Diabetes Care Tasks at School:
What Key Personnel Need To Know

PSYCHOSOCIAL ASPECTS

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THRIVING WITH DIABETES

- Students with diabetes can do anything any other student can do
- Students with diabetes are not fragile or sick
- Do not let the fact that the student has diabetes influence your style when interacting with them
    - Remain consistent. Rules are still rules. Expectations are still expectations.
- Strategies to help promote overall development and well-being may vary depending on the student's age

ELEMENTARY SCHOOL

- Telling others about diabetes
- Feeling different
- Diabetes is unfair
- Handling questions from others
- “Food police”
- Readiness for management
- Building confidence and problem-solving skills

MIDDLE SCHOOL / HIGH SCHOOL

- Telling others about diabetes
- Support from others
  - Friends, peers, online community
- Feeling different
- Diabetes is unfair
- Handling questions from others
- "Food police"
- Puberty
- Readiness for management
- Building confidence and problem-solving skills
- Planning for tests

TIPS

- Talk about normal, regular, every day things before talking about diabetes
- Pay attention to your tone of voice when you discuss diabetes-related topics to make sure it's not different
- Blood glucose are not "good" or "bad" – merely information to determine the student's needs
- Praise your students for completing diabetes tasks
    - It's not easy or fun – the more you praise and reinforce positive diabetes care habits, the better they will do

As a teacher, you can help by:

- *Supporting self-care by capable students*
- *Providing easy-access to diabetes supplies*
- *Ensuring students eat snacks at a scheduled time and make sure snacks are available to treat low blood sugar*
- *Allowing students reasonable time to make up missed homework or tests*
- *Learning about diabetes and complying with the individual student's 504 and health care plans*

“Make The Right Choice The Easy Choice”

Eliminate barriers to diabetes management:

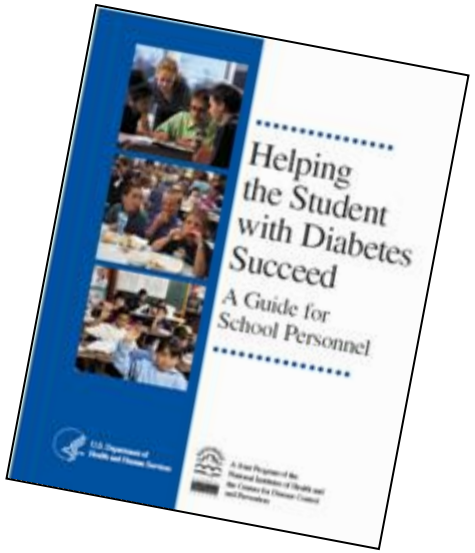
- Become familiar with and follow students’ written plans
- Eliminate barriers to:
  - *Snacking*
  - *Blood glucose checks*
  - *Access to water and bathrooms*
  - *Insulin administration*
- Avoid “good or bad” judgments based on individual blood glucose readings
- Communicate with parent/guardian and school nurse

Other Classroom Tips:

- *Keep a contact sheet of trained diabetes staff at your desk for emergencies*
- *Create a diabetes info sheet for substitute teachers*
- *Learn signs and responses to low/high blood sugar levels*
- *Allow blood glucose monitoring and free access to bathrooms/water during class*
- *Teach your class about diabetes*
- *Let parents know, in advance, changes to the class schedule (field trips, special events, etc.)*

For More Information:

- *Visit www.diabetes.org/schools*
- *Visit www.diabetes.org/safeatschool*
- *Download the following free tools:*
  - *NDEP's Helping the Student with Diabetes Succeed: A Guide for School Personnel*
  - *ADA's Diabetes Care Tasks at School: What Key Personnel Need to Know*
- *Visit www.diabetes.org/schoolwalk for free lesson plans about diabetes*



School Staff Support + Diabetes Knowledge = Student Success

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INSULIN BY PUMP

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WHAT IS AN INSULIN PUMP

- Battery operated device about the size of a pager
- Reservoir filled with insulin
- Insulin is delivered by tubing or from a “patch”
- Worn 24 hours per day
- Delivers only rapid-acting insulin
- Can be removed by simply pulling off like a band-aid

