I. Training Standards for the Administration of Epinephrine Auto-injectors

It is recommended that all school personnel responsible for the storage and emergency use of an epinephrine auto-injector be trained annually, that the training be conducted by a physician or school nurse and that the training include the following information.

A. Techniques for recognizing symptoms of anaphylaxis.

The signs and symptoms of anaphylaxis usually appear rapidly, within seconds or minutes, after an exposure to an allergen, although, in some cases the reaction can be delayed for up to one to three hours depending on the substance causing the reaction. The Utah Health Code definition of ANAPHYLAXIS IS " POTENTIALLY LIFE-THREATENING HYPERSENSITIVITY TO A SUBSTANCE." Common symptoms, according to the American Academy of Allergy, Asthma and Immunology's (AAAAI) Position Statement 34, may include:

<table>
<thead>
<tr>
<th>Symptoms</th>
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<tbody>
<tr>
<td>Hives</td>
<td>Coughing</td>
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<td>Itching (of any part of the body)</td>
<td>Wheezing</td>
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<td>Swelling (of any body parts)</td>
<td>Throat tightness or closing</td>
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<td>Red, watery eyes</td>
<td>Difficulty swallowing</td>
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<td>Runny nose</td>
<td>Difficulty breathing</td>
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<tr>
<td>Vomiting</td>
<td>Sense of doom</td>
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<tr>
<td>Diarrhea</td>
<td>Dizziness</td>
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<tr>
<td>Stomach cramps</td>
<td>Fainting or loss of consciousness</td>
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<tr>
<td>Change of voice</td>
<td>Change of color</td>
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Some individuals have an anaphylactic reaction and the symptoms go away only to return a few hours later. This is called a bi-phasic reaction. Often the symptoms of the bi-phasic reaction occur in the respiratory system and take the individual by surprise. Therefore, according to the AAAAI, after a serious reaction "observation in a hospital setting is necessary for at least four hours after initial symptoms subside because delayed and prolonged reactions may occur even after proper initial treatment."

Once anaphylaxis has begun, the treatment of choice is an immediate intramuscular injection of epinephrine, which is effective for 10 to 15 minutes (according to the manufacturer of epinephrine auto-injectors, Dey Labs), followed by emergency medical attention.

Common causes of anaphylaxis include:

- **Food**
- **Insect stings**
- **Medication (e.g. antibiotics, aspirin, and non-steroidal anti-inflammatory drugs)**
- **Latex**
- Less common causes of anaphylaxis include:
  - **Food-dependent exercise induced anaphylaxis** (rare — occurs when an individual eats a specific food and exercises within three to four hours after eating)
  - **Idiopathic anaphylaxis** (Unknown cause)
Severe allergic reactions may be at times unavoidable because foods may contain unknown or unreported allergy producing ingredients, insects range widely, latex can be found almost anywhere, and some individuals do not know that they are severely allergic to one or more allergens.

B. Standards and procedures for the storage and emergency use of epinephrine auto-injectors.

An epinephrine auto-injector is a disposable drug delivery system that contains the proper dose of epinephrine and is used to treat anaphylaxis. It is supplied as a spring-loaded syringe that can be easily transported. The disposable system is designed to treat a single anaphylactic episode and must be properly discarded (in compliance with applicable state and federal laws) after its use. It is generally recommended that two epinephrine auto-injectors be kept on-hand as back-up. The following information on the emergency use of an epinephrine auto-injector is based on the manufacturer’s instructions:

Steps in the Emergency Use of an Epinephrine Auto-Injector (EpiPen):

1. Determine if anaphylaxis is suspected. Anaphylaxis usually, but not always, occurs right after exposure to an allergen. Frequently anaphylaxis occurs in individuals who have a history of a previous reaction. If there is uncertainty about the diagnosis, but there is a reasonable probability that it is anaphylaxis, then treat as anaphylaxis.

