

2019-2020

ADMINISTERED EPINEPHRINE AUTO-INJECTORS IN SCHOOLS REPORT



TEXAS
Health and Human
Services

Texas Department of State
Health Services

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Introduction

The Texas Education Code, Section 38.209 requires a school district, open-enrollment charter school, or private school who adopts an epinephrine auto-injector policy under Section 38.208 to report the use of an epinephrine auto-injector within 10 business days to the school district, charter holder if the school is an open-enrollment charter school, or the governing body of the school if the school is a private school, the physician or other person who prescribed the epinephrine auto-injector, and the commissioner of state health services.

The Texas Department of State Health Services (DSHS) School Health Program worked with the DSHS Chronic Disease Epidemiology Branch (CDE) to analyze data submitted through the “Required Reporting of Administered Epinephrine Auto-Injectors to DSHS” web form during the 2019-2020 school year.

Methods

School health services personnel complete the “Required Reporting of Administered Epinephrine Auto-Injectors to DSHS” web form within 10 days of the use of an epinephrine auto-injector in a school (**Appendix A**). The web form consists of 22 questions, including 8 open-ended questions and 8 multiple-choice and 5 multi-select questions. The web form can be found on the **DSHS website**.

It is important to note that due to the coronavirus disease (COVID-19) pandemic, schools in the state of Texas were closed as of March 2020. Thus, the data included in this report covers from August 2019 to March 2020¹.

Results

A total of 132 records were submitted during this period. Records were submitted from 48 independent school districts (ISD). The most records were submitted from Education Service Center (ESC) Regions 11 and 13 (20.5 percent), Region 10 (18.9 percent), and Region 20 (15.2 percent) (**Appendix B**).

¹ Data was reported from August 12, 2019 through March 9, 2020. Governor Abbott issued Executive Order No. GA-08 on March 19, 2020, which temporarily closed schools. On April 27, 2020 Governor Abbott issued Executive Order No. GA-18, which required schools to remain closed for in-person classroom instruction for the remainder of the 2019-2020 school year. These executive orders explain why data was not reported in late March, as well as in the months of April and May.

The age range of people who received an epinephrine auto-injector injection was 2 to 62 years old, with an average age of 14. The mode age was 14 years old. Most respondents reported that the epinephrine auto-injector injection was administered in a health clinic or nurse's office (78.6 percent) by a nurse (93.5 percent).

Table 1 shows the frequency and percent of responses to each question. The majority of epinephrine auto-injector injections were administered to students (87.1 percent). The majority of the individuals received an adult dosage (68.9 percent) and 97.1 percent received 1 dose of epinephrine.

Most of the individuals who received the epinephrine auto-injector injection had a known history of anaphylaxis (53.8 percent). In 74.2 percent of the cases the school's unassigned epinephrine auto-injector was utilized. Lastly, 76.5 percent of those who received the epinephrine auto-injector were transported to local emergency medical services.

Table 2 presents the reported signs and symptoms experienced by the individuals who received the auto-injector injection. Individuals who experienced respiratory symptoms reported tightness in throat or chest (39.2 percent) and trouble breathing (20.9 percent). Of individuals who experienced skin symptoms, most reported itchiness (27.2 percent), hives (27.2 percent), and rash (22.8 percent). Individuals who experienced central nervous system symptoms, most reported swelling of the lips, tongue, or throat (40.0 percent) and anxiety (34.5 percent). The majority of the individuals did not experience gastrointestinal (81.6 percent) or cardiovascular system symptoms (46.9 percent).

Fifty respondents wrote in "other" symptoms. The most common symptoms included, but are not limited to, swelling, redness of the face, itchiness, red or irritated eyes, paleness, nausea, and increased body temperature ("burning/hot").

Table 3 shows the suspected causes or triggers of the anaphylaxis. The most frequently suspected cause or trigger for the anaphylaxis was due to food (42.4 percent), while the second most suspected cause or trigger was unknown (25.8 percent). The third most suspected cause or trigger was an insect bite or sting (17.4 percent), followed by other causes (9.1 percent) and medication (4.5 percent). No cases of anaphylaxis suspected to be from latex exposure were reported during this period.

