

PARAMEDIC VACCINATION ADMINISTRATION PROGRAM

Local Optional Scope of Practice Expansion

For Administration to 5- to 11-year-olds

November 2021



OVERVIEW

- The State of California has stated that Local EMS agencies (LEMSAs) may authorize Paramedics to administer COVID-19 vaccinations to patients five (5) to eleven (11) years of age under the LEMSA's existing Local Optional Scope of Practice (LOSOP).
- The LEMSA must ensure that specialized training is conducted, and treatment protocols are updated, for this special patient population.
- This training is a supplement to the original vaccination administration training previously issued by the Monterey County EMS Agency. Both training offerings must be completed in order to vaccinate those patients in the 5- to 11-year-old age group.



OBJECTIVES

- Discuss pediatric dosing guidelines for the COVID-19 vaccine
- Describe procedures for vaccination of the 5- to 11-year-old population
- Describe procedure for lateral thigh intramuscular injections
- Discuss potential allergic reaction and anaphylaxis complications
- Discuss modifications to the Monterey County EMS Agency Policy Number 4513 – Paramedic Vaccination Administration

PEDIATRIC COVID VACCINE INFORMATION

- The Pfizer-BioNTech vaccine age recommendations have recently been expanded to include people 5 years and older.
- The vaccine is under an Emergency Use Authorization (EUA) for 5–11-year-olds.
- The pediatric vaccine is a new product formulation with new packaging and preparation.
- Pediatric vaccines will require diluent. Reconstitution for 5–11-year-olds uses a different volume of diluent than the adult/adolescent formulation.
- The current product for adults and adolescents should be not be used in children.

PEDIATRIC VACCINE DOSING

- The pediatric vaccine is supplied in a multi-dose vial.
- The pediatric vaccine vial has an **orange cap** and a label with an **orange border**.
- The vial and carton labels state: “For ages 5 years to < 12 years.”
- The pediatric vaccine is administered as a primary series of 2 doses.
- The 2 doses are administered 3 weeks apart.



✓ Orange plastic cap and label with orange border.



VACCINE PREPARATION

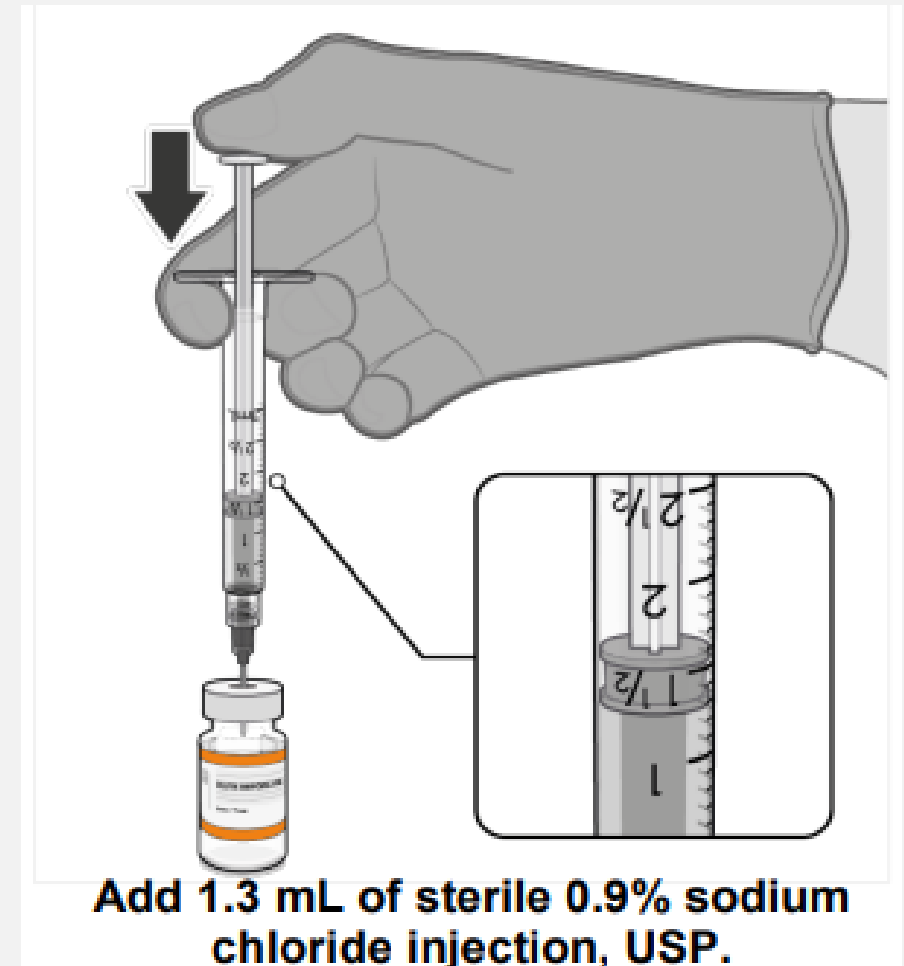
- The vials are supplied as a frozen suspension that does not contain preservative.
- Each vial must be thawed prior to use. This may be done in a refrigerator or at room temperature.
- Each vial **MUST BE DILUTED** before administering the vaccine.
- Before dilution, mix the vial by inverting it gently 10 times.



