

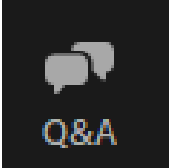


Management of COVID-19 Vaccine Side Effects

February 25, 2021

Housekeeping

- **How to Ask Questions**

- Click on the  icon found at the bottom part of your screen
- A box will open where you can type in questions, comments, indicate sound problems, etc.
- Use this throughout the webinar to ask questions

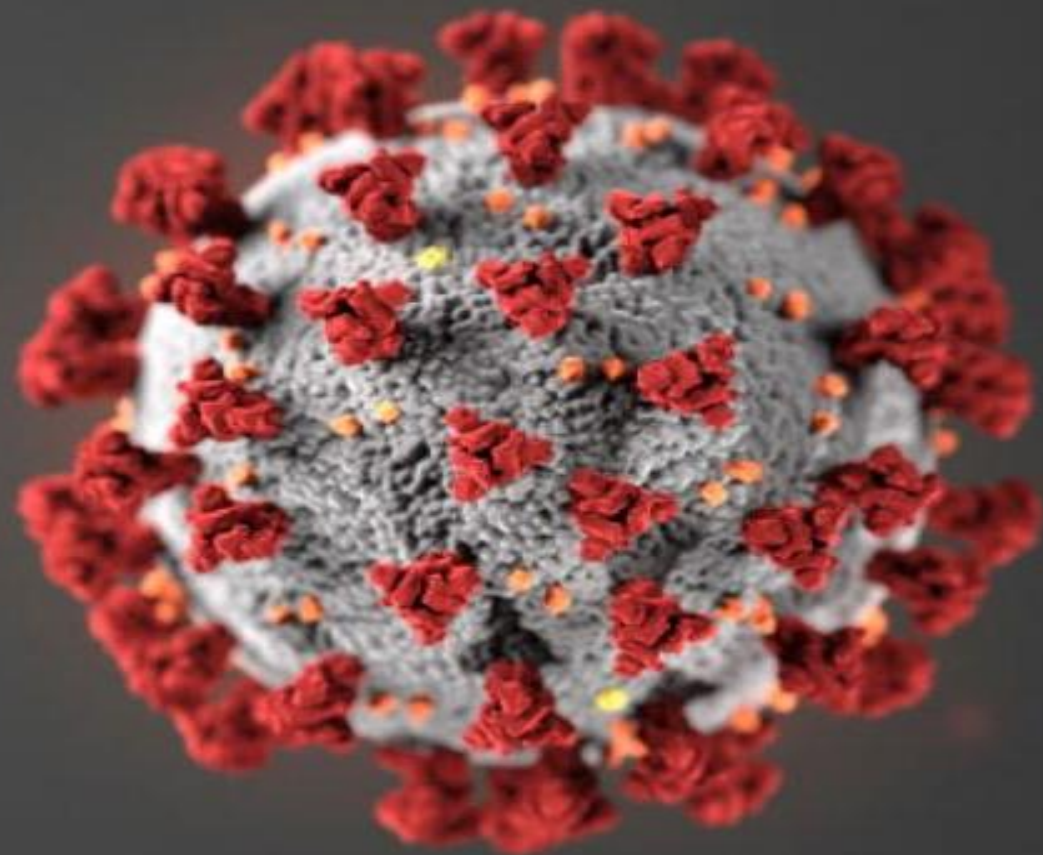
- **Slides & Recording**

- This webinar is being recorded and a link as well as slides will be emailed out through our listserv as well as posted on our website at:
www.michigan.gov/COVIDvaccine → Provider Guidance and Education

Topics Covered

- Common Side Effects
- Helpful Tips
- Preparing for Potential Anaphylaxis Management
- Routine Observation Period Following COVID-19 Vaccination
- Early Recognition of Anaphylaxis
- Management of Anaphylaxis at COVID-19 Vaccination Locations
- Considerations in Special Populations

Common Side Effects



COVID-19 Common Side Effects

Common side effects

On the arm where you got the shot:



- Pain
- Swelling

Throughout the rest of your body



- Fever
- Chills
- Tiredness
- Headache

Helpful Tips in Managing Common Side Effects

To reduce pain and discomfort where you got the shot



- Apply a clean, cool, wet washcloth over the area.
- Use or exercise your arm.

To reduce discomfort from fever



- Drink plenty of fluids.
- Dress lightly.

When to call the doctor

In most cases, discomfort from fever or pain is normal. Contact your doctor or healthcare provider:

- If the redness or tenderness where you got the shot increases after 24 hours
- If your side effects are worrying you or do not seem to be going away after a few days



Available in English and Spanish!

Printable Handout for Vaccine Recipients

What to Expect after Getting a COVID-19 Vaccine

Accessible version: <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect/after.html>

COVID-19 vaccination will help protect you from getting COVID-19. You may have some side effects, which are normal signs that your body is building protection. These side effects **may feel like flu** and **may even affect your ability** to do daily activities, but they should go away in a few days.

Common side effects

On the arm where you got the shot:

- Pain
- Swelling

Throughout the rest of your body:

- Fever
- Chills
- Tiredness
- Headache

Helpful tips

If you have pain or discomfort, talk to your doctor about taking an over-the-counter medicine, such as ibuprofen or acetaminophen.

To reduce pain and discomfort where you got the shot:

- Apply a clean, cool, wet washcloth over the area.
- Use or exercise your arm.

