DEPARTMENT OF HEALTH

Minnesota Influenza (Flu) Vaccination Guide

INFORMATION FOR THE 2024-25 RESPIRATORY SEASON

Contents

Background

The 2024-2025 fall and winter respiratory season in Minnesota is expected to lead to a rise in cases of flu, RSV and COVID-19. Respiratory diseases continue to cause severe illness in Minnesota and around the world. Increased cases of severe illness and hospitalization place an additional burden on the health care system.

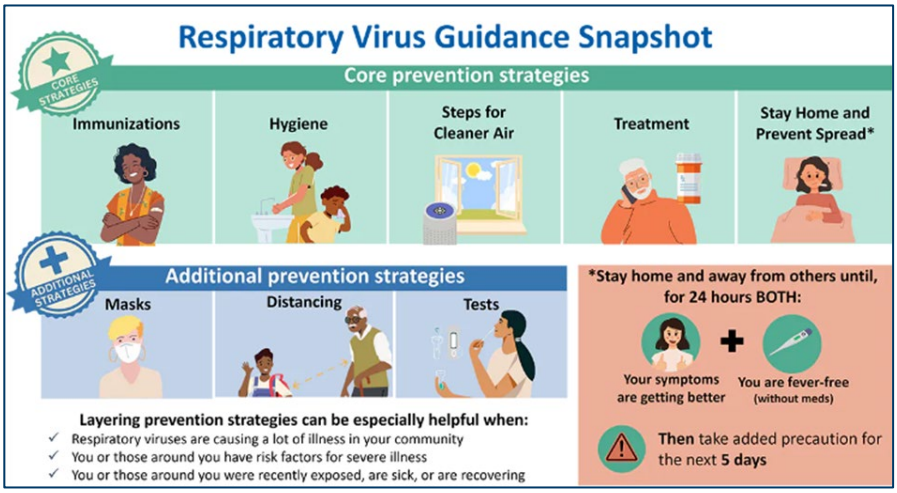
Influenza, COVID-19, and RSV vaccines help to prevent co-infection for people of all ages and are especially important for reducing the risk of severe illness and hospitalization.

Persons of all ages are susceptible to influenza. Influenza incidence is difficult to quantify precisely, as many or most of those infected may not seek medical attention and are therefore not diagnosed. Increases in health care provider visits for acute febrile respiratory illness occur annually, coinciding with periods of increased influenza activity, making influenza-like illness (ILI) surveillance systems valuable in understanding, and describing the seasonal and geographic occurrence of influenza each year. An annual flu vaccine is still the best protection against severe disease, hospitalization, and death.

Take precautions to prevent transmission

The Centers for Disease Control and Prevention (CDC) updated their Respiratory Virus Guidance in February 2024. This guidance provides practical recommendations and information on core prevention strategies (masks, cleaner air, hygiene, treatment, physical distancing and testing) as well as guidelines for when to stay home and away from others to help lower risk from flu, RSV, COVID-19 and other common respiratory viral illnesses: Respiratory Virus Guidance (www.cdc.gov/respiratory-viruses/guidance/).

Respiratory virus guidance snapshot



Respiratory Virus Guidance (www.cdc.gov/respiratory-viruses/guidance/)

Use of this guide

Anyone who handles and/or administers influenza vaccine should read this guide. Bookmark this guide for easy reference and sign up for updates by entering your email address at the top of Influenza Vaccine Information For Health Professionals.

Flu vaccine recommendations

Routine annual influenza vaccination is recommended for all people age 6 months and older without contraindications. The official CDC vaccine recommendation can be found in the published MMWR CDC: ACIP Recommendations: Influenza (Flu) Vaccine (www.cdc.gov/acip-recs/hcp/vaccine-specific/flu.html).

Solid organ transplant recipients

Solid organ transplant recipients 18 through 64 years of age who are receiving immunosuppressive medication regimens may receive either high-dose inactivated influenza vaccine (HD-IIV3) or adjuvanted inactivated influenza vaccine (aIIV3) as acceptable options. ACIP makes no preferential recommendation over other age appropriate IIV3s or RIV3. Information on a systematic review and evidence concerning effectiveness and safety that informed this recommendation can be found in the Primary Changes and Updates section of the Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices – United States. 2024-2025 Influenza Season (www.cdc.gov/mmwr/volumes/73/rr/rr7305a1.htm).

HD-IIV3 and aIIV3 vaccines are approved for people age ≥65 years. Use of high-dose and adjuvanted flu vaccine products for people age <65 years are considered off-label use.

Adults age 65 years and older

ACIP recommends that adults age ≥65 years preferentially receive any one of the following higher dose or adjuvanted influenza vaccines:

- Trivalent high-dose inactivated influenza vaccine (HD-IIV3).
- Trivalent recombinant influenza vaccine (RIV3).
- Trivalent adjuvanted inactivated influenza vaccine (aIIV3).

