Allergy/Anaphylaxis Management in the School Setting

National Association of School Nurses

Position Statement

SUMMARY

It is the position of the National Association of School Nurses (NASN) that the safe and effective management of allergies and anaphylaxis in schools requires a collaborative, multidisciplinary team approach. The registered professional school nurse (hereinafter referred to as the school nurse), is the leader in a comprehensive management approach which includes planning and coordination of care, educating staff, providing a safe environment, and ensuring prompt emergency response should exposure to a life-threatening allergen occur. Furthermore, NASN supports, in states where laws and regulations allow, the maintenance of stock non-patient specific epinephrine and physician-standing orders for school nurses to administer epinephrine in life-threatening situations in the school setting.

School districts must have a clear, concise, all-inclusive policy in place to address the management of allergies in the school setting that should be reviewed annually (National School Boards Association (NASB), 2010). This policy shall be consistent with federal and state laws, nursing practice standards and established safe practices in accordance with evidence-based information and include development of a developmentally appropriate Individualized Healthcare Plan (IHP) and Emergency Care Plan (ECP).

HISTORY

Food and insect sting allergies that may result in anaphylaxis, a potentially life-threatening allergic reaction, have been diagnosed with an increased frequency (Branum & Lukacs, 2009). Food allergies have soared in school-age children and now affect 1 in every 25 students, which is an increase of 18% from 1997 to 2007 (Young, Munoz-Furlong, & Sicherer, 2009).

Food allergies induce 30%-50% of anaphylaxis cases (Cianferoni & Muraro, 2012). The eight most common food allergies that account for 90% of food allergy reactions are milk, eggs, peanuts, tree nuts, fish, shellfish, soy, and wheat (National Institute of Allergy and Infectious Diseases [National Institute of Allergy and Infectious Disease](NIAID), 2010). Children with food allergies are 2-4 times more likely to experience other allergic reactions and asthma than those without food allergies (Branum & Lukacs, 2008).

DESCRIPTION OF ISSUE

Anaphylaxis is a severe allergic reaction that has a rapid onset and may be fatal. During anaphylaxis, tissues in the body release histamines that cause the airways to tighten and lead to many systemic symptoms, the most important being those that are life threatening, e.g. difficulty breathing and swallowing, systemic hives, feelings of impending doom, wheezing, decreased blood pressure and loss of consciousness. Common causes of anaphylaxis are medications (i.e. antibiotics), foods, natural rubber latex, and insect bites/stings (Kim & Fischer, 2011). Cold-induced and exercise-induced anaphylaxis, although rare, can also occur. Some people have anaphylactic reactions with unknown causes (MA Department of Public Health Data Health Brief, 2010). Food allergies are the most common source of anaphylaxis in children, whereas adults are more likely to experience venom and drug-induced response (Kim & Fisher, 2011).

Once an infrequent occurrence, anaphylaxis has increased dramatically, and 16-18% of students with food allergies have experienced an allergic reaction in school (Young, Munoz-Furlong, & Sicherer, 2009). Epinephrine administration reports from Massachusetts indicate that approximately 25% of students who experience anaphylaxis were not previously diagnosed with a life-threatening allergy (MA Department of Public Health Data Health Brief, 2010). This indicates a need for non-patient specific epinephrine to be available for use in the school setting, which is supported by NASN, American Academy of Asthma Allergy Immunology (AAAI), American Academy of Pediatrics (AAP) and the Food Allergy Anaphylaxis Network (FAAN) (School Access to Emergency Epinephrine Act, 2011). Prevention of anaphylaxis is vital for identified allergens and begins with avoidance of allergens or treatment of symptoms (NIAID, 2010).

