

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 4-A-08

Subject: Ensuring the Best In-School Care for Children with Diabetes
(Resolution 404, A-07)

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Referred to: Reference Committee D
(Robert T. M. Phillips, MD, PhD, Chair)

1 Introduction

2
3 Resolution 404 (A-07), introduced by the Medical Student Section and referred by the House of
4 Delegates, asked:

5
6 That our American Medical Association (AMA) support the implementation of rigorous
7 training programs under physician oversight, including frequent refresher courses, for
8 selected school staff members to dose and administer injectable medications in
9 emergency situations and to aid the child in his or her self-administration of insulin in the
10 case that a licensed medical professional is not available.

11
12 Several federal and some state laws provide protection for children with disabilities, including
13 diabetes. This report provides an overview of such protections and the recommended approaches
14 to ensuring that children with diabetes are educated in a medically safe environment and have
15 access to the same educational opportunities as their peers in public schools. Resolution 404
16 (A-07) is evaluated in light of these findings.

17
18 Methods

19
20 English-language reports on studies using human subjects were selected from a PubMed search of
21 the literature from 2000 to March 2008 using the terms “pediatric” and “diabetes,” in
22 combination with “epidemiology,” “treatment,” and “schools.” Additional articles were identified
23 by manual review of the references cited in these publications. Web sites of the American
24 Academy of Pediatrics, American Academy of Clinical Endocrinologists, The Endocrine Society,
25 American Diabetes Association, National Diabetes Education Program, and National Association
26 of School Nurses were searched for relevant articles. Additionally, a Google search for
27 information on treatment of diabetes in schools was conducted.

28
29 Epidemiology

30
31 The incidence of developing diabetes before age 20 years is approximately 24.3/100,000 per year,
32 with higher risks (>25/100,000 per year) for non-Hispanic white, non-Hispanic black, and
33 American Indian youth compared with Hispanics and Asian ethnicities, whose risk is less than
34 20/100,000 per year.¹ Although most of these patients (78%) have type 1 diabetes, the rates of
35 apparent type 2 diabetes mellitus increase with age and occur more frequently among non-
36 Hispanic black, Asian, and American Indian individuals.¹ Thus, approximately 1/400 school-
37 aged children have diabetes, and it is estimated that each year an additional 13,000 to 15,000

1 pediatric patients are diagnosed with type 1 diabetes requiring daily insulin injections to maintain
2 glycemic control.^{2,3}

3

4 Protections for School-Aged Children with Diabetes—Education Laws.

5

6 Three federal laws provide protection for children with diabetes and require school districts to ensure
7 access to educational opportunities in a medically safe environment without discrimination. These federal laws are: Section 504 of the Rehabilitation Act of 1973, the
8 American with Disabilities Act (ADA), and the Individuals with Disability Education Act
9 (IDEA).⁴⁻⁶

10

11 The ADA is a federal civil rights law enacted in 1990 that prohibits discrimination by public entities against people with disabilities. In this context, the ADA applies broadly to public, but not religious private institutions. Similarly, Section 504 of the Rehabilitation Act (a federal law passed by Congress in 1973) is an antidiscrimination law that prohibits recipients of federal funds from discriminating against individuals on the basis of disability. As they relate to schools, both are geared toward students with physical or mental impairments (disability) that “substantially limits one or more major life activities” by requiring schools to provide students with “reasonable accommodations” and educational services to ensure they have an equal opportunity to participate in academic, nonacademic, and extracurricular activities.

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Most parents and students with diabetes rely on Section 504 and/or the ADA to support their right to a disability assessment. Implementation of Section 504 is accomplished by developing a Section 504 plan, which is prepared by the school, generally in consultation with parents (who have a right to participate). The plan describes the accommodations, special education, and/or related services that will be provided in order for the student to stay healthy at school and have equal access to education. Generally, the plan should be informed by a Diabetes Medical Management Plan developed by the child’s physician. Deciding who will provide diabetes care in the school setting is an important part of the accommodation plan.

