Task Force/Committee Report

The Allergist's Role in Anaphylaxis and Food Allergy Management in the School and Childcare Setting

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Anaphylaxis and food allergy management in childcare facilities and schools are growing challenges. An increasing number of children experience severe allergic reactions on school grounds as evidenced by reports of epinephrine use. Data also suggest that the prevalence of food allergy may be increasing, with a large percentage of school-aged children at risk for anaphylaxis. Moreover, anaphylaxis may occur for the first time in a previously undiagnosed child at school or childcare setting, suggesting that general preparedness is essential. Management includes strategies for minimizing the risk of reactions and allergen exposures as well as readiness to recognize and treat allergic reactions of any severity. The primary objective of this report is to offer health care providers an overview of relevant evidence, resources, and expert opinion to assist with developing interprofessional collaborative counsel on school food allergy management and anaphylaxis preparedness with families, schools, and childcare settings. We present the current evidence base, suggest resources, and highlight areas of current controversy that warrant further study. **© 2017 American Academy of Allergy, Asthma & Immunology** **(J Allergy Clin Immunol Pract 2017;■:■-■)**

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Over the last several decades, the prevalence of pediatric IgE-mediated food allergy appears to have increased, resulting in up to 1 or 2 children per typical school classroom affected.[1-8] The primary objective of this report is to offer health care providers an overview of relevant evidence, resources, and expert opinion to assist with developing interprofessional collaborative counsel on school food allergy management and anaphylaxis preparedness with families, schools, and childcare settings. This workgroup report synthesizes materials from recent publications relevant to its objectives to provide guidance to health care providers; it is not based on independent meta-analysis or comprehensive literature reviews. This update is timely given recent publications of Guidelines from the U.S. Centers for Disease Control and Prevention (CDC) regarding school food allergy management, updated Joint Task Force on Practice Parameters (American Academy of Allergy, Asthma and Immunology and American College of Allergy, Asthma and Immunology) for anaphylaxis and for food allergy, clinical reports from the American Academy of Pediatrics regarding first aid use of epinephrine and written emergency plans, and a report from the National Academies of Sciences, Engineering and Medicine on food allergy.[9-13] The intent of this workgroup report is not to restate the materials in these documents, but rather to incorporate the contemporary messages to provide guidance to health care providers. The reader is encouraged to review the 2013, "Voluntary Guidelines for Managing Food Allergies in Schools and Early Care and Education Programs" published by the CDC.[9] The CDC voluntary guidelines provide a framework of evidence-based recommendations that can be tailored to adapt to the wide variations among schools and patients on an individualized basis.[9,14] A list of selected resources is presented in Table I.

This report assumes that health care professionals understand the nature of IgE-mediated food allergy, anaphylaxis, and other serious food allergies that are not mediated by IgE antibodies, for example, food protein-induced enterocolitis syndrome. The details of diagnosis, daily management (allergen avoidance), determination of risk/severity, and emergency management are beyond the scope of this report and are reviewed in various practice parameters and national guidelines.[1,10-12,15] Although these topics are not reviewed here, key aspects of diagnosis and management are reviewed here briefly when they are relevant to specific recommendations about school management.

BACKGROUND

Allergic reactions, including anaphylaxis, occur in schools and childcare settings, and the apparent increasing prevalence

Abbreviations used
ADA- Americans with Disabilities Act
ADAA- ADA Amendments
CDC- Centers for Disease Control and Prevention
EAI- Epinephrine autoinjectors
EMS- Emergency medical services
FAAMA- Food Allergy and Anaphylaxis Management Act
IHP- Individual health plan
SAEEA- School Access to Emergency Epinephrine Act

of food allergy suggests that many school-aged children are at risk.

