

MICHIGAN SCHOOL HEALTH - ANAPHYLAXIS

Michigan Specific Information

Michigan Association of School Nurses

- [Safe and Legal Support of Students' Health and Medication Needs](#)

Michigan Department of Health and Human Services

- [Addendum to the 2002 Model Policy and Guidelines for Administering Medication to Pupils at School – Guidelines for Responding to an Anaphylaxis Reaction in School](#)
- [Epinephrine Auto-Injector Disposal Guide](#)

Michigan Department of Education

- [Allergy Guidelines for Michigan Schools](#)

Michigan Laws

Law	Brief Description
PA 186 of 2014	Addresses stock epinephrine in schools. A prescriber may issue a prescription for and a dispensing prescriber or pharmacist may dispense an auto-injector epinephrine to a school board for meeting the requirements of section 1179a of revised school code, 1976, PA 451, MCL 380.1179a.
PA 187 of 2014	Requires each Michigan public school have at least two Epinephrine auto-injectors in addition to policies based on updated medication guidelines, training requirements and reporting requirements.
PA 221 of 2015	Requires each Michigan public school have at least two Epinephrine auto-injectors in addition to policies based on updated medication guidelines, training requirements and reporting requirements.
PA 12 of 2014	The governing body of a school that operates K-12 shall adopt and implement a cardiac emergency response plan for the school. The plan must include at least: 1) Use and regular maintenance of the auto external defibrillator, 2) Activation of a cardiac emergency response team during an identified cardiac emergency, 3) A plan for effective communication, and 4) If a school is grades 9-12 a training plan for use of an auto external defibrillator in CPR rescue techniques.

MICHIGAN SCHOOL HEALTH - ANAPHYLAXIS

Law	Brief Description
PA 320 of 2020	<p>Allows school employees in good faith to administer in the presence of another adult an auto-injectable epinephrine without being civilly or criminally liable unless the conduct was willful or wanton misconduct.</p> <p>Section 1 applies to the school nurse RN, except does not have to administer in the presence of another adult.</p>

Considerations for School Nurse Practice

In Michigan, best practice is influenced by the extent of school nurse coverage which varies across the state from having no nurses to having at least one nurse in a school building.

The school nurse coordinates care for students with known allergies and unknown allergies to provide a safe school environment. This includes supporting partnerships between school staff, parents and providers. It involves communicating with school boards and school administrators to ensure that policies and a comprehensive plan are in place to address the management of allergic reactions consistent with federal law, state law, and nurse practice standards of care.

- Develop a system for accessing, stocking, storing, determining appropriate dosage and monitoring expiration dates for the epinephrine auto-injectors as well as documenting usage and reporting usage to parent/guardian (as soon as possible) and MDE (annually).
- The system should also include plans for bus transportation, athletics, before and/or after school programs, school lock downs and field trips. All school staff members have a role in anaphylaxis management.
- Identify all students in the school with allergies. Share information with staff as needed, following FERPA guidelines.
- Provide information, resources and support to students and caregivers, referring patients who do not have access to a provider to health care services in the community.
- Develop Individualized Health Care Plans (IHCP) and Emergency Care Plans (ECP) for students as needed. Individualized plans are critical because allergic reactions vary in severity, symptoms and cause. Once an emergency plan is developed for a specific student, ensure that these are easily accessible to delegated staff in case of an emergency. The school nurse should monitor the ECP on a regular basis and update/modify the plan as needed. Some students may also have an Individualized Education Plan (IEP) or 504 plan.
- Do not underestimate the necessity for accommodations, staff education and increased awareness. (Mustafa et al., 2018; Bingemann, et al., 2021).

MICHIGAN SCHOOL HEALTH - ANAPHYLAXIS

- Consider anaphylaxis risk reduction strategies for areas inside and outside the school building (Bingemann, et al., 2021).
- Discuss necessary student accommodations with parents/guardians prior to field trips (CDC, 2013; Bingemann, et al., 2021).
- Response times for EMS vary in different locations. Two doses of prescribed epinephrine should be available for students at risk of anaphylaxis, (Bingemann, et al., 2021).
- IHP or 504 Plans may include meal accommodation planning for students at risk of food-induced anaphylaxis (Kao et al., 2018; Wang et al., 2018). Such decisions are often made working together with parents/guardians, school staff, and students' healthcare providers (Bingemann, et al., 2021).
- Be alert to bullying (e.g., teasing, shaming, forced contact with known allergen) from classmates or staff and strictly enforce school bullying policy (Dupuis et al., 2020; Rocheleau & Rocheleau, 2020; Wang et al., 2018; Bingemann, et al., 2021).

