American Diabetes Association®

YOUR RIGHTS. ONE VOICE.

Guidelines for the use of Continuous Glucose Monitors (CGM) and Sensors in the School Setting

The purpose of this guidance document is to provide general information about CGM use in the school setting. Specific questions unique to individual students should be directed to the student's Diabetes Care Team. This document will be updated as new devices are approved by the US Food and Drug Administration (FDA), so we encourage you to check back frequently.

The use of continuous glucose monitors and glucose sensors by students with Type 1 diabetes (T1D) has increased dramatically over the past three years. According to data from a large T1D clinic registry, approximately 50% of children with T1D under the age of 18 have adopted this technology, and we expect these numbers to rise as the technology becomes less expensive, easier to use, and further reduces disease burden.[1]

CGM provide valuable information about glucose levels for the student, caregivers, school nurse, and diabetes care team. CGM update glucose data every 5 minutes, providing 288 readings per day. In addition, CGM have trend arrows, that in combination with the current glucose level, allow the student to know what the current glucose level is, where it is going, and how fast it is changing. A summary of benefits:

1. Immediate access to **real time glucose levels**, along with personalized alerts to prompt an immediate response when the student's glucose level is above or below the prescribed target
2. **Trend arrows** that predict a rise or fall in student's glucose, and the speed it is rising or falling. Newer devices can predict hypoglycemia and provide alerts to avert it.
3. **Insight into cause and effect,** and the ability to see how different foods, activities, stress, and other factors may affect glucose levels
4. **Retrospective data review,** in which patterns can be identified to inform changes to the insulin regimen or behavior (e.g., indication for before meal versus post meal insulin dosing)

Current CGM/Sensors used in the school setting:

Dexcom G4 Continuous Glucose Monitor
Dexcom G5 Continuous Glucose Monitor
Dexcom G6 Continuous Glucose Monitor
Abbott Libre Flash Glucose Monitoring System
Medtronic Guardian Connect
Medtronic Guardian III or Enlite (only used in conjunction with the Medtronic 670G insulin pump)

Please note that some devices have been approved by the FDA for non-adjunctive insulin dosing ("treatment decisions"), while others have not. In addition, some devices do not require calibration with a blood glucose meter, while others do. Given the growing diversity of available CGM and glucose sensors, the primary takeaway from this guidance should be that the student's Diabetes Medical

Management Plan (DMMP) must ALWAYS be consulted before using CGM or Sensor data to make treatment decisions. Even if a student is using a device approved by the FDA for treatment decisions, they may not have permission from the prescriber to do so. Since the prescribing doctor, nurse practitioner, or PA assumes responsibility for confirming the student's readiness to use a particular device to make treatment decisions in the school setting, this must be confirmed in the DMMP or updated school orders.

Additional Considerations:

Data Sharing. Students who use the Dexcom G5 or G6 CGMs have the option to pair their smartphone with the CGM, and receive glucose data on their phone via bluetooth. In addition to convenience, this gives the student the ability to share real time data with up to 5 followers, who might include the school nurse and parents/guardians. The student's CGM data is shared via app using a wireless network or cellular data. The utility of data sharing and remote monitoring varies by the student's age. In school age students, data sharing can improve coordination of care among the student, parents, school staff, and before- and after-school caregivers. In adolescents, remote monitoring by parents may be perceived as intrusive. Students using the data sharing feature of the CGM devices may request access to the school's wireless network to enable this feature and to avoid costly cell phone data charges.

Hypoglycemia (low blood glucose). The DMMP will specify CGM alert levels for each student. Depending on the device, hypoglycemia detected by the CGM may need to be confirmed by meter. Consult the student's DMMP for instructions. For all CGM users, if the student exhibits symptoms of hypoglycemia, and a meter is not readily available for confirmation, the priority should be to treat the low glucose level per the DMMP. Note that all CGM require use of a blood glucose reading when both a number AND an arrow are not present. Thus, if the student's CGM receiver reads "LOW" instead of displaying a number, a blood glucose should be obtained using a meter.

Use of Trend Arrows. The use of trend arrows and other advanced CGM features like predictive low glucose alerts should be clearly enumerated in the DMMP.

Other concerns. If the CGM falls off at school, the school nurse should help the student place all pieces into a sealable plastic bag to be sent home with the student. No portion of the CGM should be discarded while at school.

For more training resources and tools go to diabetes.org/safeatschooltraining

September 10, 2018

Safe at School®