To reduce discomfort from fever:

- Drink plenty of fluids.
- Dress lightly.

When to call the doctor

In most cases, discomfort from fever or pain is normal. Contact your doctor or healthcare provider:

- If the redness or tenderness where you got the shot increases after 24 hours
- If your side effects are worrying you or do not seem to be going away after a few days



Ask your healthcare provider about getting started with v-safe

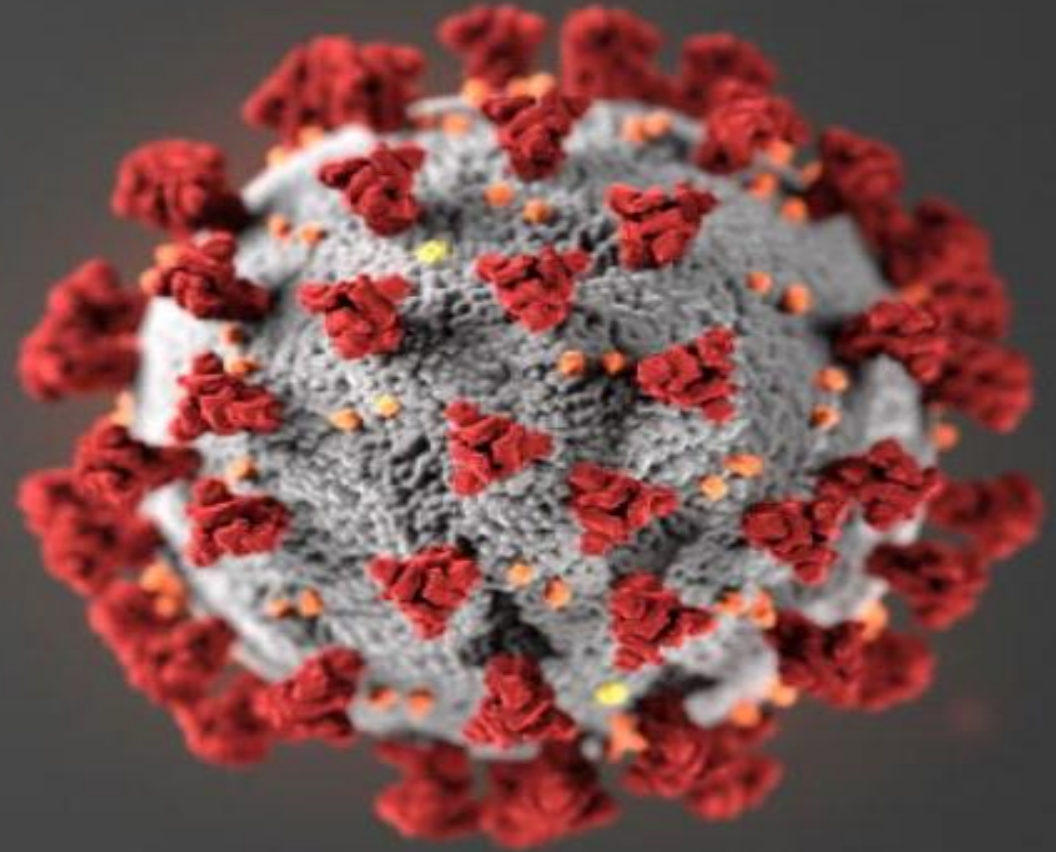
Use your smartphone to tell CDC about any side effects after getting the COVID-19 vaccine. You'll also get reminders if you need a second dose.

Learn more about **v-safe**.

www.cdc.gov/vsafe

<https://www.cdc.gov/coronavirus/2019-ncov/vaccines/expect/after.html>


Preparing for Potential Anaphylaxis Management



Screening for Contraindications and Precautions

- Screen patients prior to receipt of each vaccine dose to identify if there is a contraindication or precaution
- CDC Prevaccination Questionnaire to assist with screening
<https://www.cdc.gov/vaccines/covid-19/downloads/pre-vaccination-screening-form.pdf>
- Persons with a contraindication (including history of a severe or immediate reaction following the first dose of mRNA COVID-19 vaccine) should not be vaccinated

Prevaccination Checklist for COVID-19 Vaccines



For vaccine recipients: Patient Name _____
 The following questions will help us determine if there is any reason you should not get the COVID-19 vaccine today. Age _____
If you answer "yes" to any question, it does not necessarily mean you should not be vaccinated. It just means additional questions may be asked.
 If a question is not clear, please ask your healthcare provider to explain it.

