May 2019:

Changes to the required emergency kit contents in Section V.
Changes to the anaphylaxis module in Section II A.
Changes to the optional emergency kit checklist (separate document)
Changes to the optional Anaphylaxis/Epinephrine worksheet (separate document)

**I. OREGON IMMUNIZATION MODEL STANDING ORDER:**

1. **Anaphylaxis;**
   a. **Treatment**: see Section II A;
   b. **Epinephrine IM injection table**: see Section II B;
   c. Anaphylaxis **signs and symptoms**: see Appendix Section 1, A–C

2. **Severe Urticaria (hives);**
   a. **Diphenhydramine IM injection table**: see Section III A
   b. **Hydroxyzine Hydrochloride PO table**: see Section III B
   c. Urticaria **signs and symptoms**: see Appendix Section 2

3. **Loss of Consciousness: Syncope (fainting);**
   a. **Treatment**: see Section IV;
   b. Fainting **signs and symptoms**: see Appendix Section 3.

4. **Required emergency equipment and supplies (E-Kit):** see Section V.
   **Documentation of adverse event worksheet**: see Appendix Section 4.
II. A. TREATMENT OF ANAPHYLAXIS:

1. **IMMEDIATELY do the following:**
   a. Ask someone to call 911 and assess ABCs
   b. Lay patient flat to prevent empty ventricle syndrome
   c. Administer epinephrine using correct needle length for client

2. If no improvement in condition, repeat epinephrine dose every 5–15 minutes for up to 3 doses, depending on patient’s response.

3. **Do not delay transport; DO NOT WAIT FOR MILD SYMPTOMS TO SUBSIDE.**

4. Take and record the patients’ vital signs (pulse, respirations) at the initial assessment, and at minimum – every 5 minutes, and following the administration of any additional medication. See optional Adverse Event Record Tool.

5. Monitor until Emergency Medical Services arrive.

6. Give report and list of medications given to emergency medical personnel upon arrival.

7. Complete your documentation.

If at any time the patient suffers Respiratory or Cardiac Arrest, **start CPR immediately.** Apply AED if available. Initiate Oxygen if available.

Any client who develops signs and symptoms of anaphylaxis MUST be examined by a physician or transported via a fully equipped emergency vehicle to an emergency department. Any refusal of transport must be dealt with by EMS personnel.

See APPENDIX A for signs and symptoms of anaphylaxis.
II. B. Table 1. ANAPHYLAXIS: Inject **EPINEPHRINE** 1:1000 (aqueous): 0.01 mg/kg of body weight up to 0.5mg maximum dose. **May be repeated every 5–15 minutes for a total of 3 doses.**

- Give intramuscularly (IM) in the vastus lateralis muscle of the thigh, regardless of age, either by auto injector or by syringe and needle, through the clothing if necessary.1–4

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Weight in lbs</th>
<th>Weight in Kg</th>
<th>Epinephrine injectable (1:1000 dilution); IM = (1mg/mL) Minimum dose: 0.05mL$</th>
<th>Epinephrine auto–injector 0.15mg or 0.3 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1–6 months</td>
<td>9–19 lbs</td>
<td>4–8.5 kg</td>
<td>0.05 ml (or mg)</td>
<td>N/A</td>
</tr>
<tr>
<td>7–36 months</td>
<td>20–32 lbs</td>
<td>9–14.5 kg</td>
<td>0.1 ml (or mg)</td>
<td>N/A</td>
</tr>
<tr>
<td>37–59 months</td>
<td>33–39 lbs</td>
<td>15–17.5 kg</td>
<td>0.15 ml (or mg)</td>
<td>0.15mg/dose</td>
</tr>
<tr>
<td>5–7 years</td>
<td>40–56 lbs</td>
<td>18–25.5 kg</td>
<td>0.25 ml (or mg)</td>
<td>0.15mg/dose</td>
</tr>
<tr>
<td>8–10 years</td>
<td>57–76 lbs</td>
<td>26–34.5 kg</td>
<td>0.3 ml* (or mg)</td>
<td>0.15 mg/dose or 0.3mg/dose</td>
</tr>
<tr>
<td>11–12 years</td>
<td>77–99 lbs</td>
<td>35–45 kg</td>
<td>0.4 ml (or mg)</td>
<td>0.3mg/dose</td>
</tr>
<tr>
<td>≥13 years</td>
<td>100+ lbs</td>
<td>46+ kg</td>
<td>0.5 ml◊ (or mg)</td>
<td>0.3mg/dose</td>
</tr>
</tbody>
</table>

