

AADE POSITION STATEMENT

Management of Children With Diabetes in the School Setting

More than 176 000 children and adolescents under the age of 20 in the United States have type 1 or type 2 diabetes. One in every 400–600 (0.22%) children and adolescents has type 1 diabetes.¹

Most youth with diabetes take medication to control it.² These medications, especially insulin, must be balanced with food and exercise, using information from self-monitoring of blood glucose (SMBG), to achieve optimal blood glucose control on a daily basis. Health and safety are at risk when these are not balanced. Because most youth spend a significant amount of their day in school and related activities, school personnel must understand diabetes and its management to ensure the safety and well-being of students who have diabetes.^{2,3}

Diabetes educators, who may work in a variety of roles and settings including school systems, are well positioned to assist in the care of the student with diabetes within the school setting.⁴ AADE supports and advocates for:

1. involvement of the Diabetes Educator in developing and implementing written plans of care for the student with diabetes^{2,3};
2. use of the AADE7™ Self-Care Behaviors as a framework for school-based diabetes care⁵;
3. United States federal and state laws that advocate for and protect students with diabetes in school⁶;
4. the inclusion of a school nurse who is responsible for coordinating school-based diabetes care on the diabetes health care team^{7,8};
5. the training of nonmedical school personnel (by the school nurse) to assist students with diabetes tasks when sanctioned by law and or regulation, and advocating for change

This is an official position statement of the American Association of Diabetes Educators (AADE). AADE is a multidisciplinary professional membership organization of health care professionals dedicated to integrating successful self-management as a key outcome in the care of people with diabetes and related conditions.

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when specific tasks are not sanctioned if sanctioned at the system's level^{2,7-9}; and

6. self-management by the student with diabetes, while at school and school activities, when deemed appropriate by the diabetes health care team including the diabetes educator, parents/guardian, and school personnel.^{2,7-9}

Background

Diabetes management in children and adolescents requires complex daily management skills which can challenge their caregivers and cause them to worry.^{2,10,11} Nevertheless, the scientifically proven long-term health benefits of optimal diabetes control mandate that best efforts be made to control diabetes at school as well as at home.¹² Diabetes educators are ideally positioned to be involved in the process of educating school nurses and nonmedical school personnel about diabetes management, thus facilitating the student's diabetes care within the school environment. All school staff responsible for the student with diabetes must have a basic understanding of the disease, its management, and symptoms which may require intervention during school-related activities.^{2,3,13}

School nurses are responsible for coordinating and overseeing medical management and safety during school hours. They strive to promote health and safety, while adhering to school policies, as well as state and federal laws and regulations.¹ Not all schools employ licensed nurses, despite the recommended school nurse:student ratio of 1:750.¹⁴ Even in schools which do employ a school nurse, there will be times when the nurse will be unavailable to personally provide care for the student with diabetes. Thus, a small group of school staff members must receive student-specific training from a qualified health care professional in routine and emergency diabetes care tasks, including checking blood glucose, administering insulin/medications, and giving glucagon for severe hypoglycemia.^{7,8}

Communication and collaboration between the school nurse, school personnel, the student with diabetes, his/her family, and the diabetes health care team are essential to promoting the student's success and safety at school. Immediate goals are minimal, that is, averting hypoglycemia and hyperglycemia, and optimal school performance with normal attendance records. Ongoing goals are normal growth and development, positive coping skills and avoidance of the chronic complications of diabetes.^{11,15}

AADE7™ Self-Care Behaviors and Diabetes Management in School

The American Association of Diabetes Educator's (AADE) uniquely advocates the concepts contained in AADE7™ Self-Care Behaviors that promote behavior change regarding the care of children and adolescents in the school setting.⁵ The following section discusses: the role of the diabetes educator, written diabetes plans, and school-specific outcome measures for each of the AADE7™ Self-Care Behaviors.

