

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

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

21
22 Most parents and students with diabetes rely on Section 504 and/or the ADA to support their right
23 to a disability assessment. Implementation of Section 504 is accomplished by developing a
24 Section 504 plan, which is prepared by the school, generally in consultation with parents (who
25 have a right to participate). The plan describes the accommodations, special education, and/or
26 related services that will be provided in order for the student to stay healthy at school and have
27 equal access to education. Generally, the plan should be informed by a Diabetes Medical
28 Management Plan developed by the child’s physician. Deciding who will provide diabetes care in
29 the school setting is an important part of the accommodation plan.

30
31 The IDEA is a federal law that provides funds to states to support special education and related
32 services for children with disabilities, and is administered by the Office of Special Education
33 Programs in the U.S. Department of Education. Unlike Section 504 and the ADA, IDEA’s
34 protections only apply to certain categories of students whose disability impairs the student’s
35 ability to learn to the extent that he or she requires special education and related services.
36 Implementation is accomplished through an individualized education program (IEP).

37
38 When requests and/or negotiations for developing an adequate Section 504 plan or IEP fail,
39 parents or guardians typically engage internal school or district grievance procedures. Additional
40 measures include filing an administrative complaint with the State Board of Education or filing a
41 lawsuit in court, depending on whether the claim is based on IDEA, Section 504, or the ADA.
42 Treating physicians should function as advocates in this process.⁷

43
44 The *Legal Rights of Students with Diabetes* is an authoritative and comprehensive resource
45 designed to assist advocates throughout the process of working with schools to secure appropriate
46 care, learning environment, and access to activities for these students.⁸ In addition, several states
47 have adopted statutes that specifically relate to school-based diabetes care. Links to these
48 specific state laws can be accessed from the American Diabetes Association web site.⁹

49

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
11 What Health Services Should be Provided and Who Should Provide Them?
12

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

18
19 The National Diabetes Education Program (NDEP) and the American Diabetes Association both
20 hold the view that diabetes care tasks may be safely and appropriately delegated to nonmedical
21 and non-nursing personnel in the school setting, including field trips and other extracurricular
22 activities.^{10,11} State laws typically regulate who may perform diabetes care tasks and whether a
23 given task must be delegated by a nurse or other health care professional before a nonlicensed
24 person may perform it.⁸ The delegated tasks that are permitted vary from state to state, but
25 delegation is acceptable in most states. Where delegation is not permitted, the school must
26 provide appropriately licensed personnel to provide services.⁸
27

28 Most students with diabetes should have two planning documents, one that describes the
29 treatment plan (or Diabetes Medical Management Plan), and another that outlines how the needed
30 diabetes care will be provided at school (Section 504 plan or something comparable). Children
31 covered by IDEA are required to have a written IEP. Also recommended are a “quick reference
32 emergency plan,” which describes how to recognize hypoglycemia and hyperglycemia and what
33 to do as soon as signs or symptoms of these conditions are observed. Some school nurses also
34 may generate an “individual care plan” that provides instructions to faculty and staff who are in
35 contact with the student.¹⁰
36

37 The Diabetes Medical Management Plan should be completed by the student’s personal health
38 care team and parents/guardians, and reviewed with relevant school staff, with copies easily
39 accessible by the school nurse and trained diabetes personnel, and other authorized persons.
40 These plans typically include contact information and instructions for blood glucose monitoring
41 and insulin dosing and administration, including specific instructions on students’ abilities if they
42 have an insulin pump. Additionally, information on meals and snacks to be eaten at school and
43 on exercise and sports may be provided, along with the usual symptoms and treatment for both
44 hypoglycemia and hyperglycemia, supplies to be kept at school, and approval signatures. Sample
45 Medical Management Plans and Quick Reference Emergency Plans (see Appendix) are available
46 as part of the Guide for School Personnel developed by the NDEP.¹¹
47

48 The trained diabetes personnel assist with diabetes care tasks such as blood glucose monitoring,
49 insulin and glucagon administration, and urine ketone testing in the school setting. As noted
50 above, the extent to which care may be provided by non-health care professionals varies based on
51 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)

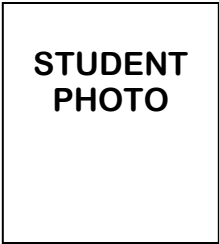
Fiscal Note: No significant fiscal impact

