May 4, 2023

**Standing Order for Pfizer COVID-19 Vaccine Administration   
for Infants and Children 6 Months through 4 Years of Age**

# Purpose

To reduce the morbidity and mortality of the SARS-CoV-2 virus by vaccinating individuals 6 months through 4 years and older in the state of Missouri who meet the criteria established by the Advisory Committee on Immunization Practices (ACIP).

# Policy

This standing order establishes administration parameters for any individual authorized to administer a COVID-19 vaccine by declaration of the Secretary of the Department of Health and Human Services, issued pursuant to the Public Readiness and Emergency Preparedness Act. Any healthcare provider who is listed in Attachment A to this Order, that is not expressly authorized to vaccinate by the declaration of the Secretary of the Department of Health and Human Services, is authorized to administer a COVID-19 vaccine, if such individual complies with the requirements enumerated Attachment A.

# Procedure

1. Assess children in need of vaccination against the SARS-CoV-2 vaccine based on the following criteria

**For individuals WHO ARE NOT moderately to severely immunocompromised:**

* 1. Must be 6 months of age through 4 years of age
  2. Any minor authorized to receive this vaccine under this order, shall only receive such with the consent of a parent or guardian, or in compliance with Sections 431.056, 431.058, or 431.061, RSMo.
  3. If the child has never had a SARS-Co-V-2 vaccine, administer Pediatric PfizerBioNTech COVID-19 Bivalent Vaccine intramuscularly as a series of three doses (0.2 mL/3 mcg each).
     1. Dose 1 and 2 spaced at least 3 weeks (21 days) apart
     2. Dose 2 and 3 spaced at least 8 weeks (2 months) apart
  4. If the child has started the monovalent mRNA SARS-Co-V-2 vaccine then dose as follows:
     1. If child had one previous mRNA monovalent SARS-Co-V-2 vaccine, then administer the PfizerBioNTech Bivalent vaccine as dose 2 at least 3 weeks (21 days) after dose one, and administer additional dose of the PfizerBioNTech Bivalent vaccine at least 8 weeks (2 months) after dose 2.
     2. If two previous doses of mRNA monovalent SARS-Co-V-2 vaccine, then administer one (1) dose of the PfizerBioNTech Bivalent vaccine at least 8 weeks (2 months) after the last mRNA monovalent SARS-Co-V-2 vaccine dose.
     3. If the child has completed a mRNA monovalent SARS-Co-V-2 vaccine series then administer one (1) dose of the PfizerBioNTech Bivalent vaccine at least 8 weeks (2 months) after the last mRNA monovalent SARS-Co-V-2 vaccine dose.
  5. PfizerBioNTech COVID-19 bivalent vaccine may be administered with any other vaccines. Use a different arm for other vaccine administration. It is unknown whether reactogenicity is increased with co-administration, including with other vaccines known to be reactogenic such as adjuvanted vaccines. When deciding to co-administer with COVID-19 vaccines, providers should consider whether the patient is behind or at risk of becoming behind on recommended vaccines and the reactogenicity profile of the vaccines.

**For individuals WHO ARE moderately to severely immunocompromised:**

* Unvaccinated children should receive three (3) doses of the PfizerBioNTech Bivalent vaccine. Space doses 1 and 2 at least 3 weeks apart and dose 2 and 3 at least 8 weeks apart.
* Children who have received at least one (1) dose of an mRNA monovalent SARS-Co-V-2 vaccine should receive two (2) doses of the PfizerBioNTech Bivalent vaccine. Space dose 1 at least 3 weeks from the last monovalent vaccine and dose 1 and 2 are spaced at least 8 weeks apart.
* Children who have received two (2) doses of a monovalent SARS-Co-V-2 vaccine should receive one (1) dose of the PfizerBioNTech Bivalent vaccine. Space dose at least 8 weeks after the last monovalent vaccine.
* Children who have received two (2) doses of a monovalent SARS-Co-V-2 vaccine and one (1) dose of the PfizerBioNTech Bivalent vaccine. May receive one additional PfizerBioNTech Bivalent vaccine spaced at least 8 weeks after the last bivalent vaccine.
* Children who have received three (3) doses of a monovalent SARS-Co-V-2 vaccine should receive one (1) dose of the PfizerBioNTech Bivalent vaccine. Space dose at least 8 weeks after the last monovalent vaccine.
* Children who have received three (3) doses of a monovalent SARS-Co-V-2 vaccine and one (1) dose of the PfizerBioNTech Bivalent vaccine may receive one (1) additional PfizerBioNTech Bivalent vaccine dose. Space dose at least 8 weeks after the last bivalent vaccine dose.