**Note:** Dose by weight is preferred. If weight is not known, dosing by age is appropriate.5

* Maximum dose for children.

◊ Maximum dose for teens and adults. $ Subcutaneous injection is no longer recommended.2–4
### III. A. Table 2. URTICARIA: First-Line Treatment for Urticaria:

- Give Diphenhydramine IM as follows:

<table>
<thead>
<tr>
<th>Age Group Dose</th>
<th>Weight in lbs◊</th>
<th>Weight in Kg◊</th>
<th>Injectable: 50mg/mL IM</th>
</tr>
</thead>
<tbody>
<tr>
<td>7–36 months</td>
<td>20–32 lbs</td>
<td>9–14.5 kg</td>
<td>10 mg–15 mg</td>
</tr>
<tr>
<td>37–59 months</td>
<td>33–39 lbs</td>
<td>15–17.5 kg</td>
<td>15 mg–20 mg</td>
</tr>
<tr>
<td>5–7 years</td>
<td>40–56 lbs</td>
<td>18–25.5 kg</td>
<td>20 mg–25 mg</td>
</tr>
<tr>
<td>8–12 years</td>
<td>57–99 lbs</td>
<td>26–45 kg</td>
<td>25–50 mg³</td>
</tr>
<tr>
<td>≥13 years§</td>
<td>100+ lbs</td>
<td>46+ kg</td>
<td>50mg² –100 mg⁴</td>
</tr>
</tbody>
</table>

*This order does not authorize use of Benadryl® in children ≤6 months of age.*  
◊ Dose by weight is preferred. If weight is not known, dosing by age is appropriate.  
§ Children age ≥13 years, maximum single dose is 100mg.

1. Apply ice to the site where the vaccine was administered. If more than one site is involved, apply ice to the sites that appear to be red, warm, or swelling.

2. Record all medications administered including the time, dosage, response, and the name of the medical personnel who administered the medication.

3. Take and record the patient’s vital signs at the initial assessment, and at minimum - every 10 minutes, and following the administration of any additional medication.

4. If the patient is wheezing because of respiratory difficulty, elevate the head and chest slightly; if the patient’s blood pressure is decreased and the pulse is weak, lay them flat with feet elevated.

5. Continue to monitor for and treat signs and symptoms progressing towards anaphylaxis when indicated.
III. B. Table 3. Optional Treatment: Hydroxyzine Hydrochloride\textsuperscript{1–4} (Atarax\textsuperscript{®} or Vistaril\textsuperscript{®}) for severe urticaria (hives) when Benadryl\textsuperscript{®} is unavailable:

>Administer when Benadryl\textsuperscript{®} is unavailable<

• Give PO as follows:

<table>
<thead>
<tr>
<th>Age Group Dose</th>
<th>Weight in lbs</th>
<th>Weight in Kg</th>
<th>Liquid: 10mg/5mL or 25mg/5mL</th>
</tr>
</thead>
<tbody>
<tr>
<td>7–36 months</td>
<td>20–32 lbs</td>
<td>9–14.5 kg</td>
<td>5–7.5mg/dose</td>
</tr>
<tr>
<td>37–59 months</td>
<td>33–39 lbs</td>
<td>15–17.5 kg</td>
<td>7.5–10mg/dose</td>
</tr>
<tr>
<td>5–7 years</td>
<td>40–56 lbs</td>
<td>18–25.5 kg</td>
<td>10–12.5mg/dose</td>
</tr>
<tr>
<td>8–10 years</td>
<td>57–76 lbs</td>
<td>26–34.5 kg</td>
<td>12.5–15mg/dose</td>
</tr>
<tr>
<td>11–12 years</td>
<td>77–99 lbs</td>
<td>35–45 kg</td>
<td>15–25mg/dose</td>
</tr>
<tr>
<td>(\geq)13 years</td>
<td>(\geq)100 lbs</td>
<td>(\geq)46 kg</td>
<td>25mg/dose (50–100mg, maximum per day)</td>
</tr>
</tbody>
</table>