**Table 1. Epinephrine Auto-Injector Use in Texas Schools
(August 2019 through March 2020)**

Question	Answer	Frequency (N)	Percent (%)
ESC Region	Region 1	6	4.5
	Region 2	9	6.8
	Region 4	4	3.0
	Region 5	2	1.5
	Region 7	2	1.5
	Region 8	1	0.8
	Region 10	25	18.9
	Region 11	27	20.5
	Region 12	1	0.8
	Region 13	27	20.5
	Region 16	1	0.8
	Region 17	4	3.0
	Region 19	3	2.3
	Region 20	20	15.2
Administered to	Students	115	87.1
	School Personnel/Volunteer	13	9.8
	Visitors	4	3.0
Dosage type	Adult	91	68.9
	Pediatric	41	31.1
Dosage administered	1	121	91.7
	2	11	8.3
History of Anaphylaxis	Yes	71	53.8
	No	57	43.2
	Unknown	4	3.0
Unassigned* Auto-Injector Utilized	Yes	98	74.2
	No	34	25.8
Transported to local emergency medical services	Yes	101	76.5
	No	31	23.5
Total		132	100.0

Footnotes:

*The unassigned auto-injector is assigned to the school and not a specific student.

- Texas Education Code, Section 38.209 relates to unassigned auto-injectors. However, the Stock Epinephrine Advisory Committee (SEAC) suggested that schools also report the administration of assigned auto-injectors to show the extent to which anaphylactic reactions are treated in schools. As such, some schools report the administration of both assigned and unassigned auto-injectors.
- Totals may not add up to 100 percent due to rounding.

Table 2: Symptom Information

Type	Symptoms	Frequency (N)	Percent (%)
Respiratory	Tightness in throat or chest	62	39.2
	Trouble breathing or shortness of breath	33	20.9
	Wheezing or coughing	31	19.6
	Tingling or numbing sensation	21	13.3
	No respiratory symptoms	11	7.0
Skin	Itchiness	41	30.1
	Hives	37	27.2
	Rash	31	22.8
	No skin symptoms	27	19.9
Gastrointestinal	Cramps	9	10.3
	Vomiting	7	8.0
	Diarrhea	0	0.0
	No gastrointestinal symptoms	71	81.6
Central Nervous System	Swelling of lips, tongue, or throat	44	40.0
	Anxiety	38	34.5
	Headache	4	3.6
	Loss of consciousness	2	1.8
	No central nervous systems symptoms	22	20.0
Cardiovascular system	Rapid pulse	28	29.2
	Dizzy or lightheaded	19	19.8
	Low blood pressure	4	4.2
	No cardiovascular system symptoms	45	46.9

Table 3: Suspected Cause

Cause	Frequency (N)	Percent (%)
Food	56	42.4
Unknown	34	25.8
Insect Bite/Sting	23	17.4
Other	12	9.1
Medication	6	4.5

Conclusion

During the 2019-2020 school year, 132 uses of an epinephrine auto-injector in a school were reported to DSHS through the “Required Reporting of Administered Epinephrine Auto-Injectors to DSHS” web form. Most of these injections were given to students, who received one adult dose of epinephrine. About 54 percent of injections were given to people with known history of anaphylaxis or allergies. In most cases, the school’s unassigned epinephrine auto-injector was used.

The most commonly reported symptoms were tightness in throat or chest, trouble breathing, itchiness, hives, rash, swelling of the lips, tongue, or throat, and anxiety. In almost half of cases the suspected cause or trigger was food.

It is important to note that due to the COVID-19 pandemic, schools in the state of Texas were closed as of March 2020. Thus, the data included in this report covers from August 2019 to March 2020.

Appendix A: Required Reporting of Administered Epinephrine Auto-Injectors to DSHS Form

Epinephrine Auto-Injectors Form

Required Reporting of Administered Epinephrine Auto-Injectors to DSHS

School districts, open-enrollment charter schools, private schools, or institutions of higher education that adopt an epinephrine auto-injector policy must report the use of an epinephrine auto-injector. This requirement is found in Texas Education Code, [Section 38.209](#) and [Section 51.883](#).

You must report within 10 business days to the entities outlined in the law and rules. School districts, open-enrollment charter schools, and private schools must report to the school district, charter holder if the school is an open-enrollment charter school, or the governing body of the school if the school is a private school, the physician or other person who prescribed the epinephrine auto-injector, and the commissioner of state health services. Institutions of higher education must report to the physician who prescribed the epinephrine auto-injector and the commissioner of state health services.