Accidental ingestion of food allergens occurs frequently among students in the school environment. One study reports accidental ingestion of milk protein by children with known milk allergies resulted in a 40% reaction rate with 15% of those reactions being severe (Boyno-Martinez, Garcia-Ara, Pedrosa, Diaz-Pena, & Quince, 2009). Maintaining a healthy environment is essential. All environments in the school setting require special attention to protect students by limiting allergens or providing areas that are allergen safe (National School Boards Association [NBSA], 2011). Completely banning nuts or other foods is not recommended as it is 1) not possible to control what other people bring onto the school grounds, and 2) does not provide the allergic student with an environment where he/she can safely learn to navigate a world containing nuts. When a ban is instituted, parents feel their child will not be exposed to allergens. A ban can create a false sense of security ("Banning allergens from school", 2012).

There are many considerations in the management of an anaphylactic reaction. Biphasic or rebound reactions can occur hours after the initial reaction without a further exposure and affect as high as 20% of individuals who receive epinephrine for anaphylaxis (NIAID, 2010). Epinephrine administration requires immediate activation of Emergency Medical Services, or 911 (Morris, Baker, Belot, & Edwards, 2011; NSBA, 2011).

School staff must not only be aware but also prepared to prevent or respond to an anaphylactic reaction to be effective in supporting a student with a life-threatening emergency (NSBA, 2011). Training must be provided at least annually to school personnel that are involved with the student during the school day, extracurricular activities, field trips and before/after school programs.

Most states have laws allowing emergency medication such as epinephrine to be carried by the students and be self-administered as needed. Several states also have laws supporting the supply and use of stock epinephrine in the school setting for both non-patient specific and diagnosed patient use. When developmentally appropriate, students should be allowed to self-administer and self-manage their allergy.

Allergies have a significant impact on the lives of families. Families with allergies report a higher level of stress for both parents and the child. Parents are anxious about sending their child to school with an allergy. Entering school or changes in the school environment are stressful events, and many parents view these events as opportunities that increase their child's chance of exposure to allergens (Roy & Roberts, 2011).

RATIONALE

Federal laws including the American Disabilities Act, Individual with Disabilities Education Act, and Section 504 of the Rehabilitation Act of 1973 protect the legal rights of students with allergies along with the Food Safety Modernization Act (FSMA) which became law January 2011. These laws protect students' individual rights as well as direct schools to develop voluntary guidelines on food allergy management while they prohibit preempting state laws (FMSA, 2010).

In 1998, the American Academy of Allergy Asthma and Immunology advocated that every student with a food allergy diagnosis have an ECP and a prescription for epinephrine (Carlisle et al., 2010). Schools are responsible for planning and preparing for the complex medical and nursing needs of students. The school nurse functions as the leader in coordinating health services in the school setting (AAP, 2008). As the school health professional, the school nurse is uniquely prepared with the education, experience and expertise to coordinate student health-care, the development and implementation of a comprehensive IHP and ECP with the parents/guardian, health care provider, school staff and when appropriate, the student (Sicherer & Mahr, 2010).

School nurses can decrease the stress and anxiety of parents of children with allergies by working in partnership with families, implementing evidence-based strategies to prevent allergen exposure and preparing school personnel to respond to anaphylaxis, acknowledging parents' concerns, and emphasizing that the school takes allergy seriously (Roy & Roberts, 2011).

Managing allergies and anaphylaxis at school is complicated and multifaceted and is best accomplished through coordination of care within a multidisciplinary team (including but not limited to the student and his or her family, school nurse, teachers, school administrators, nutrition services, and bus drivers) (Carlisle et al., 2010; NASB, 2010). Research shows that schools and childcare settings **with** school nurses are more likely to provide immediate treatment (47% with a school nurse vs. 34% without) and have emergency care plans (62.3% with vs. 39.2% without) in place (Greenhawt, McMorris, & Furlough, 2008). Prompt treatment leads to an increase in positive outcomes (Young, Munoz-Furlong, & Sicherer, 2009). The school nurse is the key school professional to lead the school staff in the awareness, prevention and treatment of life-threatening allergic reactions keeping students safe at school and ready to learn.

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