\*NOTE: Dose by weight is preferred. If weight is not known, dosing by age is appropriate.\textsuperscript{4}
IV. LOSS OF CONSCIOUSNESS: Syncope

A. Treatment: Ammonia capsule if needed.

1. If the individual “feels faint”:
   - Ammonia ampules may be used: (crush and wave near patient's nose)
   - Have patient lie flat with feet elevated or sit with their head down for several minutes

2. Unconsciousness:
   - Place flat on back, with feet elevated
   - Unconsciousness from fainting should only last seconds
   - Ammonia ampules may be used: (crush and wave near patient's nose)
   - Have patient rest in a quiet area for 10 minutes after regaining consciousness. Slowly have patient move to a sitting position and then standing, checking to make sure no symptoms recur.

Anaphylaxis can be distinguished from a vasovagal response by the quality of the pulse. In the case of anaphylaxis, the pulse may be rapid, thready, and weak. The patient’s blood pressure may be falling. In a vasovagal response, the pulse should be slow.

See APPENDIX A for additional signs and symptoms of vasovagal response.
V. Required Emergency Kit Contents:

Required Documentation available on site:
- Current Healthcare Provider CPR Card*
- Copy of Adverse Events Protocol

Required Equipment and Medications Maintained in a Separate Container:

Medications (generic formulations acceptable):
- Epinephrine solutions:
  - 1 multi-dose vial (MDV) of 1:1000 Epinephrine and syringe
  - Epinephrine auto-injectors; 3 doses each of adult and pediatric size units

Syringes: For Epinephrine injection only:
- 1-cc U-100 syringes, 22–25g, 1”,1½” needles for epinephrine administration

Optional Medications and Equipment

- Diphenhydramine (Benadryl®): Keep 1 MDV or 2 SDV vials available
  - Injectable: 50 mg/mL IM
  - Syringes: For diphenhydramine injection only:
    - 3-cc syringes with 1–1½” needles for diphenhydramine (Benadryl®) administration

- Sphygmomanometer and Stethoscope: electronic devices must show current calibration and batteries as needed.
Optional Medications and Equipment Cont.

- Hydroxyzine for use when diphenhydramine is unavailable
  - Liquid: 10 mg/5 mL or 25 mg/5 mL  
    EXP: __________
  - Tablets: 10-mg or 25-mg  
    EXP: __________
  - Capsules: 25-mg  
    EXP: __________
  - Bottle of water for swallowing oral antihistamines  
    EXP: __________

Oxygen Supplies for Rural Areas or where 911 response may be delayed:

- O₂ Container  Level checked: __________
- Nasal cannula: the regulator should not be set to exceed 6 liters of O₂/minute
- An oxygen face mask/shield with one-way valve: the regulator should be set at 10–12 liters of O₂/minute with a minimum of 5 liters of O₂/minute
- Breathing bag with mask with O₂ regulator should be set between 12–15 liters/minute
- Oral airways: small, medium and large

*Note: An active CPR certification issued by the American Heart Association or the American Red Cross or any other equivalent program intended for a healthcare provider that contains a hands-on training component, is valid for not more than three years and is specific to the age and population being treated.
VI. ADVERSE EVENTS REPORTING

Public providers are to complete the Vaccine Adverse Events Reporting System (VAERS) report online at https://vaers.hhs.gov/reportevent.html

Private providers are to report events directly to VAERS and can read about options on how to do so at https://vaers.hhs.gov/reportevent.html.

