

**DATA HEALTH BRIEF:**  
**EPINEPHRINE ADMINISTRATION IN SCHOOLS**  
**New York Statewide School Health Services Center**  
**August 1, 2005 - July 31, 2007**

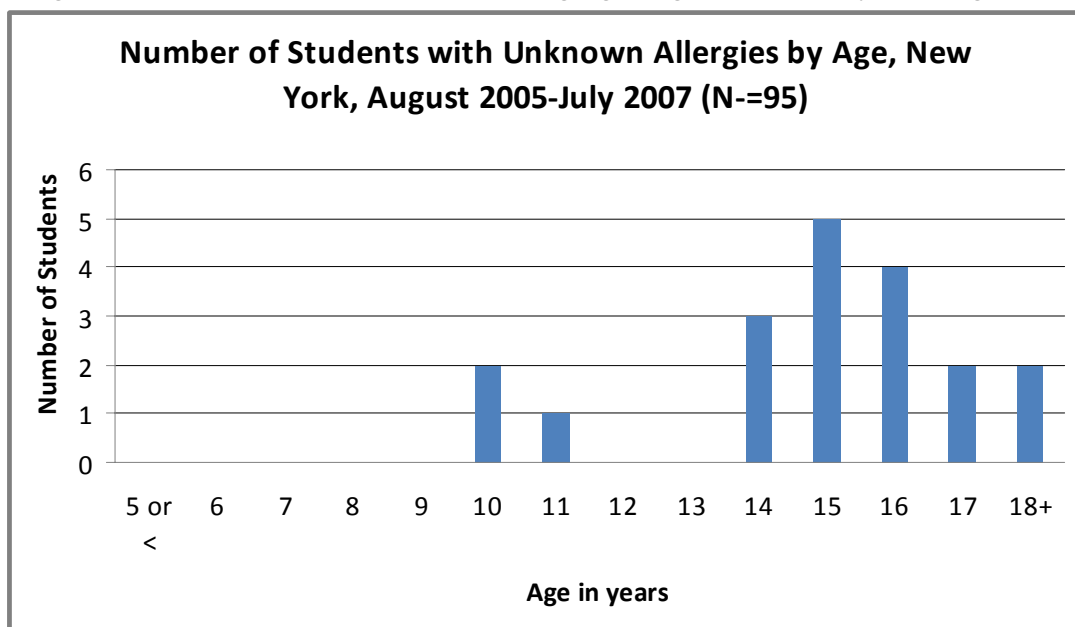
This data health brief documents the epidemiology of epinephrine administration for the treatment of allergic reactions in New York schools. Data were reported to the New York Statewide School Health Services Center (NYSSHSC), during the 2005 - 2007 school year(s). During this period of time, 92 public school districts and 10 nonpublic schools reported 102 administrations of epinephrine for the treatment of allergic reactions in schools. Data on epinephrine administration in schools is submitted to the NYSSHSC on a standardized form, Report of EpiPen® Administration, by the school district at the time of the occurrence.

- All regions of the state, including New York City, reported epinephrine administration. The Finger Lakes and the Hudson Valley region reported the greatest number of administrations [(19%), and (18%) respectively], whereas, the Central Leatherstocking and the Catskills reported the fewest (1% each).
- While most school districts reported only one administration of epinephrine, 13 school districts reported more than one and five school districts reported four or more epinephrine administrations during the school year.
- More than half (58%) of the administrations occurred during the months of September, October, March and May.

**Characteristics of Individuals Receiving Epinephrine**

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- Six of the administrations were to adult staff members; one administration was to a parent; the remaining 95 were administered to students ranging in age from 5 - 20 years (Figure 1).



**Figure 1**

*Data Source: Report of EpiPen Administration forms*

- Slightly more females (51%) received epinephrine than males (49%).
- The most frequently reported allergens were peanuts (33%), and tree nuts (11%) (Figure 2).
- Twenty (20) individuals receiving epinephrine (19%) reported having multiple allergies. Among these individuals, several different combinations of allergens were reported, including allergies to peanuts, tree nuts, dairy, egg, fish/shellfish, cat dander, molds, certain fruits and vegetables, latex, insect venom, and others. (Figure 2).
- Types of allergies listed in the “Other” category included allergies to mold, pollen, pet dander, medicines, food dye, and miscellaneous foods. (Figure 2).