Gently × 10

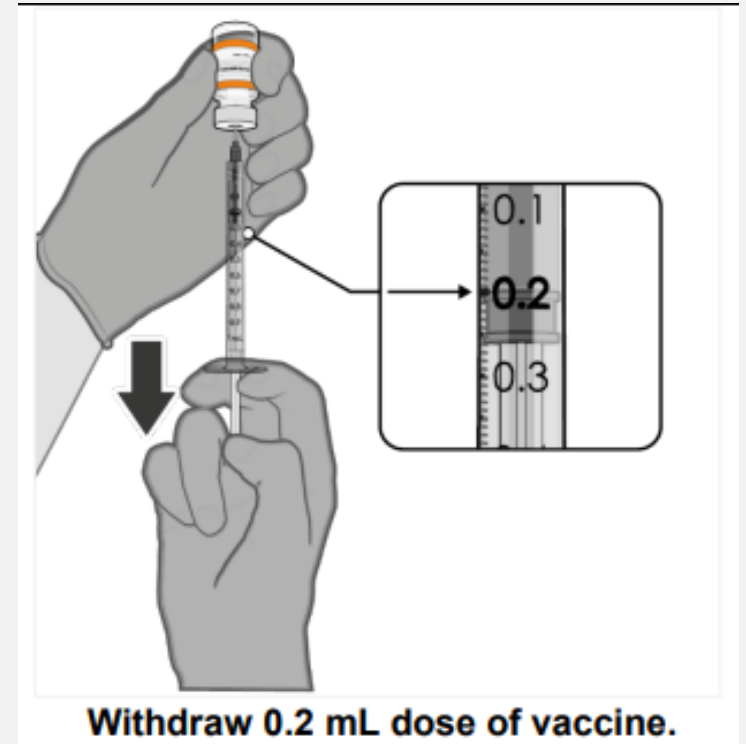
VACCINE PREPARATION

- Use 0.9% Sodium Chloride Injection as the diluent for the Pfizer-BioNTech COVID-19 Vaccine.
- Using aseptic technique, withdraw 1.3 mL of diluent into a syringe.
- Cleanse the vaccine vial stopper with an antiseptic swab.
- Add 1.3 mL of sterile 0.9% Sodium Chloride Injection into the vaccine vial.
- Equalize vial pressure before removing the needle from the vial by withdrawing 1.3 mL air into the empty diluent syringe.
- Gently invert the vial 10 times to mix – DO NOT SHAKE.
- The vaccine will be a white to off-white suspension.
- Record the date and time of first vial puncture on the vial label.
- Any unused vaccine should be discarded 12 hours after dilution.



INDIVIDUAL DOSE PREPARATION

- After dilution, 1 vial contains 10 doses of 0.2 mL each.
- Using aseptic technique, cleanse the vial stopper with an antiseptic swab.
- Withdraw 0.2 mL of the vaccine.
- If the amount of vaccine remaining in the vial cannot provide a full dose of 0.2 mL, discard the vial and any excess volume.



INDIVIDUAL DOSE ADMINISTRATION

Visually inspect the dose prior to administration.

- The vaccine will be a white to off-white suspension.
- Verify the final dosing volume of 0.2 mL.
- Confirm that there are no particulates, and that no discoloration is observed.

