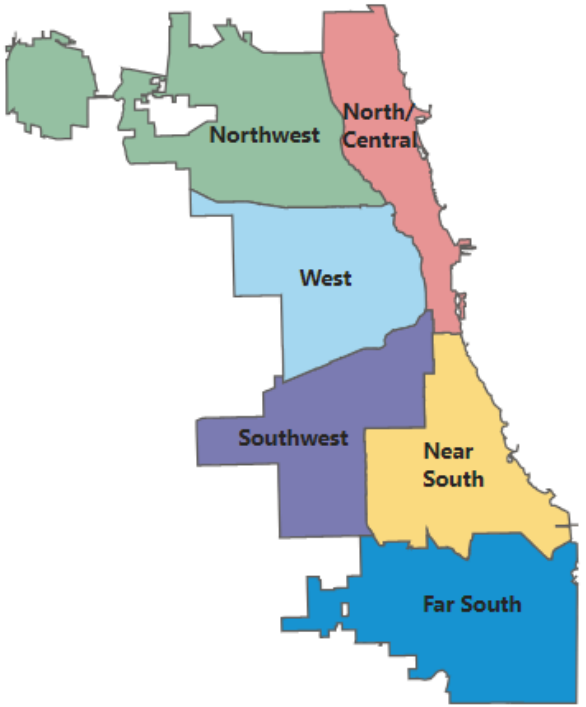
Source: I-CARE Data through December 30, 2023

HCEZ Racial Vaccine Disparities

CDPH Percent of People Up to Date with COVID-19 Vaccinations by Region

Welcome to the COVID-19 Vaccination Healthy Chicago Equity Zones (HCEZ) dashboard. To view coverage and insights for a specific region, age group, and race-ethnicity, click on the cell in the table for the group you are interested in.

Age Group and Race/Ethnicity	Citywide	Far South	Near South	North/Central	Northwest	Southwest	West
0–17 yrs							
All Race/Ethnicities	8%	2%	4%	17%	9%	4%	6%
Asian, non-Latinx	11%	8%	20%	13%	10%	5%	22%
Black, non-Latinx	2%	2%	2%	5%	7%	2%	2%
Latinx	6%	3%	7%	13%	5%	4%	6%
White, non-Latinx	16%	4%	31%	21%	13%	6%	18%
18–64 yrs							
All Race/Ethnicities	13%	7%	8%	21%	13%	7%	11%
Asian, non-Latinx	14%	15%	12%	16%	13%	8%	16%
Black, non-Latinx	6%	6%	6%	12%	11%	6%	5%
Latinx	8%	5%	9%	15%	7%	5%	7%
White, non-Latinx	19%	9%	21%	21%	16%	9%	17%
65+ yrs							
All Race/Ethnicities	32%	29%	27%	47%	30%	26%	25%
Asian, non-Latinx	28%	21%	31%	30%	25%	25%	27%
Black, non-Latinx	26%	26%	25%	35%	25%	24%	21%
Latinx	24%	22%	16%	30%	24%	23%	21%
White, non-Latinx	38%	31%	51%	48%	29%	24%	36%
All Ages							
All Race/Ethnicities	14%	10%	10%	23%	14%	8%	11%
Asian, non-Latinx	15%	15%	13%	17%	15%	10%	17%
Black, non-Latinx	9%	9%	8%	14%	12%	8%	7%
Latinx	8%	6%	9%	16%	8%	6%	8%
White, non-Latinx	21%	12%	27%	25%	18%	13%	18%



Data reported through: January 27, 2024.

Data are updated the first Wednesday of the month at 3:30 p.m., except for City holidays. All data are provisional and subject to change.

What Can Be Done To Increase Vaccine Uptake?

