

# Diabetes Management in the School Setting



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## *Position Statement*

### **SUMMARY**

It is the position of the National Association of School Nurses (NASN) that the registered professional school nurse (hereinafter referred to as school nurse) is the school staff member who has the knowledge, skills, and statutory authority to fully meet the healthcare needs of students with diabetes in the school setting. Diabetes management in children and adolescents requires complex daily management skills (American Association of Diabetes Educators [AADE], 2016). Health services must be provided to students with diabetes to ensure their healthcare needs are met; requirements of relevant federal and state laws are met; and they can fully participate in school and school-sponsored events (AADE, 2016).

### **BACKGROUND**

Diabetes is the third most common chronic health disease affecting an estimated 2.22/1,000 children and adolescents according to The Search for Diabetes in Youth (SEARCH) Study (Pettitt et al., 2014). Children and adolescents are defined as youth under the age of 20 years. In 2009, approximately 191,986 or one in 433 youth with diabetes lived in the U.S. From these, 87% have type 1 diabetes and 11% have type 2 diabetes (Pettitt et al., 2014). In the year 2008 to 2009, 18,436 youth were newly diagnosed with type 1 diabetes and 5,089 youth were newly diagnosed with type 2 diabetes (Centers for Disease Control and Prevention [CDC], 2014).

Advances in diabetes technology continue to enhance the students' ability to manage diabetes at school, thus improving their quality of life. Children and adolescents monitor blood glucose levels several times a day via blood glucose meters and continuous glucose monitors, conduct carbohydrate calculations, and inject insulin via syringe, pen and pump to attain blood glucose control (Brown, 2016). Intensive resources and consistent evidenced-based interventions will achieve the long-term health benefits of optimal diabetes control, according to the landmark study from the Diabetes Control and Complications Trial Research Group (DCCT, 1993).

Each student with diabetes is unique in his or her disease process, developmental and intellectual abilities, and levels of assistance required for disease management. An individualized Diabetes Medical Management Plan (DMMP) is completed by the healthcare provider and includes the medical orders to manage the student's diabetes needs during the school day and at school-sponsored activities (Jackson et al., 2015). The school nurse develops an individualized healthcare plan (IHP) in partnership with the student and his or her family, based on the medical orders in the DMMP and the nurse's assessment. (American Nurses Association/National Association of School Nurses [ANA/NASN], 2011). The IHP outlines the student's diabetes management strategies and personnel needed to meet the student's health goals in school (National Diabetes Education Program [NDEP], 2016). The school nurse also prepares an emergency care plan (ECP), based on the DMMP medical orders, that summarizes how to recognize and treat hypoglycemia and hyperglycemia and directs action to take in an emergency. Copies of the ECP should be distributed to all school personnel who have responsibilities for the student during the school day and during school-sponsored activities (NDEP, 2016).

Throughout childhood and adolescence, the student who has diabetes continuously moves through transitions toward increasing levels of independence and self-management (American Diabetes Association [ADA], 2016), requiring various levels of supervision or assistance to perform diabetes care tasks in school. Students who lack diabetes management experience or cognitive and developmental skills must have assistance with their diabetes management during the school day, as determined by nursing assessment and as outlined in the IHP (Wyckoff, Hanchon, & Gregg, 2015).

Hypoglycemia (low blood glucose) is the greatest immediate danger to the student with diabetes. During hypoglycemic incidents, the student may not be able to self-manage due to impaired cognitive and motor function. A student experiencing hypoglycemia should never be left alone, sent anywhere alone, or escorted by another student. Communication systems and trained school staff should be in place to assist the student. Hypoglycemia can occur suddenly and requires immediate treatment (NDEP, 2016).

Another complication of diabetes, hyperglycemia (high blood glucose), can develop over several hours or days (NDEP, 2016). If untreated, hyperglycemia can lead to the life-threatening condition, diabetic ketoacidosis (DKA) (Wyckoff et al., 2015). For students using insulin infusion pumps, lack of rapid-acting insulin increases their risks of developing DKA more rapidly (Brown, 2016). School nurses may utilize one or more of the model NDEP three levels of staff training to facilitate prompt, safe, and appropriate care for students with diabetes (NDEP, 2016).

Students with disabilities, which include students who have special healthcare needs such as diabetes, must be given an equal opportunity to participate in academic, nonacademic, and extracurricular activities. Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act prohibit recipients of federal financial assistance from discriminating against people on the basis of disability (NDEP, 2016). These laws are enforced by the Office for Civil Rights (OCR) in the U.S. Department of Education. Schools are required to identify all students with disabilities and to provide them with a free appropriate public education (FAPE) (NDEP, 2016).

Advances in science, technology, and evidence-based practices related to diabetes management require school nurses to attain and maintain current knowledge and competence in the delivery and coordination of the care for the student with diabetes (NDEP, 2016, Pansier & Schultz, 2015).

## **RATIONALE**

Children and adolescents with diabetes are confronted with many challenges and potential educational barriers in school. Some of the main barriers include lack of informed and trained staff, absence of a school nurse who is on site daily, and lack of diabetes management policies (Pansier & Schultz, 2015). School-based diabetes interventions led by school nurses are essential to improve health and academic outcomes and ensure a safe school environment for children and adolescents with diabetes.

The increasing prevalence of health-related disabilities, including type 1 and type 2 diabetes, has compounded the need for coordination of care between the school, the student's healthcare team, the family, and service providing agencies (McClanahan & Weismuller, 2015). Recent studies show that care coordination in the school setting improves quality of life, diabetes glucose control, ability to self-manage, readiness to learn, classroom participation, and academic performance (Pansier & Schultz, 2015). Care coordination, a core professional school nursing principle, and its related practice components involve developing and maintaining competence in creating, updating, and implementing care plans that comprehensively create an environment where students will maintain optimal health in the school setting so that they can succeed academically (NASN, 2016).

School nurses implement the DMMP, develop IHPs and ECPs, and train school personnel (McClanahan & Weismuller, 2015). When nursing delegation of diabetes care tasks is deemed appropriate, the school nurse provides ongoing supervision and evaluation of student health outcomes (Wyckoff et al., 2015). School nurses are accountable for addressing the students' ongoing healthcare needs, encourage independence and self-care within the student's ability, and promote a healthy, safe school environment that is conducive to learning (NDEP, 2016).

Ineffective management of diabetes in school may lead to absenteeism, depression, stress, poor academic performance, and poor quality of life (Pansier & Schulz, 2015). Managing diabetes at school is most effective when there is a partnership among students, parents/guardians, school nurses, healthcare providers, and other school personnel (e.g., teachers, counselors, coaches, transportation, food service employees, and administrators). The school nurse provides the health expertise and coordination needed to ensure cooperation from all partners in assisting the student toward self-management of diabetes. Poorly controlled diabetes not only affects academic

performance but can lead to long-term complications such as retinopathy, cardiovascular disease, and nephropathy. Maintaining blood glucose levels within a target range can prevent, reduce, and reverse long-term complications of diabetes (DCCT, 1993).

## CONCLUSION

Diabetes is listed as the third most common chronic health condition that impacts approximately one in 433 children and adolescents in the United States (Pettitt et al., 2014). The school nurse is the most appropriate staff member in the school to fully meet the healthcare needs of students and should be the key coordinator and care provider for the student who has diabetes (ADA, 2016). The school nurse's competence in the practice components of the principle of Care Coordination (e.g., case management, collaborative communication, providing and/or coordinating the provision of direct care, training of non-medical personnel) is essential to promoting the health, safety, and academic success of students who have diabetes within the school setting (AADE, 2016; McClanahan, 2015; NASN, 2016).

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