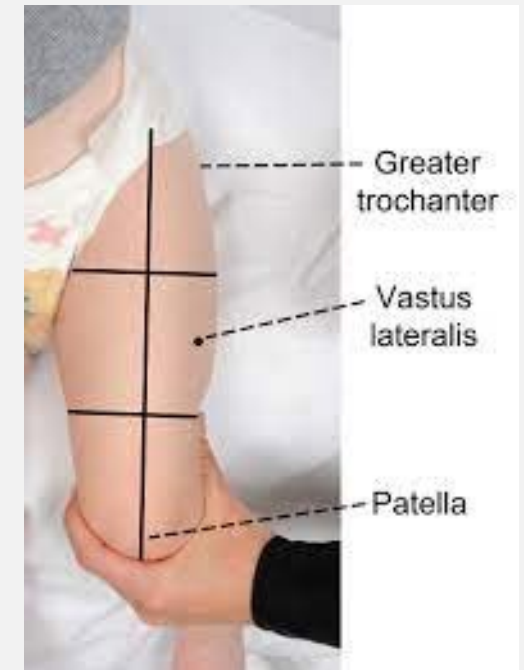
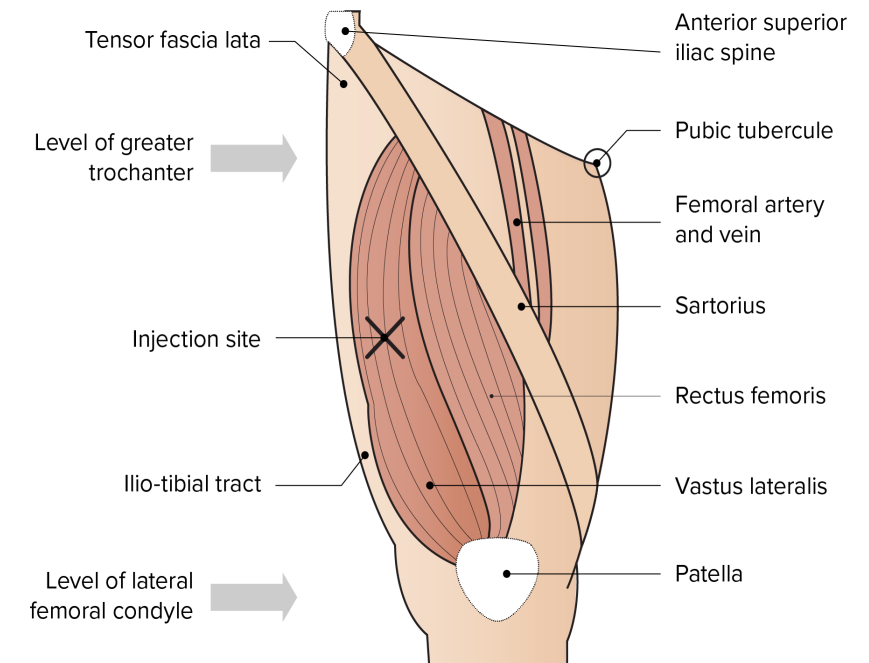
Administer the dose intramuscularly utilizing appropriate aseptic technique.

- The preferred site is the deltoid muscle.
- The vastus lateralis muscle of the anterolateral thigh may also be used.



ANTEROLATERAL THIGH INTRAMUSCULAR INJECTION

- This site is most commonly used for infants, but may also be used for children.
- The injection site is the middle third of the vastus lateralis (anterolateral thigh).
- To locate the correct anatomical site:
 - Locate the upper and lower anatomical landmarks – greater trochanter of femur and patella.
 - Draw an imaginary line between the 2 landmarks down the front of the thigh.
 - Imagine the thigh is divided into thirds.
 - The correct site is located in the middle third and on the outer aspect of the imaginary line.



	Age	Needle Gauge	Needle Length	Injection Site
Intramuscular Injections	Children, 5-10 years	22-25	5/8 – 1 inch	Deltoid
		22-25	1 – 1.25 inches	Anterolateral thigh
	Children, 12-18 years	22-25	5/8 – 1 inch	Deltoid
		22-25	1 – 1.5 inches	Anterolateral thigh

UTILIZING THE CORRECT SYRINGE AND NEEDLE

- The table outlines recommended needle gauges and lengths.
- Clinical judgment should also be used when selecting the correct needle.

SPECIAL CONSIDERATIONS FOR CHILDREN WITH DEVELOPMENTAL DISABILITIES

- Children with developmental disabilities face long-standing systemic health and social inequities.
- They may also be at increased risk of COVID-19 illness because of an increased prevalence of underlying health conditions.
- Vaccinations may need to be provided in ways that are easier for children with developmental disabilities to accept. Options may include:
 - The option to be vaccinated in their vehicle
 - Providing the vaccination in a quiet area
 - Modifying communication methods
 - Allowing more time or sensory modifications during the appointment
- Collaborate with parents/caregivers to determine the best possible situation for the patient.