2. If anaphylaxis symptoms occur, call 911 or activate the emergency medical system (EMS). Stay with the victim. Have others notify the paramedics, school nurse, parents and school administrator immediately.

3. Prepare to administer EpiPen.

4. For students in second grade or below, or if less than 66 lbs, use the Green label EpiPen Jr (0.15 mg).

5. For adults and students in third grade or above, or if more than 66 lbs, use Yellow label EpiPen (0.3 mg). The EpiPen acts immediately; however the effects last only 10—15 minutes. Make sure someone has called 911.

6. EpiPen Administration Procedure:

   a. Pull of the blue safety release cap
   b. Swing and firmly push the orange tip against the outer thigh so it ‘clicks.’ HOLD on thigh for approximately 10 seconds to deliver the drug.

      i. Please note: As soon as you release pressure from the thigh, the protective cover will extend.

      ii. Each EpiPen Auto-Injector contains a single dose of a medicine called epinephrine, which you inject into your outer thigh. DO NOT INJECT INTRAVENOUSLY. DO NOT INJECT INTO YOUR BUTTOCK, as this may not be effective for a severe allergic reaction. In case of accidental injection, please seek immediate medical treatment.
c. **Call 911 and be sure to take the EpiPen Auto-Injector with you to the emergency room.**

7. Monitor the victim's airway and breathing. Begin CPR immediately if the victim stops breathing.

8. Follow-up medical care should be obtained at the emergency room or from the victim's physician. A second delayed reaction may occur up to 6 hours after the initial anaphylaxis.

9. Document the incident. Include in the documentation the date and time EpiPen was administered, the victim's response, and additional pertinent information. Send a copy of the report to the school nurse.

**Storage:**

According to the manufacturer, epinephrine auto-injectors should be stored at room temperature until the marked expiration date, at which time the unit must be replaced. Auto-injectors should not be refrigerated as this could cause the device to malfunction. Auto-injectors should not be exposed to extreme heat, such as in the glove compartment or trunk of a car during the summer and they should not be exposed to direct sunlight. Heat and light shorten the life of the product and can cause the epinephrine to degrade. To be effective, the solution in the auto-injector should be clear and colorless. If the solution is brown, replace the unit immediately.

**C. Emergency follow-up procedures, including calling the emergency 911 phone number and contacting, if possible, the pupil's parent and physician.**

When it is determined, based on the symptoms, that an anaphylactic reaction is occurring, it is important to act quickly. Administer epinephrine via an epinephrine auto-injector and have an assistant call 911 and request emergency response. Then contact the school nurse, school administrator, pupil’s parent and physician and inform them of the actions taken. Stay with the pupil until the paramedics arrive.

Even after epinephrine has been administered, emergency medical care should be obtained immediately because severely allergic individuals who have experienced anaphylaxis may need emergency respiratory or cardiac care, or even to be resuscitated if they stop breathing altogether. At the very least, these individuals will need professional care to determine whether additional epinephrine, steroids, antihistamines, or other treatment is required. Follow-up diagnosis and care by medical professionals after the administration of epinephrine is important for recovery. A delayed or secondary reaction may occur. Therefore the individual needs to remain under medical supervision for at least four hours after an episode of anaphylaxis.
1. Pull off the blue safety release cap.

2. Swing and firmly push the orange tip against the outer thigh so it ‘clicks.’ HOLD on thigh for approximately 10 seconds to deliver the drug.

   **Please note:** As soon as you release pressure from the thigh, the protective cover will extend.

   Each EpiPen Auto-Injector contains a single dose of a medicine called epinephrine, which you inject into your outer thigh. DO NOT INJECT INTRAVENOUSLY. DO NOT INJECT INTO YOUR BUTTOCK, as this may not be effective for a severe allergic reaction. In case of accidental injection, please seek immediate medical treatment.

3. Seek immediate emergency medical attention and be sure to take the EpiPen Auto-Injector with you to the emergency room.

To view an instructional video demonstrating how to use an EpiPen Auto-Injector, please visit epipen.com.