



# MANAGEMENT OF STUDENTS WITH DIABETES MELLITUS IN SCHOOLS

## MARYLAND STATE SCHOOL HEALTH SERVICES GUIDELINE

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## MARYLAND SCHOOL HEALTH SERVICES GUIDELINE

### Foreword

There is a strong relationship between academic achievement and a child's physical, emotional and mental health. This link is the foundation for providing school health services as an important component of a school program. School health services provide primary prevention aimed at keeping students in schools through appropriate screenings, early identification of children at risk for physical, emotional and mental health concerns, and case management of students with chronic health concerns.

The Annotated Code of Maryland, Education Article, § 7-401 requires the Maryland State Department of Education (MSDE) and the Maryland Department of Health and Mental Hygiene (DHMH) to jointly develop public standards and guidelines for school health programs. The following guideline is developed in accordance with that requirement and is based on the expressed needs of the local school health services programs. These guidelines contain recommendations for minimum standards of care and current best practices for the health service topics addressed. It is intended that these guidelines will be used by the local school systems in developing local school health services policies and procedures as a means to assist local school health services programs in providing consistent and safe care to the students of Maryland. Specific laws and regulations that direct school nursing practice or other health services are identified in the guidelines.

The Maryland State School Health Council serves as an advisory council to both departments and as such, the council's School Health Services Subcommittee serves as the committee that develops and reviews these guidelines along with the specialists from MSDE and DHMH. School health services program supervisors/coordinators also review and participate in the guideline development process. To those dedicated school health services professionals and administrators, our thanks.

## MANAGEMENT OF STUDENTS WITH DIABETES MELLITUS IN SCHOOL

### Introduction

Students with diabetes attending school require a thorough assessment by a registered nurse of their health needs and specific plans that take into consideration special accommodations they may require in school. All students have the right to fully participate in educational activities. Any student with a chronic condition such as diabetes cannot be denied access to any school activity based on their needs related to the medical condition. This comprehensive guideline outlines considerations that must be addressed as the school nurse develops an individualized care plan for the student with diabetes in conjunction with the family, the primary care provider, and the diabetes care specialist.

When a student with diabetes enters school or a student is diagnosed with diabetes, the school nurse is the lead team member in assessing his/her health needs, performing a nursing appraisal/assessment, and developing a care plan to meet his/her needs in the school setting. The school nurse should refer to the *Maryland State School Health Services Guideline on Nursing Appraisal* for general guidance on conducting a nursing assessment and to Appendix A *Nursing Appraisal and Assessment of Student with Diabetes* for specific issues related to the student with diabetes. The school nurse is also responsible for informing appropriate school personnel of the special health needs of students with diabetes and providing guidance regarding their need for accommodations (i.e. blood glucose testing, transportation, field trips, and participation in educational activities). Additionally, the school nurse may provide health education to students with diabetes.

### Purpose

The purpose of this guideline is to provide school nurses with a protocol for the management and coordination of care of students with diabetes in schools in order to enable these students to attend school regularly and fully participate in educational programs.

### Definition

Diabetes is a chronic disorder of carbohydrate, fat, and protein metabolism characterized by hyperglycemia and glycosuria resulting from inadequate production or utilization of insulin. Symptoms of diabetes include excessive thirst, excessive urination, excessive hunger, weight loss and fatigue. The long-term consequences of chronic hyperglycemia include potential damage to eyes, kidneys, nerves, heart and blood vessels. The management of diabetes and the prevention of complications require a balance of insulin administration, food planning, and physical activity.

Types of diabetes include:

- ❑ Type 1 results from the body's failure to produce insulin. A person with Type 1 diabetes needs insulin daily to live.
- ❑ Type 2 diabetes results from the body's inability to use insulin adequately or insulin resistance. Type 2 diabetes is managed with diet, exercise, and medications.
- ❑ A third, less common type, gestational diabetes, is a temporary diabetic state that occurs during pregnancy and is managed with diet changes and insulin.

## **Roles and Responsibilities of the School Nurse – Delegation of Care and Treatment**

The Maryland Nurse Practice Act (Annotated Code of Maryland, Health Occupations Article, Title 8, COMAR, Title 10, Subtitle 27) allows certain nursing functions to be delegated. The decision as to whether the student's healthcare needs can be met by an unlicensed individual is made using the criteria for delegation outlined in the Maryland Nurse Practice Act and the registered nurse's (RN) professional judgment. The school nurse (RN) will determine the appropriate personnel/staff to whom responsibility for monitoring the blood glucose testing, administration of emergency glucagon, and any other treatments/medications may be delegated. The school nurse (RN) will also evaluate and determine whether a student is able to self administer medication or do blood glucose testing in the classroom. This determination is made based on the RNs professional assessment of **each individual case**, and with input from the authorized prescriber and the parent/guardian. In Maryland an authorized prescriber is a physician, nurse practitioner, certified midwife, podiatrist, physician's assistant or dentist, (Section12-101(b), Health Occupations, Annotated Code of Maryland).