Role of the Diabetes Educator

The diabetes educator serves as consultant, educator, resource person, facilitator, and advocate to parents/guardian, the student with diabetes, and school personnel. The diabetes educator might:

- be the primary contact and liaison between the school, parent/guardian, and diabetes health care team;
- educate and facilitate behavior change of students with diabetes, parents/guardians, and school personnel;
- consult regarding diabetes self-management tasks (example, insulin/medication dose adjustments) and anticipatory needs; and
- provide resources to develop and implement a written school-based diabetes management plan.

Written Diabetes Plans

A written plan is essential to foster understanding and a standard of care.^{2,6,16} The types of written plans are as follows.

The Diabetes Medical Management Plan (DMMP) is a written document that describes the needs of a youth with diabetes as it directly relates to daily diabetes self-management and safety at school. It is an action plan most often consulted by school personnel when faced with direct and immediate need for decision-making regarding diabetes management. The DMMP should include emergency contact information, as well as individualized information on all parts of diabetes management at school as agreed upon by the diabetes care provider and parent. An Individual Health Plan (IHP) or Nursing Care Plan may also be required in many states across the United States. The DMMP may serve as the foundation or diabetes specific addendum for the IHP.²

An Individual Health Care Plan (IHP) or Nursing Care Plan, developed by the school nurse, documents and

communicates the student's needs and the school's management strategies for that student in the school setting.¹⁷ The DMMP may serve as the foundation or diabetes specific addendum for the IHP. An Emergency Care Plan (ECP) or Quick Reference Emergency Plan, coordinated by the school nurse, flows from the IHP and is based on the DMMP. The ECP ensures that a plan is in place to direct the actions of the school personnel, including actions to be taken for symptoms of hyperglycemia and hypoglycemia.¹⁸

The "504" Plan is based on Section 504 of the Rehabilitation Act of 1973, a civil rights law that prohibits discrimination based on disabilities. A 504 plan protects the student and guarantees full access to all school activities while meeting any health/medical requirements. Accommodation is the term most often associated with the 504. The 504 includes a statement about the diagnosis, how diabetes impacts daily functioning, and a description of specific tasks that are necessary for effective diabetes management. The 504 states that the youth will not be penalized when these tasks interfere with the educational experience.²

The *Individual Education Plan (IEP)* protects students who have special education needs. Rules and guidelines pertaining to IEPs are found in the Individuals with Disabilities Education Act (IDEA). This is the most comprehensive, yet uncommon of the documents. In the case that diabetes has a direct impact on learning (e.g., frequent hospitalizations, chronic absences), an IEP may be needed.²

Students with diabetes may qualify for a 504 or IEP, yet do not qualify for both. If the student has an IEP, the specific accommodations typically found in the 504 Plan are incorporated into the IEP. Both a 504 plan and an IEP are formal, legal documents. This means that all schools that receive federal funding are legally bound to implement the practices incorporated in the plan.

AADE7™ Self-Care Behaviors and Diabetes Management in School

The following strategies address school-specific outcomes for each of the AADE7™ Self-Care Behaviors. As such, they provide a framework for diabetes educator support of students with diabetes while at school and other school-related activities.⁵

1. AADE7™ Healthy Eating: The Role of the Diabetes Educator.

- educate school personnel about the benefits of healthy eating especially as pertains to children with diabetes;
- provide an appropriate food plan for meals and snacks that includes time, food type, and quantity;
- confirm accuracy of estimates of portion size, food composition, and nutrients for students, parents/guardian, and/or school personnel, and
- recommend dietary modifications and medication dosage adjustment.¹⁰

2. AADE7™ Being Active: The Role of the Diabetes Educator.

- encourage and facilitate participation in school-based physical exercise;
- consider physical activity in planning meal/snack times and medication dosages;
- designate times when physical activity should be delayed, avoided, or encouraged in the written plan of care (DMMP);
- support school policy that enhances daily physical activity programs; and
- list signs, symptoms, and treatment of exercise-induced hypoglycemia.^{2,5}