1. Screen all children for contraindication and precautions for the SARS-CoV-2 vaccine
   1. Contraindications
      1. Under 6 months of age or over 4 years of age
      2. Do not administer Pfizer-BioNTech COVID-19 Vaccine to individuals with known history of a severe allergic reaction (e.g., anaphylaxis) to any component of the Pfizer-BioNTech COVID-19 Vaccine. For more information on vaccine components, refer to the manufactures’ package insert
      3. Do not give the SARS-CoV-2 vaccine to an individual who has had an immediate allergic reaction\* of any severity to a previous dose of any mRNA COVID-19 vaccine or any of its components (including polyethylene glycol (PEG))\*\*

\*Immediate allergic reaction to a vaccine or medication is defined as any hypersensitivity-related signs or symptoms consistent with urticarial, angioedema, respiratory distress (e.g., wheezing, stridor), or anaphylaxis that occur within four hours following administration of vaccine or Interim Clinical Considerations for Use of mRNA COVID-19 Vaccines Currently Authorized in the United States at <https://www.cdc.gov/vaccines/covid-19/info-by-product/clinical-considerations.html#Contraindications>

\*\* These individuals should not receive mRNA SARS-CoV-2 vaccine at this time unless they have been evaluated by an allergist-immunologist and it is determined that the person can safely receive the vaccine (e.g., under observation, in a setting with advanced medical care available)

* 1. Precautions
     1. Moderate or severe acute illness with or without a fever
     2. Delay vaccination in individuals in community or outpatient settings who have a known SARS-CoV-2 exposure until quarantine period has ended, unless individual resides in congregate healthcare setting or resident of other congregate settings (e.g., correctional facilities, homeless shelter)
     3. Polysorbate allergy is a precaution to Pfizer-BioNTech COVID-19 vaccine (due to potential cross-reactivity hypersensitivity with the vaccine ingredient PEG)
     4. Defer vaccination for both symptomatic and asymptomatic COVID-19 patients until they have [completed their isolation period](https://www.cdc.gov/coronavirus/2019-ncov/your-health/quarantine-isolation.html) and recover from their illness
     5. Delay vaccination if the individual has had passive antibody therapy for COVID-19 until 90 days have passed from completion of said therapy
     6. Delay vaccination if infant or child has history of MIS-C until 90 days have passed from the MIS-C diagnosis
     7. If myocarditis or pericarditis occurred after the first dose of an mRNA vaccine, **should not** receive a subsequent dose of any COVID-19 vaccine (<https://www.cdc.gov/vaccines/covid-19/clinical-considerations/covid-19-vaccines-us.html#Contraindications>). If after a risk assessment, the decision is made to receive a subsequent COVID-19 vaccine dose, considerations for subsequent vaccination may include:
        + The myocarditis or pericarditis was considered unrelated to the mRNA COVID-19 vaccination, especially if the myocarditis or pericarditis occurred more than 3 weeks after the most recent doses of COVID-19 vaccine
        + Increased personal risk of severe acute COVID-19 disease
        + Increased level of COVID-19 community transmission and personal risk of infection

If an additional dose is indicated then

* Ensure the episode of myocarditis or pericarditis is resolved
  + 1. Children who have a history of myocarditis or pericarditis unrelated to mRNA SARS-Co-V-2 vaccines or other viruses may receive any currently FDA-approved or FDA-authorized COVD-19 vaccine after the episode of myocarditis or pericarditis has completely resolved. This includes resolution of symptoms attributed to myocarditis or pericarditis, as well as, no evidence of ongoing heart inflammation or sequelae as determined by the person’s clinical team.

1. Special populations for which special counseling is recommended
   1. Immunocompromised
      1. Persons with HIV infection, other immunocompromising conditions, or who take immunosuppressive medications or therapies
      2. Data is limited to establish safety and efficacy of vaccine in these groups
      3. These individuals may still receive COVID-19 vaccine unless otherwise contraindicated
      4. Individuals should be counseled about:
         1. Limited vaccine safety and efficacy profiles in immunocompromised persons
         2. Need to continue to follow all current guidance to protect themselves against COVID-19
2. Routine testing for antibody testing is not recommended prior to vaccination
3. Provide
   1. Provide the Emergency Use Authorization (EUA) Fact Sheet
      1. Provide all patients (or in the case of minors or incapacitated adults their legal representative) with a copy of the Emergency Authorization Fact Sheet. Provide non-English language if one is available and desired; these can be found at: [Pfizer Recipient FS 6m-4y Maroon 06172022 (fda.gov)](https://www.fda.gov/media/159313/download)
   2. Provide the Vaccine Information Statement (VIS)
      1. Provide all patients (or in the case of minors or incapacitated adults their legal representative) with a copy of the most current federal Vaccine Information Statement (VIS). Provide non-English speaking patients with a copy of the VIS in their native language if one is available and desired; these can be found at [www.immunize.org](http://www.immunize.org/)
4. Prepare the vaccine
   1. Choose the correct needle length for an intramuscular injection