The IDEA is a federal law that provides funds to states to support special education and related services for children with disabilities, and is administered by the Office of Special Education Programs in the U.S. Department of Education. Unlike Section 504 and the ADA, IDEA’s protections only apply to certain categories of students whose disability impairs the student’s ability to learn to the extent that he or she requires special education and related services. Implementation is accomplished through an individualized education program (IEP).

When requests and/or negotiations for developing an adequate Section 504 plan or IEP fail, parents or guardians typically engage internal school or district grievance procedures. Additional measures include filing an administrative complaint with the State Board of Education or filing a lawsuit in court, depending on whether the claim is based on IDEA, Section 504, or the ADA. Treating physicians should function as advocates in this process.⁷

The *Legal Rights of Students with Diabetes* is an authoritative and comprehensive resource designed to assist advocates throughout the process of working with schools to secure appropriate care, learning environment, and access to activities for these students.⁸ In addition, several states have adopted statutes that specifically relate to school-based diabetes care. Links to these specific state laws can be accessed from the American Diabetes Association web site.⁹

1 Responsibilities of Schools

2
3 Schools must designate an employee to coordinate and implement compliance with Section 504
4 and the ADA.⁸ It is also the school's legal responsibility to provide appropriate training to school
5 staff on diabetes-related tasks and in the treatment of diabetes emergencies.⁸ This training should
6 be provided by health care professionals with expertise in diabetes unless the student's health care
7 provider determines that the parent or guardian is able to provide school personnel with sufficient
8 oral and written information to allow the school to establish a safe and appropriate environment
9 for the child.

10 What Health Services Should be Provided and Who Should Provide Them?

11
12 The ideal situation is for a school nurse to provide diabetes care-related health services.
13 However, even if a full-time nurse is present (and many schools lack sufficient nursing staff),
14 additional personnel must be trained to provide routine and emergency diabetes care, including
15 checking blood glucose levels and administering glucagon or insulin, if needed, during the school
16 day and during extracurricular activities and field trips when a nurse is unavailable.

17
18 The National Diabetes Education Program (NDEP) and the American Diabetes Association both
19 hold the view that diabetes care tasks may be safely and appropriately delegated to nonmedical
20 and non-nursing personnel in the school setting, including field trips and other extracurricular
21 activities.^{10,11} State laws typically regulate who may perform diabetes care tasks and whether a
22 given task must be delegated by a nurse or other health care professional before a nonlicensed
23 person may perform it.⁸ The delegated tasks that are permitted vary from state to state, but
24 delegation is acceptable in most states. Where delegation is not permitted, the school must
25 provide appropriately licensed personnel to provide services.⁸

26
27 Most students with diabetes should have two planning documents, one that describes the
28 treatment plan (or Diabetes Medical Management Plan), and another that outlines how the needed
29 diabetes care will be provided at school (Section 504 plan or something comparable). Children
30 covered by IDEA are required to have a written IEP. Also recommended are a "quick reference
31 emergency plan," which describes how to recognize hypoglycemia and hyperglycemia and what
32 to do as soon as signs or symptoms of these conditions are observed. Some school nurses also
33 may generate an "individual care plan" that provides instructions to faculty and staff who are in
34 contact with the student.¹⁰

35
36 The Diabetes Medical Management Plan should be completed by the student's personal health
37 care team and parents/guardians, and reviewed with relevant school staff, with copies easily
38 accessible by the school nurse and trained diabetes personnel, and other authorized persons.
39 These plans typically include contact information and instructions for blood glucose monitoring
40 and insulin dosing and administration, including specific instructions on students' abilities if they
41 have an insulin pump. Additionally, information on meals and snacks to be eaten at school and
42 on exercise and sports may be provided, along with the usual symptoms and treatment for both
43 hypoglycemia and hyperglycemia, supplies to be kept at school, and approval signatures. Sample
44 Medical Management Plans and Quick Reference Emergency Plans (see Appendix) are available
45 as part of the Guide for School Personnel developed by the NDEP.¹¹