Note: HD-IIV3 is now a 0.5 mL dose, not a 0.7 mL dose.

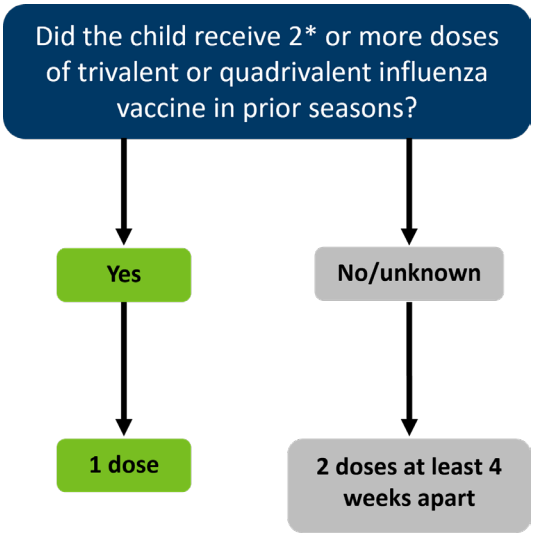
If none of these three vaccines are available at an opportunity for vaccine administration, then any other age-appropriate influenza vaccine should be used. Higher dose vaccines include HD-IIV3 and RIV3, both of which contain a higher dose of HA antigen per virus than standard-dose vaccines (60 µg for HD-IIV3 and 45 µg for RIV3, compared with 15 µg for standard-dose inactivated vaccines). Adjuvanted inactivated influenza vaccine (aIIV3) contains MF59 adjuvant.

Children less than 9 years may need two doses

Give two doses of influenza vaccine, at least 4 weeks apart to children age 6 months through 8 years who are receiving influenza vaccine for the first time or if they have not received two or more doses of influenza vaccine previously. Two doses are recommended even if the child turns 9 between receipt of dose 1 and dose 2.

Refer to Influenza vaccine dosing algorithm for children 6 months through 8 years old, CDC MMWR: Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024–25 Influenza Season (www.cdc.gov/mmwr/volumes/73/rr/rr7305a1.htm).

Vaccine dosing algorithm for children age 6 months through 8 years



*The two doses do not need to have been received during the same or consecutive seasons.

Flu vaccine products for 2024-25

All U.S. flu vaccines will be trivalent for the 2024-2025 season. Flu vaccine will no longer contain the influenza B/Yamagata component as it has not been detected globally as an actively circulating virus after March 2020.

For the 2024–25 season, U.S. egg-based influenza vaccines (i.e., vaccines other than ccIIV3 and RIV3) will contain hemagglutinin (HA) derived from:

- An influenza A/Victoria/4897/2022 (H1N1)pdm09-like virus.
- An influenza A/Thailand/8/2022 (H3N2)-like virus.
- An influenza B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

For the 2024–25 season, U.S. cell culture–based inactivated (ccIIV3) and recombinant (RIV3) influenza vaccines will contain HA derived from:

- An influenza A/Wisconsin/67/2022 (H1N1)pdm09-like virus.
- An influenza A/Massachusetts/18/2022 (H3N2)-like virus.
- An influenza B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

For more information on flu vaccine antigen selections, visit CDC: Selecting Viruses for the Seasonal Influenza Vaccine (www.cdc.gov/flu/prevent/vaccine-selection.htm).

New options for flu vaccine are available nearly every season. This makes flu vaccine more accessible but may also increase medication errors. Double check the package insert for age indication, route, and dosage. This information is summarized in the following chart and is available online in the 2024-25 Seasonal Influenza Vaccine Dosage Chart on Influenza Vaccine Administration (www.health.state.mn.us/diseases/flu/hcp/vaccine/admin.html).

Seasonal influenza vaccine dosage chart

Inactivated Influenza Vaccine, Adjuvanted, Trivalent (aIIV3)

Manufacturer[1]	Trade name	Age	Dose – Presentation	Route
Seqirus	Fluad	65 years and older	0.5 mL – prefilled syringe	IM (intramuscular)[2]

Recombinant Influenza Vaccine, Trivalent (RIV3)

Manufacturer	Trade name	Age	Dose – Presentation	Route
Sanofi Pasteur	Flublok	18 years and older	0.5 mL – prefilled syringe	IM (intramuscular)

Cell Culture-Based Inactivated Influenza Vaccine, Trivalent (ccIIV3)

Manufacturer	Trade name	Age	Dose – Presentation	Route
Seqirus	Flucelvax	6 months and older	0.5 mL – prefilled syringe 0.5 mL – multi-dose vial	IM (intramuscular)