To request this material in an alternative format (e.g., Braille) or to clarify any part of the above order, contact the Oregon Health Authority Immunization Program at 971.673.0300 and 711 for TTY. For other questions, consult with the vaccine recipient’s primary health care provider or a consulting physician.

Electronic copy of this standing order is available at: http://1.usa.gov/OregonStandingOrders
REFERENCES


APPENDIX A:

ANAPHYLAXIS: signs and symptoms

A. Symptoms:

1. Symptoms usually occur within the first 15 minutes following the injection, but may occur as soon as 30 seconds afterwards.

2. The more rapid the symptoms appear after an injection or administration of a vaccine, the more serious the reaction.

3. Anaphylaxis can be distinguished from a vasovagal response by quality of pulse. In the case of anaphylaxis, the pulse may be rapid, thready, and weak. The patient's blood pressure may be falling.

B. Early signs and symptoms (may include one or more of the following):

   Cardiac:
   - Rapid, weak pulse
   - Hypotension
   - Irregular heartbeat

   Respiratory:
   - Rapid, shallow breathing
   - Tightness in throat or chest
   - Hoarseness or stridor
   - Congestion, sneezing, wheezing, or coughing

   Cutaneous:
   - Flushing, pallor, cyanosis, or a hive-like rash
   - "Pins and needles" sensation on skin
   - Diaphoresis
   - Itching or edema

   Other:
   - Swelling of lips and tongue, inability to swallow
   - Anxiety, restlessness, apprehension or a “sense of doom”
   - Feeling of warmth
   - Irritability
   - Weakness
   - Headache
   - Nausea, vomiting, diarrhea or abdominal pain
C. These signs and symptoms may lead to life-threatening manifestations:
   • Progressive dyspnea: with or without stridor or wheezing. The upper airway may swell and become obstructed.
   • Shock: hypotension, weak, fast, irregular pulse
   • Collapse/unconsciousness; altered mental status, which may include seizures.
   • NOTE: Anaphylaxis may present with one, some or all of the life-threatening components.

Urticaria (hives): signs and symptoms

- Migratory
- Well-circumscribed
- Erythematous (red)
- Pruritic plaques on the skin (itchy)

Vasovagal Response or Syncope: signs and symptoms

- Client becomes pale.
- Client feels faint, light headed, and dizzy, nauseated, or reports a cold sweat (diaphoretic).
- Client collapses suddenly to unconsciousness, BUT maintains a slow, steady, strong pulse, normal respirations and blood pressure.
Adverse Event Documentation: EMERGENCY TREATMENT

- Call 911 while assessing ABCs → AIRWAY BREATHING CIRCULATION, lay client flat to prevent empty ventricle syndrome.
- Administer epinephrine IM in thigh (vastus lateralis) using correct needle length. If no improvement in condition, repeat epinephrine every 5–15 minutes for up to 3 doses depending on patient’s response.
- **Do not delay transport.**
- Take Vitals.
- Repeat vitals every 5 minutes, and after each medication given until emergency help arrives.
- Perform CPR if needed. Use AED if available.
- See Urticaria standing order/protocol for diphenhydramine use and dosage.

**INFORMATION**

<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>Allergies:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Birth:</td>
<td>Vaccine Given:</td>
</tr>
<tr>
<td>Date:</td>
<td>Site:</td>
</tr>
<tr>
<td>Signature:</td>
<td>Route:</td>
</tr>
</tbody>
</table>

Anaphylaxis – Urticaria – Syncope (circle one)

**VITALS**

<table>
<thead>
<tr>
<th>Time</th>
<th>Pulse</th>
<th>Respirations</th>
<th>Blood Pressure</th>
<th>Medication</th>
<th>Dose</th>
<th>Site–Route</th>
<th>Initials</th>
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Notes:

05/2019