	Yes	No	Don't know
1. Are you feeling sick today?			
2. Have you ever received a dose of COVID-19 vaccine?			
• If yes, which vaccine product did you receive? <input type="checkbox"/> Pfizer <input type="checkbox"/> Moderna <input type="checkbox"/> Another product _____			
3. Have you ever had an allergic reaction to:			
<small>(This would include a severe allergic reaction [e.g., anaphylaxis] that required treatment with epinephrine or EpiPen® or that caused you to go to the hospital. It would also include an allergic reaction that occurred within 4 hours that caused hives, swelling, or respiratory distress, including wheezing.)</small>			
• A component of the COVID-19 vaccine, including polyethylene glycol (PEG), which is found in some medications, such as laxatives and preparations for colonoscopy procedures			
• Polysorbate			
• A previous dose of COVID-19 vaccine			
4. Have you ever had an allergic reaction to another vaccine (other than COVID-19 vaccine) or an injectable medication?			
<small>(This would include a severe allergic reaction [e.g., anaphylaxis] that required treatment with epinephrine or EpiPen® or that caused you to go to the hospital. It would also include an allergic reaction that occurred within 4 hours that caused hives, swelling, or respiratory distress, including wheezing.)</small>			
5. Have you ever had a severe allergic reaction (e.g., anaphylaxis) to something other than a component of COVID-19 vaccine, polysorbate, or any vaccine or injectable medication? This would include food, pet, environmental, or oral medication allergies.			
6. Have you received any vaccine in the last 14 days?			
7. Have you ever had a positive test for COVID-19 or has a doctor ever told you that you had COVID-19?			
8. Have you received passive antibody therapy (monoclonal antibodies or convalescent serum) as treatment for COVID-19?			
9. Do you have a weakened immune system caused by something such as HIV infection or cancer or do you take immunosuppressive drugs or therapies?			
10. Do you have a bleeding disorder or are you taking a blood thinner?			
11. Are you pregnant or breastfeeding?			

Form reviewed by _____
Date _____

Precautions

- CDC considers the following to be a precaution to vaccination with both the Pfizer-BioNTech and Moderna COVID-19 vaccines:
 - History of any immediate allergic reaction to any other vaccine or injectable therapy (i.e., intramuscular, intravenous, or subcutaneous vaccines or therapies [excluding subcutaneous immunotherapy for allergies , i.e., “allergy shots”] not related to a component of mRNA COVID-19 vaccines or polysorbate)
 - This includes persons with a reaction to a vaccine or injectable therapy that contains multiple components, one of which is PEG, another vaccine component, or polysorbate, **but in whom it is unknown which component elicited the immediate allergic reaction**

<https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html>

Contraindications

- CDC considers a history of the following to be a contraindication to vaccination with both the Pfizer-BioNTech and Moderna COVID-19 vaccines:
 - Severe allergic reaction (e.g., anaphylaxis) after a previous dose of an mRNA COVID-19 vaccine or any of its components
 - Immediate allergic reaction of any severity to a previous dose of an mRNA COVID-19 vaccine or any of its components (including polyethylene glycol [PEG])
 - Immediate allergic reaction of any severity to polysorbate (due to potential cross-reactive hypersensitivity with the vaccine ingredient PEG)

<https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html>

Appendix B: Triage of persons presenting for mRNA COVID-19 vaccination

<https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html>

	CONTRAINDICATION TO VACCINATION	PRECAUTION TO VACCINATION	MAY PROCEED WITH VACCINATION
ALLERGIES	<p>History of the following are contraindications to receiving either of the mRNA COVID-19 vaccines[†]:</p> <ul style="list-style-type: none"> • Severe allergic reaction (e.g., anaphylaxis) after a previous dose of an mRNA COVID-19 vaccine or any of its components • Immediate allergic reaction[‡] of any severity to a previous dose of an mRNA COVID-19 vaccine or any of its components[^] (including polyethylene glycol)[#] • Immediate allergic reaction of any severity to polysorbate^{^#} 	<p>Among persons without a contraindication, a history of:</p> <ul style="list-style-type: none"> • Any immediate allergic reaction[‡] to other vaccines or injectable therapies[*] 	<p>Among persons without a contraindication or precaution, a history of:</p> <ul style="list-style-type: none"> • Allergy to oral medications (including the oral equivalent of an injectable medication) • History of food, pet, insect, venom, environmental, latex, etc., allergies • Family history of allergies
ACTIONS	<ul style="list-style-type: none"> • Do not vaccinate[#] • Consider referral to allergist-immunologist 	<ul style="list-style-type: none"> • Risk assessment • 30-minute observation period if vaccinated • Consider deferral of vaccination for further risk assessment and possible referral to allergist-immunologist 	<ul style="list-style-type: none"> • 30-minute observation period: Persons with a history of anaphylaxis (due to any cause) • 15-minute observation period: All other persons

The following emergency equipment should be immediately available for the assessment and management of anaphylaxis.

Should be available at all locations	If feasible, include at locations (not required)
Epinephrine (e.g., prefilled syringe, autoinjector)*	Pulse oximeter
H1 antihistamine (e.g., diphenhydramine, cetirizine)†	Oxygen
Blood pressure monitor‡	Bronchodilator (e.g., albuterol)
Timing device to assess pulse	H2 antihistamine (e.g., famotidine, cimetidine)
	Intravenous fluids
	Intubation kit
	Adult-sized pocket mask with one-way valve (also known as cardiopulmonary resuscitation [CPR] mask)

Medical Management of Vaccine Reactions in a Community Setting

The table below describes steps to take if an adverse reaction occurs following vaccination.

Administering any medication, including vaccines, has the potential to cause an adverse reaction. To minimize the likelihood of an adverse event, screen patients for vaccine contraindications and precautions prior to vaccination (see "Screening Checklist for Contraindications to Vaccines for Adults" at www.immunize.org/catg.d/p4065.pdf). When adverse reactions do occur,

they can vary from minor (e.g., to the rare and serious (e.g., prepared).

Vaccine providers should recognize allergic reactions, including anaphylaxis. Have a plan in place and supplies to provide appropriate medical care if an event occurs.

