PRIMARY CHILDREN'S GUIDELINES FOR DIABETES MANAGEMENT IN THE SCHOOL SETTING

Definitions, Laws, Guidelines, and Practical Advice for Management of Diabetes in the School Setting

UTAH 2023

Table of Contents

Introduction	2
Laws and Guidelines	3
DMMO / IHP / 504 Plan	4
Monitoring / CGM	5
Continuous Glucose Monitors	5
Hypoglycemia	
Hyperglycemia	
Insulin Management	
Insulin Pumps and Smart Pens	
Snacks and Class Parties	
Exercise and Physical Activity	13
Illness	
Bus and Walking Home	
DIY Artificial Pancreas Systems	
Interventions Outside of the DMMO	
I-Port	
Scenarios	
Definitions	
Acknowledgement of Authors	
References	

INTRODUCTION

This document contains only guidelines and is for the purpose of providing guidelines and options for the most raised questions for diabetes management at school. This document does not supersede any state or local laws and regulations, nor does it supersede any school district policies.

This document replaces all previous documents regarding diabetes management in school that came from Primary Children's Hospital.

Under Federal and State Laws, all schools or facilities who receive federal funding are prohibited from discriminating against children with disabilities including diabetes. Other facilities that may receive federal funding including private schools, child-care facilities and camp/recreation programs also have this obligation.

The facilities have an obligation to provide care so that students with disabilities such as diabetes can safely attend school and school-sponsored field trips and extracurricular activities such as before and after-hours school-sponsored events. The school nurse leads the "team" to ensure that appropriate and timely care prescribed by the student's DMMO is provided to students enabling the school/childcare facility to meet its obligations under federal and state laws.

Federal law gives students the right to receive the diabetes care they need to be safe and participate in school activities just like any other student.

Schools should provide the following:

- Trained staff to monitor glucose at specified times, respond appropriately to low glucose, and administer insulin and glucagon, within the state laws
- Trained staff to provide diabetes care during field trips, extracurricular events, and all school-sponsored activities
- Capable (independent) students are permitted to self-manage their diabetes anytime, anywhere

Schools should not:

- Require family members to go to school to care for a student's daily, routine diabetes management
- Transfer students to a different school to get needed diabetes care
- Prevent students with diabetes from participating in field trips, sports, and other school-sponsored activities

LAWS AND GUIDELINES

In the State of Utah, diabetes management at school is regulated by the Utah State Code for the Public Education System (which is created by the Utah State Legislature) and the Utah Nurse Practice Act Rule.

- 1. Section 504 Administration of glucagon
 - a. https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S504.html
- 2. Section 506 Diabetes Medication
 - a. https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S506.html
- 3. Utah Nurse Practice Act and Rules
 - a. https://rules.utah.gov/wp-content/uploads/r156-31b.pdf
- 4. Guidelines are recommendations for diabetes management at school from the Utah Department of Health and Human Services.
 - a. Standards of Care of Diabetes Management in the School Setting Utah 2022
 - b. https://heal.utah.gov/wp-content/uploads/2022/11/SOC-Diabetes-Management-11-29-22.pdf
- 5. The American Diabetes Association publishes recommendations. These are not legislated and are written with the entire country in mind. Some states have full time nurses in their schools and can provide a different scope of practice for diabetes management.
 - a. https://diabetes.org/sites/default/files/2023-03/CGM-guidance-3-23-23.pdf
 - b. https://diabetes.org/tools-support/know-your-rights/safe-at-school-state-laws
 - c. https://diabetes.org/tools-support/know-your-rights/safe-at-school-state-laws/help-for-schools
- ❖ The Utah Nurse Practice Act Rule is created by the Utah Commerce Division of Professional Licensing and dictates what nurses can and cannot do in the school setting based on their RN licensure.

Pertinent concepts found within these state laws:

- 1. A RN may not delegate to an unlicensed individual the administration of medication that has known, frequent side effects that can be life threatening (ie-hypoglycemia), or anything that requires nursing assessment or judgment prior to or immediately after administration.
- 2. R156-31b-701b. Delegation of Tasks in a School Setting:
 "(d) in addition to delegating other tasks pursuant to this rule, a registered nurse may delegate to an unlicensed individual who has been properly trained, the following tasks regarding a diabetic student's IHP:

- (i) administration of a scheduled dose of insulin; and
- (ii) administration of glucagon in an emergency, as prescribed by the practitioner's order or specified in the IHP."
- a. A "scheduled dose" of insulin is defined as before meals (breakfast and/or lunch)
 - This determination was made by the State Board of Nursing, School Nurses, and the Primary Children's Hospital Diabetes Clinic Providers.
 - ii. The interpretation is based on the 3-hour spacing guideline for doses of rapid acting insulin.
- 3. In the DMMO the Diabetes Provider must specify whether the student is able to "possess and self-administer" their diabetes medications.