3. AADE7™ Monitoring: The Role of the Diabetes Educator.

- provide or facilitate blood glucose monitoring training for the student, family, and school personnel;
- provide guidance for a regular monitoring schedule and indicate safety conditions in which additional blood glucose checking is necessary;
- collaborate with student, family, and school personnel to promote blood glucose monitoring performance whenever and wherever necessary;
- assist school personnel in their role and understanding of other monitoring modalities such as blood or urine ketone testing and continuous glucose monitoring (CGM) as appropriate;
- facilitate the purchase of adequate and appropriate monitoring supplies for glucose and ketones to meet monitoring needs; and
- emphasize the importance of keeping an adequate number of diabetes supplies at school.^{2,13}

4. AADE7™ Taking Medication: The Role of the Diabetes Educator.

- assist the School Nurse or appropriate personnel in the development of the Diabetes Medical Management Plan, clearly outlining the student's in-school medication plan and updating changes in a timely manner;
- encourage appropriate parental involvement in medication adjustment with parent and school personnel input;

- educate students, parents/guardian, and school personnel about diabetes medications;
- facilitate training of school nurses and other school personnel as new diabetes medications and delivery devices become available;
- collaborate with family and school nurses to periodically assess and optimize student's level of independence in diabetes medication administration²; and
- alert and instruct school personnel about hypoglycemia treatment and hyperglycemia that may occur as a result of medication, food, and exercise imbalance.^{9,19,20}

5. AADE7™ Problem Solving: The Role of the Diabetes Educator.

- hypoglycemia and hyperglycemia;
- suggest appropriate blood glucose action levels and an action plan for hyperglycemia (diabetes ketoacidosis prevention and/or sick-day management)²¹;
- support student access as needed to fluids, food, and/or the bathroom,
- formulate an action plan for treatment of severe hypoglycemia in the student's care plan to include calling 911 and glucagon administration by trained school staff member;
- assess causes of blood glucose extremes and promptly re-evaluate the management plan; and
- communicate to school personnel the effect of hypoglycemia and hyperglycemia on cognitive performance.^{20,22}
- *Special Situations*: help increase the student's chances for success by planning optimal diabetes management strategies for standardized testing; anticipate necessary changes in medication, meals/snacks, and activity associated with field trips, parties, and "special events"; and remind school personnel of the importance of access to food, diabetes supplies, and medications in case of school emergencies.²
- *Advocacy*: familiarize family/caregivers with federal disability laws offering accommodation of diabetes care needs, including nutritional support, as documented in writing by a licensed physician/provider^{7,8}; and support parents/guardian in advocating for adequate access to school nursing and other health services directing them to appropriate resources and organizations.⁶⁻⁸

6. AADE7™ Healthy Coping: The Role of the Diabetes Educator.

- be alert for warning signs of diabetes-related school stress and/or depression: refer to appropriate professional²³;
- support the involvement of school friends in the student's diabetes care;
- encourage involvement in a diabetes support system, camp, and so on;

- minimize differences for youth by creatively helping them fit diabetes care into their school routine in easy and unobtrusive ways; and
- recognize the student's self-management strengths and help to build on them.^{15,24}

7. AADE7™ Reducing Risks: The Role of the Diabetes Educator.

- promote general healthy eating and physical activity in the school environment,
- assess the student's capability of performing diabetes tasks in a safe manner at school,⁹
- coach student in safe practices when managing sharps at school,
- advocate for school attendance policies that allow students with diabetes adequate medical follow-up without penalty, and
- recommend annual influenza vaccination for all students with diabetes.²⁵

Recommendations

Diabetes educators are instrumental in fostering essential care and safety of students with diabetes at school. Goals are:

- a positive school experience,
- normal growth and development,
- normal school attendance,
- positive coping skills, and
- learning potential.

AADE believes that application of the AADE7™ Self-Care Behaviors will foster these behavioral goals.⁵

In conclusion, this position statement supports the following:

- a medically safe school environment;
- access, accommodation, and a discrimination-free school experience;
- written diabetes care plans for students with diabetes;
- self-management by students with diabetes when deemed appropriate;
- healthy food, physical activity, and support for students to manage diabetes;
- support and advocacy for the training of nonmedical school personnel to administer glucagon and insulin/medications in the absence of the school nurse;
- every child reaching his/her learning and developmental potential; and
- active participation of the diabetes educator in working with the school nurse and other school personnel to achieve these goals.

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