THE CDC RECOMMENDS THAT VACCINE PROVIDERS OBSERVE ALL PERSONS AFTER VACCINATION



- 30 Minutes
 - History of immediate allergic reaction to a vaccine or injectable therapy
 - History of anaphylaxis from any cause



- 15 Minutes
 - All other people

ALLERGIC REACTION/ANAPHYLAXIS

- Anaphylaxis is an acute and potentially life-threatening allergic reaction.
- Anaphylaxis has been reported rarely after COVID-19 vaccination.
- Symptoms often occur within 15-30 minutes of vaccination, though it can sometimes take several hours for symptoms to occur.
- Early signs/symptoms may resemble a mild allergic reaction. It is often difficult to know whether this will progress to become an anaphylactic reaction.
- Supplies and equipment should be available for the assessment and potential management of anaphylaxis, including age-appropriate supplies for children.

SIGNS AND SYMPTOMS OF ANAPHYLAXIS

- Respiratory
 - Respiratory distress
 - Sensation of throat closing/tightness
 - Trouble swallowing, drooling
 - Stridor or wheezing
 - Hoarseness
- Cardiovascular
 - Dizziness
 - Fainting
 - Tachycardia
 - Hypotension
- Skin/mucosal
 - Generalized hives
 - Widespread redness
 - Itching
 - Conjunctivitis
 - Swelling of eyes, lips, tongue, mouth, face, or extremities
- Neurologic
 - Agitation
 - Convulsions
 - Acute change in mental status
- Other
 - Nausea, vomiting, diarrhea
 - Abdominal pain or cramps
 - Sudden increase in secretions

TREATING ALLERGIC REACTIONS AND ANAPHYLAXIS

- Treatment for EMS providers is guided by the Monterey County EMS Treatment Protocols.
- Protocol Number EP-2 addresses Allergic Reactions and Anaphylaxis in Pediatric Patients.
- The most current version of the protocol can be found here:
 - [Monterey County EMS Protocol EP-2](#)



Monterey County EMS System Policy



Protocol Number: EP-2
Effective Date: 7/1/2021
Review Date: 6/30/2024

ALLERGIC REACTION/ANAPHYLAXIS - PEDIATRIC

BLS CARE

Routine Medical Care

Remove the patient from the source of the reaction if possible.

If the cause of the reaction is a bee sting, remove the stinger and venom sack by scraping if the stinger is still in the patient.

Assist the patient with administration of their Epinephrine Auto-injector if available for severe symptoms. (EMT and EMR only)

Epinephrine auto-injector, 0.15mg, IM, by auto-injector. Patient weight must be between 15 and 30 kg (30-66 lbs). For allergic reactions with signs of SEVERE RESPIRATORY DISTRESS, impending AIRWAY OBSTRUCTION, or life-threatening HYPOTENSION, a second dose of epinephrine 0.15mg IM may be administered. The second dose should not be administered any sooner than 5 minutes after the initial dose.

Note: Pediatric patients weighing greater than 30 kg (66 lbs) should receive the adult epinephrine dose of 0.3 mg by using the adult epinephrine auto-injector.

ALS CARE

Routine Medical Care.

Mild Reaction/Allergic Reaction (i.e., hives, itchiness)

Diphenhydramine 0.5-1mg/kg IV/IM. Maximum dose 50mg.

Severe Reaction/Anaphylaxis (i.e., hives, wheezing, difficulty breathing,)

Epinephrine 1:1,000, 0.01mg/kg IM. Maximum dose 0.3mg. May repeat one (1) time in 5 minutes for continued severe reaction. (See comments above regarding indications for repeat dosing.)

Diphenhydramine 1mg/kg IV/IM/IO. Maximum dose 50mg.

Albuterol 2.5mg via Nebulizer for bronchospasm.

Normal Saline 20cc/kg fluid bolus IV/IO. Max bolus size 500cc. Consider repeat bolus as needed for signs of shock.

Base Contact for Additional Treatment:

Epinephrine 1:10,000, 0.01mg/kg, IV/IO for severe anaphylaxis. Maximum dose 0.3mg. Give slowly. **May only administer if advised to do so under the order of a Base hospital physician.**

Dopamine. Start at 5-10mcg/kg/min IV/IO drip for persistent hypotension. Titrate to effect up to a maximum dose of 20mcg/kg/min. **May only administer if advised to do so under the order of a Base hospital physician.**

MONTEREY COUNTY EMS POLICY #4513 – PARAMEDIC VACCINATION ADMINISTRATION

- Policy #4513 authorizes Paramedics to administer vaccines.
- This policy has been updated to reflect the expanded authorization to administer the COVID-19 vaccine to those in the 5- to 11-year-old age range with the completion of additional training.
- A copy of the current policy can be found here:
 - [Monterey County EMS Policy 4513](#)

