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| **Anaphylactic Events and the Administration of Epinephrine  in Schools in Massachusetts 2020-2021 School Year** | | |
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|  | July 1, 2020- June 30, 2021 | |
| These data are compiled from reports of epinephrine administration submitted by public and private schools throughout Massachusetts via an online data collection tool. These data describe intentional epinephrine administrations due to suspected anaphylactic events.  *Schooling was both in person and remote during the 2020-2021 school year due to the COVID-19 pandemic, which likely impacted the number of epinephrine administrations. Numbers therefore cannot be directly compared to school years when schooling was fully in-person.* | | |
| ***1. Characteristics of Individuals Who Experienced an Anaphylactic Event  (Public and Private Schools)*** | | |
| **Type of person treated for anaphylaxis** | **Number of Individuals** | **Percent of Total Administrations** |
| Staff | 9 | 10.5 |
| Student | 77 | 89.5 |
| Visitor | 0 | 0.0 |
| TOTAL | 86 | 100.0 |
| **Age** |  |  |
| 5 or under | 3 | 3.5 |
| 6 | 3 | 3.5 |
| 7 | 2 | 2.3 |
| 8 | 2 | 2.3 |
| 9 | 3 | 3.5 |
| 10 | 5 | 5.8 |
| 11 | 2 | 2.3 |
| 12 | 9 | 10.5 |
| 13 | 6 | 7.0 |
| 14 | 10 | 11.6 |
| 15 | 9 | 10.5 |
| 16 | 7 | 8.1 |
| 17 | 13 | 15.1 |
| 18 or older | 12 | 14.0 |
| TOTAL | 86 | 100.0 |
| **Sex** |  |  |
| Female | 47 | 54.7 |
| Male | 39 | 45.3 |
| TOTAL | 86 | 100.0 |

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| **Race/Ethnicity**1, 2 | | **Number of Individuals** | | **Percent of Total Administrations** |
| African American/Black non-Hispanic/non-Latinx | | 3 | | 3.5 |
| Asian non-Hispanic/non-Latinx | | 9 | | 10.5 |
| Hispanic/Latinx | | 11 | | 12.8 |
| White non-Hispanic/non-Latinx | | 47 | | 54.7 |
| Multi-race non-Hispanic/non-Latinx | | 3 | | 3.5 |
| Unknown non-Hispanic/non-Latinx | | 12 | | 14.0 |
| Another race non-Hispanic/non-Latinx3 | | 1 | | 1.2 |
| TOTAL | | 86 | | 100.0 |
| *1. Race/ethnicity was determined by the school nurse using school records or other available information. Here, we’ve modified the categories that school nurses chose from. "Spanish/Hispanic/Latino" was modified to "Hispanic/Latinx" and "African American” to “African American/Black” to align with current data standards. 2. Race/ethnicity categories are mutually exclusive, so each person who was administered epinephrine is classified in only one of the rows in the table. If someone is noted as Hispanic/Latinx they are not included in any of the race categories. 3. "Another race" includes those whose race was noted as "other" and may include American Indian/Alaska Native and Native Hawaiian/Other Pacific Islander.* | | | | |
| **History of any known allergies**4 | |  | |  |
| Did not have an allergy history | | 25 | | 29.1 |
| Had an allergy history | | 61 | | 70.9 |
| TOTAL | | 86 | | 100.0 |
| *4. In the 2017-2018 school year and in years prior to that, reports listed "History of life-threatening allergy.” The reporting tool was changed to "any known allergies" in order to find out whether the individuals who were administered epinephrine had known allergies that might have put them at risk for an anaphylactic reaction.* | | | | |
| **Existence of an allergy action plan** | |  | |  |
| Did not have an allergy action plan | | 31 | | 36.0 |
| Had an allergy action plan | | 44 | | 51.2 |
| Unknown | | 1 | | 1.2 |
| Not applicable (there was no history of allergy) | | 10 | | 11.6 |
| TOTAL | | 86 | | 100.0 |
| **History of anaphylaxis** | |  | |  |
| No history of anaphylaxis | | 40 | | 46.5 |
| Had a history of anaphylaxis | | 36 | | 41.9 |
| Unknown | | 10 | | 11.6 |
| TOTAL | | 86 | | 100.0 |
| **Previous epinephrine use** | |  | |  |
| No prior epinephrine use | | 40 | | 46.5 |
| Prior epinephrine use | | 33 | | 38.4 |
| Unknown | | 13 | | 15.1 |
| TOTAL | | 86 | | 100.0 |
| **Previous epinephrine prescription** | |  | |  |
| No prior epinephrine prescription | | 27 | | 31.4 |
| Prior epinephrine prescription | | 58 | | 67.4 |
| Unknown | | 1 | | 1.2 |
| TOTAL | | 86 | | 100.0 |
| **History of asthma** | |  | |  |
| No history of asthma | | 53 | | 61.6 |
| Had a history of asthma | | 28 | | 32.6 |
| Unknown | | 5 | | 5.8 |
| TOTAL | | 86 | | 100.0 |
| ***2. Characteristics of Anaphylactic Events*** | | | | |
| **Trigger** | **Number of Individuals** | | **Percent of Total Administrations** | |