Inactivated Influenza Vaccine, High Dose, Trivalent (HD-IIV3)

Manufacturer	Trade name	Age	Dose – Presentation	Route
Sanofi Pasteur	FluZone High-Dose	65 years and older	0.5 mL – prefilled syringe[3]	IM (intramuscular)

Inactivated Influenza Vaccine, Trivalent (IIV3)

Manufacturer	Trade name	Age	Dose – Presentation	Route
GlaxoSmithKline	Fluarix	6 months and older	0.5 mL – prefilled syringe	IM (intramuscular)
GlaxoSmithKline	FluLaval	6 months and older	0.5 mL – prefilled syringe	IM (intramuscular)
Seqirus	Afluria[4]	6 through 35 months[5]	0.25 mL – multi-dose vial	IM (intramuscular)
Seqirus	Afluria	3 years and older	0.5 mL – multi-dose vial 0.5 mL – prefilled syringe	IM (intramuscular)
Sanofi Pasteur	FluZone	6 months and older[6]	0.5 mL – prefilled syringe 0.5 mL – multi-dose vial	IM (intramuscular)

Live Attenuated Influenza Vaccine, Quadrivalent (LAIV4)

Manufacturer	Trade name	Age	Dose – Presentation	Route
AstraZeneca	FluMist	2 through 49 years	0.2 mL – prefilled intranasal sprayer; 0.1 mL in each nostril	Intranasal

Adapted from CDC MMWR: Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024–25 Influenza Season (www.cdc.gov/mmwr/volumes/73/rr/rr7305a1.htm) *(August 29, 2024; 73(5);1–25) Table 1.*

[1] Make sure you are using the correct codes to enter doses into the Minnesota Immunization Information Connection (MIIC) by going to MIIC Codes for Data Submission and Exchange (www.health.state.mn.us/people/immunize/miic/data/codes.html).

[2] Recommended vaccination sites: adults and older children – deltoid muscle; infants and young children – anterolateral aspect of the thigh.

[3] Note: HD-IIV3 is now a 0.5 mL dose not a 0.7 mL dose.

[4] Afluria is licensed for administration with the PharmaJet Stratis needle-free injection system for persons age 18 through 64 years.

[5] The Afluria 0.25 mL pre-filled syringe dose for children ages 6 through 35 months is no longer available.

[6] The Fluzone 0.25 mL pre-filled syringe dose for children ages 6 through 35 months is no longer available.

Pediatric flu vaccine

There are five inactivated influenza vaccine products approved for children as young as age 6 months: Afluria, Fluzone, FluLaval, Fluarix, and Flucelvax. FluMist, a live, attenuated vaccine is approved for

children over 2 years. The dosages differ according to the product. Be sure to follow the package insert instructions. In summary, the dosage for:

- Afluria differs between children age 6 through 35 months (0.25 mL) and for 3 years and older (0.5 mL).
  - Afluria 0.25-mL prefilled syringes are not expected to be available this year. For children age 6 through 35 months, a 0.25-mL dose must be obtained from a multidose vial.
- Fluzone for age 6 months to 35 months is either a 0.25 mL or 0.5 mL dose. The dose for ages 36 months and older is 0.5 mL.
  - Fluzone 0.25 mL prefilled syringes are not available this year. If a 0.5 mL prefilled syringe of Fluzone is used for a child age 6 through 35 months, the dose volume will be 0.5 mL per dose.
  - Or a 0.25-mL dose must be obtained from a multidose vial.
- FluLaval, Flucelvax and Fluarix are 0.5 mL for age 6 months and older.
- FluMist (LAIV) for healthy children is 0.1 mL in each nostril and is licensed for persons age 2 through 49 years.

Timing of vaccination

Because timing of the onset, peak, and decline of influenza activity varies, the ideal time to start vaccinating cannot be predicted each season. Decisions about timing necessitate balancing considerations regarding this unpredictability of the influenza season, possible waning of vaccine-induced immunity over the course of a season, and programmatic considerations. For most persons who need only one dose of influenza vaccine for the season, vaccination should ideally be offered during September or October. However, vaccination should continue after October and throughout the influenza season as long as influenza viruses are circulating, and unexpired vaccine is available.