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INSULIN PUMP THERAPY

- Based on what the body does naturally
  - *Small amounts of insulin all the time (basal insulin)*
  - *Extra doses to cover each meal or snack (bolus insulin)*
- Precision, micro-drop insulin delivery
- Flexibility
- Ease of correction for high blood glucose levels

WHAT PUMPS DO

"Bells and Whistles"

- Most pumps will calculate bolus dosages
- Some pumps communicate with blood glucose meters and/or continuous glucose monitors
- Tracking active insulin
- Temporary basal rates

Limitations:

- Pumps rely on accurate input from humans to calculate dosing; the user can override pump-calculated doses

ARTIFICIAL PANCREAS SYSTEMS

More advanced hybrid closed loop systems self-adjust insulin delivery based on sensor data

- The Medtronic 670G System (a pump + a sensor) partially automates insulin delivery to help students stay in a target glucose range
- Can be used in Auto-Mode (hybrid closed loop) or Manual-Mode (basic pump and sensor therapy without automated delivery)
- Blood glucose testing with a meter is still required by student for treatment decisions, per DMMP
- Important to address alerts
  - "enter BG"
  - calibration requests
- Students must bolus before meals/snacks to stay in Auto-Mode
- If insulin is given by injection for ketones, Auto-Mode should be disabled
- Students who cannot self-manage independently will require assistance

WHAT KEY PERSONNEL NEED TO KNOW ABOUT AN INSULIN PUMP

- How to deliver routine boluses for carbs and high blood glucose

- Signs/symptoms that pump site may need to be changed
- When an injection by pen or syringe is indicated

- How to disconnect or "suspend" the pump
  - In the event the student becomes unconscious or seizes *or*
  - If instructed by the parent/guardian or diabetes care provider, e.g. during P.E.

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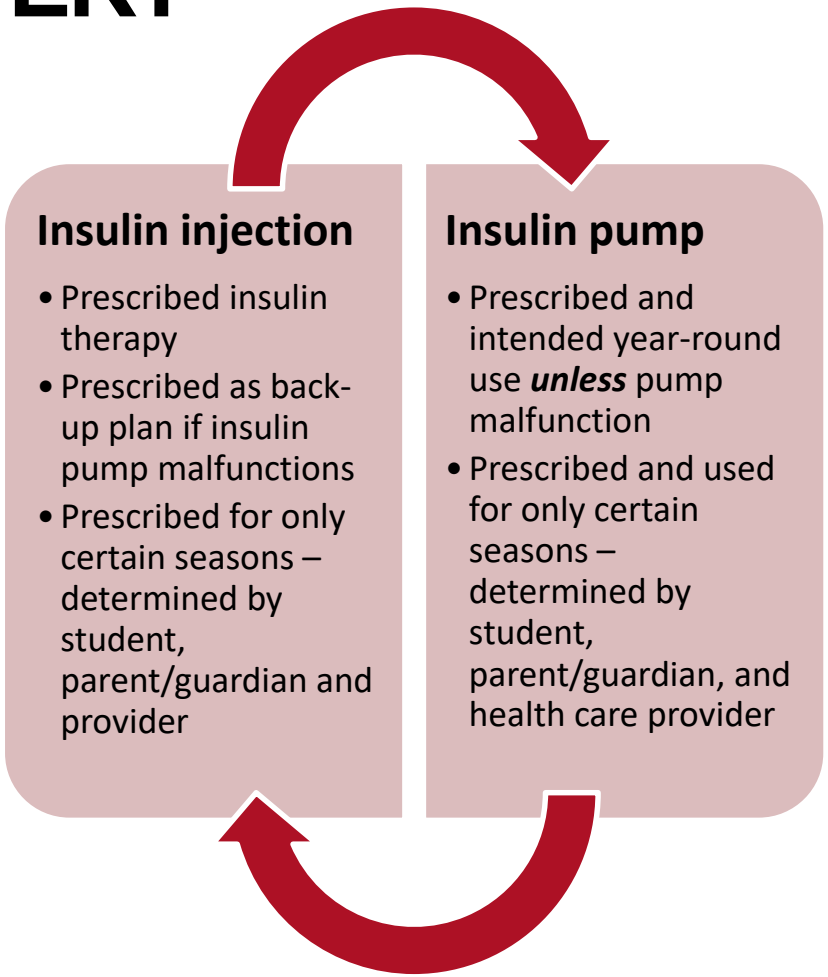
METHOD OF DELIVERY