DMMO / IHP / 504 PLAN

- 1. The Diabetes Medical Management Orders (DMMO) is an order signed by the student's Diabetes Provider that states the student has diabetes and provides orders for their care plan while at school.
 - a. The document states the current carbohydrate ratio, correction doses and target ranges of glucoses.
 - b. The route of insulin administration is also defined (pump, smart pen, or pen/syringe).
 - c. The frequency of glucose checks is also defined (before meals and other appropriate times as needed).
- 2. The Individualized Healthcare Plan (IHP) is completed by the school nurse and the parents stating specific plans for monitoring, treatments, and location of supplies.
- 3. A 504 Plan sets out the actions the school will take to make sure the student with diabetes is medically safe, has the same access to education as other students, and is treated fairly.
- 4. An IHP or a 504 plan should not include any requirements that are contradictory to the DMMO, state laws or these guidelines.
- 5. Ability level is to be determined by the parent and provider on the DMMO. Ability is then applied to the school setting as specified in the IHP. All students regardless of age or expertise require a plan (e.g., Emergency Action Plan) and may need assistance with hypoglycemia, emergency glucagon or illness.
- 6. If unable to obtain a complete DMMO that includes all necessary insulin doses from the provider, contact your district provider and/or the Utah Department of Health and Human Services.
- 7. These forms are found here: https://heal.health.utah.gov/sn-documents/

MONITORING / CGM

- 1. Glucose (aka blood sugar) may be checked with either a glucometer (meter) or a Continuous Glucose Monitor (CGM)
- 2. Target ranges for each student are determined by their provider and noted in the DMMO.
- 3. Standard target ranges if not stated in the DMMO are based on the age of the student.
 - a. Age < 6 years = 100-200
 - b. Age 6-17 years = 80-150
 - c. Age >17 years = 70-130
- 4. Blood glucose monitoring should be performed prior to breakfast and/or lunch, anytime the student is symptomatic of hypoglycemia or hyperglycemia or as otherwise stated in the DMMO or IHP.
- 5. Appropriate additional (but not required) times other than those stated above would be upon arrival to school, prior to recess/PE or other physical activities, prior to walking home or riding the bus home from school.
- 6. The student's schedule and participation in regular learning should be considered when determining the timing and frequency of glucose monitoring. Too frequent checking of glucose may impact learning and school participation. On average, most students' glucose should be checked at meals and when symptomatic.
- 7. Those students who require more support at school to manage their diabetes may have their CGM reviewed at the beginning of the school day and at lunch to verify that they are receiving data. If there is no number or no arrow on the CGM, a glucometer should be used to test a finger poke glucose.

CONTINUOUS GLUCOSE MONITORS

CGM systems use a tiny sensor inserted under the skin to measure glucose levels in the interstitial fluid. Parents/independent children are responsible for changing the sensor/site.