REACTION	SIGNS AND SYMPTOMS	MANAGEMENT
Localized	Soreness, redness, itching, or swelling at the injection site	Apply a cold compress to the site. Consider giving an analgesic/antipruritic (anti-itch) medication.
	Slight bleeding	Apply pressure and an adhesive bandage to the injection site.
	Continuous bleeding	Place thick layer of gauze pad over the injection site and maintain direct and firm pressure for 10 minutes. If bleeding continues, place a second layer of gauze over the first layer and maintain pressure for 10 minutes. If bleeding still does not stop, seek medical attention.
Psychological fright, presyncope, and syncope (fainting)	Fright before injection is given	Have patient sit or lie down for 5 minutes before injection.
	Patient feels "faint" (e.g., light-headed, dizzy, weak, nauseated, or has visual disturbance)	Have patient lie flat. Loosen clothing and maintain open airway. Apply cool cloth to patient's face and neck. Monitor vital signs and close observation until fully recovered.
	Fall, without loss of consciousness	Examine the patient to determine if injury is present before attempting to move the patient. Place patient flat on back with feet elevated.
	Loss of consciousness	Check to determine if injury is present before attempting to move the patient. Place patient on back with feet elevated. Call 911 if patient does not recover immediately.
Anaphylaxis	Skin and mucosal symptoms such as generalized hives, itching, or flushing; swelling of lips, face, throat, or eyes. Respiratory symptoms such as nasal congestion, change in voice, sensation of throat closing, stridor, shortness of breath, wheeze, or cough. Gastrointestinal symptoms such as nausea, vomiting, diarrhea, cramping abdominal pain. Cardiovascular symptoms such as collapse, dizziness, tachycardia, hypotension.	See the emergency medical protocol on the next page for detailed steps to manage anaphylaxis.

Suggested Medications for Managing Anaphylaxis in a Community Immunization Clinic Setting

FIRST-LINE medication

Epinephrine 1.0 mg/mL aqueous solution (1:1000 dilution) in prefilled autoinjector or prefilled syringe (0.3 mg), prepackaged syringes, vials, or ampules. At least three epinephrine doses should be available onsite.

OPTIONAL medications: H₁ antihistamines

These relieve itching and hives only; they DO NOT relieve upper or lower airway obstruction, hypotension, or shock.

Diphenhydramine (e.g., Benadryl) oral, 12.5 mg/5 mL liquid, 25 or 50 mg tablets

Additional emergency supplies you may need

Syringes (1 and 3 cc) and needles (22 and 25 g, 1", 1½", and 2") if needed for epinephrine

Alcohol wipes

Tourniquet

Applied on the extremity above the injection site to slow systemic absorption of antigen and anaphylactic mediators

Stethoscope

Blood pressure measuring device with adult-sized and extra-large cuffs

Tongue depressors

Light with extra batteries (for examination of the mouth and throat)

A timing device, such as wristwatch, for checking pulse

Cell phone or access to onsite phone

For remote areas without EMS support

Adult airways (various sizes)

Adult-sized pocket mask with one-way valve

Oxygen (if available)

REFERENCES

American Academy of Pediatrics. *Red Book: 2018–2021*, 31st ed (p. 66).

Campbell RL, Kelso JM. Anaphylaxis: Emergency treatment. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA, November 2018.

Kroger AT, Duchin J, Vazquez M. General Best Practice Guidelines for Immunization. Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP) at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html.

Emergency medical protocol for management of anaphylactic reactions in adults in a community setting

1 If itching and swelling are confined to the injection site where the vaccination was given, observe patient closely for the development of generalized symptoms.

2 If symptoms are generalized, activate the emergency medical system (EMS; e.g., call 911) and notify the patient's physician. This should be done by a second person, while the primary healthcare professional assesses the airway, breathing, circulation, and level of consciousness of the patient. Vital signs should be monitored continuously.

3 **DRUG DOSING INFORMATION: The first-line and most important therapy in anaphylaxis is epinephrine. There are NO absolute contraindications to epinephrine in the setting of anaphylaxis.**

a First-line treatment: EPINEPHRINE is the first-line treatment for anaphylaxis, and there is no known equivalent substitute. Use epinephrine in a 1.0 mg/mL aqueous solution (1:1000 dilution). Administer a 0.3 mg dose IM using a premeasured or prefilled syringe or an autoinjector in the mid-outer thigh. If using another epinephrine formulation, the recommended dose is 0.01 mg/kg, ranging for adults from 0.3 mg to maximum dose of 0.5 mg. Administer IM, preferably in the mid-outer thigh. Epinephrine dose may be repeated 2 additional times every 5–15 minutes (or sooner as needed) while waiting for EMS to arrive.

b Optional treatment: H₁ ANTIHISTAMINES relieve itching and urticaria (hives). These medications DO NOT relieve upper or lower airway obstruction, hypotension, or shock. Consider giving diphenhydramine (e.g., Benadryl) for relief of itching and hives. Administer orally 1–2 mg/kg every 4–6 hours, up to a maximum single dose of 100 mg.*

4 Monitor the patient closely until EMS arrives. Perform cardiopulmonary resuscitation (CPR), if necessary, and maintain airway. Keep patient in recumbent position (flat on back) unless he or she is having breathing difficulty. If breathing is difficult, patient's head may be elevated, provided blood pressure is adequate to prevent loss of consciousness. If blood pressure is low, elevate legs. Monitor blood pressure and pulse every 5 minutes.