- In cases of pump or site malfunction, **always** notify the parent/guardian
  - Immediate site change is recommended if a pump site error occurs. For delayed or pump malfunctions, one common response is to provide correctional insulin with injection to reduce risk for hyperglycemia and DKA



PUMP SUPPLIES AT SCHOOL

Infusion set *and* reservoir (or pod)	Insulin	Skin prep items	Alcohol wipes
Syringe (in case of pump malfunction)	Pump batteries (or charger -if used)	Inserter (if used)	Manufacturers manual, alarm card

In cases where the pump is disconnected (for example in PE) is should be placed in a secure place as designated in the student's written plan. In cases of pump or site malfunction, always notify the parent/guardian and back-up plan, per DMMP.

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CONTINUOUS GLUCOSE MONITOR TECHNOLOGY

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WHAT IS CGM?

CGM have three parts: A sensor, transmitter, and receiver:

- A tiny glucose-sensing device called a "**sensor**" is inserted just under the skin and remains for 7-10 days
- A transmitter is attached to the sensor and sends the information to a receiver
- The receiver can be a manufacturer-issued display device, smart device or insulin pump
- The system automatically records a glucose value every 1-5 minutes
- Some CGM provide alarms to signal when glucose is out of target range

WHY IS CGM USED?

- Can uncover undetected hypoglycemia and other glucose trends
- Provide direction and rate of change of glucose
- Can provide alerts if glucose is traveling outside target range
- Can contribute to improved glucose control
- Ongoing and frequent use is recommended to maximize benefits
- Can reduce the number of fingersticks

CGM ALARMS

- CGM settings are prescribed by the health care provider with input from the student and parents/guardians
- Some CGM are capable of sharing data real-time with caregiver(s) remotely
  - Data sharing while in school should be specified in the student's 504 Plan
- Hypoglycemia is an acute risk and is usually set as an audible alarm
  - Other alarms are usually used conservatively to avoid unnecessary disruption of the student’s school activities

CGM ALARMS AND HOW TO RESPOND

- If the CGM alarms for a low or high glucose, follow the instructions in the student's DMMP to determine treatment
  - CGM data should **not** be used to make treatment decisions unless specifically stated otherwise in the DMMP
- Students identified as capable of managing diabetes independently may choose to respond to alarms and provide treatment without assistance
- Students who cannot self-manage independently will require help responding appropriately to CGM alarms
- All students, regardless of level of independence, may require assistance when they experience severe hypoglycemia

USE BLOOD GLUCOSE OR CGM?

- Some CGM are indicated for treatment decisions – ***but not all***
  - Dexcom G5 and Dexcom G6 are indicated for treatment decisions and FDA approved for those 2 years and older
- Blood glucose levels should be monitored with a blood glucose meter in accordance with the student's DMMP
- **A child who uses a CGM may REQUIRE a cell phone for signals to be delivered**

SAMPLING OF CGM

CGM SUPPLIES AT SCHOOL

- Receiver (Cell Phone)
- Transmitter
- Sensors
- Alcohol Wipes
- Skin prep wipes (if used)
- Inserter (if used)
- Manufacturers manual, alarm card

In cases where the sensor/transmitter falls off (for example in PE) it should be placed in a secure place as designated in the student's written plan. No part of the CGM should be discarded. Sensor placement requires training and is routinely done at home; as such, back-up CGM supplies may not be necessary at school (unless the student manages independently, per DMMP).

