CLINICAL PATHWAY: Hypersensitivity Post COVID-19 mRNA Vaccination Management Considerations

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.

Side Effect Management for COVID-19 mRNA Vaccination

Prior COVID-19 vaccination administration, ensure no contraindications exist:

- 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 *(Although no longer a contraindication, it remains a precaution. Consider referral to allergy-immunology for further testing and/or clearance to obtain vaccination.)*

*Immediate reactions refer to any hypersensitivity-related signs/symptoms consistent with urticaria, angioedema, respiratory distress, anaphylaxis that occur within 4 hours after administration.

If history of any immediate allergic reaction* to vaccines or injectable therapies (not related to the mRNA COVID-19 vaccine, or polysorbate), can either:

- Proceed with vaccination and have a 30 minute observational period afterwards
- Defer vaccine and refer to allergist-immunologist

Any contraindications to COVID-19 mRNA vaccine?

YES → Do not vaccinate. Advise referral to allergist for clearance to obtain vaccination.

NO → Administer COVID-19 mRNA vaccination

Monitor for 15 minutes after giving vaccination, unless below risk factors.

Monitor for 30 minutes if the following risk factors are present:

- History of anaphylaxis due to *any* cause unrelated to mRNA COVID-19 vaccine
- History of immediate allergic reaction to any vaccine or injectable therapy (except to mRNA COVID-19 vaccine as that is contraindicated)

Vaccine reaction during observational period?

YES → If hypersensitivity reaction: Activate Rapid Response team. If anaphylactic reaction: follow **Anaphylaxis Clinical Pathway (Appendix A)** → Discharge Criteria and Instructions

NO → Discharge Criteria and Instructions

Discharge Criteria and Instructions:

- May leave clinic if remains clinically stable.
- If any side effects occur post-vaccination, follow up with primary care doctor, and report side effects via VAMS/CDC (refer to **COVID-19 FAQ sheet**)
- If individual had hypersensitivity reaction post-vaccine: Advise referral to allergist and follow up with primary care doctor for care
- If employee of CT Children's experiences side effects: refer to **Appendix E of Employee Exposure Algorithm** for workplace implications

CONTACTS: JUAN SALAZAR, MD | JOHN SCHREIBER, MD

This pathway is subject to change, based on evolving recommendations from the CDC and CT DPH.

LAST UPDATED: 06.02.21

©2019 Connecticut Children's Medical Center. All rights reserved. 19-004

CLINICAL PATHWAY: Hypersensitivity Post COVID-19 mRNA Vaccination Management Considerations
Appendix A: Anaphylaxis Clinical Pathway

THIS PATHWAY SERVES AS A GUIDE AND DOES NOT REPLACE CLINICAL JUDGMENT.

MUST document allergy and symptoms of allergy in patient's chart

[2]Hypotension:

Low systolic blood pressure for children is defined as:
- 1 month to 1 year: Less than 70 mmHg
- 1 to 10 years: Less than (70 mmHg + [2x age])
- 11 to 17 years: Less than 90 mmHg

Inclusion Criteria: child of any age with signs and/or symptoms of anaphylaxis[1]
Exclusion Criteria: blood transfusion and other medication infusion reactions that are not anaphylaxis, symptoms attributable to other causes, allergy to epinephrine

↓

Initial Management:
- If outside Emergency Department (ED) or PICU: consider calling Code Blue if severe respiratory distress or hypotension[2]
- Place on continuous cardiorespiratory monitor and perform full set of vitals
- Immediately discontinue medications that may be causing anaphylaxis
- Rapid assessment and manage ABCs:
  - Administer Epinephrine 0.01 mg/kg IM (max 0.5 mg)
  - *If hypoxic*: administer oxygen
  - Place patient in recumbent or supine position
  - *If hypotensive*[2]: Place PIV and administer normal saline bolus 20 ml/kg IV
  - *If respiratory failure*: consider intubation
- Continue to check vital signs every 15 min, or more frequent if unstable

↓

Stable vital signs and/or anaphylaxis resolved?

