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

CONTINUOUS GLUCOSE MONITOR TECHNOLOGY
GOAL: OPTIMAL STUDENT HEALTH AND LEARNING

Glucose monitoring is a vital piece of a comprehensive management plan.
What is continuous glucose monitoring (CGM)  Why is CGM used  When and how to use CGM information

Participants will be able to understand:
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?

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<th>Benefit</th>
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<td>Can uncover undetected hypoglycemia and other glucose trends</td>
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<td>Provide direction and rate of change of glucose</td>
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<td>Can provide alerts if glucose is traveling outside target range</td>
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<td>Can contribute to improved glucose control</td>
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<td>Ongoing and frequent use is recommended to maximize benefits</td>
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<td>Can reduce the number of fingersticks</td>
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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
CRITERIA FOR USING CGM FOR TREATMENT DECISIONS

• Specific guidelines for CGM use should be outlined in the student’s DMMP

• Based on FDA guidelines, criteria for the Dexcom include:
  • The receiver or mobile app must display both a glucose value AND a trend arrow
  • The student is not taking correction insulin doses too close together (“stacking”)
  • The student is not having symptoms that do not match the Dexcom data
  • Note: the older Dexcom G5 requires above criteria but also the following to be used for treatment decisions
    • The CGM must be calibrated using blood glucose, per manufacturer’s instructions – usually done at home
    • The student has not taken acetaminophen
CGM AND TREATMENT DECISIONS AT SCHOOL

• Specific guidelines should be outlined in the student’s DMMP; if not, use blood glucose for all treatment decisions

These are general guidelines, follow DMMP for each student:

Greetings

Meals

• CGM values may be used to make treatment decisions if the conditions on the previous slide have been met and the student’s DMMP states the student can use the device to make treatment decisions

Hypoglycemia (lows)

• If the student feels low or if the CGM displays < 80, then check blood glucose with a meter and treat according to meter value, per DMMP
• If the CGM displays low, but the student is not symptomatic, then check blood glucose and treat according to meter value, per DMMP

Hyperglycemia (highs)

• CGM values may be used to make treatment decisions if the conditions on the previous slide have been met and the student’s DMMP states the student can use the device to make treatment decisions
SAMPLING OF CGM
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).
Module 5 Pre – and Post – Tests: CONTINUOUS GLUCOSE MONITOR TECHNOLOGY

This tool may be freely duplicated and distributed for training purposes
1. **Which CGM alarm is set at an audible level?**
   a. Insulin ran out
   b. Hyperglycemia (high blood glucose)
   c. Hypoglycemia (low blood glucose)
   d. CGM alarms should always be on the vibrate mode

2. **All CGMs are indicated for treatment decisions.**
   a. True
   b. False

3. **Which item below is NOT part of CGM equipment?**
   a. receiver
   b. Lancet
   c. Transmitter
   d. sensors
WHERE TO GET MORE INFORMATION

American Diabetes Association
1-800- DIABETES
www.diabetes.org/safeatschool