Staff Training

Schools are recommended to provide food allergy/anaphylaxis staff education annually, at a minimum, prior to the start of the academic year and should be reviewed after a food allergy reaction or anaphylaxis emergency for the purpose of improving prevention and response.

According to the [Michigan Department of Education Food Allergy Guidelines for Michigan Schools](#) training should be provided to all staff members and not just required designated staff per Section 380.1179a of the Revised School Code.

- Training should include:
 - An overview of food allergies and anaphylaxis
 - How to reduce the risk of an allergic reaction
 - How to identify symptoms of anaphylaxis
 - How to respond to food allergy emergencies
 - How to properly use an epinephrine auto-injector
 - The risk of bullying toward students with food allergies
- Provide a standardized training format consisting of 3 tiers of training for Unlicensed Assistive Personnel (refer to [Safe and Legal of Students' Health and Medication Training](#)).
- Determine the appropriate tier(s) of training for school staff subgroups: all employees, substitute teachers, emergency responders, and staff having direct contact with students known allergies and prescribed medications.
- Training plans also need to include bus drivers, substitute teachers, athletic staff, before and/or after school programs and any staff that attend field trips.

MICHIGAN SCHOOL HEALTH - ANAPHYLAXIS

- Student specific training may be necessary based on the individual student needs.
- Stock Epinephrine Required training
 - At least 2 staff members in each building. [PA 187 of 2014](#)
 - Initially and at least every 2 years. [PA 221 of 2015 Sec. 1774d](#)
 - [MDE Administering Medications to Pupils at School: Guidelines for Responding to an Anaphylaxis Emergency At School](#), recommends annual training but does not require annual training.
 - Documentation of initial and ongoing training and any competency assessment should be maintained and made available, on request, to a pupil, parent/guardian, physician, licensed registered professional nurse or a school district official.
 - The Skills Checklist is completed at the end of the initial training and can continue to be used as an assessment tool as needed.
- **[PA320 of 2020](#) Allows school employees in good faith to administer in the presence of another adult an auto-injectable epinephrine without being civilly or criminally liable unless the conduct was willful or wanton misconduct.**

Treatment:

- Research documents that the successful management of anaphylaxis is early recognition of signs and symptoms and the prompt administration of intramuscular adrenaline (Anagnostou K.,2018).
- The first line of treatment for anaphylaxis is immediate intramuscular injection of epinephrine into the outer mid-thigh muscle (Shaker et al., 2020).
- Epinephrine administration requires immediate activation of Emergency Medical Services due to the possibility of phasic or rebound occur hours after the initial reaction without further exposure.
- Keep the student lying on their back with legs elevated, to avoid the empty ventricle syndrome, which can be fatal. Do not allow a student to suddenly stand or sit with anaphylaxis. If vomiting or has respiratory distress, turn them on their side to avoid the risk of vomiting, keeping the legs elevated if possible (Mali & Jambure, 2015).
- Studies consistently show that delay in administration of epinephrine is associated with increased risk for hypoxia and fatality from anaphylaxis (Brown et al., 2020; Shaker et al.,2020). Secondary medications like antihistamines and corticosteroids take much longer to begin acting in the body and are far less effective than epinephrine to treat

MICHIGAN SCHOOL HEALTH - ANAPHYLAXIS

anaphylaxis and therefore should not be used as initial treatment of anaphylaxis (Bingemann et al., 2021; Shaker et al., 2020).

