Caring for students with diabetes is challenging. Regardless of the student’s type of diabetes, length of time since diagnosis, and self-care knowledge and abilities, diabetes in school can create unpredictable difficulties, sometimes at inconvenient times. It is not easy to predict how well a student and family will cope with diabetes and it can be difficult to anticipate the school nurse’s workload and stress level associated with caring for the student with diabetes. Some “real life” scenarios are presented here to help school nurses understand the complexities of diabetes management and provide families appropriate and timely support and guidance.

The new school year is about to begin
You are the nurse at School #1 and twin brothers with diabetes have just moved to your school. The twins are 12 years old and live with their single mother and two sisters. They developed type 1 diabetes at ages 4 and 7. Both use insulin pumps. The family has little money.

Your school nurse colleague at School #2 has a 12-year-old student who developed type 1 diabetes 2 years ago and began pump therapy 9 months ago. She is an only child, living with two well-educated and employed parents, in a suburban neighborhood. After her diagnosis of diabetes she independently learned all her diabetes care tasks.

Most readers would assume that the nurse caring for the twin boys would have more diabetes management difficulties during the school year, but just the opposite occurred. At School #1, the boys arrived in September with their glucagon kits, low-blood-glucose supplies for every class, back-up insulin in the form of pens, and extra blood glucose meter test strips. Each day they arrived at school with functional infusion set sites and enough insulin and battery power to get through the school day. Their mother was responsive to requests from the school nurse to deliver supplies as needed. Good communication about the boys’ needs was established on a regular basis between the mother and the school nurse.

In contrast, at School #2, the appropriate supplies were delivered on the first day of school, but once they were used up, the parents did not respond to requests to replenish them. The student often arrived with an infusion set that was not functioning or that had been in situ for more than three days. She also often did not have enough insulin in her pump cartridge to last through the school day. When her parents were called they were concerned, but failed to become more attentive. This communication pattern with the parents, and the student’s apparent inability to manage her diabetes, proved to be very frustrating for the school nurse. Two episodes of diabetic ketoacidosis (DKA) occurred. During one of the girl’s acute care hospital stays, her pump and blood glucose meter memory features revealed that there were days that she did not inject the prescribed bolus doses of insulin and that she tested her blood glucose infrequently.

The twin boys at School #1 have had A1Cs less than 7 percent for the last few years, and neither one has had an episode of DKA. The twins’ mother accepted their diabetes diagnosis as a challenge in life that required her to channel her energies into doing the best job possible to manage their diabetes. While the mother is “in charge” of their diabetes care, she clearly expects her twins to be responsible for their diabetes self care. To meet her expectations, the boys do all they need to do to take care of their diabetes during the school day, after school program hours, and during summer programs.

At School #2, the student’s A1C climbed into double digits during the year. The parents were ineffectual in taking responsibility for their daughter’s diabetes management and in providing her appropriate guidance and support, and in clarifying expectations for self care. Even during her two entirely preventable DKA episodes the parents failed to recognize that their lack of supervision of some crucial elements of their daughter’s diabetes care put her life at risk. Unlike the twins’ mother, the girl’s parents had become immobilized by grief. The school nurse and other members of the healthcare team recommended that the family be referred for counseling to help them adjust to and cope with the demands of diabetes care.

Type 2 diabetes in school-aged children requires a variety of diligent efforts by the school nurse
Student A is a 14-year-old girl diagnosed with type 2 diabetes a year ago. Her treatment plan began with nutrition therapy and metformin. Three months ago insulin therapy was initiated. Her weight has climbed to over 250 pounds and her A1C is 11.5 percent, which indicates that her average blood glucose is above 310 mg/dl. A is an only child and
lives with her mother in a subsidized apartment. Her father lives out of town and A sees him irregularly. Her mother cries during every visit to the healthcare team. During a recent visit, A’s mother admitted she did not always supervise her daughter’s insulin administration, and A stated that she omits doses when she “does not feel like taking it.” The school nurse was allowing A to step behind a curtain for privacy when injecting her lunch-time insulin and A also admitted to regularly omitting that dose as well.

A strategy to increase the level of supervision was implemented. The mother and the school nurse agreed that they would observe all A’s insulin injections, and be willing to give the injection when A requested. This simple action and ongoing encouragement of A’s efforts resulted in improved blood glucose values.

Student B is a 14-year-old boy recently diagnosed with type 2 diabetes who lives with his single mother and three brothers. He is enrolled in special education setting because of his autism and limited verbal abilities. Upon diagnosis, B’s A1C was 12, indicating his average blood glucose was above 345 mg/dl. Metformin was prescribed and his mother and older brother received nutrition therapy counseling. They seized upon what they learned and improved the nutrition of the entire family, despite their limited means. At his 3-month visit to the healthcare team, B’s A1C had decreased several percentage points and 6 months following his diagnosis his A1C was 7 percent. The school nurse was instrumental in supporting the boy’s diabetes care plan and facilitating the prescribed regimen of blood glucose testing during the school day. The nurse also advocated for incorporation of physical activity into his educational plan and communicated regularly with the family about his management.

Student C is a 13-year-old boy who was told by his teacher to go to the bathroom to wash his neck. The student complied with the request and returned to class. When the dark marks on the back of his neck looked the same, the teacher repeated the request. C returned from the bathroom unchanged a second time. The next day, C brought a note in from his parents informing the teacher that he had pre-diabetes and that his healthcare team was working with his family to take steps to prevent him from developing type 2 diabetes. The boy had very noticeable acanthosis nigricans on his neck. The school nurse had not been informed of C’s pre-diabetes and so had no opportunity to inform school personnel about acanthosis nigricans and its association with insulin resistance and pre-diabetes.

There are many issues related to management of type 2 diabetes in school. Treatment regimens can be labor intensive if they involve blood glucose monitoring and insulin administration. Carbohydrate counting and helping students achieve adequate physical activity are further challenges. In addition, there may be social and behavioral issues that affect families as they attempt to provide consistent, quality diabetes care.

What are the similarities between the management of type 1 and type 2 diabetes in school?

Both types of diabetes can present difficulties and challenges. Both require lifestyle change and adaptation for the child and the family. Emotional responses and family dynamics often “make or break” successful diabetes management. The expertise and ability of the school nurse is a vital treatment component as the nurse guides the student’s and family’s success during the school day and communicates issues to the larger health care team.

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