YES →
- Administer the following medications:
  - If urticaria: diphenhydramine
  - Consider systemic steroids
- Observe for 2-4 hours from last epinephrine dose
- Vital signs every 30 min

↓

Any of the following? Hx biphasic or severe reactions, ≥ 2 doses epinephrine required, progressive/persistent sxs, reaction was to long acting medication, hx severe asthma/ current asthma flare, hypotension[2] or syncope, upper airway obstruction, young age

NO →

Discharge Criteria:
Complete resolution all serious sxs (rash may persist), at least > 4 hrs from last epinephrine, parental comfort with discharge and easy access to ED, epinephrine auto-injector physically available to family (if reaction to medication administered only in hospital setting, auto-injector may not be indicated)

Discharge meds:
Epinephrine auto-injector, Benadryl PRN

Discharge Instructions:
epinephrine auto-injector training, avoid known allergens, consider referral to allergist, f/u with PCP in 1-2 days

YES →
- Admit to Medical-Surgical floors on Pediatric Hospital Medicine Service (GI, Nephrology or Heme-Onc will admit to their own service)
- Observe on continuous cardiorespiratory monitor
- Consider the following medications:
  - Benadryl PRN
  - Systemic steroids

(→ Discharge Criteria)

NO →

Vital signs unstable and/or anaphylaxis unresolved:
- If outside Emergency Department (ED) or PICU: consider calling Code Blue if severe respiratory distress or hypotension[2]
- Administer up to 3 total doses of IM epinephrine q 5-15 min
- Place PIV and administer rapid NS bolus 20 ml/kg IV
  - If hypotension[2]: give up to 3 boluses
- Check vital signs every 5 min
- Consider systemic steroids
- *If urticaria:* diphenhydramine
- *If wheeze:* consider albuterol
- *If stridor*: consider racemic epinephrine
- *If respiratory failure:* consider intubation

↓

Does patient meet all of the below? (if no to one criteria, must admit to PICU)
- Required only <3 doses of epi?
- Stable vital signs?
- Normal mental status?

YES → Admit to Medical-Surgical floors (see above)

NO → Admit to PICU

[1]Diagnostic Criteria for Anaphylaxis:
(must meet ONE of the following three criteria)

1. Acute onset of (seconds to minutes) skin and/or mucosal involvement (e.g. generalized hives, pruritus or flushing, swollen lips/tongue/uvula), AND respiratory compromise (e.g. dyspnea, wheeze/bronchospasm, stridor, hypoxemia) OR reduced blood pressure or associated symptoms of end-organ dysfunction (e.g. hypotonia, syncope, incontinence)

2. TWO OR MORE OF THE FOLLOWING that occur rapidly after exposure to a LIKELY allergen for that patient (seconds to minutes):
   A. Skin-mucosal involvement (e.g. generalized hives, pruritus or flushing, swollen lips/tongue/uvula)
   B. Respiratory compromise (e.g. dyspnea, wheeze/bronchospasm, stridor, hypoxemia)
   C. Reduced blood pressure or associated symptoms (e.g. hypotonia, syncope, incontinence)
   D. Persistent gastrointestinal symptoms (e.g. crampy abdominal pain, vomiting, diarrhea)

3. Reduced blood pressure after exposure to a KNOWN allergen for that patient (seconds to minutes):
   A. Infants and children – Low systolic blood pressure (age-specific) or greater than 30% decrease in systolic blood pressure from baseline
   B. Adults – Systolic BP of less than 90 mmHg or greater than 30% decrease from that person's baseline

CONTACTS: JUAN SALAZAR, MD | JOHN SCHREIBER, MD
This pathway is subject to change, based on evolving recommendations from the CDC and CT DPH.
LAST UPDATED: 06.02.21

©2019 Connecticut Children's Medical Center. All rights reserved. 19-004