Emergency Medications:

- There are multiple epinephrine delivery devices, including generics. Most devices come in two doses (0.15 mg and 0.3 mg). Auvi-q is the only brand that comes in a 0.1 mg dose. Brand doses have consistent coloring, generics do not have consistent coloring of boxes/doses across dose ranges (Bingemann, et al., 2021).
 - [EpiPen](#),
 - [Auvi-Q](#),
 - [Amneal/Impax](#),
 - [TEVA](#),
 - [Symjepi](#)

Self-Administration

- Assess whether students can reliably carry and use their own epinephrine auto-injector. When appropriate, encourage self-directed care. For students who have permission to carry and use their own epinephrine auto-injector, regularly assess their ability to perform such tasks.
 - Remember that students may not carry their epinephrine auto-injector at all times.
 - A student may not be able to administer their epinephrine auto-injector during an anaphylaxis episode.
- Notify the local Emergency Medical System (EMS) as soon as a severe allergy is recognized along with administering the epinephrine auto-injector.
- Follow Michigan Department of Environmental Quality Epinephrine Auto-Injector Disposal Guide (Michigan Department of Health and Human Services, 2015).

References

Asthma & Allergy Foundation Allergy & Asthma Network (AAN). (2020). *Anaphylaxis statistics*. <https://allergyasthmanetwork.org/anaphylaxis/anaphylaxis-statistics/>

Anagnostou K. Anaphylaxis in Children: Epidemiology, Risk Factors and Management. (2018). *Curr Pediatr Rev.*, 14(3):180-186. 10.2174/1573396314666180507115115. PMID: 29732976.

Bingemann, T. A., Nanda, A., & Russell, A. F. (2021). Pharmacology Update: School Nurse Role and Emergency Medications for Treatment of Anaphylaxis. *NASN School Nurse*, 1942602X211021902.

Brown, J. C., Simons, E., & Rudders, S. A. (2020). Epinephrine in the Management of Anaphylaxis. *The Journal of Allergy and Clinical Immunology: In Practice*, 8(4), 1186-1195.

MICHIGAN SCHOOL HEALTH - ANAPHYLAXIS

Centers for Disease Control and Prevention . (2013). Voluntary guidelines for managing food allergies in schools and early care and education programs. https://www.cdc.gov/healthyschools/foodallergies/pdf/20_316712-A_FA_guide_508tag.pdf
[Google Scholar](#)

Dupuis, R., Kinsey, E. W., Spergel, J. M., Brown-Whitehorn, T., Graves, A., Samuelson, K., Epstein, C., Mollen, C., Cannuscio, C. C. (2020). Food allergy management at school. *Journal of School Health*, 90(5), 395-406. <https://doi.org/10.1111/josh.12885>

John Hopkins Medicine. (2021). Allergies and the immune system. <https://www.hopkinsmedicine.org/health/conditions-and-diseases/allergies-and-the-immune-system#:~:text=Allergic>

Kao, L. M., Wang, J., Kagan, O., Russell, A., Mustafa, S. S., Houdek, D., Smith, B., Gupta, R. (2018). School nurse perspectives on school policies for food allergy and anaphylaxis. *Annals of Allergy, Asthma & Immunology*, 120(3), 304-309. [10.1016/j.anai.2017.12.019](https://doi.org/10.1016/j.anai.2017.12.019)
[Google Scholar](#)

Lieberman et al. (2015). Anaphylaxis – A practice parameter update. *Annals of Allergy, Asthma & Immunology*, 115(5), 341 -334. [10.1016/j.anai.2015.07.019](https://doi.org/10.1016/j.anai.2015.07.019).

Lopes, J. P., & Sicherer, S. (2020). Food allergy: epidemiology, pathogenesis, diagnosis, prevention, and treatment. *Current Opinion in Immunology*, 66, 57-64.

McIntyre, C.L., Sheetz, A.H., Carroll, C.R., & Young, M.C. (2005). Administration of epinephrine for life-threatening allergic reactions in the school setting. *Pediatrics*, 116(5), 1134-1140. [101542/peds2004-14751134-1140](https://doi.org/10.1016/j.peds.2004.14751134-1140).