In order for children to receive medication or have invasive medical procedures performed (e.g., blood glucose testing) in school, an order from an authorized prescriber must be in place. The school can only authorize medication administration and/or procedures based on the orders from a physician, not a parent.

Regardless of the service delivery model, the registered nurse is always the leader of the school health *nursing* team. The registered nurse, *the expert in nursing and health*, makes the decisions about how care is provided and who provides the care to the child in the school system.

## **Planning and Interventions for Students with Diabetes in School**

Optimal blood glucose control helps to promote normal growth and development and supports optimal learning. Blood glucose testing is the tool used to monitor the successful balance between food, exercise, and insulin or oral medication needed for optimal blood glucose control. Research has shown that maintaining blood glucose levels within the target range can prevent or delay the long-term complications of diabetes. The following areas are key elements to diabetes management.

### **❑ Meal Plans**

Individualized meal plans are developed based on nutritional needs, food choices, preferences and medication regimen. Carbohydrate counting is the most common method for meal planning. With some insulin regimens, it is important to eat the right amounts of food at the right times to balance with insulin. Insulin works even when the food is not eaten. The healthcare provider in conjunction with the student and family will develop an effective meal plan.

### **❑ Exercise and Physical Activity**

Exercise and physical activity are critical parts of diabetes management. Schools must offer students with diabetes full participation in physical education classes and team sports. Accommodations may be needed and the details of which provided in the

student's Individualized Health Plan (IHP).

Insulin

Insulin lowers the blood glucose levels and helps keep the blood glucose within a normal range. A calculated amount is given based on child's age, blood glucose levels, expected carbohydrate intake, weight, physical activity and expected insulin sensitivity. Doses are adjusted as determined by the healthcare provider. Delivery systems include:

- Syringe (with/without automatic injector aids)
- Insulin Pen
- Insulin Pump

Upon completion of the assessment, the school nurse shall develop a plan that addresses both routine and emergency care. The plan shall outline what will be done if the nurse is not available. Copies of these plans should be shared with the appropriate school staff on a need to know basis. Copies should be shared with the parents/guardians and physician according to local policy. Barriers or obstacles to participation and care in school should be identified and addressed in the care plan. It is important to remember that the goals for the student are safety and independence in controlling this lifelong chronic condition.

The following should be considered when developing healthcare plans for the student with diabetes:

- |  |  |
|--|--|
| <input type="checkbox"/> Developmental considerations                                    | <input type="checkbox"/> Emergency care  |
| <input type="checkbox"/> Parental concerns   | <input type="checkbox"/> Staff training  |
| <input type="checkbox"/> Student concerns and their understanding of diabetes management | <input type="checkbox"/> Educational planning  |
| <input type="checkbox"/> Equipment needed  | <input type="checkbox"/> Coordination with other team members including the parent, the healthcare provider, and diabetes care specialist  |
| <input type="checkbox"/> Psycho-social issues  | <input type="checkbox"/> Safety considerations   |
| <input type="checkbox"/> Classroom strategies and accommodations                         | <input type="checkbox"/> Disaster preparedness: Lockdown, Sheltering In-Place and Evacuation (refer to the <i>Maryland State School Health Services Guideline for Emergency Planning for School Nurses</i> ) |
| <input type="checkbox"/> Snacks  |  |
| <input type="checkbox"/> Blood glucose testing/ ketone testing                           |  |
| <input type="checkbox"/> Medication administration                                       |  |
| <input type="checkbox"/> Schedule – physical education, lunch, recess                    |  |

## Emergency Protocol/Plan

When a student is identified as having diabetes, the school nurse will develop an individualized emergency protocol/plan with parent and healthcare provider input. The following should be considered when developing emergency protocol/plan:

- The emergency protocol/plan addresses hypoglycemia and hyperglycemia, the healthcare providers' emergency orders and when to call 911.
- The student's individual symptoms for hypo and hyperglycemia.
- Hypoglycemia symptoms can progress to a serious medical emergency and should be handled immediately and in the classroom.
- Plans should include accommodations so that a student who is feeling "low" is never unaccompanied to the health suite/office.
- The student's ability to identify when he or she is "low".
- Hyperglycemia symptoms can progress to a serious medical emergency and requires action steps that should include careful monitoring and follow-up.
- Identify who has the daily responsibility for the management of the student's diabetes (unless the parent assumes this responsibility).
- Emergency kit for hypoglycemia:
  - Determine if student is capable to carry.
  - Contents should include quick acting sugar sources to treat hypoglycemia.
  - Determine where the kit is stored (consider multiple locations).
  - Label the kit with directions.
  - Include glucagon, as ordered.