References

1. The Writing Group for the SEARCH for Diabetes in Youth Study Group. Incidence of diabetes in youth in the United States. *JAMA*. 2007;297:2716-2724.
2. Centers for Disease Control and Prevention. *National diabetes fact sheet: General information and national estimates on diabetes in the United States*. Atlanta, GA: U.S. Department of Health and Human Services; 2005.
3. National Diabetes Education Program. Helping the student with diabetes succeed: a guide for school personnel. U.S. Department of Health and Human Services; 2003 Available at: http://ndep.nih.gov/diabetes/pubs/Youth_SchoolGuide.pdf. Accessed March 4, 2008.
4. U.S Department of Education, Office of Civil Rights. Section 504 of the Rehabilitation Act of 1973, 29 USC § 794, implementing regulations at 34 CFR Part 104. Available at: www.ed.gov/ocr/disability.html. Accessed March 4, 2008.
5. Title II of the Americans with Disabilities Act of 1990, 42 USC § 12134 et seq., implementing regulations at 28 CFR Part 35. Available at www.ed.gov/ocr/disability.html. Accessed March 4, 2008.
6. Individuals With Disabilities Education Act, 20 USC § 111 et seq., implementing regulations at 34 CFR Part 300. Available at: www.ed.gov/offices/OSERS/OSEP. Accessed March 4, 2008.
7. The role of health care professional in diabetes discrimination issues at work and school. *Diabetes Educator*. 2002;28:1021-1027.
8. Rapp JA, Arent S, Dimmick BL, Jackson C. *Legal Rights of Students with Diabetes*. American Diabetes Association; 2007. Available at: <http://www.diabetes.org/advocacy-and-legalresources/attorneymaterials/legalrights.jsp>. Accessed March 4, 2008.
9. American Diabetes Association. School legislation. Available at: <http://www.diabetes.org/advocacy-and-legalresources/discrimination/school/legislation.jsp>. Accessed March 4, 2008.
10. American Diabetes Association. Care of children with diabetes in the school and day care setting. *Diabetes Care*. 2003;26(Suppl 1):S131-S135.
11. National Diabetes Education Program. Helping the Student with Diabetes Succeed. A Guide for School Personnel. U.S Department of Health and Human Services. Available at: http://ndep.nih.gov/diabetes/pubs/Youth_NDEPSchoolGuide.pdf. Accessed March 4, 2008.
12. American Diabetes Association. Safe at School Campaign. Available at: <http://www.diabetes.org/advocacy-and-legalresources/discrimination/school/safeschool.jsp>. Accessed March 4, 2008.
13. American Diabetes Association. Diabetes care tasks at school. What key personnel need to know. Available at: <http://diabetes.org/advocacy-and-legalresources/discrimination/school/schooltraining.jsp>. Accessed March 4, 2008.
14. American Academy of Pediatrics, Committee on School Health. Guidelines for emergency medical care in school. *Pediatrics*. 2001;107:435-436.

15. American Academy of Pediatrics, Committee on School Health. The role of the school nurse in providing school health services. *Pediatrics*.2001;108:1231–1232.
16. National Association of School Nurses. Position Statement. School nurse role in care and management of the child with diabetes in the school setting. 2005. Available at: <http://www.nasn.org/Default.aspx?tabid=216>. Accessed March 4, 2008.
17. Lewis DW, Powers PA, Goodenough MF, Poth MA. Inadequacy of in-school support for diabetic children. *Diabetes Technol Ther*. 2003;5:45-56.
18. Melton D, Henderson J. Do public schools provide optimal support for children with diabetes? *Prev Chronic Dis*. 4(3):1-3. Available at: www.cdc.gov/pcd/issue/2007/jul/06_0124.htm. Accessed March 4, 2008.
19. Juvenile Diabetes Research Foundation. Position Statement on Diabetes Management in Schools. 2001. Available at: http://www.jdrf.org/index.cfm?fuseaction=home.viewPage&page_id=B0F27252-2A5E-7B6E-1BEA8F58C0863902. Accessed March 4, 2008.
20. Parent Teachers Association. Resolution. Recognition and care of school-age children with diabetes. 2006. Available at: www.pta.org/archive_article_details_1152136026718.html. Accessed March 10, 2008.