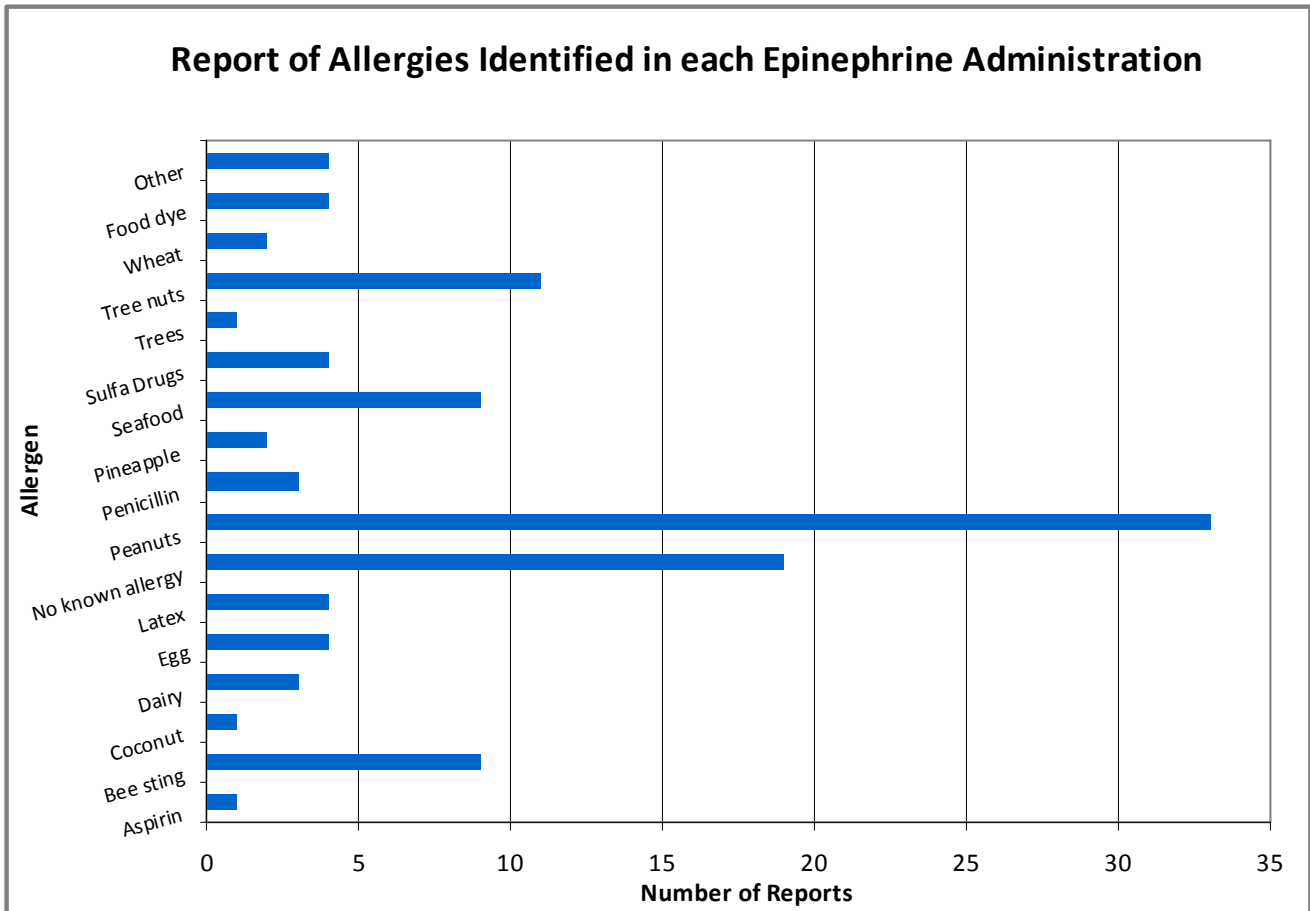


Figure 2

Data Source: Report of EpiPen Administration forms

*(numbers reflect the number of times allergen is reported - student may have more than one reported allergen)*