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| **Age of child or adolescent** | **Needle gauge and length** | **injection site** |
| 6 through 11 months | 22-25 gauge and 1” needle length | Anterolateral Aspect of the thigh |
| 12 months to 3 years | 22-25 gauge and 1”- 1.25” needle length | Anterolateral Aspect of the thigh |
| 3 years and older | 22-25 gauge and  5/8” to 1” needle length | Deltoid |
| 22-25 gauge and  1” to 1.25” needle length | Anterolateral Aspect of the thigh |

* 1. Prepare the PfizerBioNTech COVID-19 vaccine (Maroon Cap vaccine vial) ***MUST BE DILUTED before use*** 
     1. Thaw the vaccine vial if frozen for 30 minutes at room temperature or for 4 hours in a refrigerator
     2. Once thawed remove the cap of the Pfizer vaccine and inject 2.2 ml of 0.9% sodium chloride that comes in the ancillary kit of the vaccine
     3. Gently invert the vaccine vial 10 times
     4. Document date and time the vaccine was diluted on the Pfizer vaccine vial
     5. Clean top of Pfizer vaccine vial with alcohol prep pad and with draw 0.2ml of vaccine
     6. Discard open vial after 12 hours or after all doses have been removed (Whichever comes first)
     7. Each vial should contain 10 doses. Due to production at the factory, an extra dose may occur. However, any remaining vaccine that does not equal a full 0.2ml dose should not be pooled with other remaining vaccine to obtain a full 0.2ml dose.

1. Administer (Maroon Cap vaccine)

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| **Children who ARE NOT moderately to severely immunocompromised** | | | | |
| **Type of vaccine** | **Age group** | **Dose** | **Instruction** | **Vaccination History /Dose schedule** |
| Pfizer-BioNTech Bivalent Vaccine  Maroon vial cap | 6 months-4 years | 0.2mL | Administer intramuscularly into the Deltoid or Anterolateral Aspect of the thigh | Unvaccinated children should receive 3 doses of the Pfizer-BioNTech Bivalent Vaccine   * Dose 1 and 2 = 3 weeks apart * Dose 2 and 3 = 8 weeks apart   Children who have received 1 dose of PfizerBioNTech mRNA monovalent vaccine should receive 2 doses.   * Dose 1 at least 3 weeks from the last monovalent dose * Dose 1 and 2 are 8 weeks apart   Children who have received 2 doses of PfizerBioNTech mRNA monovalent vaccine should receive 1 dose of the PfizerBioNTech Bivalent vaccine spaced at least 8weeks after the last monovalent dose.  Children who have received 3 doses of PfizerBioNTech mRNA monovalent vaccine should receive 1 dose of the PfizerBioNTech Bivalent vaccine spaced at least 8 weeks after the last monovalent dose. |

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| **Children who ARE moderately to severely immunocompromised** | | | | |
| **Type of vaccine** | **Age group** | **Dose** | **Instruction** | **Vaccination History /Dose schedule** |
| Pfizer-BioNTech Bivalent Vaccine  Maroon vial cap | 6 months-4 years | 0.2mL | Administer intramuscularly into the Deltoid or Anterolateral Aspect of the thigh | Unvaccinated children should receive 3 doses of the Pfizer-BioNTech Bivalent Vaccine   * Dose 1 and 2 = 3 weeks apart * Dose 2 and 3 = 8 weeks apart   Children who have received 1 dose of PfizerBioNTech mRNA monovalent vaccine should receive 2 doses.   * Dose 1 at least 3 weeks from the last monovalent dose * Dose 1 and 2 are 8 weeks apart   Children who have received 2 doses of PfizerBioNTech mRNA monovalent vaccine should receive 1 dose of the PfizerBioNTech Bivalent vaccine spaced at least 8 weeks after the last monovalent dose.  Children who have received 2 doses of a monovalent SARS-Co-V-2 vaccine and 1 dose of the PfizerBioNTech Bivalent vaccine. Should receive one additional PfizerBioNTech Bivalent vaccine spaced at least 8 weeks after the last bivalent vaccine.  Children who have received 3 doses of PfizerBioNTech mRNA monovalent vaccine should receive 1 dose of the PfizerBioNTech Bivalent vaccine spaced at least 8 weeks after the last monovalent dose.  *Children* *with 3 previous doses of monovalent vaccine and 1 dose of bivalent mRNA vaccine may receive an additional dose of bivalent vaccine spaced at least 8 weeks from the last dose* |