5 Record the patient's reaction (e.g., hives, anaphylaxis) to the vaccine, all vital signs, medications administered to the patient, including the time, dosage, response, and the name of the medical personnel who administered the medication, and other relevant clinical information.

6 Notify the patient's primary care physician.

7 Report the incident to the Vaccine Adverse Event Reporting System (VAERS) at www.vaers.hhs.gov.

These standing orders for the medical management of vaccine reactions in adult patients shall remain in effect for patients of the

NAME OF CLINIC _____ until rescinded or until _____ DATE _____

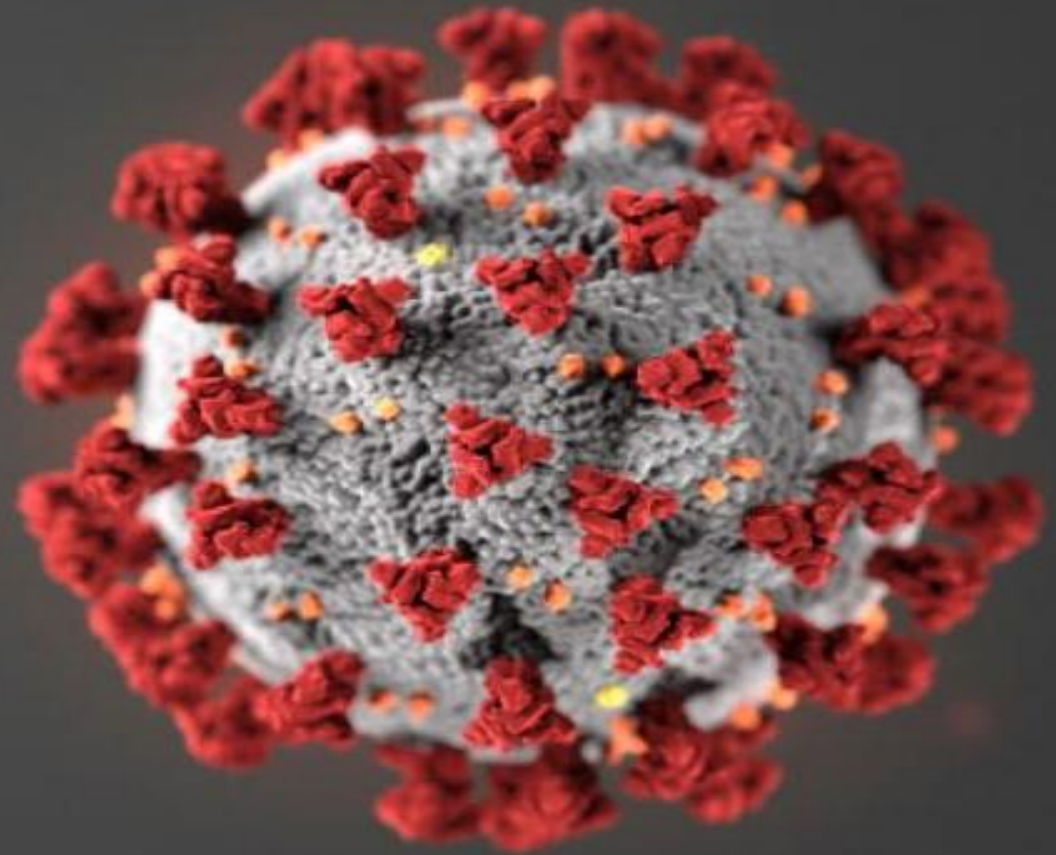
MEDICAL DIRECTOR'S SIGNATURE _____ DATE OF SIGNING _____

- Signs/Symptoms of specific reactions
- Management of specific reactions
- Medications for anaphylaxis
- Additional emergency supplies
- Protocol for responding to anaphylaxis

Personnel, Medications, and Supplies for Assessing and Managing Anaphylaxis

- Healthcare personnel who are trained and qualified to recognize the signs and symptoms of anaphylaxis as well as administer intramuscular epinephrine should be available at all times
- COVID-19 vaccination locations should have **at least 3 doses** of epinephrine available at all times
 - The ability to quickly obtain additional doses to replace supplies
 - Expired epinephrine or epinephrine that appears to be in unacceptable condition (per the manufacturer's package inserts) should be replaced
- Antihistamines may be given as adjunctive treatment but should not be used as initial or sole treatment for anaphylaxis
 - Caution should be used if oral medications are administered to persons with impending airway obstruction
- Either an automated or a manual blood pressure monitor, with appropriate cuff sizes
 - If a manual blood pressure monitor is used, a stethoscope should also be available