## Characteristics of Allergic Reactions

- Some type of food was believed to be the cause of 54% of the reactions (Figure 3). In 35 cases, the allergic reaction was triggered by the ingestion of some type of snack food, e.g., cookies, candy, muffins, etc. In 8 cases, the allergic reaction was triggered by student inhaling, or touching food product; in majority of cases, foods that contained peanuts.
- In 19% of the cases, the allergen that triggered the reaction was unknown (Figure 3).

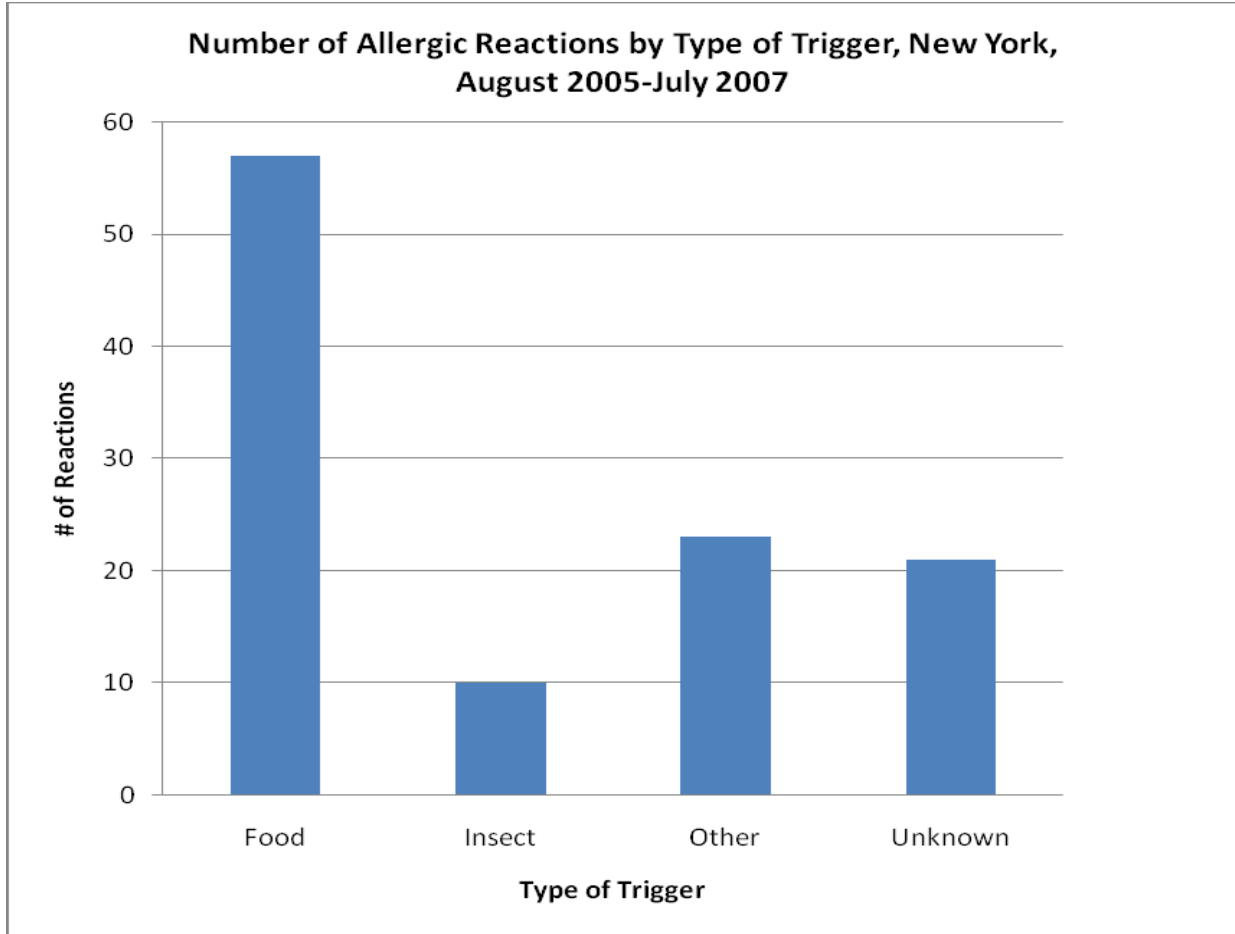
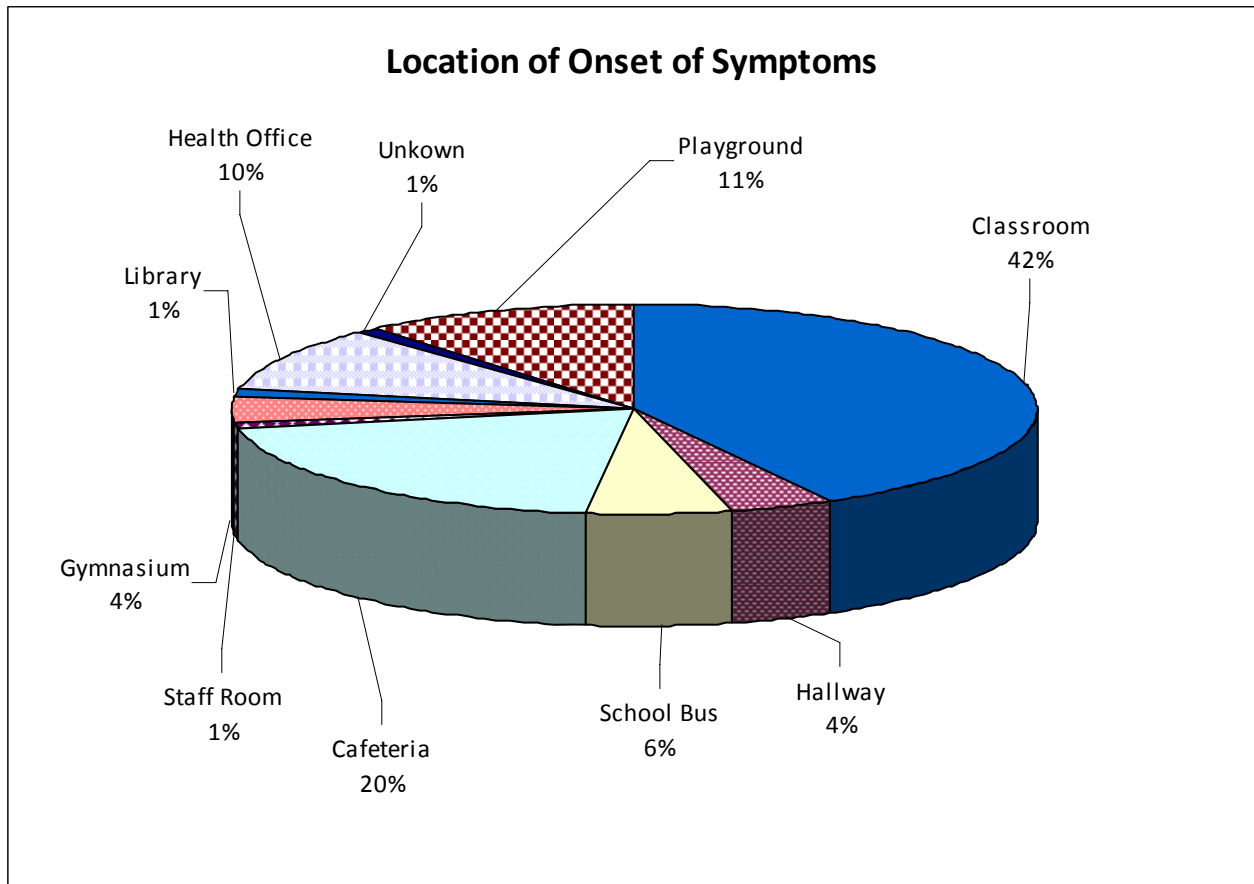


Figure 3

Data Source: Report of EpiPen Administration forms

- In the majority of cases (85%), the symptoms reported involved the respiratory tract such as tightness of the throat, coughing, wheezing, shortness of breath, or difficulty swallowing.