Considerations for timing of vaccination include the following:

- **Most adults (particularly adults age ≥65 years) and for pregnant persons in the first or second trimester**: Vaccination during July and August should be avoided unless there is concern that vaccination later in the season might not be possible.
- **Children who require two doses**: Certain children age 6 months through 8 years require two doses of influenza vaccine for the season. These children should receive their first dose as soon as possible (including during July and August, if vaccine is available) to allow the second dose (which must be administered ≥4 weeks later) to be received, ideally, by the end of October.
- **Children who require only one dose**: Vaccination during July and August can be considered for children of any age who need only one dose of influenza vaccine for the season. While waning of immunity after vaccination over the course of the season has been observed among all age groups, there are fewer published studies reporting results specifically among children. Moreover, children in this group might visit health care providers during the late summer months for medical examinations before the start of school. Vaccination can be considered at this time because it represents a vaccination opportunity.
- **Pregnant persons in the third trimester**: Vaccination during July and August can be considered for pregnant persons who are in the third trimester because vaccination might reduce risk for influenza illness in their infants during the first months after birth, when they are too young to receive influenza vaccine.

Contraindications and precautions

Find contraindications and precautions information for the 2024-25 influenza season on Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2024–25 Influenza Season (www.cdc.gov/mmwr/volumes/73/rr/rr7305a1.htm).

- A person who has experienced Guillain-Barre Syndrome (GBS) within 6 weeks of receipt of a flu vaccine may be vaccinated after having a conversation with their medical provider regarding the risks and benefits of vaccination. While GBS is extremely rare after vaccination, a person who has experienced GBS within 6 weeks of a flu vaccination could be at higher risk to experience it again after vaccination.
- Mild illness is neither a contraindication nor precaution to flu vaccination. A mild illness is one in which there are no expectations of a worsening illness course. Examples include otitis media in which antibiotics are prescribed and fever may or may not still be present, or cold symptoms that have been declining. Immunization programs should have a policy with clear criteria about what symptoms would warrant deferral (e.g., fever >100.5 degrees F, or an acute illness that began within the past 24-48 hours) and when the patient may be vaccinated.
- LAIV: Because LAIV is a live vaccine, additional contraindications and precautions include, pregnancy, conditions that suppress the immune system, receipt of antivirals, CSF leak, or cochlear implants. Additionally, ACIP does not recommend LAIV for people with asthma and underlying medical conditions that place a person at high risk for influenza (e.g., diabetes, heart disease, etc.).

Egg allergy

- People with egg allergies can receive any licensed, recommended, age-appropriate flu vaccine (IIV3, RIV3, or LAIV3) and should be observed for the standard 15 minutes.
- Administration of flu vaccine to people with egg allergies requires no additional precautions other than those recommended for administration of any vaccine to any individual.
- All vaccination providers should be familiar with the procedure for treating an acute reaction and be currently certified in cardiopulmonary resuscitation (CPR). Epinephrine and equipment for maintaining an airway should be available for immediate use.
- Postvaccination observation period is not specifically recommended for egg-allergic people. Providers are recommended to consider observing patients (seated or supine) for 15 minutes after administration of any vaccine to decrease the risk for injury should syncope occur.

Vaccine ordering

All respiratory vaccines, including COVID-19 vaccine, are commercially available and should be ordered through your routine ordering process. Providers enrolled in MnVFC or UUAV will order vaccine in MIIC.

Vaccine storage and handling

Proper storage and handling of vaccine is critical to its effectiveness. Vaccines are especially sensitive to freezing temperatures. Here are some key tips to help ensure that your flu vaccine remains viable:

- Follow CDC and manufacturer specifications for maintaining the recommended temperature range:
  - Refrigerated vaccines: 36° through 46°F or 2° through 8°C, aim for 40°F/5°C.

  - Frozen vaccines: -58° through 5°F or -50°C through -15°C, aim for 0°F/-18°C.
  - Ultra-low cold vaccines: -130°F through -76°F or -90°C through -60°C.
- Optimal storage units include “stand alone” or pharmacy grade units; they provide uniform temperatures inside the unit. If using a combination unit, do not use the freezer compartment to store vaccines because the freeze-thaw cycles impact the temperatures in the refrigerator portion and increase the risk of exposure to freezing temperatures. Include water bottles in the refrigerator to add additional temperature buffering.
- Use a calibrated temperature monitoring device; a continuous temperature monitoring device, such as a data logger, is recommended.
- Check and document the minimum and maximum temperature once a day and the current temperature twice a day.
- Take action if the temperature goes out of range. Review managing out of range temperatures section.
- Visit CDC: Vaccine Storage and Handling (www.cdc.gov/vaccines/hcp/storage-handling/) for full guidance on storage and handling of vaccines.

Note: There are specific storage requirements for those that participate in the Minnesota Vaccine for Children Program (MnVFC) (www.health.state.mn.us/people/immunize/hcp/mnvfc/index.html). Refer to your site's Policies and Procedures Manual for guidance.

Managing out-of-range temperatures (excursions)

Take immediate action on out-of-range temperatures and mishaps

When your continuous temperature monitoring device is reading a temperature that falls outside the recommended range, it is considered an excursion or out-of-range temperature. Vaccines exposed to out-of-range temperatures may become nonviable (unusable, especially if frozen).