Observation Periods Following COVID-19 Vaccination



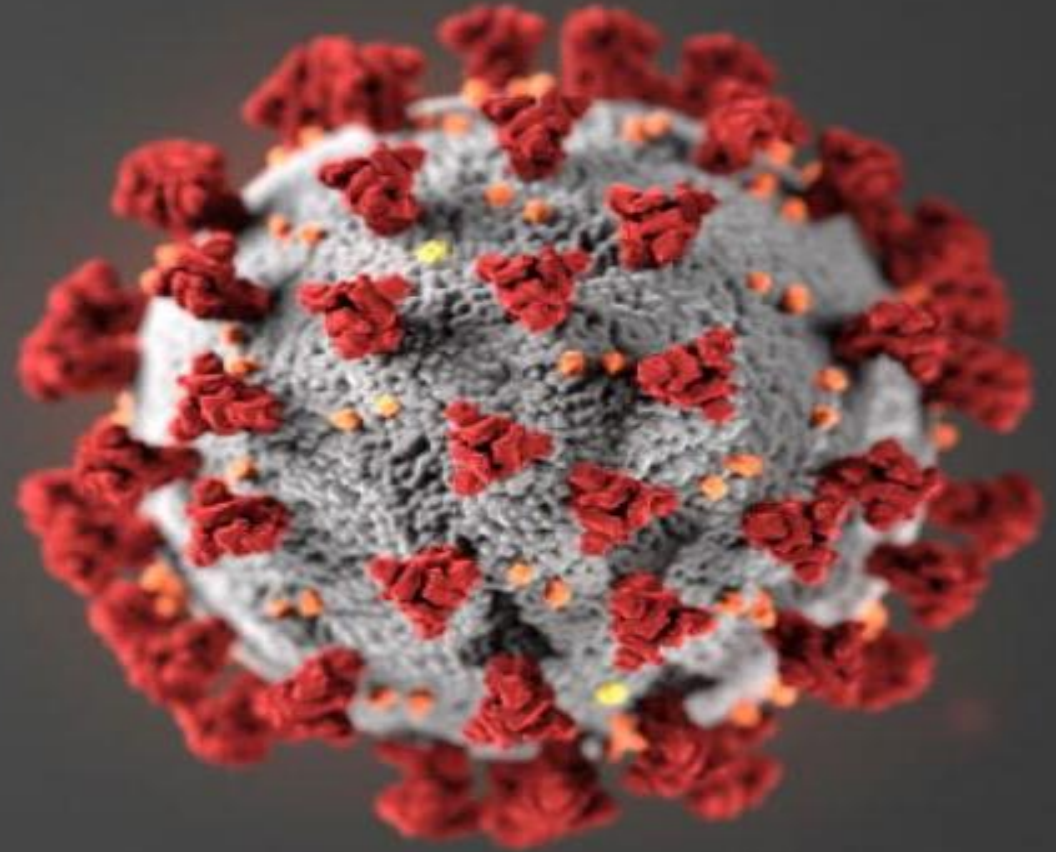
Observation Periods After COVID-19 Vaccine

CDC currently recommends that persons without contraindications to vaccination who receive an mRNA COVID-19 vaccine be observed after vaccination for the following time periods

- 30 minutes:
 - Persons with a history of an immediate allergic reaction of any severity to another (non-mRNA COVID-19) vaccine or injectable therapy
 - Persons with a history of anaphylaxis due to any cause
- 15 minutes: All other persons