All vaccine recipients should be monitored for at least 15 minutes following each vaccination dose.

1. Document Vaccination
   1. Consent Form: Record the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, the vaccine dosage, and the name and title of the person administering the vaccine. Document the VIS/EUA given, and VIS/EUA publication date.
   2. Immunization Record Card: Record the date of vaccination, and the name/location of the administering clinic.
   3. Documentation of the vaccination in Missouri’s immunization information system
2. Emergency medical protocol for management of anaphylactic reaction in children
   1. If a patient experiences itching and swelling confined to the injection site where the vaccination was given, apply a cold compress to the injection site. Observe patient closely for the development of generalized symptoms until symptoms resolve.
   2. If symptoms are generalized (generalized itching, redness, urticaria (hives); or include angioedema (swelling of the lips, face, or throat); shortness of breath; shock; or abdominal cramping; call 911 and notify the patient’s physician. Notifications 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 (heart rate, respirations and Blood Pressure, pulse ox) should be taken every 5 minutes.

First Line Treatment Epinephrine

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| **Age group** | **Range of weight** | | **Epinephrine dose** | |
| 1.0 mg/mL aqueous solution (1:1000 dilution); intramuscular. Minimum dose: 0.05mL | Epinephrine auto injector or prefilled syringe *(0.1mg 0.15mg, 0.3 mg)* |
| 6 months of age | Up to 19 lbs. | Up to 8.5 kg*.* | 0.05mL (mg) | 0.1mg\*\* |
| 7 – 36 months | 20-32 lbs. | 9-14.5 kg. | 0.1mL (or mg) | 0.1 mg\*\* |
| 37 – 59 months | 33-39 lbs. | 15-17.5 kg*.* | 0.15mL (mg) | 0.15 mg/dose |

\*If weight known, then dose by weight is preferred, if unknown then dose by age is appropriate.

\*Rounded weight at the 50th percentile for each age range

\*\* 0.1 mg auto injector is licensed for use in infants and children who weight 7.5-14 kg.

May use Diphenhydramine (Benadryl) as a second line treatment

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| **Age group** | **Range of weight** | | **Diphenhydramine *(Benadryl)* dose 1mg/kg** |
| 7 – 36 months | 20-32 lbs. | 9-14.5 kg. | 10-15 mg/dose |
| 37 – 59 months | 33-39 lbs. | 15-17.5 kg. | 15-20 mg/dose |

\*If weight known then dose by weight is preferred, if unknown then dose by age is appropriate.

\*Rounded weight at the 50th percentile for each age range

\*\*AAP. Red Book: 2018–2021, 31st ed. (p. 66). Diphenhydramine maximum single dose for children younger than age 12 years is 40 mg.

* + 1. Monitor the patient closely until EMS arrives. Monitor blood pressure and pulse every 5 minutes.
    2. If EMS has not arrive and symptoms are still present, repeat dose of epinephrine every 5-15 minutes for up to 3 doses depending on patient’s response.
    3. Record the patient’s reaction to the vaccine (e.g., hives, anaphylaxis), all vital signs, and medications administered to the patient, including time dosage, response, and the name of the medical personnel who administered the medication and other relevant clinical information. Report the incident to the Vaccine Adverse Event Reporting System (VAERS) at <https://vaers.hhs.gov/reportevent.html>or call 1-800-822-7967.
    4. Notify the patient’s primary care physician.

This order and procedure shall be effective on May 4, 2023 and shall remain in effect until rescinded or until May 11, 2023.