1. Not all CGM's are FDA approved to dose from. It is the nurse's responsibility to verify this information.

- 2. CGM's that are FDA approved to dose from do not require a finger poke meter reading to treat hypoglycemia or insulin administration, other than noted in the hypoglycemia section below.
- 3. Students should have a glucometer or meter at school in case of CGM failure, lack of communication, or site failure/loss.
- 4. If there is no number AND arrow on the CGM, use the meter. If the student does not have a meter at school when unable to use the CGM, contact a parent/guardian.
- 5. CGM devices have multiple warning alarms available.
 - a. Alarms should be used sparingly and for safety to avoid unnecessary disruption to the student's activities/education. The recommendation is to set alarms for glucose levels that require an immediate action/response.
 - b. Low alarm: glucose is at or below set alarm.
 - c. Urgent low soon: glucose will be less than 55 mg/dl in the next 30 minutes. There is no way to silence this alarm.
 - d. High alarm: glucose is at or above set alarm.
 - e. Fall or Rise Rate alarms: these alarms are to warn of rapidly increasing or decreasing glucose levels; these should NOT be turned on for any student.
 - f. In the school setting, UAPs should not respond to rapidly changing numbers or trend arrows. They *should* respond to low and high BG alarms and assist the student in treatment as indicated by the DMMO and IHP.
 - g. School staff are responsible for keeping all children safe in the school setting. School staff do not have the staffing capacity to support unique requests for frequent glucose pattern monitoring or management techniques at school (e.g., sugar surfing). Diabetes care at school will be provided in accordance with the regimen prescribed in the student's DMMO and based on applicable laws.
 - h. Touchdown's may be instituted if agreed upon by the school nurse and the parent. A touchdown is a predetermined time when a CGM may be reviewed to verify that there is a number and an arrow present. Times are determined by the school nurse and the parent, but should not be excessive, nor interfere with the student's education. Reasonable times would be upon arrival to school, prior to physical activity such as recess or PE and before going home.
 - i. Dexcom Follow or LibreLinkUp:
 - i. Parents can follow glucose levels and see trend arrows on their own smart devices if the student has a smart phone themselves or a device with Wi-Fi capabilities.
 - ii. Remote monitoring of the CGM using these apps is generally not required or recommended as the student is usually adult supervised by trained staff and alarms are used to identify urgent blood glucose levels requiring action.

- iii. Certain unique cases such as pre-school, non-verbal, severely impaired cognition may support an alternative plan. These are situations where rise or fall rate alarms may also be considered.
- iv. After assessment, the section 504 or IEP team will determine accommodations based on the student's individual needs and the DMMO. When determined appropriate, the school nurse and 504 team will indicate these accommodations on a Section 504 plan and the IHP.
- v. Even if the plan includes more frequent monitoring than listed in monitoring section; UAP cannot take orders or recommendations from parents, school nurses cannot take orders from parents; treatments are based on alarms and the DMMO.
- vi. The follow applications (apps) can be downloaded to a school healthcare device depending on the school and school district's policy.
 - Parents may provide the monitor device. School nurse/UAP/school staff personal devices should NEVER be used for remote monitoring.
 - 2. Even if the school allows for a "healthcare smart device," UAP are only responsible to respond to alarms requiring immediate treatment.

HYPOGLYCEMIA

- 1. Hypoglycemia is any glucose that is below their target range. For example, if their target is 80-150, any number below 80 would be considered hypoglycemia.
- 2. The family is responsible for providing snacks to treat hypoglycemia.
- 3. It is preferred that hypoglycemia be treated in the classroom, when possible. Process may differ based on staffing and school policies or the overall needs of the classroom. If the student needs to go elsewhere for the treatment of hypoglycemia, they should always be escorted, preferably by an adult.
- 4. The standard of care for hypoglycemia is the 15-15 rule: Treat with 15 grams of fast-acting, simple carbohydrates and retest glucose in 15 minutes. If glucose is still low, treat with an additional 15 grams of carbohydrates and retest glucose in 15 minutes. Continue this until hypoglycemia has resolved (student's glucose is above the low target). If unable to resolve within an hour, the parent should be notified.
- 5. CGM's may have a delay after an event of hypoglycemia and may take time to "catch up" to real time. If hypoglycemia is noted on a CGM, treat with 15 grams of carbohydrates. In 15 minutes, if hypoglycemia is still noted on the CGM, a meter/finger poke must be used to assess glucose and the treatment plan should

- be determined based on the meter. A meter should be used for the full hour after the initial episode of hypoglycemia.
- 6. Severe HYPOglycemia- The DMMO states Emergency Glucagon should be administered "immediately for severe hypoglycemia: unconscious, semiconscious (unable to control airway), or seizing."
 - a. Glucagon/Glucagen IM 1.0 mg/1.0 mL, or Baqsimi nasal 3 mg, or Gvoke SQ 0.5 mg, or Zegalogue SQ 0.6 mg
 - b. Once glucagon has been administered, the school must call 911.
 - c. Possible side effects: Nausea and Vomiting.
- 7. Options for hypoglycemia prior to a meal (not required):
 - a. Verbiage: "low-target" means the bottom number in their target range. For example, if their target is 80-150, their low target is 80. If their target is 100-200 then their low target is 100.
 - b. Many students want to get to recess or lunch without having to wait for hypoglycemia to correct.
 - c. If glucose is ≤65 mg/dl prior to a meal, keep them with an adult, treat with 15 grams of carbohydrates and retest glucose in 15 minutes. Once glucose is above their low-target, dose for all carbohydrates for the meal and send them to eat.
 - d. If glucose is \geq 66 mg/dl but below their low-target, <u>and</u> they are not symptomatic of hypoglycemia, dose for all but 15 grams of carbohydrates for the meal and send them to eat.
 - i. For example, the student's target is 80-150 and their pre-lunch glucose is 55 mg/dL. Give them 15 grams of carbohydrates and retest them in 15 minutes. Fifteen minutes later their glucose is 75 (below their low target) and they're eating 60 grams of carbohydrates, simply dose them for 45 grams of carbohydrates and send them to eat.
 - i. If glucose is ≥ 66 mg/dl but below their low-target, and they ARE symptomatic of hypoglycemia, treat with an additional 15 grams of carbohydrates, keep them with an adult and retest glucose in 15 minutes. Once glucose is above low-target, dose for all carbohydrates for the meal and send them to eat.