- Symptoms most frequently developed in the classroom (42%). Other locations included the cafeteria (20%), health office (10%), playground/sports field (11%) and various locations both within and outside the school building, including school buses. (Figure 4).



**Figure 4**

Data Source: Report of EpiPen Administration forms

- Most (88%) of the epinephrine administrations occurred in the Health Office. Other locations included the classroom, gym, school bus, and various other locations both within and outside the school building. (Figure 5).

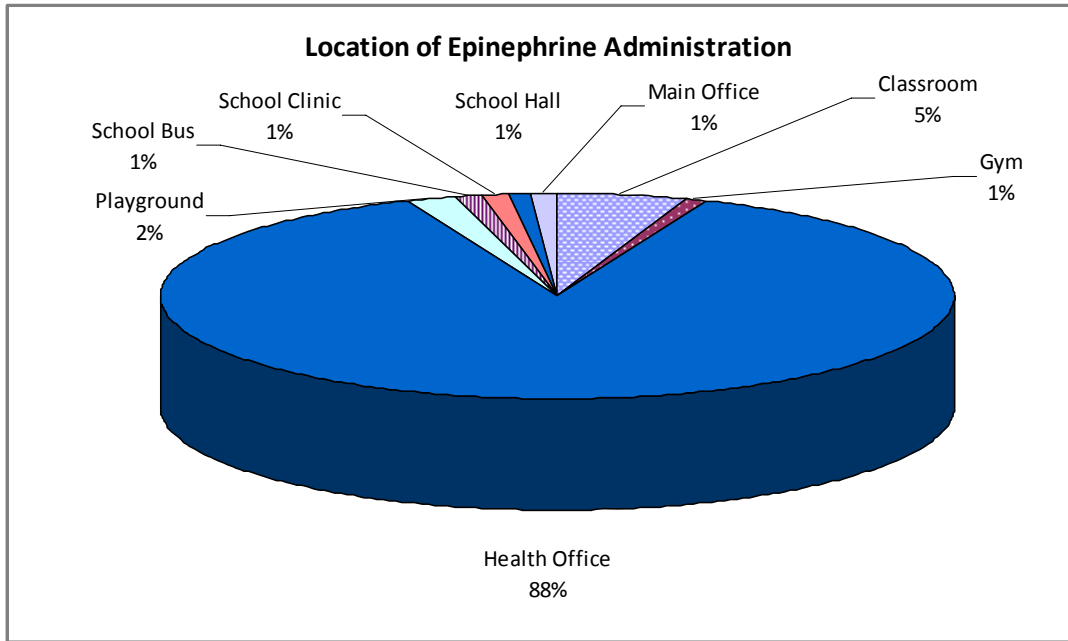


Figure 5

Data Source: Report of EpiPen Administration forms

- The majority of Epi-pens were kept in the Health Office (86%). 9% were self carried by student, as well as various other storage locations. (Figure 6).