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Chief Medical Officer

**Attachment A**

**To Standing Order for Pfizer COVID-19**

**Vaccine Administration for Children 6 Months through 4 Years of Age**

* The order authorizes any licensed physician, assistant physician, physician’s assistant, or Advanced Practice Registered Nurse to prescribe and administer this vaccine. Additionally, any medical student or physician assistant student working under the license and direction of a licensed physician may administer this vaccine.
* The order authorizes any Registered Professional Nurse or Licensed Practical Nurse who is licensed by the Missouri Board of Nursing or has a privilege to practice in the State of Missouri from another compact state to administer this vaccine. After receiving documented training nursing students and medical assistants (MA) working under the direction of a licensed nurse may administer this vaccine.
* The order authorizes Advanced Emergency Medical Technicians, Emergency Medical Technician-Paramedics, Emergency Medical Technician-Basics and Emergency Medical Responders to administer this vaccine, whose authorized scope of practice includes administering immunizations via the intramuscular route
* The order authorizes licensed pharmacist, intern pharmacists and pharmacy technicians with the supervision of a Missouri licensed pharmacist to administer this vaccine, provided the pharmacist, intern pharmacist or pharmacy technician has:

1. Documentation of completing 20 hours of practical training on immunizations approved by the Accreditation Council for Pharmacy Education (ACPE) this training must include hands-on injection technique, clinical evaluation of indications and contraindications of vaccines, and the recognition and treatment of emergency reactions to vaccines; and
2. Complete a minimum of two hours of ACPE-approved, immunization-related continuing pharmacy education during each state licensing period.

* The order authorizes any of the following individuals to administer this vaccine, provided that such individual held a license, certification, or could have otherwise lawfully administered this vaccine under this order within the last five years. If such individual held a license or certification, such must have been active with no disciplinary action nor under an investigation prior to the date it went inactive, expired or lapsed and must not have been revoked by the licensing authority, in an alternative to discipline program, surrendered while under suspension, surrendered following an arrest, and the individual cannot be on the List of Excluded Individuals/Entities maintained by the Office of the Inspector General. Prior to administering the vaccine, such individual shall: (1) complete the Centers for Disease Control and Prevention COVID-19 Vaccine Training Modules <https://www2.cdc.gov/vaccines/ed/covid19/>; (2) document their identification and prior license, certification, or experience that would have allowed such individual to lawfully administer this vaccine under this order within the last five years; and (3) certify that the individual does not have any condition or impairment which in any way affects their ability to administer the vaccine in a competent and safe manner, including but not limited to: (a) a mental, emotional, nervous or sexual disorder; (b) an alcohol or substance abuse disorder; or (c) a physical disease or condition. Such individual shall initially be under the observation of a currently practicing Missouri licensed or certified healthcare professional adequately experienced in vaccination, who shall review the submitted documentation, initially observe, and confirm the competency of such individual to prepare and administer the vaccine.

If such currently practicing Missouri licensed or certified healthcare professional, who is observing the individual, is unable to confirm the competency of such individual, such individual will not be permitted to administer a vaccine.

* + licensed physician;
  + assistant physician;
  + physician’s assistant;
  + Advanced Practice Registered Nurse;
  + Registered Professional Nurse or Licensed Practical Nurse who is licensed by the Missouri Board of Nursing or has a privilege to practice in the State of Missouri from another compact state to administer this vaccine;
  + Advanced Emergency Medical Technicians, Emergency Medical Technician-Paramedics, Emergency Medical Technician-Basics and Emergency Medical Responders, whose authorized scope of practice includes administering immunizations via the intramuscular route;
  + licensed pharmacist;
  + pharmacy technicians with the supervision of a Missouri licensed pharmacist to administer this vaccine, provided the pharmacist, intern pharmacist or pharmacy technician has:
  1. Documentation of completing 20 hours of practical training on immunizations approved by the Accreditation Council for Pharmacy Education (ACPE) this training must include hands-on injection technique, clinical evaluation of indications and contraindications of vaccines, and the recognition and treatment of emergency reactions to vaccines; and
  2. Completed a minimum of two hours of ACPE- approved, immunization-related continuing pharmacy education during each state licensing period.
* The order authorizes any healthcare provider who is licensed or certified in any state to prescribe, dispense, and/or administer a vaccine, to administer this vaccine. Such individual shall alert the relevant licensing body within the State of Missouri of their intention to administer a COVID-19 vaccine in Missouri and provide their professional credentials to such licensing body.
* Any individual authorized to administer this vaccine under the order shall be certified to provide cardiopulmonary resuscitation, or in the case of a medical student or former healthcare provider without current certification to administer cardiopulmonary resuscitation, such individual may only administer the vaccine in the presence of someone with current certification to administer cardiopulmonary resuscitation
* Appropriate medical treatment used to manage immediate allergic reactions must be immediately available in the event of an acute anaphylactic reaction following administration of the vaccine.