Early Recognition of Anaphylaxis



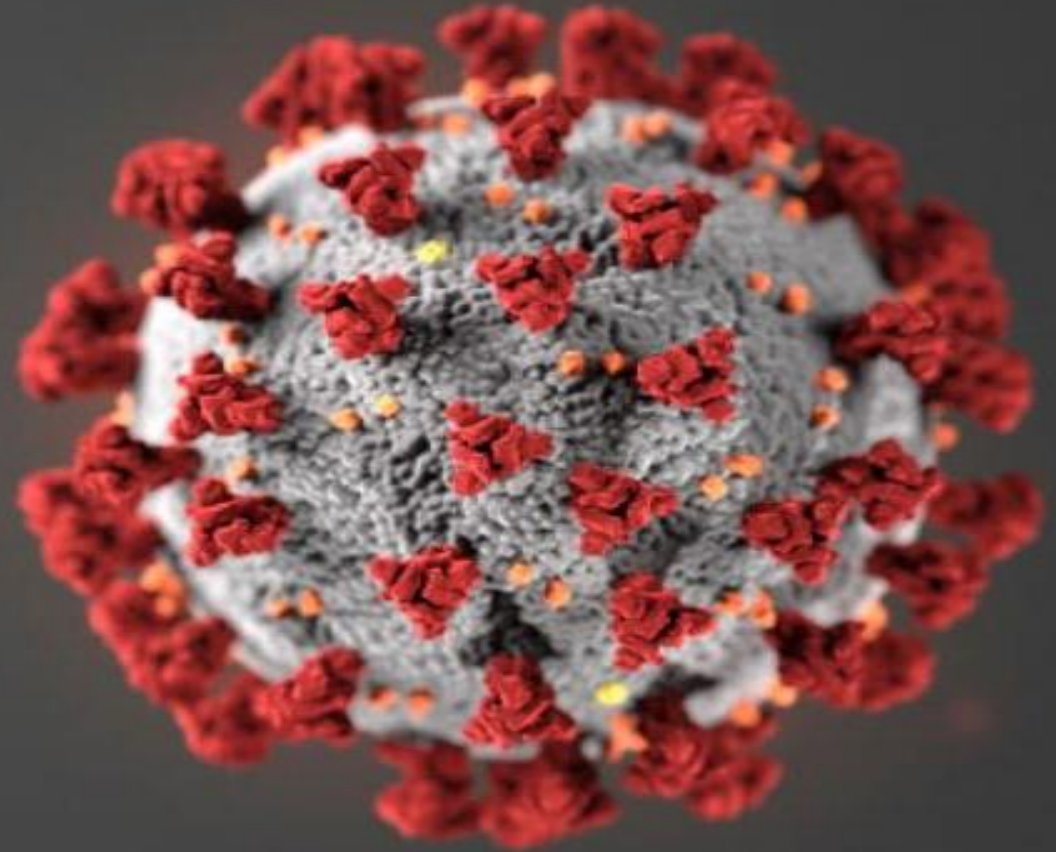
Recognizing Signs and Symptoms

- **Respiratory:** sensation of throat closing or tightness, stridor (high-pitched sound while breathing), hoarseness, respiratory distress (such as shortness of breath or wheezing), coughing, trouble swallowing/drooling, nasal congestion, rhinorrhea, sneezing
- **Gastrointestinal:** nausea, vomiting, diarrhea, abdominal pain, or cramps
- **Cardiovascular:** dizziness; fainting; tachycardia (abnormally fast heart rate); hypotension (abnormally low blood pressure); pulse difficult to find or “weak”; cyanosis (bluish discoloration); pallor; flushing
- **Skin/mucosal:** generalized hives; widespread redness; itching; conjunctivitis; or swelling of eyes, lips, tongue, mouth, face, or extremities
- **Neurologic:** agitation; convulsions; acute change in mental status; sense of impending doom (a feeling that something bad is about to happen)
- **Other:** sudden increase in secretions (from eyes, nose, or mouth); urinary incontinence

Recognizing Signs and Symptoms Cont.

- Anaphylaxis symptoms often occur within 15-30 minutes of vaccination, though it can sometimes take several hours for symptoms to appear
- Early signs of anaphylaxis can resemble a mild allergic reaction, and can be difficult to predict whether initial, mild symptoms will progress to become an anaphylactic reaction
- Symptoms of anaphylaxis may be more difficult to recognize in persons with communication difficulties, such as long-term care facility residents with cognitive impairment, those with neurologic disease, or those taking medications that can cause sedation
- Not all symptoms listed on previous slide are necessarily present during anaphylaxis, and not all patients have skin reactions

Management of Anaphylaxis at COVID-19 Vaccination Location

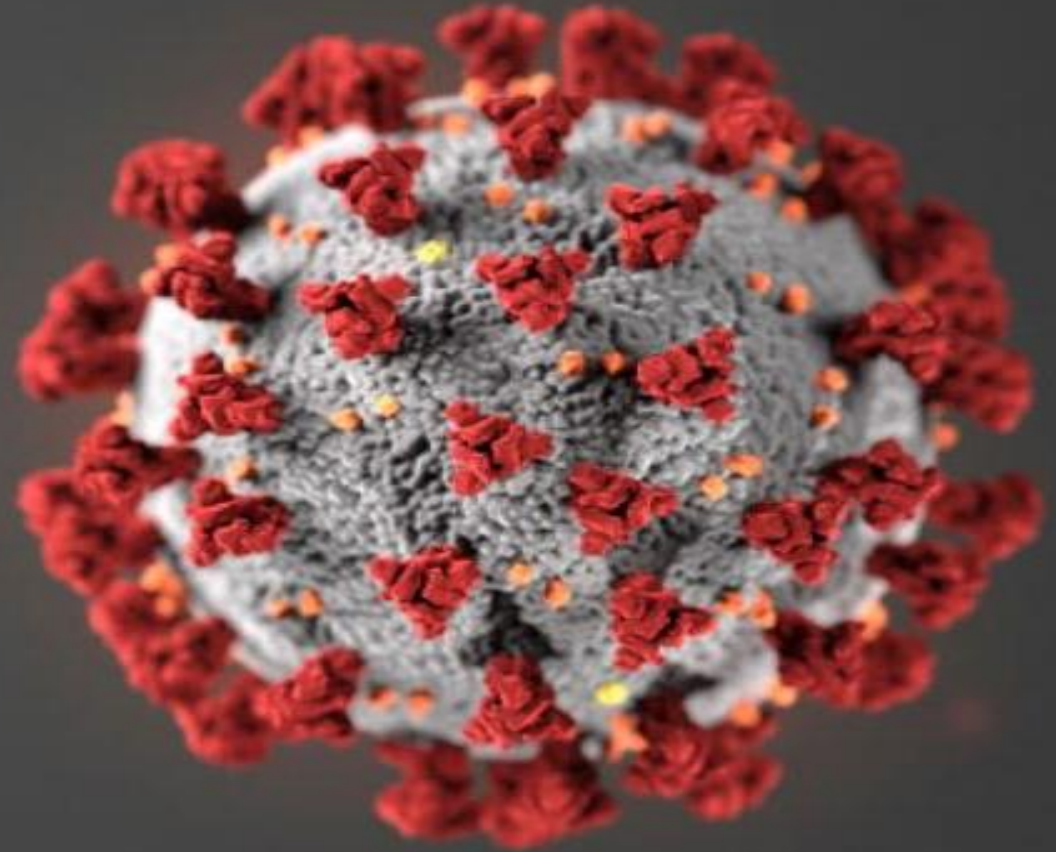


Management of anaphylaxis at a COVID-19 vaccination location

If anaphylaxis is suspected, take the following steps:

- Rapidly assess airway, breathing, circulation, and mentation (mental activity).
- Call for emergency medical services (EMS).
- Place the patient in a supine position (face up), with feet elevated, unless upper airway obstruction is present or the patient is vomiting.
- Epinephrine (1 mg/ml aqueous solution [1:1000 dilution]) is the first-line treatment for anaphylaxis and should be administered immediately.
 - In adults, administer a 0.3 mg intramuscular dose using a premeasured or prefilled syringe, or an autoinjector, in the mid-outer thigh (through clothing if necessary).
 - The maximum adult dose is 0.5 mg per dose.
 - Epinephrine dose may be repeated approximately every 5-15 minutes if symptoms do not improve or if they return while waiting for EMS. The number and timing of epinephrine doses should be recorded and communicated to EMS.
 - Because of the acute, life-threatening nature of anaphylaxis, there are no contraindications to epinephrine administration.