- Vaccine must be stored within the following temperature ranges:
  - Refrigerator between 36°F and 46°F (between 2°C and 8°C), aim for 40°F (5°C).
  - Freezer between -58°F and +5°F (between -50°C and -15°C), aim for 0°F (-18°C).

Move vaccine immediately for refrigerated vaccine that is less than 2 degrees Celsius (36 degrees Fahrenheit) and follow action steps for out-of-range temperatures. Vaccines exposed to freezing temperatures for even a brief time may become nonviable (unusable).

- If you find an out-of-range temperature, take immediate action:
  - Determine the problem. Attempt to fix the cause, if possible. It might be easily corrected (e.g., door not shut, power outage, unit malfunction).
  - Adjust the storage unit’s temperature, if necessary.
  - Report the excursion to the vaccine coordinator or backup, if available.
- Monitor the temperature. If the temperature is too warm and doesn’t stabilize in the correct range within 30 minutes, follow these action steps:
  - Stop using the vaccine.

  - Mark the vaccine "Do Not Use" so no one administers it.
  - Move the vaccine to a storage unit that is maintaining the correct temperature.
- Collect the lot numbers, expiration dates, storage unit temperatures, the room temperature, and the time the unit was out-of-range.
  - Determine the length of time the storage unit was out of range and how high/low the temperature got.
  - Determine if any of this vaccine was involved in a previous storage and handling mishap.
- Be aware that open multidose vials and refrigerated MMR vaccine are especially sensitive to out-of-range temperatures. Confirm viability with vaccine manufacturer(s) with every excursion even if the temperature stabilized within 30 minutes.
- Call the vaccine manufacturer(s) and ask to speak to a medical consultant or quality assurance staff. Manufacturer contact information can be found on Immunize.org: Vaccine Manufacturers (www.immunize.org/clinical/external/manufacturers/).
- Document your actions. You can use MDH forms or your own site's form to document out-of-range temperatures and actions taken.
  - Storage and Handling Mishap Log (www.health.state.mn.us/people/immunize/hcp/mnvfc/mishaplog.pdf).
  - Storage and Handling Mishap Checklist (www.health.state.mn.us/people/immunize/hcp/mnvfc/vaxchklst.pdf).
- Keep these logs for three years.

Recommending vaccinations

Provide a strong recommendation to your patients about flu, RSV and COVID-19 immunizations. Trusted health care providers are a powerful influence on patients' decisions to vaccinate. Prepare for questions about vaccine effectiveness, safety and when and why to get vaccinated and re-vaccinated:

- CDC: Conversation Guide For Healthcare Providers (www.cdc.gov/respiratory-viruses/tools-resources/downloads/HCP-conversation-guide-508.pdf).
- CDC: Healthcare Worker Vaccination is Important for Respiratory Virus Season (https://blogs.cdc.gov/safehealthcare/hcw-vaccination-respiratory-virus-season/).
- CDC: COVID-19 Vaccine Confidence (www.cdc.gov/vaccines/covid-19/vaccinate-with-confidence.html).
- Immunization Information for Health Care Providers (www.health.state.mn.us/people/immunize/hcp/index.html).

Vaccine screening templates

Screen for possible contraindications and precautions before vaccinating. Some sample screening forms include:

- Immunize.org: Screening Checklist for Contraindications to Vaccines for Adults (www.immunize.org/wp-content/uploads/catg.d/p4065.pdf).
- Immunize.org: Screening Checklist for Contraindications to Vaccines for Children and Teens (www.immunize.org/wp-content/uploads/catg.d/p4060.pdf).

- Template: COVID-19 Vaccine Screening and Agreement (www.health.state.mn.us/diseases/coronavirus/vaccine/screening.docx).
- Influenza Vaccine: IIV (www.health.state.mn.us/diseases/flu/hcp/vaccine/iivall.docx).
- Influenza Vaccine: Flu (www.health.state.mn.us/diseases/flu/hcp/vaccine/laivall.docx).

Verify patient immunization data

Prior to administering a dose of vaccine, please review the patient's immunization history. The primary source of vaccine administration data should be the Minnesota Immunization Information Connection (MIIC). If the data for a patient is not in MIIC, other acceptable sources include:

1. Their CDC vaccination card.
2. An official document from a health care provider or another state's Immunization Information System (IIS) with day, month, year, and product administered as well as the patient's name and date of birth.
3. Electronic documentation from a health care provider or another state's Immunization Information System (IIS) such as the MyChart app or another consumer access application (app) that includes day, month, year, and product administered as well as the patient's name and date of birth.
4. A patient's U.S. Department of State's Vaccination Documentation form DS-3025 that includes a patient's verified past immunizations.