46
47 The trained diabetes personnel assist with diabetes care tasks such as blood glucose monitoring,
48 insulin and glucagon administration, and urine ketone testing in the school setting. As noted
49 above, the extent to which care may be provided by non-health care professionals varies based on
50 state law. As Resolution 404 alludes to, these school staff members should be trained and

1 monitored, taking the relevant state laws into account. The care plan developed as part of the
2 necessary accommodations should identify school employees assigned to provide care to an
3 individual student. The NDEP (which is endorsed by our AMA) advises this should be done
4 under the direction of the school nurse, when allowed by state nurse practice acts.¹¹ The school
5 nurse is responsible for training, monitoring, and supervising these school personnel. The NDEP
6 further notes that “a team approach to developing the care plan, involving the student, parent,
7 health care provider, key school personnel, and school nurse, is the most effective way to ensure
8 safe and effective diabetes management during the school day.”¹¹

9
10 The American Diabetes Association Position Statement on Diabetes Care in the School and Day
11 Care Setting and the Association’s “Safe at School Campaign” also emphasize the need to assess
12 the requirements of each child individually and to provide appropriate care in the school based on
13 the student’s Diabetes Medical Management Plan or other health care plan.^{10,12} The Association
14 has developed “Diabetes Care Tasks at School: What Key Personnel Need to Know,” a series of
15 training modules that can be used to train school personnel and which are available online.

16
17 The basic principles behind the Safe at School campaign are:¹³

- 18
19 • All school staff members who have responsibility for a student with diabetes should
20 receive training that provides a basic understanding of the disease and the student’s
21 needs, how to identify medical emergencies, and which school staff members to contact
22 with questions or in case of an emergency.
- 23
24 • The school nurse holds a primary role of coordinating, monitoring, and supervising the
25 care of a student with diabetes. However, in addition to any full- or part-time school
26 nurse, a small group of school staff members should receive training from a qualified
27 health care professional in routine and emergency diabetes care so that a staff member is
28 always available for younger or less-experienced students who require assistance with
29 their diabetes management (e.g., administering insulin, checking their blood glucose,
30 choosing appropriate food) and for all students with diabetes in case of an emergency
31 (including administration of glucagon). These staff members should be school personnel
32 who have volunteered to do these tasks and do not need to be health care professionals.

33
34 The American Academy of Pediatrics recommends that the “leadership in developing safe
35 guidelines lies with the certified school nurse, the physician, and the parent. When school nurses
36 delegate care to nonmedical staff members, a system should be devised through which the school
37 nurse, parent, and physicians are comfortable with the protocol.”^{14,15} The American Nursing
38 Association also notes that individualized health care planning is a nursing responsibility that is
39 regulated by state nurse practice acts and cannot be delegated to unlicensed individuals.¹⁶

40
41 The limited survey data that are available indicate that improvements are needed in the way
42 schools address the health care needs of their students with diabetes.^{17,18}

43
44 Other Policy Statements

45
46 The Juvenile Diabetes Research Foundation position statement on diabetes management in
47 schools states that “students with type 1 diabetes must be allowed to manage their diabetes in a
48 school setting by monitoring their blood sugar, eating appropriate foods, and administering
49 insulin,” fostered by appropriate school policies and a supportive network of teachers, parents,
50 school administrators and health care providers.^{19,20}

1 The Parent Teacher Association urges that at least two staff members per school undergo specific
2 training on diabetes care and emergency procedures, and on identification and treatment of
3 symptoms of hyperglycemia and hypoglycemia, as allowed by state laws and practice acts.

4

5 **Summary and Conclusion**

6

7 Federal laws, and in many cases, state laws provide protection for school-aged children with type
8 1 diabetes, and a general framework is in place to address the health care and education needs of
9 students with diabetes. Parents, the health care team, and school personnel should work together
10 to allow children with diabetes to participate fully and safely in the school experience.