### *Orders*

The healthcare provider will submit the statewide diabetes order form (Appendix B) to complete the child's diabetes orders for school. If this form is not used, it is recommended that the orders address all elements included on the statewide form. Parents/guardians are responsible for providing the completed order form to the school.

### *Equipment*

The school should provide the following:

- Sharps container
- Locked storage for syringes
- Safe storage of insulin
- Access to medication, testing equipment and snacks
- Sharps that meet Occupational Safety and Health Administration (OSHA) guideline citation, if the school staff is performing blood glucose sticks or insulin administration.

The parent is expected to provide supplies for ordered interventions at school:

- Insulin and syringes or insulin pen
- Blood glucose meter, test strips, lancets
- Urine ketone test strips
- Snacks

- Hypoglycemia emergency kit
- Glucagon
- Batteries for meter and pump if applicable
- Pump and pump supplies if appropriate
- Medical alert identification such as bracelets, necklaces, shoe tags, etc.

### ***Blood Glucose Monitoring***

Blood glucose monitoring may be ordered by the healthcare provider and/or diabetes care specialist before lunch, before exercise, before snacks and for symptoms. It is reasonable for blood glucose testing to be performed in the health suite, but requests for testing in the classroom may be made. The school nurse will consider requests for blood glucose testing in the classroom on a case by case basis by evaluating the following:

- Has the healthcare provider approved blood glucose monitoring in classroom, independently by student?
- Is the student able to perform the procedure safely - for him/herself and the protection of others?
- Is the student aware of blood spill clean up procedures?
- Will the equipment be safely stored?
- Will used lancets and waste materials be disposed of in the classroom?
- How does the student feel about performing the procedure in front of classmates?
- Can the procedure be done with minimum distraction to others?
- Has the classroom teacher been informed?
- If the results of the testing indicate the need for further attention from health staff, have plans been made for the student to be accompanied to health suite?
- Does the student correctly respond to the blood glucose result?
- Is there a need for a presentation on diabetes to the class?

### ***Administration of Insulin in School***

Should a student require insulin to be administered during school, many issues must be considered:

- Need for medication order including method of administration
- Proper storage of insulin and supplies (Once opened, vials of insulin should be dated and used within 30 days, stored away from direct light, extreme heat and freezing temperatures)
- Self administration, supervision, or assistance required
- Safe disposal of sharps
- Privacy for student
- Safety of the student and others
- Responsibility/maturity of the student
- Request by the healthcare provider that the student self-administer medication
- Documentation and monitoring of the self administration

Each case should be reviewed individually and with the cooperation of parents/guardian, administrators, healthcare provider, student and nurse. It is reasonable to require that insulin be administered in the health suite. Requests to administer insulin outside of the health suite should

be evaluated individually keeping in mind the safety of the student and others. Multi-dose insulin administration devices may present a hazard to other students should the device be illegally obtained and used by another student.

## **Daily Accommodations and Educational Planning**

### ***Unrestricted Use of Restroom***

Increased thirst and frequency of urination are often symptoms when a student with diabetes is experiencing a hyperglycemic reaction. Unrestricted use of the restroom should be allowed with as little disruption to the student's education as possible. Free and unrestricted access to sugar free liquids should be provided to prevent possible dehydration. The teacher should alert the school nurse to these symptoms because it may indicate a need to readjust the student's diabetes management plan.

### ***Snacks***

Some students with diabetes require **snacks** during the school day (i.e., a midmorning snack, mid-afternoon snack or when symptomatic). Snacks should be kept in strategic places, e.g., the health suite, classrooms and in special areas.

Arrangements for snacks should be made with the least disruption to the student's school day and can be eaten in the classroom. The family should provide snacks.

### ***Educational Planning***

The needs of the student with diabetes are met with a thorough nursing assessment and development of care plans; however, some students with diabetes require additional educational accommodations. If the student requires more specific educational accommodations, a 504 plan may be developed. If a student with diabetes qualifies for special education services, an Individual Education Plan (IEP) may include specific accommodations.

The school nurse is an integral part of the educational team and is vital in the planning of educational accommodations for the student with diabetes. Special issues that may need to be considered:

- Classroom accommodations for testing, including quizzes, exams, performance and assessment tests
- Accommodations because of a vocational assignment
- Schedules that can accommodate blood glucose monitoring, snacks and physical education classes
- Adaptive physical education
- Field trip/school sponsored activities
- Bus accommodations
- Minimizing instruction time or recess time missed because of nutritional and/or diabetes management accommodations
- Extra and co-curricular activities
- Methods/strategies for students to use in obtaining classwork missed due to time in the health suite for care of hyper/hypoglycemia



***Transportation:***

The healthcare plan should address transportation needs for the student with diabetes. In general, a student with well-managed diabetes should not require special transportation. Each student's needs should be evaluated individually. It is recommended that the school nurse provide consultation on any requests for special transportation for the student with diabetes.