| Food | 49 | | 57.0 | |
| Insect sting | 5 | | 5.8 | |
| Latex | 0 | | 0.0 | |
| Medication | 2 | | 2.3 | |
| Other | 5 | | 5.8 | |
| Unknown | 25 | | 29.1 | |
| TOTAL | 86 | | 100.0 | |
| **Mode of contact with food allergen** |  | |  | |
| Ingested | 44 | | 51.2 | |
| Inhaled | 2 | | 2.3 | |
| Touched | 2 | | 2.3 | |
| Don't know | 0 | | 0.0 | |
| Other | 0 | | 0.0 | |
| Not applicable (food was not the trigger) | 37 | | 43.0 | |
| Did not select an answer | 1 | | 1.2 | |
| TOTAL | 86 | | 100.0 | |
| **Location where symptoms developed** |  | |  | |
| Bus | 0 | | 0.0 | |
| Cafeteria | 16 | | 18.6 | |
| Classroom | 42 | | 48.8 | |
| Gymnasium | 1 | | 1.2 | |
| Health office | 7 | | 8.1 | |
| Playground or sports field5 | 12 | | 14.0 | |
| Other | 8 | | 9.3 | |
| TOTAL | 86 | | 100.0 | |
| *5. In the 2017-2018 school year and in years prior to that, “sports fields” were classified as "other," so these data are not directly comparable to data collected in 2017-2018 and before.* | | | | |
| **Location where epinephrine was administered** |  | |  | |
| Cafeteria | 0 | | 0.0 | |
| Classroom | 2 | | 2.3 | |
| Hallway | 0 | | 0.0 | |
| Health office | 79 | | 91.9 | |
| Other | 3 | | 3.5 | |
| Don't know | 1 | | 1.2 | |
| Did not select an answer | 1 | | 1.2 | |
| TOTAL | 86 | | 100.0 | |
| **Location where epinephrine was stored** |  | |  | |
| Health office | 78 | | 90.7 | |
| Carried by person given epinephrine | 19 | | 22.1 | |
| Main office or administrative office | 2 | | 2.3 | |
| Classroom | 3 | | 3.5 | |
| Other | 7 | | 8.1 | |
| Did not select an answer | 1 | | 1.2 | |
| TOTAL | 110 | | † | |
|  | *†Percentages sum to more than 100% since respondents could select more than one answer.* | | | |
| **Type of person that administered the epinephrine** | | **Number of Individuals** | | **Percent of Total Administrations** |
| Parent | | 0 | | 0.0 |
| Principal/Assistant Principal | | 0 | | 0.0 |
| Registered nurse | | 78 | | 90.7 |
| Student | | 0 | | 0.0 |
| Teacher | | 0 | | 0.0 |
| Other | | 1 | | 1.2 |
| Did not select an answer | | 7 | | 8.1 |
| TOTAL | | 86 | | 100.0 |
| **Self-administration** | |  | |  |
| Epinephrine was self-administered | | 6 | | 7.0 |
| Epinephrine was not self-administered | | 79 | | 91.9 |
| Did not select an answer | | 1 | | 1.2 |
| TOTAL | | 86 | | 100.0 |
| **Time elapsed between onset of symptoms and communication of symptoms** | |  | |  |
| Less than or equal to 5 minutes | | 38 | | 44.2 |
| 6 - 10 minutes | | 27 | | 31.4 |
| 11 - 15 minutes | | 8 | | 9.3 |
| 16 - 30 minutes | | 5 | | 5.8 |
| 31 - 60 minutes | | 3 | | 3.5 |
| Greater than 60 minutes | | 1 | | 1.2 |
| Unknown | | 3 | | 3.5 |
| Did not select an answer | | 1 | | 1.2 |
| TOTAL | | 86 | | 100.0 |
| **Time elapsed between communication of symptoms and administration of epinephrine** | |  | |  |
| Less than or equal to 5 minutes | | 34 | | 39.5 |
| 6 - 10 minutes | | 34 | | 39.5 |
| 11 - 15 minutes | | 8 | | 9.3 |
| 16 - 30 minutes | | 7 | | 8.1 |
| 31 - 60 minutes | | 1 | | 1.2 |
| Greater than 60 minutes | | 1 | | 1.2 |
| Unknown | | 0 | | 0.0 |
| Did not select an answer | | 1 | | 1.2 |
| TOTAL | | 86 | | 100.0 |
| **Emergency room transfer** | |  | |  |
| Individual was transferred to the ER | | 80 | | 93.0 |
| Individual was not transferred to the ER | | 5 | | 5.8 |
| Unknown | | 0 | | 0.0 |
| Did not select an answer | | 1 | | 1.2 |
| TOTAL | | 86 | | 100.0 |

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| **Presence of a biphasic reaction** | **Number of Individuals** | **Percent of Total Administrations** |
| A biphasic reaction occurred | 3 | 3.5 |
| No biphasic reaction occurred | 37 | 43.0 |
| Unknown | 45 | 52.3 |
| Did not select an answer | 1 | 1.2 |
| TOTAL | 86 | 100.0 |
| **Second dose of epinephrine** |  |  |
| A second epinephrine dose was required | 5 | 5.8 |
| A second epinephrine dose was not required | 45 | 52.3 |
| Unknown | 35 | 40.7 |
| Did not select an answer | 1 | 1.2 |
| TOTAL | 86 | 100.0 |
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| Data Notes:  1) Percentages may not sum to 100% due to rounding.  2) "Did not select an answer" indicates that the respondent skipped the question or failed to complete the questionnaire, and as a result, nothing can be inferred from the answer. "Unknown" is a response option and indicates that the respondent answered the question by selecting "unknown” or “don’t know.” | | |