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DIABETES MEDICAL MANAGEMENT PLAN (DMMP)

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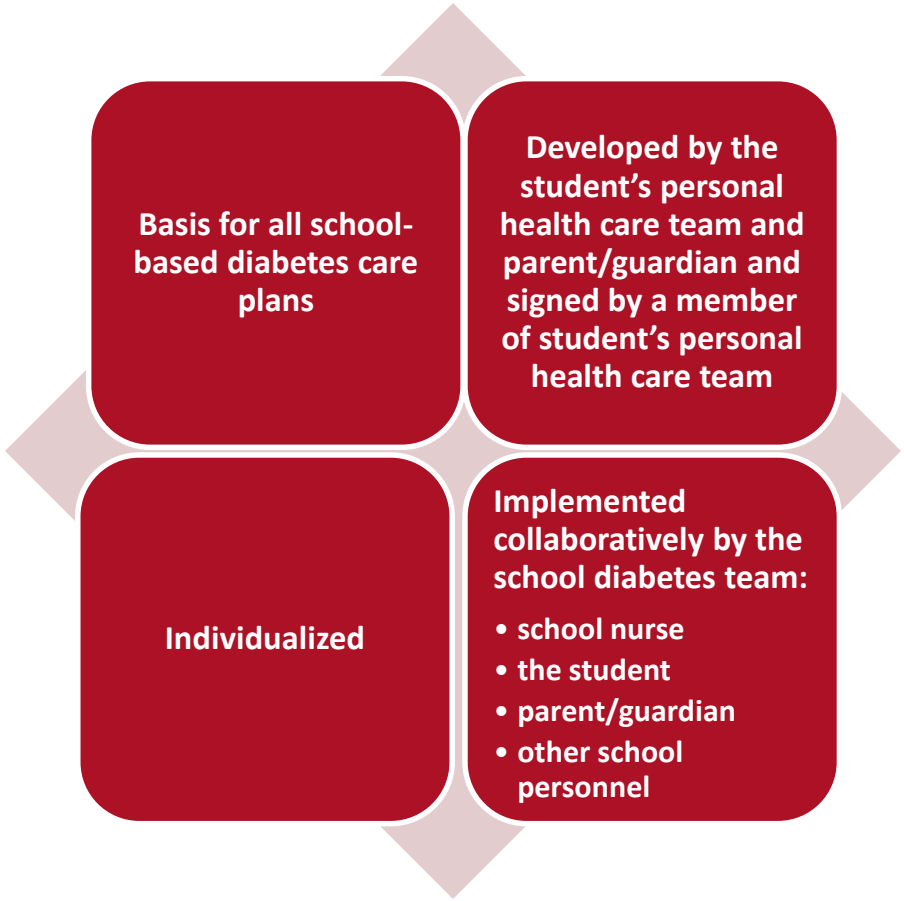
DIABETES MEDICAL MANAGEMENT PLAN (DMMP)



DMMP INFORMATION

- Emergency contact information
- Level of self-care
- Blood glucose monitoring
- Insulin/medication administration
- Glucagon administration
- Meal and snack schedule
- Physical activity and sports
- Recognition and treatment of hypoglycemia and hyperglycemia

NEEDS ADDRESSED BY 504 PLAN/IEP

- Location and timing of blood glucose monitoring and insulin administration
- Identity of trained diabetes personnel
- Location of diabetes supplies
- Free access to water and restroom
- Nutritional needs, meals and snacks
- Full participation in all school-sponsored activities
- Access to blood glucose checks and treatment supplies during exams
- Alternative times for academic exams if student is experiencing hypoglycemia or hyperglycemia
- Absences without penalty for doctors' appointments and diabetes-related illness
- Maintenance of confidentiality and student's right to privacy


Calvin and Hobbes
BLAHHHHHHHH
MMF RRG
MMF!
BU-URRP!
BOOT
WHUMP