

UTMB professor implements lifesaving protocol for school children with severe allergies

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As the number of children with food allergies in the U.S. increases, so does the risk of children having a severe, potentially life-threatening allergic reaction called anaphylaxis on school campuses. School nurses often have treatment plans in place for students with diagnosed allergies, but many children have their first allergic reactions at school, where a specific medication, such as EpiPen epinephrine injectors, may not be available and a response protocol may not be in place.

Students with identified food allergies are generally well known to school nurses. School nurses are uniquely prepared to develop and apply individualized health plans for students with allergies and to coordinate resources, training and allergy and anaphylaxis education, ensuring a safe school environment for all students.

"When I was the health services director for the Milwaukee Public Schools, the largest school district in Wisconsin, I witnessed nurses caring for children who had symptoms of anaphylaxis but no allergy diagnosis and for children with diagnoses whose parents hadn't supplied emergency medication to the school," said M. Kathleen Murphy, associate professor of nursing at the University of Texas Medical Branch at Galveston. "Because it was clear that the school nurses needed better preparation to provide a critical first response to these severe [allergic reactions](#), I helped to develop and initiate an emergency response protocol that ensured nurses had access to stock epinephrine medications."

In 2009, Murphy began developing an emergency anaphylaxis response protocol in the Milwaukee Public Schools to allow school nurses to assess for anaphylaxis and administer epinephrine from the school's supply to children with unidentified allergies and known allergies for whom prescription

epinephrine auto-injectors have not been provided to the school.

This project was implemented in two steps. First, a policy change was needed: the medical advisor issued standing orders that all school nurses who observe anaphylaxis in previously undiagnosed children treat them according to the new protocol. Other school personnel are trained to administer epinephrine only in situations in which a child has already been diagnosed, the anaphylaxis symptoms are documented and the child's prescribed auto-injector is at school.

Second, the new policy was put into effect. This required the purchase of epinephrine auto-injectors and the development of a staff training program. Before and after the school nurses attended the training program, a survey was given to gauge their knowledge of the signs and symptoms of anaphylaxis and their perceptions about the training. They received additional training and practice opportunities two months later, when the EpiPens were distributed to each school campus.

The pre- and post-training surveys helped to assess the nurses' knowledge, preparedness and attitudes about anaphylaxis and the response protocol. Comparison of the survey results showed improved awareness of anaphylaxis symptoms, greater confidence in their ability to respond effectively to an anaphylaxis emergency and more positive attitudes about the new response protocol.

The development of a protocol like this is a complex administrative process for school districts, according to Murphy, and the experience of the Milwaukee Public Schools in negotiating this process can serve as a model for others. Moreover, this protocol can also potentially be adapted for use by nonmedical personnel and used in other settings

in which [children](#) may experience sudden, serious food allergies, such as child care and recreational facilities.

"Eventually, this protocol could be adapted to address the management of other conditions and even redesigned to allow for delegation to nonnursing staff," said Murphy. "This fairly simple protocol has the potential to make a significant difference in the lives of many people every day."

Provided by University of Texas Medical Branch at Galveston

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