HYPERGLYCEMIA

- 1. Hyperglycemia is any glucose that is above their target range. For example, if their target is 80-150, any number over 150 would be considered hyperglycemia.
- 2. However, it is normal for the glucose to rise into the 200-300 range after meals, but it should return to their target range within 3 hours.

- 3. Based on Utah law, a correction for hyperglycemia may only be given at breakfast and/or lunch, unless the student is using an insulin pump or a smart pen that determines insulin doses by tracking insulin action time and insulin on board.
- 4. If the student is using an insulin pump or a smart pen, correction doses and carbohydrate doses can be given at any time, if the dosing is determined by the device and the insulin is delivered via the device.
- 5. The recommended dose of insulin must be administered and cannot be adjusted by school personnel. A RN, who is administering the insulin in person (not delegating) may determine their scope of practice with using advanced pump features such as extended boluses or adjusting insulin doses based on other variables such as activity.
- 6. Parents/school should make sure that correction doses via pump or smart pen are not administered so frequently that they interfere with the student's education or that of the class.
- 7. The school nurse will determine where/when glucose should be checked and by whom.
- 8. There is no glucose high enough to require a student to be sent home from school unless other symptoms of illness are noted (vomiting, abdominal pain, fever). The student should be given access to water and the restroom, and an insulin dose should be administered if it fits within the criteria under the Laws and Guidelines section above.
- 9. Increasing no-carb fluid intake (sugar-free fluids) and moderate exercise can be helpful to reduce glucose, but if the glucose is over 300 the student should be given water and allowed to return to class. Exercise should not be used frequently to reduce glucose readings and should not require the student to miss class.
- 10. If the student is experiencing consistent hyperglycemia while at school, the nurse/school staff should encourage the parent/guardian to contact their diabetes provider for review of their glucose data.

INSULIN MANAGEMENT

The type of insulin a student is taking is noted on their DMMO. Rapid-acting insulins are interchangeable [Humalog (insulin lispro), Novolog (insulin aspart), Apidra (insulin glulisine), Admelog (insulin lispro)]. Ultra-rapid acting insulins [Fiasp (insulin aspart) and Lyumjev (insulin lispro-aabc)] are not interchangeable with the others and require a new order.

1. All insulin dose changes must come from the provider. Parents cannot tell the school what insulin dose to give as insulin is a prescription medication and requires a provider's signature.

- 2. If a dose change occurs, the DMMO must be updated for the nurse to delegate to the UAP.
- 3. Generally, insulin is given 10-15 minutes prior to breakfast or lunch unless indicated on the DMMO. As it is difficult to determine precisely when the student will eat their meal at school due to varying factors, rapid-acting insulin is not given earlier than 10-15 minutes prior to eating to avoid an episode of hypoglycemia. Dosing insulin after eating is only a temporary fix and must be stated on the DMMO and approved by the student's provider.
- 4. If a student is independent in their diabetes management at school, their parent can determine the insulin dosage to be given and communicate directly to the student.
- 5. Once any school staff are involved in the diabetes management process (double checking carb counts or glucose checked by student, insulin administration, etc.) then insulin via injection can only be administered at breakfast and/or lunch.
- 6. Insulin administration at times other than breakfast/lunch (e.g., snacks/parties) can only be given if the student is using a pump/smart pen and the carbs AND glucose are entered into the device and the device determines the insulin dose. See "Snacks and Class Parties" section below.
- 7. If a parent/guardian chooses to come to school and administer an injection of insulin on their own, they must then administer all subsequent injections for the rest of the day. Rapid-acting insulin is recommended to only be given every 3 hours. Changing the scheduling by dosing between meals at school disrupts the schedule and can lead to insulin stacking and hypoglycemia. If nursing assessment or judgement is necessary to determine dosing, it cannot be delegated to UAP.
- 8. All insulins should be discarded 28 days after opening or by its expiration date, whichever is sooner. Long-acting insulin may be administered at school if noted in the DMMO.

