	Treatment Protocol
Anaphylaxis Symptoms	Symptoms of anaphylactic reactions can include but are not limited to: • Dyspnea/wheezing • Stridor • Laryngeal edema • Angioedema • Vomiting/abdominal cramping • Collapse or syncope • More than 40 mmHg increase/decrease in systolic BP from baseline • Pediatric: persistent GI symptoms, BP <90/60
Anaphylaxis Treatment Protocol	• Promptly and simultaneously stop the infusion • Assess the patient's airway, breathing, circulation, and mental status • Dial 911 • If patient becomes unresponsive at any point, initiate BLS and continue to follow steps outlined below • Administer epinephrine 1:1000 (1mg/mL) 0.3 mL IM (Vastus Lateralis). If unable to access, use Deltoid IM. *If using an Epi-Pen, the Epi-Pen Junior Auto-Injector should be used for patients weighing less than 30 kg. (Epi-Pen is only indicated for administration in the thigh) - **Epinephrine** may be repeated once in 5-15 minutes as needed based on patient response until EMS (Emergency Medical Services) arrives - Any patient receiving Epinephrine MUST GO TO THE EMERGENCY DEPARTMENT for evaluation - Immediate administration of epinephrine upon diagnosis of anaphylaxis is the single most important factor in effectively treating anaphylaxis - DO NOT DELAY giving epinephrine if anaphylaxis is suspected • Place the patient in supine position and elevate legs as tolerated; be ready to initiate CPR. Obtain AED (Automatic External Defibrillators) if available • If available, the following should be administered: - 100% oxygen using a nonrebreather mask - Nebulized **albuterol** (2.5/3 mL) given via nebulizer (may repeat if necessary) - If hypotension is present, administer 500 mL-1000 mL bolus of 0.9 % **Normal Saline** - Administer **diphenhydramine** 25-50 mg IV or IM (oral diphenhydramine 25-50 mg may be used if IV is unavailable) - Administer **methylprednisolone** 125 mg IV or IM - Administer **famotidine** 20 mg IV • Remain with patient and monitor vital signs every 2-5 minutes until EMS arrives • Infusion nursing staff should notify the referring provider as soon as the patient is stabilized and has been transported to the emergency department (ED) • Document event in patient's permanent medical record: - Presence of previous allergies and type of reaction to medication(s) - Observations and patient assessment - Interventions taken and outcome - Referring provider notification - Patient's condition and response to interventions • Complete documentation, including a quality assessment report according to department policy

	SYMPTOMS	TREATMENT
Moderate Reaction	**Symptoms of moderate infusion reactions can include but are not limited to:** • Increased temperature (<102°F) • Hypotension or hypertension (greater than ±20 mmHg with respect to baseline) • Chest tightness • Urticaria (hives) • Rigors (acute shivering or shaking) • Palpitations with tachycardia	**In the event of a moderate reaction, the clinician is to:** • Hold the infusion until symptoms subside or reduce to a "mild reaction" • Obtain vital signs every 15 minutes or more frequently until symptoms subside • Maintain vascular access, if applicable • Administer acetaminophen 500 mg or 650 mg PO for increased temperature, rigors • Administer loratadine or cetirizine 10 mg PO for urticaria. Diphenhydramine 25 mg IV may be used to achieve symptom abatement or if loratadine or cetirizine are not available. Diphenhydramine 50 mg PO may be used if IV diphenhydramine is unavailable or if patient does not have an IV established • Administer methylprednisolone 125 mg IV. If already administered as premedication, administer methylprednisolone 40 mg IV instead • If available, administer famotidine 20 mg IV • If symptoms continue, may initiate continuous infusion of 500-1000 mL Sodium Chloride 0.9%. Leave wide open or infuse at 250 mL/hr for the 1st hour, then decrease rate as needed • If symptoms subside or reduce to a "mild reaction", resume ramp-up of infusion rate in accordance with the drug-specific protocol and/or manufacturer recommendations • If symptoms persist, end treatment, and observe the appropriate post-infusion monitoring period in accordance with the drug-specific protocol and/or manufacturer recommendations • Notify referring provider of reaction **If symptoms worsen or progress to anaphylaxis, see interventions for anaphylaxis.**
Mild Reaction	**Symptoms of mild infusion reactions can include but are not limited to:** • Dizziness • Flushing • Headache • Diaphoresis • Palpitations • Nausea/vomiting • Pruritus • Back pain • Throat irritation • Flu-like symptoms	**In the event of a mild reaction, the clinician is to:** • Reduce the infusion rate to half the rate at the onset of reaction and maintain rate until symptoms subside • Obtain vital signs every 15 minutes or more frequently PRN until symptoms subside • Maintain vascular access, if applicable • Administer acetaminophen 500 mg or 650 mg PO for headache, flushing, or back pain • Administer diphenhydramine 25 mg IV for pruritus. Diphenhydramine 50 mg PO may be given if no IV is established. Loratadine or cetirizine 10 g PO may also be given if needed for symptom abatement, or if diphenhydramine IV is unavailable • If symptoms subside, resume ramp-up of infusion rate in accordance with the drug-specific protocol and/or manufacturer recommendations • If symptoms persist, hold infusion for 15 minutes, and resume at a reduced rate as tolerated • If patient is intolerant of reduced rate, end treatment, and observe the appropriate post-infusion monitoring period in accordance with the drug-specific protocol and/or manufacturer recommendations If symptoms worsen, see interventions for moderate or anaphylactic reactions.

Pediatric Mild/ Moderate Reaction	**Symptoms of mild/moderate PEDIATRIC infusion reactions can include but are not limited to:** • Flushing • Dizziness • Headache • Apprehension • Diaphoresis • Palpitations • Nausea/vomiting • Pruritus • Back pain	**In the event of a mild or moderate reaction, the clinician is to:** • Reduce the infusion rate to half the rate at the onset of reaction and maintain rate until symptoms subside • Obtain vital signs every 15 minutes or more frequently PRN until symptoms subside • Administer acetaminophen 10 to 15 mg/kg/dose every 4 to 6 hours as needed PO for headache, flushing, or back pain • Administer diphenhydramine 1 mg/kg/dose; maximum dose: 50 mg/dose IV for pruritus. Diphenhydramine 25-50 mg PO may be given if no IV is established. Loratadine or cetirizine 10 mg PO may also be given if needed for symptom abatement, or if diphenhydramine is unavailable • If symptoms subside, resume ramp-up of infusion rate in accordance with the drug-specific protocol and/or manufacturer recommendations • If symptoms persist, hold infusion for 15 minutes, and resume at a reduced rate as tolerated • If patient is intolerant of reduced rate, end treatment, and observe the appropriate post- infusion monitoring period in accordance with the drug-specific protocol and/or manufacturer recommendations • Notify referring provider of reaction If symptoms worsen, or any respiratory symptoms develop, see interventions for anaphylactic reactions.

*Referring provider orders for infusion reaction management will take precedence over this protocol.