***Field Trips/School Sponsored Activities:***

All students are afforded the right to fully participate in educational activities. No student is to be denied participation in a field trip because of the need for medication/treatment or requirement of additional assistance. The teacher should access local school system policy regarding field trips and school-sponsored activities and give sufficient notice to the school nurse so that a plan can be put into place for any student with special health needs such as diabetes and which may include a nurse accompanying a student. Prior to the field trip, the school nurse should make sure that the teacher/staff member in charge has copies of the care plan for the student.

Medications needed for diabetes should be administered to students during school-sponsored trips/activities when necessary or as ordered. Medications must be administered in compliance with the Maryland State School Health Services Guideline: *Administration of Medication in Schools*. The school nurse, in collaboration with the school administrator, parents, and healthcare provider determines what accommodations are needed during a field trip/school-sponsored activity.

***Coordination and Case Management***

Each school team member is responsible for implementation of the emergency protocols/plans. Responsibility of coordination with other team members would include:

- |                               |  |
|-------------------------------|--|
| <b>Administrators</b>         | Overall responsibility for the education and safety of the student   |
| <b>Bus Drivers</b>            | Responsibility for student on bus, communicates health problems or concerns to school official, school nurse, and parent   |
| <b>Food Services Staff</b>    | Assistance with dietary accommodations as necessary  |
| <b>Pupil Personnel Worker</b> | Assistance with transportation issues, home teaching and attendance issues   |
| <b>School Counselor</b>       | Disability awareness, assistance with support groups/counseling needs, and assistance with educational planning  |
| <b>School Nurse</b>           | Development of healthcare plan and coordination of the school-related management of the student with diabetes. The school nurse is the liaison between the healthcare provider, school staff, administration, pupil service staff, parents/guardian and student. The school nurse can also refer the student and/or family for counseling, support groups, and access to medical care. |

**School Psychologist**

Assistance with any behavioral strategies

**Teachers, including physical education teachers**

Responsibility for student in class, communication of health problems or concerns to school nurse, school official and parent

For students who participate in field trips and other school sponsored activities, the school nurse is a resource to evaluate and plan for student needs.

***Staff Training***

Training of appropriate staff should include:

- Definition of diabetes mellitus
- Classroom accommodations
- Bus accommodations
- Field trip/school sponsored activities
- Blood glucose monitoring
- Symptoms to report to the school nurse
- Confidentiality
- Understanding of their role in the implementation of the emergency protocol/plan
- Substitute plans (teacher, school health staff, transportation, and food services)
- Available resources

***Evaluation***

Evaluation is an ongoing process and should include the following:

- Orders reviewed with family and healthcare provider annually and as necessary
- Documentation of medications and treatments given
- Communication with the healthcare provider and family
- Need for staff training
- Classroom observation
- Effectiveness of the plan to meet the student's health and educational needs
- Assessment and documentation of student's response to the management plan

## GLOSSARY

**Blood Glucose Meter:** A device that measures how much glucose (sugar) is in the blood. Meters measure the blood glucose with a test strip on which a sample of blood, usually from the finger, has been applied.

**Co-curricular:** Those activities which take place outside the class, regardless of time, that are a requirement of the course, e.g., chorus or band. The student must participate in these activities in order to take the course.

**Glucagon:** A hormone that stimulates the release of stored glucose from the liver and is used to treat severe hypoglycemia (low blood glucose).

**Health Appraisal:** The process by which a designated school health services professional identifies health problems that may interfere with learning.

**Hyperglycemia:** A high blood glucose level that can result from a mismatch of insulin, food intake, stress, illness and exercise. Symptoms include increased thirst, frequent urination, increased hunger, fatigue, irritability and blurred vision.

**Hypoglycemia:** A low blood glucose level that can result from a mismatch of insulin, food intake and exercise. Symptoms include feeling shaky, weakness, sudden hunger, pallor (paleness), sweating, and headache and behavior changes. Severe hypoglycemia can lead to seizures and unconsciousness.

**Insulin Pump:** A device that delivers a continuous supply of insulin through an infusion set (plastic tubing) which is attached to the body and it is approximately the size of a cell phone. The goal is to achieve near normal blood glucose levels over 24 hours per day.