When you submit this electronic form, you meet the reporting requirement for the Texas Department of State Health Services (DSHS.) Be sure you report complete and accurate information.

Please fill out the entire form and provide detailed information.

- Spell out school district or institution name. Do not use an abbreviation.
- Report this information to your school district, charter holder, or governing body, and the epinephrine auto-injector prescriber.

NOTE: A [public institution of higher education means](#) a:

- Technical Institute,
- Junior College or Community College,
- College or University,
- Medical or Dental School,
- Public State College, and an
- Agency of Higher Education.

We do not require private institutions of higher education to submit reports at this time. DSHS encourages all institutions of higher education to report the use of epinephrine auto-injectors.

Please remember to promptly replace your used epinephrine auto-injector.

You must complete all fields with an asterisk (*).

School Information	
Select if you are reporting for a K-12 school or an institution of higher education:*	<input type="radio"/> K-12 School <input type="radio"/> Institution of Higher Education
Name of the institution of higher education, school district, open-enrollment charter school, or private school:*	
<input type="text"/>	
Email address of person completing this form:*	
<input type="text"/>	
Education Service Center region for your school district, open-enrollment charter school, or private school: (Enter N/A if this report is for an institution of higher education.)*	
<input type="text"/>	
Recipient Information	
Person who received the epinephrine auto-injector injection:*	<input type="radio"/> Student <input type="radio"/> School Personnel or School Volunteer <input type="radio"/> Visitor
Age of person who received the epinephrine auto-injector injection:*	<input type="text"/>

Location and Dosage Information

Physical location where you administered the injection:*

(Examples: cafeteria, classroom, school bus, hallway, football field, etc. You do not need to include mailing address.)

Number of doses administered:*

(1 dose = 1 epinephrine auto-injector)

Type of dosage administered:*

- Child dose
- Adult dose

Other Information

Date administered:*

[None]  

Title of the person who administered the injection:*

(Examples: 6th grade teacher, school librarian, basketball coach, school volunteer, etc.)

Did the person who received the epinephrine auto-injector injection have a known history of anaphylaxis or allergies requiring epinephrine auto-injectors?*

- Yes
- No
- Unknown

Was the school's unassigned epinephrine auto-injector utilized?*

- Yes
- No


Was the individual who received the epinephrine auto-injector injection transported to local emergency medical services?*