Michigan Department of Health and Human Services (2015). Epinephrine auto-injector disposal guide. https://www.michigan.gov/documents/mde/Epi_Addendum_6-18-14_461400_7.pdf

Mustafa, S. S., Russell, A. F., Kagan, O., Kao, L. M., Houdek, D. V., Smith, B. M., Wang, J., Gupta, R. S. (2018). Parent perspectives on school food allergy policy. *BMC Pediatrics*, 18(1), Article 164. [10.1186/s12887-018-1135-6](https://doi.org/10.1186/s12887-018-1135-6)
[Google Scholar](#)

Rocheleau, G. C., Rocheleau, B. N. (2020). The mark of a food allergy label: school accommodation policy and bullying. *Journal of School Violence*, 19(2), 167-176. [10.1080/15388220.2019.1566072](https://doi.org/10.1080/15388220.2019.1566072)
[Google Scholar](#)

MICHIGAN SCHOOL HEALTH - ANAPHYLAXIS

Shaker, M. S., Wallace, D. V., Golden, D. B. K., Oppenheimer, J., Bernstein, J. A., Campbell, R. L., Dinakar, C., Ellis, A., Greenhawt, M., Khan, D. A., Lang, D. M., Lang, E. S., Lieberman, J. A., Portnoy, J., Rank, M. A., Stukus, D. W., Wang, J., & Collaborators . (2020). Anaphylaxis: A 2020 practice parameter update, systematic review, and Grading of Recommendations, Assessment, Development and Evaluation (GRADE) analysis. *Journal of Allergy and Clinical Immunology*, 145(4), 1082-1123. [10.1016/j.jaci.2020.01.017](https://doi.org/10.1016/j.jaci.2020.01.017)

[Google Scholar](#)

Sicherer, S., & Simons, E. & Section (2017). Epinephrine for first aid management of anaphylaxis. *Pediatrics* 139 (3) e20164006

Mali S, Jambure R. Anaphylaxis management: current concepts. *Anesth Essays Res.* 2012;6(2):115–123. 4103/0259-1162.108284. [[PMC free article](#)] [[PubMed](#)] [[CrossRef](#)] [[Google Scholar](#)]

Wang, J., Bingemann, T., Russell, A. F., Young, M. C., Sicherer, S. H. (2018). The allergist's role in anaphylaxis and food allergy management in the school and childcare setting. *Journal of Allergy and Clinical Immunology*, 6(2), 427-435. [10.1016/j.jaip.2017.11.022](https://doi.org/10.1016/j.jaip.2017.11.022)

[Google Scholar](#)

Additional Resources

School Nurse Resource Manual 9th edition. A Guide to Practice: Evidenced based policies for safe student care. Resha & Taliaferro.

School Nursing: A Comprehensive Text 3rd . Selekman, Shannon, Yonkaitis.

Allergy and Anaphylaxis Network symposium. *Journal of Allergy and Clinical Immunology*, 117(2), 391- 397. [10.1016/j.jaci.2005.12.1303](https://doi.org/10.1016/j.jaci.2005.12.1303).

American Academy of Pediatrics (2010). *Clinical Report: Management of food allergy in the schoolsetting*. [file:///C:/Users/patbe/Documents/DHHS/anaphylaxis/Pediatric%20Anaphylaxis%20Management%20in%20the%20Prehospital%20Setting.%20EBSCOhost files/pediatric%20journal/peds.2010-2575.full.pdf](file:///C:/Users/patbe/Documents/DHHS/anaphylaxis/Pediatric%20Anaphylaxis%20Management%20in%20the%20Prehospital%20Setting.%20EBSCOhost%20files/pediatric%20journal/peds.2010-2575.full.pdf).

Centers for Disease Control and Prevention (CDC). (2017a). Research brief: Addressing the needs of students with chronic health conditions: Strategies for schools. https://www.cdc.gov/healthyschools/chronic_conditions/pdfs/2017_02_15-How-Schools-Can-Students-withCHC_Final_508.pdf.

Mylan. (2017). *Epinephrine prescribing information*. [[Product Monograph Template - Subsequent Entry Product \(except for Schedule C and D products\)](#)] (hres.ca)

National Association of School Nurses. (2018). *Allergies and anaphylaxis*. [Allergies and Anaphylaxis - National Association of School Nurses \(nasn.org\)](http://AllergiesandAnaphylaxis-NationalAssociationofSchoolNurses(nasn.org)).