For more information, review MIIC user guidance for looking up a client at Client Search and Printing Immunization Records MIIC User Guidance and Training Resources (www.health.state.mn.us/people/immunize/miic/train/clientsearch.html) and entering immunization data at Adding Immunizations Not Using Inventory MIIC User Guidance and Training Resources (www.health.state.mn.us/people/immunize/miic/train/addnoinv.html).

Vaccine Information Statements (VIS) and Emergency Use Authorizations (EUA)

Vaccine information sheets (VIS)

Vaccines licensed through the FDA and added to the vaccine injury table are required to have a vaccine information sheet (VIS). Federal law requires that patients receive the most current VIS prior to administration of a licensed vaccine. For more information and current VISs, refer to Vaccine Information Statements (www.cdc.gov/vaccines/hcp/vis/index.html).

EUA fact sheets

- EUA fact sheets for vaccination providers are product-specific information sheets that replace the usual package insert. The fact sheet for vaccine recipients is similar to a licensed product's VIS.
- The EUA fact sheet for vaccine recipients explains the vaccine risks and benefits, specific vaccine product information and its use, and information from clinical trials that support the FDA's emergency use authorization.
- You are legally required to give an EUA fact sheet to each recipient/parent/legal representative prior to vaccination. Be prepared to answer questions about the vaccine.

- EUA fact sheets for providers and recipients are available on FDA, CDC, MDH, and vaccine manufacturer websites. Translated fact sheets in multiple languages are on FDA: COVID-19 Vaccines (www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines).

Vaccine protocols

MDH vaccine protocol information and templates can be found on Vaccine Protocols (www.health.state.mn.us/people/immunize/hcp/protocols/index.html).

Co-administration

- Influenza, COVID and RSV (both vaccine and monoclonal antibody) can be given with any other vaccines. If giving intranasal live influenza vaccine (FluMist), it must be given at the same time as any other live virus vaccine or at least 28 days later.
- Vaccines should be given in different sites or at least one inch apart if given in the same limb.
- Vaccines should never be mixed in the same syringe.

Administration of vaccines

All people who administer vaccines should receive comprehensive, competency-based staff training and education based on their scope of practice, including the "rights of vaccine administration," patient care before, during, and after vaccine administration, vaccine preparation, and skill validation.

Vaccine administration resources for all people who vaccinate, including staff who are new to vaccination and staff who need a refresher:

- CDC: ACIP Vaccine Administration Guidelines for Immunization (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html).
- CDC: Vaccine Administration Route and Site (www.cdc.gov/vaccines/hcp/admin/administer-vaccines.html)
- Immunize.org: Clinical Resources: Administering Vaccines (www.immunize.org/clinical/topic/admin-vaccines/).
- How to hold your child during a vaccination (www.health.state.mn.us/diseases/coronavirus/vaccine/comforthold.pdf).

Take precautions to prevent transmission. Vaccination activities should include precautions to prevent respiratory disease transmission. Providers should use precautions (e.g., mask requirements, social distancing, etc.) depending on disease circulation in your community. Consult Situation Update for COVID-19 (www.health.state.mn.us/diseases/coronavirus/stats/index.html) and Weekly Influenza and Respiratory Activity: Statistics (www.health.state.mn.us/diseases/flu/stats/index.html) for information on disease activity.

Post-vaccination care

Post-vaccination instructions

Preparing people for what to expect after vaccination and when to follow up with a health care provider is a best practice and expectation. Patient instructions should include information specific to the product they are receiving. This information should include:

- Common side effects (listed in the VIS and EUA fact sheet).
- When to contact their health care provider (such as signs of an allergic reaction or medical concerns that may or may not be related to vaccination).
- For vaccine(s) requiring more than one dose, the importance of receiving all recommended dose(s) of vaccine to build an adequate immune response.

Observation periods following vaccination

Syncope (fainting) might occur in association with any injectable vaccine, especially in adolescents. In accordance with CDC: General Best Practice Guidelines for Immunization (GBPG) (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html), vaccination providers, particularly when vaccinating adolescents, should consider observing vaccine recipients for 15 minutes after vaccination.

Additionally, providers should consider observing people with the following medical histories for 30 minutes after COVID-19 vaccination to monitor for allergic reactions:

- Allergy-related contraindication to a different type of COVID-19 vaccine.
- Non-severe, immediate (onset within 4 hours) allergic reaction after a previous dose of COVID-19 vaccine.
- Anaphylaxis after non-COVID-19 vaccines or injectable therapies.

Emergency preparation

Administer vaccines in settings where staff are trained to recognize and respond to reactions.

