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Life-Threatening Allergies Revisited

What Are the New Opportunities to Improve the Care of These Children in the School Setting?

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The rise in allergy prevalence shows no sign of abating. Data from nationally representative surveys indicate that food allergy prevalence among children younger than 18 years of age has risen 18% from 1997 through 2007 (Branum & Lukacs, 2009). The upward trend is exhibited in Massachusetts rates of epinephrine prescriptions for all categories of life-threatening allergies (LTAs), which are used as a proxy for prevalence in the commonwealth's schools. *This prescription rate has increased from 7.2 to 18.8 prescriptions per thousand students from 2001 to 2009* (Massachusetts Department of Public Health, 2010b). In May 2009, an article in *NASN School Nurse* titled "How May School Nurses Facilitate Policies and Regulations Ensuring the Safety of Children With Life-Threatening Allergies During the School Day?" (Sheetz, 2009) focused on a safe school environment for these children, by both preventing exposure to the offending antigen and providing an emergency response *within minutes* should an exposure occur. However, the rising number of children, coupled with the critical nature of LTAs, has raised the stakes for the school nursing role in

care management of these children. It has also demanded action at all state and local levels, through statewide guidelines and well-implemented local school policies. School nurses, as the health experts in their schools, are often leaders in policy development and implementation, a time-consuming, challenging responsibility. Management of LTAs also offers many opportunities for school nurses and their leaders to work with administrators, parents, and staff, as well as to share resources, guidelines, policies, and data with colleagues in other states.

Collaboration Among School Nurses on Guidelines and Legislation

Some states have developed statewide guidelines for managing LTAs and/or have included allergy management in their school health manuals, such as Massachusetts, Rhode Island, Connecticut, New York, Florida, and Virginia, to name a few. The work in these states greatly facilitates work in other states that may use these resources as a basis for adapting their own guidelines specific to state laws and local emergency medical service protocols. Some states have drafted legislation and regulations to address emerging issues in their schools. For example, in Massachusetts, the regulations governing

the administration of prescription medications in public and private schools (105 CMR 210.000) provides detailed guidance to schools on their responsibilities to manage the care of children with LTAs in a range of settings. In addition, a recent amendment to Massachusetts General Law Chapter 90, Section 8A, states that "all original applicants for a registry of motor vehicles school bus driver's license . . . must complete a basic course in first aid, which shall include training relative to the administration of an epinephrine auto injector, as approved by the registrar." As new safeguards emerge in guidelines, legislation, and regulations, school nurses are encouraged to reach across state lines and share with colleagues. The goal is to support the ongoing development of policies to ensure the safety of all children with LTAs in the school setting.

Collaboration Among School Nurses on Data Collection

Data collection remains a major challenge in addressing LTAs. In 2004, the Massachusetts Department of Public Health amended its medication regulations to require statewide reporting of epinephrine administration for life-threatening anaphylaxis in the schools. The goal was "to determine the

incidence of anaphylaxis in schools, describe the circumstances around anaphylactic events, assess practices used to manage students with life-threatening allergies, and identify opportunities for improvement” (McIntyre, Sheetz, Carroll, & Young, 2005, p. 1134). An annual report is issued and shared with a range of stakeholders. In 2009, epinephrine was administered 175 times in Massachusetts schools (Massachusetts Department of Public Health, 2010a). All outcomes were positive. Several other states, such as New York, Connecticut, and New Mexico, have begun or piloted similar reporting systems, although these are not yet codified in regulations. As their data develop, there will be exciting opportunities to compare state results and find mutual ways to address the issues. For example, *the numbers of administrations to individuals with no previously known allergies in Massachusetts is between 17% and 27% annually for the years recorded*. Is this consistent with other states? Because of this high rate, Massachusetts has issued guidelines for maintaining a stock supply of epinephrine and a standing physician's order for administration by the school nurse, recommendations that may be adapted by other states. In the 2009 data, symptoms of anaphylaxis most frequently developed in the classroom (39%). Other locations included the cafeteria (14%); health office (15%); playground, outside, or recess (6%); gymnasium (4%); and various other locations both inside and outside the school building. In 91% of the cases, epinephrine was administered in the health office. These results indicate a need to ensure that classroom teachers are knowledgeable on LTAs. They are also reassuring to parents concerned that the child will be in area where the symptoms might not be observed. Again, are these findings similar in other states? Another question relates to the number of biphasic reactions. A recent multicenter study

found that of children presenting to an emergency room with food-related anaphylaxis, 12% required the second dose of epinephrine, leading to the recommendation that children carry two doses of the self-injected medication (Rudders, Banjeeri, Corel, Clark, & Carmago, 2010). How many anaphylactic events in schools require two doses? What are the outcomes for children?

Collaboration Between School Nurses and Allergy Specialists

The challenges of LTAs are shared among children, families, schools, allergy specialists, and all community sites where children are present. The Massachusetts Department of Public Health has forwarded its data on epinephrine administration to allergists in major teaching hospitals, requesting their assistance in reinforcing the parent's responsibility to contact the school nurse for care management in the school setting. Allergists have assisted in writing the clinical aspects of statewide guidelines for managing food allergies, presented at school nurse conferences, offered their expertise in community forums, provided continuing education to pediatricians, promoted appropriate emergency room management, and kept school nurses abreast of progress in desensitization research. As these collaborative relationships emerge, school nurses will have opportunities to partner with researchers as they address multiple questions relating to LTAs and their management in children and adolescents.

Summary

LTAs in children are indeed challenges, especially in busy school settings. However, for these school nurses and their leaders who assume responsibility for school preparation and management, collaborate across states, develop data systems to improve performance, and partner with allergy experts, there

are opportunities for ensuring both child safety and professional growth. ■

For more information about life-threatening allergies, please contact your state school nurse consultant. To locate contact information for your state school nurse consultant, please visit the National Association of State School Nurse Consultants' website at www.nassnc.org and click on "About Us" to gain access to a listing of our members.

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