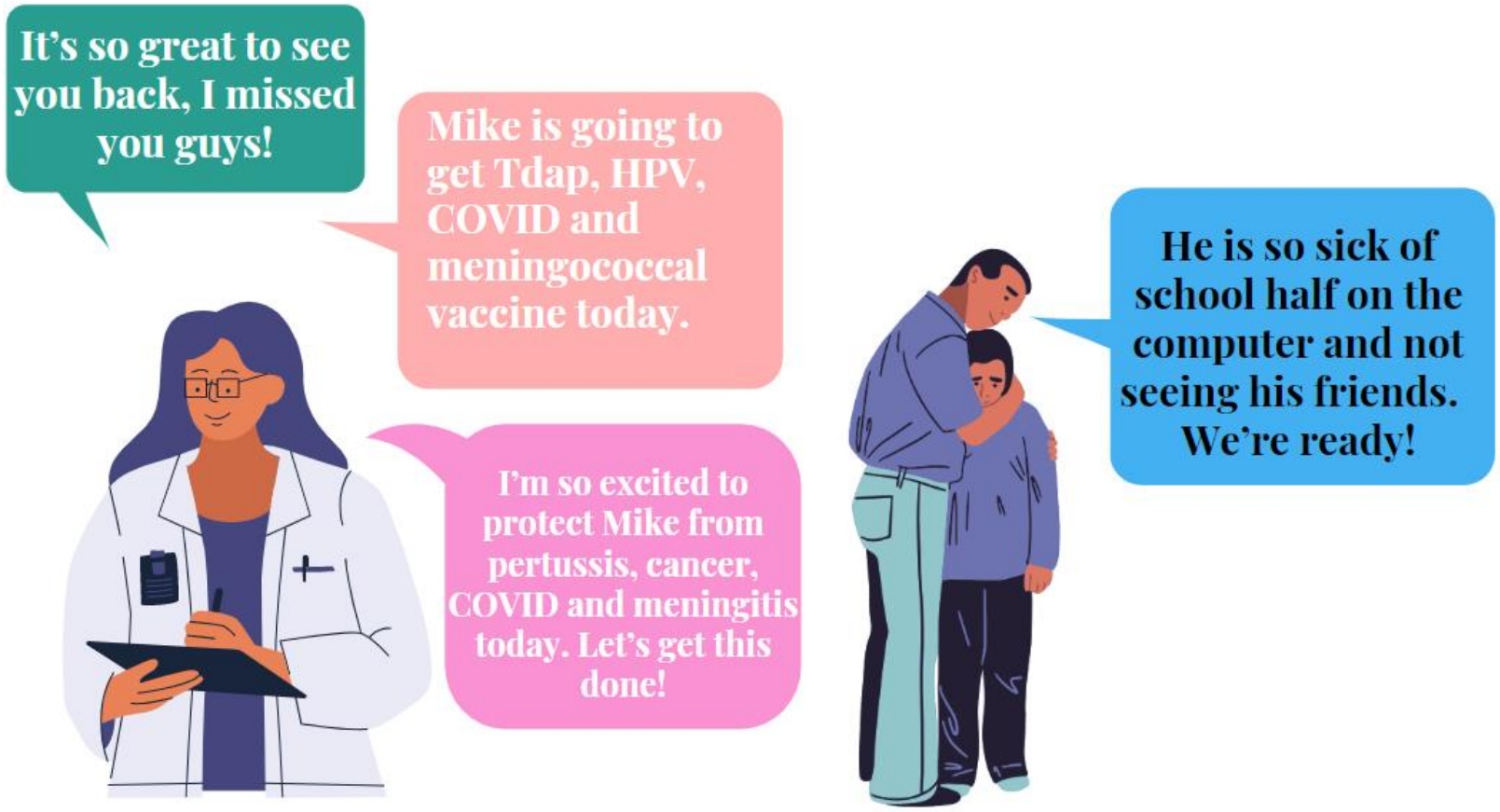
AAP suggests:

- Use the presumptive approach.
- Implementing reminder recall strategies.
- Promoting the VFC program to ensure un/under-insured have access to all recommended vaccines.
- Make every visit a vaccine visit by making a strong recommendation at **all** visits.

CDC's Let's RISE initiative: Routine vaccination is rebounding but unevenly and not among all groups. Many are still behind schedule.

- Send reminders to families whose children are behind on or due for vaccination,
- Improve vaccine related communications
- Offer vaccination-only appointments or hold vaccination clinics
- Have standing orders
- Be prepared to answer questions and address specific concerns

Presumptive Approach



Provider Recommendations Make a Difference to Their Patients

Helpful Links

- The Recommended Child and Adolescent Immunization Schedule, United States, 2024 is now available on *Red Book Online* (RBO).

- AAP Policy Statement: Recommended Childhood and Adolescent Immunization Schedule: United States, 2024.

- CDC: 2024 Child and Adolescent Immunization Schedule.

https://www.cdc.gov/mmwr/volumes/71/wr/mm7107e4.htm

Thank you!

We will now distribute awards and raffle prizes, share important last steps, and take questions.

Meet the CDPH Staff

Vaccine Coverage Awards

If you see your clinic, be ready to come up to the stage for an **AWARD**

High Pediatric Vaccine Coverage

80% or greater for 4DTaP, 3Polio, 1MMR, Hib UTD, HBV UTD, 1 VAR, PCV UTD (≥ 15 records)

C00505 ERIE FAMILY HEALTH CENTER

Congratulations and thank you for your hard work!

High Adolescent Vaccine Coverage

Tdap ≥ 90%, MCV ≥ 80%, HPV UTD ≥ 85% (>1000 records)

C00653	RUSH HEALTH CENTER @ CRANE HIGH SCHOOL

Congratulations and thank you for your hard work!

High HPV Vaccine Coverage

85% or greater for HPV UTD (≥ 10 records)

C00505	ERIE FAMILY HEALTH CENTER
C00653	RUSH HEALTH CENTER @ CRANE HIGH SCHOOL

Congratulations and thank you for your hard work!

Raffle Winners!

Upcoming Events 2024

- April 17 at 12PM – HPV Vaccinations (Trends and Updates)
- April 19 at 8:30AM – VFC Training at Northeastern Illinois University
- May 6 at 8AM – VFC Training at Malcolm X College
- Find and register for all events at: https://illinoisaap.org/upcoming-events/

MOC Part 4 Credit Opportunity

- Illinois Vaccinates Against COVID-19 (I-VAC) Quality Improvement Project.
- The goal of this project is to build the capacity of primary care providers to increase COVID-19 vaccination rates.
- Sessions will be held on select Thursdays at 8am CST from April to September 2024.
- Learn more →

Evaluation

- You must complete the evaluation by 4/8/24 to receive CME and/or a completion certificate.

SCAN ME

Questions?