**Insulin Pen:** A pen-like device that is used to administer insulin.

**Ketones:** Chemicals that the body makes when there is not enough insulin in the blood and the body must break down fat. Ketones build up in the blood and then are excreted in urine.

**Nursing Assessment:** The act of gathering and identifying data about a client to assist the nurse, the student and the student's family in identifying the student's problems and needs.

## RESOURCES

### Resources

- ❑ **American Academy of Pediatrics (AAP):** [www.aap.org](http://www.aap.org). The AAP is a professional membership organization committed to the attainment of optimal physical, mental and social health and wellbeing for all infants, children, adolescents and young adults.
- ❑ **American Association of Diabetes Educators (AADE):** [www.aadenet.org](http://www.aadenet.org). The AADE is a multidisciplinary organization of health professionals who provide diabetes care and education. This website has diabetes links including information on diabetes in children and adolescents.
- ❑ **American Diabetes Association (ADA):** [www.diabetes.org](http://www.diabetes.org). The mission of ADA is to prevent and cure diabetes and to improve of the lives of people with diabetes. The ADA is a non-profit organization that provides diabetes research, information and advocacy. This association offers a number of programs for children and adolescents with diabetes. For school training information, please go to [www.diabetes.org/schooltraining](http://www.diabetes.org/schooltraining)
- ❑ **American School Health Association (ASHA):** [www.ashaweb.org](http://www.ashaweb.org). The mission of ASHA is to promote and improve the well-being of children and youth by supporting comprehensive school health programs. This association publishes a journal and a book about managing school-age children with chronic health conditions.
- ❑ **Centers for Disease Control and Prevention (CDC):** [www.cdc.gov](http://www.cdc.gov), [www.cdc.gov/diabetes](http://www.cdc.gov/diabetes), [www.cdc.gov/nccdphp/dash](http://www.cdc.gov/nccdphp/dash). The CDC serves as the national focus for developing and applying disease prevention and control, environmental health and health promotion and educational activities to improve the health of the people of the United States. The above websites are CDC divisions related to diabetes.
- ❑ **Children with Diabetes:** [www.childrenwithdiabetes.org](http://www.childrenwithdiabetes.org). This website serves as an online community for children, families and adults with diabetes. The website has helpful information about managing diabetes in the school setting; included are sample 504 plans and IEPs.
- ❑ **Diabetes Exercise and Sports Association:** [www.diabetes-exercise.org](http://www.diabetes-exercise.org). This nonprofit service organization is dedicated to enhancing the quality of life for people with diabetes through exercise.
- ❑ **Joslin Diabetes Center:** [www.joslin.harvard.edu](http://www.joslin.harvard.edu). The Joslin Diabetes Center and its affiliates offer comprehensive services for children and adults with diabetes, including educational programs to help children and their families to better manage the disease.
- ❑ **Juvenile Diabetes Research Foundation International (JDRF):** [www.jdrf.org](http://www.jdrf.org). The goal of this organization is to find a cure for diabetes and its complications through the support of research.

- ❑ **National Diabetes Education Program (NDEP):** [www.ndep.nih.gov](http://www.ndep.nih.gov). The NDEP is a federally sponsored program of NIH and CDC for diabetes prevention and improving diabetes treatment and outcomes for people with diabetes. It has published, *Helping the Student with Diabetes Succeed*.
- ❑ **Pediatric Adolescent Diabetes Research and Education Foundation (PADRE):** [www.padrefoundation.org](http://www.padrefoundation.org). This foundation was established to provide educational programs and clinical and scientific research of juvenile diabetes. PADRE sponsored the Pediatric Education for Diabetes in Schools (P.E.D.S.) program.
- ❑ **Starbright Foundation:** [www.starbright.org](http://www.starbright.org). The Starbright Foundation is a nonprofit organization dedicated to developing projects that help children and teens address the psychosocial challenges that accompany chronic diseases.
- ❑ **National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK):** <http://www.niddk.nih.gov/>
- ❑ *Helping the Student with Diabetes Succeed*, published by the U.S. Department of Health and Human Services and the National Diabetes Education Program, a joint program of the National Institutes of Health and the Centers for Disease Control and Prevention; [http://ndep.nih.gov/diabetes/pubs/Youth\\_SchoolGuide.pdf](http://ndep.nih.gov/diabetes/pubs/Youth_SchoolGuide.pdf)
- ❑ **Pediatric Education For Diabetes in Schools** (National Version), developed by the PADRE foundation in collaboration with NASN; [www.pedsonline.org](http://www.pedsonline.org)

## APPENDIX A: THE NURSING APPRAISAL/ASSESSMENT FOR A STUDENT WITH DIABETES

### Data Collection

It is essential that the school nurse be well informed on all aspects of medical, educational, and psychosocial issues regarding students with diabetes. The school nurse will collect information from a review of medical and educational records (i.e., the school health record, the Student Record Card, emergency health card, and the student cumulative education record). Additional information should be obtained from:

- Parent interviews and/or home visits
- Student interview
- Physician/healthcare provider
- Diabetes educator working with family
- Teaching staff
- Classroom observations

### Assessment

The school nurse should assess the student with diabetes using standard appraisal procedures developed by the jurisdiction and the procedures outlined in the *Maryland State School Health Services Guideline: Nursing Appraisal/Assessment of Students with Special Health Needs*. The school nurse should be cognizant of policies regarding record releases, information sharing, and confidentiality. Assessment of the student with diabetes should include but not be limited to the following:

#### *Nursing Appraisal/Assessment Outline for Students with Diabetes*

##### 1. Identifying Information/Contact Information:

- Name of parents/guardian, address, phone number and emergency contacts
- Name of primary care provider and phone number
- Name of diabetes care provider and phone number

##### 2. Personal Health History/Diabetes History:

- Current diagnosed medical conditions
- Family history of diabetes
- Initial diagnosis, onset date, progress of disease, honeymoon phase
- History of diabetes emergencies, hospitalizations, emergency room visits, previous glucagon use
- Latest hemoglobin A1C
- Current patterns of blood glucose levels
- Number of days absent in the past year
- Limitation of activities
- Frequency of hypo or hyper-glycemic reactions
- Student awareness of symptoms of hypo and hyper-glycemic reactions
- Other health concerns, including but not limited to, vision, neuropathy, nephropathy
- Medications in addition to insulin

### 3. School Diabetes Management

- ❑ Insulin regimen:
  - Type(s) of insulin, frequency given
  - Method of administration
  - How dose is determined
  - Will insulin be administered at school?
  - Self administered by student; amount of supervision required
- ❑ Blood glucose testing:
  - Frequency, reasons for
  - Equipment used
  - Target range of blood glucose levels
  - Level of independence
- ❑ Ketone testing
  - Frequency, reasons for
  - Type of ketone test strips used
  - Level of independence
- ❑ Nutritional requirements:
  - Meal plan, how determined, carbohydrate counting
  - Schedule of meals and snacks
  - Will student bring lunch or purchase at school?
  - Recommended snacks, where will snacks be eaten
  - Student's level of understanding and independence
  - Whether student qualifies for free/reduced price meals
- ❑ Hypoglycemia, how treated at home
- ❑ Hyperglycemia, how treated at home
- ❑ Questions pertinent for students on an insulin pump:
  - What type of insulin pump
  - How long on pump therapy
  - Is the student independent in the following areas:
 

-Counting carbohydrates	-Reconnecting pump at infusion set
-Calculating an insulin dose	-Preparing infusion set for insertion
-Bolusing an insulin dose	-Inserting infusion set
-Resetting basal rate profiles	-Troubleshooting alarms and malfunctions
-Setting a temporary basal rate	-Giving self-injection if needed
-Disconnecting pump	-Changing batteries

### 4. Educational information/considerations:

- ❑ School performance, grade level
- ❑ Need for or existence of 504 plan, IEP
- ❑ Participation in special programs, e.g., vocational program, work-study program, dropout prevention program, alternative education program, infant and toddler program, early childhood intervention, etc.
- ❑ Field trips/school sponsored activities
- ❑ Transportation needs (bus rider, length of ride; walker, length of walk; does the student carry emergency supplies)
- ❑ Location of emergency supplies

**5. Psycho-social considerations:**

- Family status, support available
- Family stresses
- Ability of student and family to cope with disease
- Student's and family understanding of the condition
- History of diabetes education
- Developmental issues
- Disability awareness needed in classroom
- Involved in disease related support groups
- Any issues related to access to healthcare and diabetes supplies? Health insurance needs and other additional resources
- Cultural issues

**Healthcare Plan**

Upon completion of the assessment, the school nurse shall develop a plan that addresses routine and emergency care. The plan will address what will be done if the nurse is not present. Copies should be shared with the parents/guardians and physician. Copies of these plans should be shared with the appropriate school staff on a need to know basis. Barriers or obstacles to participation and care in school should be identified and addressed in the care plan.