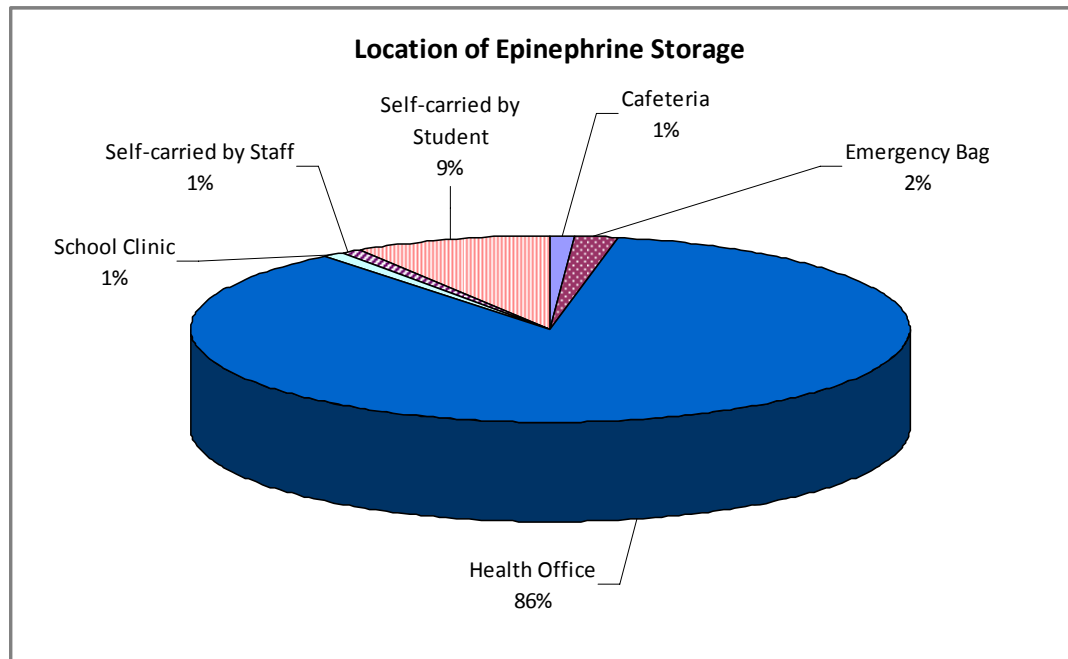


Figure 6

Data Source: Report of EpiPen Administration forms

- The majority of epinephrine administrations were performed by registered nurses (83%). In five cases, epinephrine was administered by other types of personnel as follows: four LPNs, one coach. (Figure 7). All unlicensed personnel had been appropriately trained in the administration of epinephrine.
- Twelve (12) students, ranging in age from 13 years to 16 years, self-administered the epinephrine. (Figure 7).