- Have a signed hardcopy of a medical management of vaccine reaction plan and protocol that staff have reviewed and are ready to implement.
- Immediate systemic reactions can include syncope (fainting) and anaphylaxis.
  - To minimize syncope, have a place for patients to sit down while they are vaccinated, and be ready to lower them to a laying position if needed.
  - Although rare, anaphylaxis to a vaccine can occur and is a life-threatening event. Have the appropriate equipment on hand and have trained staff available to administer epinephrine and maintain an airway in settings where vaccinations are given.
- Learn more about how to prepare for anaphylactic reactions at CDC: Interim Considerations: Preparing for the Potential Management of Anaphylaxis after COVID-19 Vaccination (www.cdc.gov/vaccines/covid-19/clinical-considerations/managing-anaphylaxis.html).
- Immunize.org has examples of emergency plans. Refer to Immunize.org: Medical Management of Vaccine Reactions in Children and Teens (www.immunize.org/catg.d/p3082a.pdf) and Immunize.org: Medical Management of Vaccine Reactions in Adult Patients (www.immunize.org/catg.d/p3082.pdf) for more information.

Report vaccine adverse events and administration errors

- Health care providers are required to report any event after vaccination that requires medical attention, regardless of whether it is related to vaccination.
- Learn more about VAERS at CDC: Vaccine Safety Systems (www.cdc.gov/vaccine-safety-systems/). To submit an event, go to VAERS: Report an Adverse Event (vaers.hhs.gov/reportevent.html). Use this HHS: VAERS 2.0_Checklist.pdf (https://vaers.hhs.gov/docs/VAERS%202.0_Checklist.pdf) to help gather information needed when submitting a report
- HIPAA permits reporting of vaccine adverse events and medical documentation to VAERS for public health purposes under 45 CFR, section 164.512(b), as authorized by 42 USC 300aa-25.

Documenting vaccination and vaccination records

Documenting vaccine

Vaccine documentation must include:

- Site/facility address where the vaccine was administered (in the chart somewhere, does not need to be on the immunization screen).
- Date vaccine was administered.
- Vaccine type.
- Vaccine manufacturer.
- Vaccine lot number.
- Signature and title of person(s) administering vaccine.
- Publication date of VIS (located at the bottom of VIS).
- Date VIS was given to the patient, parent, or legal representative (usually the same as the vaccine administration date, but still needs to be documented).
- VFC eligibility if vaccinating children.

Vaccines should also be uploaded or entered into MIIC within 7 days of administration. MIIC cannot be used as the medical record. Minnesota Immunization Information Connection (MIIC) (www.health.state.mn.us/people/immunize/miic/index.html).

Billing and reimbursement

Insurance plans should reimburse providers for the cost of the vaccine and the administration fee. Vaccine providers may seek appropriate reimbursement from a program or plan that covers vaccine for the vaccine recipient.

For patients who have a Minnesota Health Care Plan (MHCP), providers will be reimbursed for the administration fee. Children with a MHCP should get MnVFC vaccine and not billed for the cost of the vaccine. Adults with a MHCP should get privately purchased vaccine and bill the MHCP for the cost of the vaccine. MHCP also covers vaccine counseling that occurs during visits and for those vaccines they can administer. For details, refer to the MHCP Provider Manual: Immunizations and Vaccinations (www.dhs.state.mn.us/main/idcplg?IdcService=GET_DYNAMIC_CONVERSION&RevisionSelectionMethod=LatestReleased&dDocName=dhs16_136660). Contact the MHCP Provider Call Center at 651-431-2700 with any related questions.

Additional billing resources

Find vaccine administration codes from CDC at Data Code Sets (www.cdc.gov/vaccines/programs/iis/code-sets.html).

Additional resources

Clinical resources

- CDC: Respiratory Virus Guidance (www.cdc.gov/respiratory-viruses/guidance/).
- CDC: ACIP General Best Practice Guidelines for Immunization (www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html).
- Immunize.org: Influenza (www.immunize.org/vaccines/a-z/influenza/).
- Immunize.org: COVID-19 (www.immunize.org/vaccines/a-z/covid-19/).
- Immunize.org: RSV (Respiratory Syncytial Virus) (www.immunize.org/vaccines/a-z/rsv/).

Influenza, COVID-19, and RSV testing

It is important that providers distinguish between influenza, COVID-19 and, RSV through PCR testing whenever possible. Multiplex PCR tests for all 3 pathogens, as well as a dualplex PCR test for influenza and COVID-19 are available. Each pathogen also has rapid antigen testing available. At this time, PCR testing is considered to be the gold-standard diagnostic test for influenza, COVID-19, and RSV.

Rapid flu testing

While rapid flu testing can be useful, it has limitations.