Original date of issue: 1992; Revised 2000, 2006



# Maryland State Management of Diabetes at School/Order Form

This order is valid only for the Current School Year: \_\_\_\_\_ (including summer session)

<b>Student:</b> _____	<b>DOB:</b> _____
<b>School:</b> _____	<b>Grade:</b> _____

**CONTACT INFORMATION**

Parent/Guardian: \_\_\_\_\_ Home Phone: \_\_\_\_\_ Work: \_\_\_\_\_ Cell/pager: \_\_\_\_\_

Parent/Guardian: \_\_\_\_\_ Home Phone: \_\_\_\_\_ Work: \_\_\_\_\_ Cell/pager: \_\_\_\_\_

Other Emergency Contact: \_\_\_\_\_

**Insulin Orders (complete only if insulin is needed at school):**

1. Insulin administration via:

Syringe and vial     Insulin pen     Insulin pump     Other \_\_\_\_\_

Insulin pump                      Type of pump: \_\_\_\_\_                      Basal rates: \_\_\_\_\_

2. Insulin Before Lunch/Meals:                      Name of Insulin: \_\_\_\_\_

Routine lunchtime dose: \_\_\_\_\_

Per sliding scale as follows:

Meals

Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units
Blood Glucose _____	to _____	give _____	units

Calculated insulin dose (add carbohydrate coverage and correction dose for total insulin dose):

Carbohydrate Coverage: Insulin to carbohydrate ratio

Give \_\_\_\_\_ # unit(s) insulin per \_\_\_\_\_ gms carbohydrate.

Correction:

Give \_\_\_\_\_ # unit(s) insulin per \_\_\_\_\_ mg/dl of glucose **above** \_\_\_\_\_ mg/dl

Subtract \_\_\_\_\_ # units for every \_\_\_\_\_ mg/dl of glucose **below** \_\_\_\_\_ mg/dl

Insulin may be given after lunch if \_\_\_\_\_

3. Other times insulin may be given:

<input type="checkbox"/> Snack:      Dose: _____	<input type="checkbox"/> Calculated as above.	<input type="checkbox"/> Snack:      Blood Glucose _____	Give: _____
<input type="checkbox"/> Ketones:      If ketones are _____	Give/Add: _____ unit(s)	_____	units
If ketones are _____	Give/Add: _____ unit(s)	_____	units
		_____	units

**Health Care Provider Authorization for Management of Diabetes in School**

My signature below provides authorization for the above written orders. This authorization is for a maximum of one school year. If changes are indicated, I will provide new written authorization, which may be faxed.

**Health Care Provider Name:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ (original or stamped signature) **\*Sign both sides.**

**Address:** \_\_\_\_\_ **City:** \_\_\_\_\_ **Zip:** \_\_\_\_\_

**Phone:** \_\_\_\_\_ **Fax:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Use for Prescriber's Address Stamp

**Parent Consent for Management of Diabetes at School**

I (We) request designated school personnel to administer the medication and treatment orders as prescribed above. I agree

1. To provide the necessary supplies and equipment
2. To notify the school nurse if there is a change in the student's diabetes management or health care provider.

I authorize the school nurse to communicate with the health care provider as necessary.

Parent/Guardian Signature \_\_\_\_\_ Date \_\_\_\_\_ **\*Sign both sides.**

\_\_\_\_\_ Date \_\_\_\_\_

Order reviewed and signed by School Nurse (per local policy): \_\_\_\_\_ Date: \_\_\_\_\_

**Maryland State Management of Diabetes at School/Order Form**

**Student:** \_\_\_\_\_

**Blood Glucose Monitoring:**

**Target range for blood glucose monitoring at school:** \_\_\_\_\_

- Before snacks                       2 hours or \_\_\_\_\_ hours after lunch
- Before meals                          2 hours or \_\_\_\_\_ hours after a correction dose
- As needed for symptoms of hypo/hyperglycemia
- With signs and symptoms of illness
- Other times: \_\_\_\_\_

**Hypoglycemia – blood glucose less than \_\_\_\_\_**

- Self treatment for mild lows.
- Give \_\_\_\_\_ grams of fast-acting carbohydrate according to care plan. Recheck BG in 10-15 mins. Repeat treatment if BG less than \_\_\_\_\_ mg/dl
- Provide extra protein & carbohydrate snack after treating low if next meal/snack greater than \_\_\_\_\_ minutes away
- Suspend pump for severe hypoglycemia for \_\_\_\_\_ mins.

**If student is unconscious, having a seizure or unable to swallow, presume student is having a low blood sugar and:**

**Call 911, notify parent**

- Glucagon injection (1 mg in 1 cc) \_\_\_\_\_ mg, subcutaneously or intramuscular (IM)**
- OK to use glucose gel inside cheek, even if unconscious, seizing.**
- Other:** \_\_\_\_\_

**Hyperglycemia – blood glucose greater than \_\_\_\_\_**

- Check urine ketones, follow care plan, administer insulin as per orders.                       For pumps, insulin may be given by syringe or pen if needed.
  - Encourage sugar free fluids, at least \_\_\_\_\_ ounces per \_\_\_\_\_.
  - If student complains of nausea, vomiting or abdominal pain; check urine ketones & check insulin administration orders.
  - Other: \_\_\_\_\_
- \* Transport to local Emergency Room may be needed with vomiting and large ketones.