11

12 Physicians should assist in developing individualized Diabetes Medical Management Plans for
13 students. The school nurse has the primary responsibility for integrating this information into the
14 development of in-school plans for providing the necessary health care services for students with
15 diabetes, as well as training of nonmedical school personnel to provide needed services, which is
16 particularly important to the process. The extent to which individual physicians are engaged will
17 vary from school to school based on state practice regulations and local school district practices;
18 however, physicians should function as advocates throughout the planning process. Deficiencies
19 in caring for school-aged children with diabetes are the result of local policies and school-level
20 system and training issues, and will not be solved by our AMA advocating for more rigorous
21 physician-directed training programs for nonmedical school personnel.

22

23 **RECOMMENDATION**

24

25 The Council on Science and Public Health recommends that the following statement be adopted
26 in lieu of Resolution 404 (A-07) and the remainder of this report be filed:

27

28 That our American Medical Association establish policy that physicians, physicians-in-
29 training, and medical students should serve as advocates for pediatric patients with
30 diabetes to ensure that they receive the best in-school care, and are not discriminated
31 against, based on current federal and state protections. (New HOD Policy)

Fiscal Note: No significant fiscal impact

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Appendix¹¹

Quick Reference Emergency Plan for a Student with Diabetes

Hypoglycemia (Low Blood Sugar)

**STUDENT
PHOTO**

Student's Name _____

Grade/Teacher _____

Date of Plan _____

Emergency Contact Information: _____

Mother/Guardian _____

Father/Guardian _____

Home phone _____

Work phone _____

Cell _____

Home phone _____

Work phone _____

Cell _____

School Nurse/Trained Diabetes Personnel _____

Contact Number(s) _____

Never send a child with suspected low blood sugar anywhere alone.

- Causes of Hypoglycemia**
- Too much insulin
 - Missed food
 - Delayed food
 - Too much or too intense exercise
 - Unscheduled exercise

Onset

- Sudden

Symptoms

Mild

- Hunger
- Shakiness
- Weakness
- Paleness
- Anxiety
- Irritability
- Dizziness
- Sweating
- Drowsiness
- Personality change
- Inability to concentrate
- Other: _____

Circle student's usual symptoms.

Moderate

- Headache
- Behavior change
- Poor coordination
- Blurry vision
- Weakness
- Slurred Speech
- Confusion
- Other _____

Circle student's usual symptoms.

Severe

- Loss of consciousness
- Seizure
- Inability to swallow

Circle student's usual symptoms.

Actions Needed

Notify School Nurse or Trained Diabetes Personnel. If possible, check blood sugar, per Diabetes Medical Management Plan. When in doubt, always TREAT FOR HYPOGLYCEMIA.

Mild

- Student may/may not treat self.
- Provide quick-sugar source.
3-4 glucose tablets
or
4 oz. juice
or
6 oz. regular soda
or
3 teaspoons of glucose gel
- Wait 10 to 15 minutes.
- Recheck blood glucose.
- Repeat food if symptoms persist or blood glucose is less than _____.
- Follow with a snack of carbohydrate and protein (e.g., cheese and crackers).

Moderate

- Someone assists.
- Give student quick-sugar source per MILD guidelines.
- Wait 10 to 15 minutes.
- Recheck blood glucose.
- Repeat food if symptoms persist or blood glucose is less than _____.
- Follow with a snack of carbohydrate and protein (e.g., cheese and crackers).

Severe

- Don't attempt to give anything by mouth.
- Position on side, if possible.
- Contact school nurse or trained diabetes personnel.
- Administer glucagon, as prescribed.
- Call 911.
- Contact parents/guardian.
- Stay with student.

Quick Reference Emergency Plan

for a Student with Diabetes

Hyperglycemia (High Blood Sugar)

**STUDENT
PHOTO**

Student's Name _____

Grade/Teacher _____

Date of Plan _____

Emergency Contact Information:

Mother/Guardian _____

Father/Guardian _____

Home phone _____

Work phone _____

Cell _____

Home phone _____

Work phone _____

Cell _____

School Nurse/Trained Diabetes Personnel _____

Contact Number(s) _____