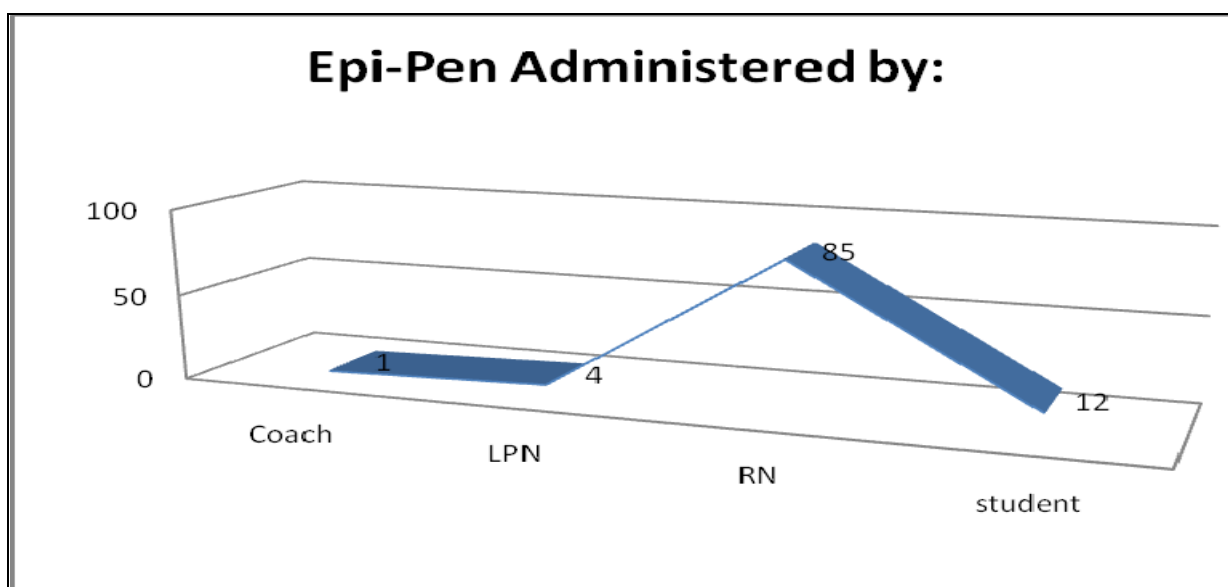


Figure 7

Data Source: Report of EpiPen Administration forms

- The average time between development of symptoms and the administration of epinephrine for all individuals (with both known and unknown allergic conditions) was 10-12 minutes, with a range of 0 - 120 minutes.
- Of those students with known allergies, 50% had an individualized health care plan (IHCP) in place.
- Fifty-five (55) schools had (Non-Patient Specific) Standing Orders signed by School District's Authorized Provided, allowing School Health Professionals to administer Epinephrine in an Emergency.
- Twelve individuals (12) (10 students and 2 adults) were not transported to a medical facility via the Emergency Medical System. In all cases involving students, the decision not to transport was made by a parent or physician.

## Characteristics of Cases Involving Individuals with Unknown Allergic Conditions

- Twenty-one (21) cases involved individuals with unknown allergic conditions. In three of these cases, the student had a diagnosed allergic condition, but this information was not reported to the school nurse.
- The average age of students with unknown allergic conditions was 15 years, with a range of 10 – 19 years (Figure 8).

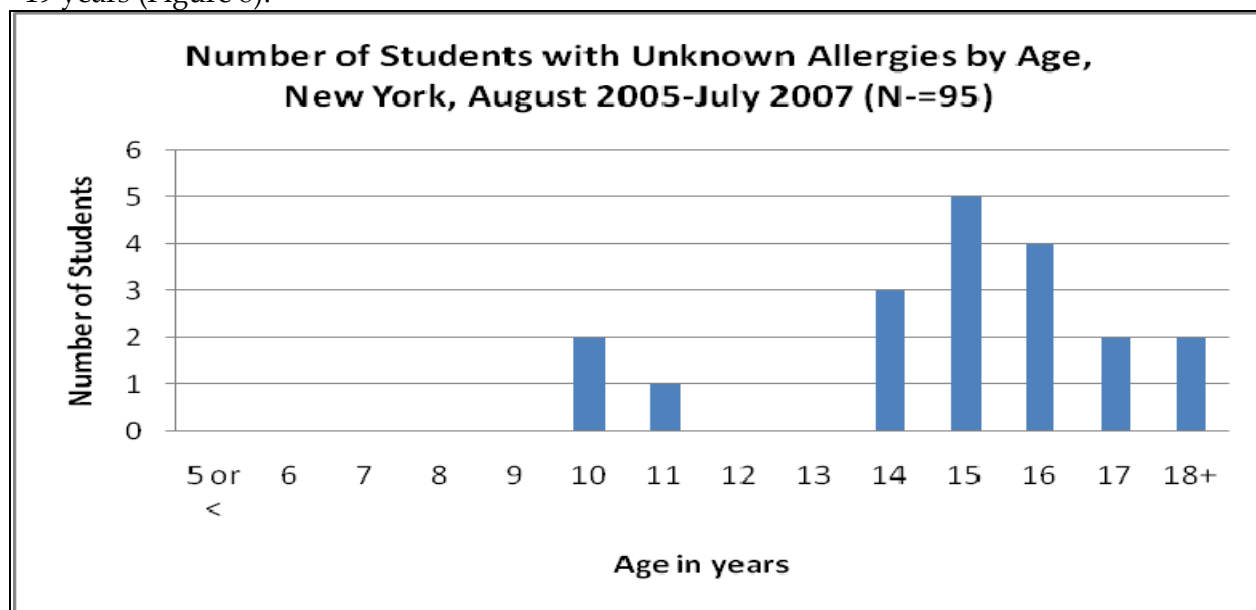


Figure 8

Data Source: Report of EpiPen Administration forms

- Nineteen (19) individuals with unknown allergic conditions experienced symptoms involving the respiratory system such as tightness of the throat, wheezing, coughing, shortness of breath, or difficulty swallowing.
- The average amount of time between onset of symptoms and administrations of epinephrine in those individuals with unknown allergic conditions was 5-10 minutes, with a range of 2 – 20 minutes, except in one case response time was 120 minutes. (The average time between development of symptoms and the administration of epinephrine for all individuals (with both known and unknown allergic conditions) was 10-12 minutes, with a range of 0 – 120 minutes).