**Meal Plan**

- AM snack, time: \_\_\_\_\_                       PM snack time: \_\_\_\_\_                       Avoid snack if blood glucose greater than \_\_\_\_\_ mg/dl.
- Lunch: \_\_\_\_\_
- Extra food allowed;    Parent's discretion;    Student's discretion

**Exercise (check and/or complete all that apply)**

Fast-acting carbohydrate source must be available before, during and after all exercise.

- With student     With teacher
- If most recent blood glucose is less than \_\_\_\_\_, exercise can occur when blood glucose is corrected and above \_\_\_\_\_.
- Eat \_\_\_\_\_ grams of carbohydrate                       Before                       Every 30 mins during                       After vigorous exercise
- Avoid exercise when blood glucose is greater than \_\_\_\_\_ or ketones are \_\_\_\_\_

**Bus Transportation**

- Blood glucose monitoring not required prior to boarding bus
- Check blood glucose 15 minutes prior to boarding bus
- Allow student to eat on bus if having symptoms of low blood glucose
- Provide care as follows: \_\_\_\_\_

**Health Care Provider Assessment**

Student can self-perform the following procedures (school nurse and parent must verify competency):

- Blood glucose monitoring                       Measuring insulin                       Injecting insulin                       Determining insulin dose
- Independently operating insulin pump
- Other: \_\_\_\_\_

**Disaster Plan (if needed for lockdown, 24 hr shelter in place):**

- Follow insulin orders as on Management Form
- Additional insulin orders as follows: \_\_\_\_\_
- Administer long acting insulin as follows: \_\_\_\_\_
- Other: \_\_\_\_\_

**Other instructions:**

\_\_\_\_\_

Health Care Providers Signature: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_

Parent's Signature: \_\_\_\_\_ Phone: \_\_\_\_\_ Date: \_\_\_\_\_

Order reviewed by School Nurse (per local policy): \_\_\_\_\_ Date: \_\_\_\_\_

## Maryland State Supplemental Form for Students with Insulin Pumps

This order is valid only for the Current School Year: \_\_\_\_\_ (including summer session)

<b>Student:</b> _____	<b>DOB:</b> _____
<b>School:</b> _____	<b>Grade:</b> _____

### CONTACT INFORMATION:

Parent/Guardian: \_\_\_\_\_ Home Phone: \_\_\_\_\_ Work: \_\_\_\_\_ Cell/pager: \_\_\_\_\_  
 Parent/Guardian: \_\_\_\_\_ Home Phone: \_\_\_\_\_ Work: \_\_\_\_\_ Cell/pager: \_\_\_\_\_  
 Pump Resource Person: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Other Emergency Contact: \_\_\_\_\_

### Pump Management

Type of pump: \_\_\_\_\_ Start Date for Pump Therapy: \_\_\_\_\_  
 Type of Insulin in pump: \_\_\_\_\_

Basal rates: \_\_\_\_\_ 12am to \_\_\_\_\_ Comment: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Insulin/carbohydrate ratio: \_\_\_\_\_ Check Management of Diabetes at School Order or correction factor  
 Hyperglycemia: \_\_\_\_\_  
 \_\_\_\_\_ Pump site should be changed if BG greater than \_\_\_\_\_ times \_\_\_\_\_  
 \_\_\_\_\_ Insulin should be given by syringe or pen if needed \_\_\_\_\_

### Management Skills of Student

- As verified by school nurse, health care provider and parent Independent?

Count carbohydrates	__ yes	__ no
Calculate an insulin dose	__ yes	__ no
Bolus an insulin dose	__ yes	__ no
Reset basal rate profiles	__ yes	__ no
Set a temporary basal rate	__ yes	__ no
Disconnect pump	__ yes	__ no
Reconnect pump at infusion set	__ yes	__ no
Prepare infusion set for insertion	__ yes	__ no
Insert infusion set	__ yes	__ no
Troubleshoot alarms and malfunctions	__ yes	__ no
Give self injection if needed	__ yes	__ no
Change batteries	__ yes	__ no

Student is non independent Child Lock On? Yes No

### Pump Supplies

Extra supplies needed include: Infusion sets, reservoir/cartridges, insertion device, insulin vial & syringes, batteries  
 Location of supplies: \_\_\_\_\_

### Disaster Plan (If needed for lockdown, etc):

- Follow Insulin orders as on Management Form
- Insulin doses as follows: \_\_\_\_\_

Other: \_\_\_\_\_

**Health Care Providers Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Parent's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Order reviewed by School Nurse (per local policy):** \_\_\_\_\_ **Date:** \_\_\_\_\_