- False negative flu rapid testing results are common, and a negative rapid test result does not rule out flu.
- Likewise, a positive rapid test does not confirm flu, especially during times of low prevalence of disease in the community.
- Antiviral treatment should not be withheld from patients with signs and symptoms suggestive of flu and a negative rapid flu test result.

Providers are encouraged to use clinical judgment for treatment and infection control decisions. More information on rapid tests can be found at Rapid Influenza Diagnostic Testing (www.health.state.mn.us/diseases/flu/hcp/rapid.html).

MDH will communicate any changes in guidelines on Specimen Collection and Testing for Seasonal Influenza (www.health.state.mn.us/diseases/flu/hcp/lab.html) and through the Health Alert Network (www.health.state.mn.us/communities/ep/han/index.html).

COVID-19 testing

- Similar to rapid flu tests, at-home COVID-19 antigen tests are less accurate than PCR tests and false-negative results can occur.
- Patients are not required to have a positive COVID-19 test to be treated with antivirals.
  - If a provider feels COVID-19 is likely despite a negative test (or no test) result (e.g., a patient with signs/symptoms consistent with COVID-19 following a recent known exposure to someone with COVID-19), antiviral treatment should not be withheld if patients are otherwise eligible.

Antiviral treatment recommendations

Influenza antivirals

Antiviral use is recommended as soon as possible for patients with suspected or confirmed flu who are:

- Hospitalized.
- Have severe, complicated, or progressive illness.
- Outpatients at higher risk for influenza complications (e.g., children under age 2 years, pregnant women, those with immunosuppression, etc.).
- Residents of nursing homes and other chronic-care facilities.
- Have uncomplicated influenza and present within 48 hours of illness (based on clinical judgment).

For more information on influenza antivirals visit, CDC: Influenza Antiviral Medications (www.cdc.gov/flu/professionals/antivirals/index.htm): CDC: Influenza Antiviral Medications: Summary for Clinicians (www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm).

COVID-19 antivirals

For information about COVID-19 antiviral treatment visit IDSA Guidelines on the Treatment and Management of Patients with COVID-19 (www.idsociety.org/practice-guideline/covid-19-guideline-treatment-and-management/) and Therapeutic Options for COVID-19 Patients (www.health.state.mn.us/diseases/coronavirus/hcp/therapeutic.html).

Stay informed!

Immunization updates

- For information on flu activity in Minnesota, subscribe to our Weekly Influenza & Respiratory Activity: Statistics (www.health.state.mn.us/diseases/flu/stats/index.html).
- Get an email alert when updates are made to Immunization Information for Health Care Providers (www.health.state.mn.us/people/immunize/hcp/index.html) by signing up at the bottom of the webpage.
- Subscribe to Got Your Shots? News (www.health.state.mn.us/people/immunize/hcp/gys/index.html) for monthly immunization updates from MDH.

Respiratory disease and vaccination coverage data

- Viral Respiratory Illness in Minnesota (Data & Statistics) (www.health.state.mn.us/diseases/respiratory/stats/index.html) for current and past trends on weekly rates of influenza, RSV and COVID-19 hospitalizations and cases in Minnesota and submit your email address at the bottom of the webpage to sign-up for weekly updates.
- CDC: Respiratory Virus Data Channel Weekly Snapshot (www.cdc.gov/respiratory-viruses/data-research/dashboard/snapshot.html).
- CDC: RespVaxView (www.cdc.gov/vaccines/imz-managers/coverage/respvaxview/index.html) for vaccination coverage data for all ages.
- CDC COVID Data Tracker (https://covid.cdc.gov/covid-data-tracker/#datatracker-home).
- CDC: Weekly U.S. Influenza Surveillance Report (www.cdc.gov/flu/weekly/index.htm).

Clinical questions

MDH Immunization program

- Health.vaccineSME@state.mn.us regarding clinical vaccine recommendations, schedules, resources.
- Health.Miichelp@state.mn.us regarding MIIC application, data, user accounts, client search, reports, reminder recall.
- Health.mnvfc@state.mn.us regarding Minnesota Vaccines for Children (MnVFC) policies and procedures, enrollment, reports, vaccine storage and handling, and MnVFC ordering. 651-201-5522.
- Health.uuadultvax@state.mn.us regarding Uninsured and Underinsured Adult Vaccine (UUAV) policies and procedures, enrollment, reports, vaccine storage and handling, and MnVFC ordering.
- Call 651-201-5414 or 1-800-657-3970.

Centers for Disease Control and Prevention (CDC)

- CDC-Info line: 1-800-232-4636.
- CDC-INFO (www.cdc.gov/cdc-info/index.html).

Minnesota Department of Health
PO Box 64975, St. Paul, MN 55164-0975
health.vaccineSME@state.mn.us
www.health.state.mn.us/immunize

09/04/2024

To obtain this information in a different format, call: 651-201-5414.