Appendix¹¹



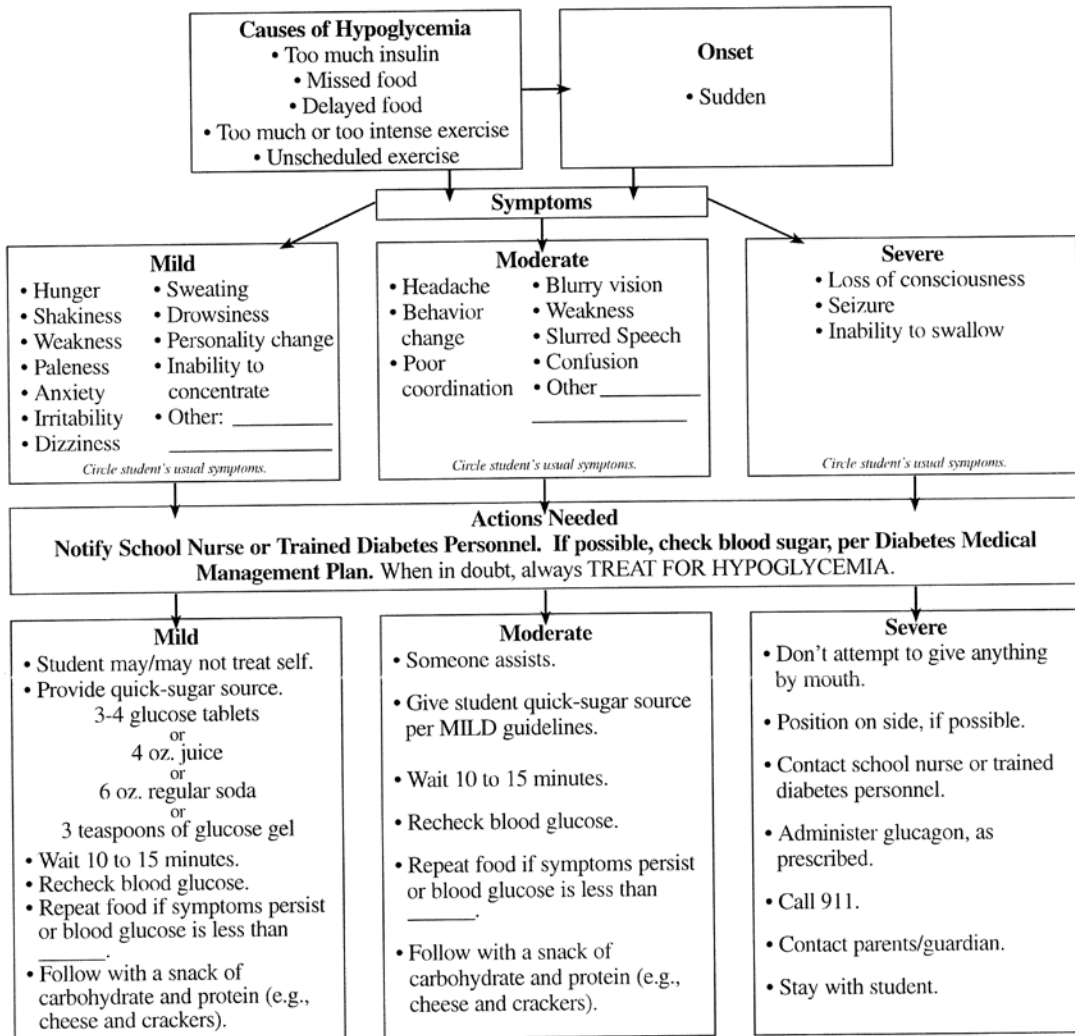
Quick Reference Emergency Plan

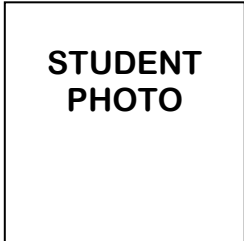
for a Student with Diabetes

Hypoglycemia (Low Blood Sugar)

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.





Quick Reference Emergency Plan

for a Student with Diabetes

**Hyperglycemia
(High Blood Sugar)**

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) _____