- Approximately 8% of children in the United States have food allergy.[2,5] Studies suggest that food allergies are resolving more slowly than previously believed.[16] This leads to a greater prevalence of school-aged children at risk for allergic reactions.
- Studies of self-reported reactions show that 16% to 18% of children with food allergy have experienced an allergic reaction while at school or daycare.[17,18]
- Allergic reactions in the school setting occur in students with known food allergy, as well as those who have no prior history of allergy and in nonstudent members of the school community. Up to one quarter of reactions occurring on schools grounds affect individuals who are unaware of their risk.[18-20]

Students with food allergy are protected by federal civil rights legislation to access education in the least restrictive environment.[21-23]

- The Americans with Disabilities Act of 1990 (ADA) and ADA Amendments of 2008 (ADAA) prevent discrimination based on disability. Children with food allergy gain legislative security in school and childcare settings receiving federal funding as the law protects their access to a free and appropriate education.[21,22,24,25] Private schools that are not religiously affiliated must comply with the ADA and ADAA, but private schools that are religiously affiliated are exempt.[22,25]
- Under ADAA, students with food allergy are considered to have a disability restricting their diet and therefore are eligible for free case-specific dietary substitutions in school meal and snack programs when their physician, or other state-allowed health care provider, gives written documentation of substitution needs with suggested alternatives, unless exempted by the U.S. Food and Nutrition Service.[25,26]
- Section 504 of the U.S. Rehabilitation Act of 1973 disallows discrimination against qualified individuals with disabilities in activities and programs receiving federal funding.[23]
- The Food Allergy and Anaphylaxis Management Act (FAAMA) became law in 2011, as part of the Food Safety Modernization Act, and mandated that the U.S. Secretary of Health and Human Services, in collaboration with the U.S. Secretary of the Department of Education, developed voluntary school food allergy and anaphylaxis management guidelines. FAAMA included recommended elements to be addressed in the procedures, and established incentive grants to support implementation of such guidelines in public schools.[27,28]
- The School Access to Emergency Epinephrine Act (SAEEA) of 2013 is federal legislation providing financial incentive for states to create laws requiring schools to stock undesignated epinephrine autoinjectors (EAI) for the treatment of anaphylaxis by trained personnel.[29]
- Most states have passed laws regarding the availability of nonstudent-specific stock EAI.[30] However, legal distinctions may exist with factors such as whether only a school nurse or other trained school personnel may administer the medication during an anaphylactic emergency, whether staff education is only to be directed by registered nurses or if other personnel may do so, and parameter requirements for reporting reactions and any use of epinephrine.[24]

Summary

Allergists and other health care providers should be familiar with the scope of food allergy affecting school-aged children and the role of legislation in protecting the rights and safety of these children.

COMMUNICATION BETWEEN PATIENTS/FAMILIES AND SCHOOLS

The allergist or health care provider plays a key role in communicating the diagnosis and allergic risks faced by the child with food allergy. Opportunities include discussion with the family of food allergy care and provision of a written allergy and anaphylaxis emergency plan, prescriptions for EAIs, assistance with creating school plans for effective avoidance, and additional communication with the school team if needed.

- The CDC recommends a team approach to managing food allergy in schools. Clear communication and partnership are necessary for this to be successful. This partnership includes the food-allergic child, parents, school staff, school nurse, and the child's health care providers.[9]
- Parental anxiety is a natural outcome of the knowledge that the child is at risk for anaphylaxis and that despite best efforts, unintentional allergen exposures do occur. The health care provider's discussion of anaphylaxis should be evidence based, including the low risk of anaphylaxis from casual contact (skin, air) compared with ingestion, the lack of correlation of allergy tests with clinical reaction severity, and the low incidence of fatal food anaphylaxis.[1,31]

Individualized written emergency plans should be developed with the student and family and provided to the school. Emergency plans are documents written in simple lay terms that provide medical information about the child (demographics and allergy history), describe signs and symptoms that can develop during an allergic reaction, instructions for initiating treatment, and medication dosages appropriate for the child. School personnel, parents, and health care providers should recognize that the written plan provides individualized guidance and treatment authorization, but is not a sole means of imparting the full scope of anaphylaxis recognition and management. Additional education about food allergy and anaphylaxis is required to provide context.

- The CDC recommends that students have individualized emergency care plans that are prepared by the child's health care provider.[9]
- A written emergency plan serves to inform the school of a child's risk for allergic reactions and anaphylaxis. It also provides guidance for managing reactions given a student's specific circumstances or needs. Ideally, the emergency plan is simple to execute, and allows trained, unlicensed school personnel to implement the plan in the absence of the school

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