- Yes
- No

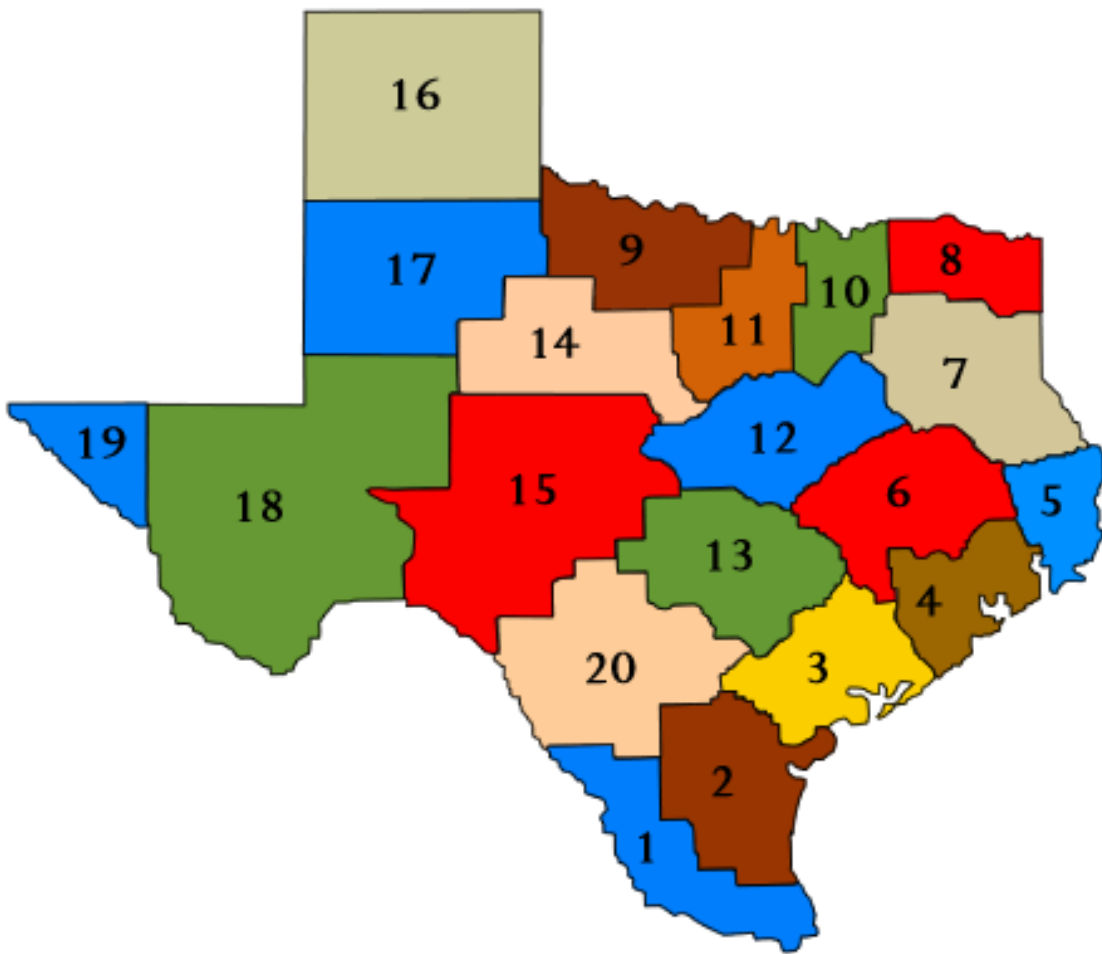
Symptom Information

A person experiencing anaphylaxis may have many signs and symptoms. Please select the symptoms that the individual who received the auto-injector injection was exhibiting. Please mark all that apply. If no symptoms for a particular group occurred, choose "N/A."

Respiratory	<input type="checkbox"/> Wheezing or coughing <input type="checkbox"/> Trouble breathing or shortness of breath <input type="checkbox"/> Tightness in throat or chest <input type="checkbox"/> Tingling or numbing sensation <input type="checkbox"/> N/A (no respiratory symptoms)
Skin	<input type="checkbox"/> Rash <input type="checkbox"/> Hives <input type="checkbox"/> Itchiness <input type="checkbox"/> N/A (no skin symptoms)
Gastrointestinal	<input type="checkbox"/> Cramps <input type="checkbox"/> Diarrhea <input type="checkbox"/> Vomiting <input type="checkbox"/> N/A (no gastrointestinal symptoms)
Central Nervous System	<input type="checkbox"/> Headache <input type="checkbox"/> Swelling of lips, tongue, or throat <input type="checkbox"/> Loss of consciousness <input type="checkbox"/> Anxiety <input type="checkbox"/> N/A (no CNS symptoms)

<p>Cardiovascular System</p>	<p><input type="checkbox"/> Dizzy or lightheaded</p> <p><input type="checkbox"/> Rapid pulse</p> <p><input type="checkbox"/> Low blood pressure</p> <p><input type="checkbox"/> N/A (no cardiovascular symptoms)</p>
<p>Other</p>	<p>Please list signs or symptoms not listed above, if applicable:</p> <div data-bbox="708 417 1214 516" style="border: 1px solid black; height: 47px; width: 312px;"></div>
<p>Suspected Cause</p>	
<p>Please indicate the suspected cause or trigger of the anaphylaxis:*</p> <p><input type="radio"/> Food</p> <p><input type="radio"/> Latex</p> <p><input type="radio"/> Insect sting or bite</p> <p><input type="radio"/> Medication</p> <p><input type="radio"/> Unknown</p> <p><input type="radio"/> Other</p>	
<p>If you selected "Other" for the suspected cause question above, please explain:</p>	<div data-bbox="708 959 1214 1058" style="border: 1px solid black; height: 47px; width: 312px;"></div>
<div data-bbox="220 1094 639 1194" style="border: 1px solid #ccc; padding: 5px;"> <input type="checkbox"/> I'm not a robot <div style="float: right; text-align: center;">  <p>reCAPTCHA <small>Privacy - Terms</small></p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <input type="button" value="Submit Request"/> </div> <div style="text-align: center; margin-top: 10px;"> <input type="button" value="Clear Form"/> </div>	

Appendix B: Education Service Center Map



General Information

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