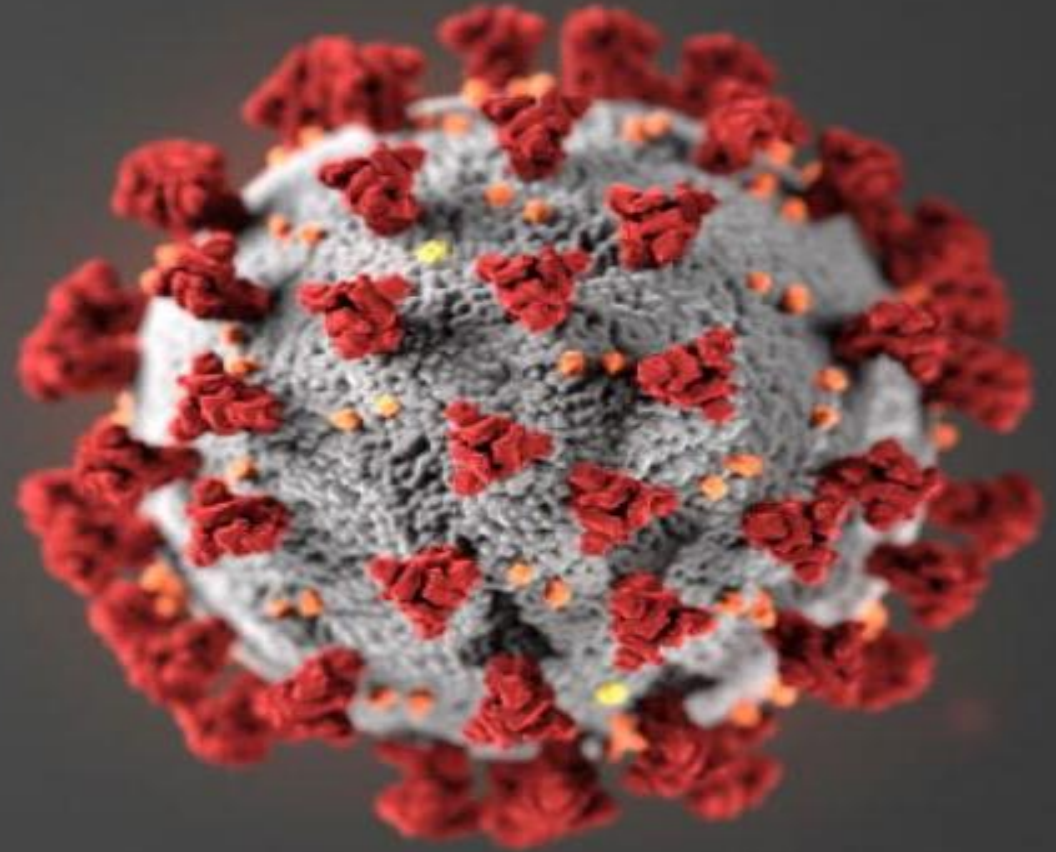
Management of Anaphylaxis in Special Populations



Special Populations

- **Older adults, including long-term care facility residents**
 - No contraindication to the administration of epinephrine for the treatment of anaphylaxis
 - Adverse cardiac events, such as myocardial infarction or acute coronary syndrome, have been reported in some patients who received epinephrine for treatment of anaphylaxis (particularly among older adults with hypertension and/or atherosclerotic heart disease)
 - It is important to have staff members who can recognize the signs and symptoms of anaphylaxis and provide prompt treatment if needed
- **Pregnant people**
 - Pregnant people with anaphylaxis should be managed the same as non-pregnant people
- **Homebound persons requiring home vaccination services**
 - Homebound persons who might be at increased risk for anaphylaxis following vaccination should consider whether they could be vaccinated in a setting where medical care is immediately available if they experience anaphylaxis following vaccination
 - If home vaccination is the only option for these persons and, through risk assessment it is determined that the benefits of vaccination outweigh the potential risk for anaphylaxis, home vaccination providers should ensure they are able to manage anaphylaxis

Patient Counseling and Reporting of Anaphylaxis



Counseling and Reporting for Anaphylaxis

- Patient Counseling
 - Patients who experience a severe allergic reaction (e.g., anaphylaxis) or an immediate allergic reaction should be instructed not to receive additional doses of either Pfizer-BioNTech or Moderna COVID-19 vaccine
 - Patients should be referred to an allergist-immunologist for appropriate work-up and additional counseling
- Reporting
 - Report any adverse events, including anaphylaxis, that occur in a recipient following COVID-19 vaccination, to the Vaccine Adverse Event Reporting System (VAERS)
 - Information on how to submit a report to VAERS is available at <https://vaers.hhs.gov>

Thank You!

Next “Noontime
Knowledge” Update: March
11, 2021 at 12:00p.m.

Topic: TBD

Please watch your email for
an updated link and topic!

www.michigan.gov/COVIDvaccine → Provider Guidance and Education