INSULIN PUMPS AND SMART PENS

Insulin pumps and smart pens have computerized calculators to determine insulin doses. The calculator uses an algorithm (equation) to track insulin on board (insulin active in a student's body) and insulin action time (how long insulin works).

The InPen is a reusable injector pen (Smart Pen) that tracks dosing and assists with diabetes management by calculating bolus insulin doses using a mobile app (like a bolus calculator in an insulin pump). It considers insulin on board and subtracts insulin when the student is below their target range. In the school setting, the insulin dosing may be calculated per the smart pen (InPen) app calculator. All blood glucose levels should be entered into the app calculator for administration of app-calculated doses. Parents are responsible for maintaining the insulin dose settings within the InPen app.

- 1. All glucose values and carbohydrate grams must be entered into the pump for delivery of pump-recommended boluses.
- 2. The insulin pump or smart pen must determine the dose being given. School nurses and staff cannot override the recommendation from the device.
- 3. RN's and school personnel should not change pump sites unless their district policy allows them to do so, and they have been properly trained.
- 4. Extended boluses and other advanced features of the pump can be utilized by a RN but cannot be delegated as they require nursing judgment and assessment.
- 5. In case of pump failure, follow the DMMO. Pump failure is categorized by infection at the insertion site, leaking of insulin, or a glucose that's over 300 mg/dL, a correction dose is given and 3 hours later the glucose is still over 300 mg/dL.
 - a. Due to the infrequency of changing pump sites and the school staff/school nurse/UAP's ability to maintain expertise in insertion of pump infusion sets/pods/CGM sensors, insulin will be given by injection if a pump site fails, and the BG meter will be used if the CGM fails.
 - b. Contact parents/guardians for concerns of pump failure.

SNACKS AND CLASS PARTIES

- 1. Snacks, class parties and food brought to school to share with classmates can be problematic for children with diabetes due to the need for insulin administration with all carbohydrate intake. There are a few options or substitutions that may be appropriate based on the setting.
- 2. If the student is using an insulin pump or smart pen, they should receive insulin for the carbohydrates.
- 3. If the student is receiving insulin via injection, a few adjustments can be made. These should be reviewed by school personnel and discussed with the teacher and the parents.
- 4. The *Diabetes Individualized Healthcare Plan* created by the Utah Department of Health and Human Services contains a *Special Considerations* section that includes information on school parties and snacks. The parents are to determine which option they prefer. The options include:
 - a. No coverage for snacks/parties
 - b. Student to save snack for lunchtime
 - c. Student to take snack home
 - d. Parent will provider alternate snack
 - e. Other (specify)
- 5. Things to consider:
 - a. Move the snack/treat for the entire class to lunch time so the student with diabetes can receive insulin for the snack/treat with their lunch injection.

- b. Move the snack/treat for the entire class to the end of the school day. If the snack/treat is given to the entire class as they leave the classroom, the student with diabetes may also be given the snack and asked to take it home with them.
- c. If the snack/treat cannot be moved to either lunch or the end of the day, the snack/treat can be given to the student with diabetes to take home.

6. Alternative options:

- a. The options noted below are NOT required and are only to be used at the discretion of the school nurse, and not the UAP, parent or any other school employees.
- b. Dosing for snacks outside of meals are not "scheduled doses" and therefore cannot be delegated.
- c. Parents must provide approval for these options to take place.
- d. Any of these options are to be done on a case-by-case basis per the discretion of the school nurse, and once again are NOT required.
- e. An increased risk for errors is evident in giving insulin after lunch and should be done cautiously.
- f. These options should be used infrequently for things such as school parties and special events. If a student is needing a correction dose for hyperglycemia after lunch on a regular basis, the parent should be advised to contact their provider and glucose levels should be reviewed by provider.
- g. A carbohydrate only insulin injection OR a correction dose for hyperglycemia may be given after lunch if the following criteria are met. If dosing for carbs after lunch, use the lunch carb ratio noted in the DMMO.
 - i. The option to dose for carbohydrates or hyperglycemia after lunch should be used cautiously for students who are not being transported home by a parent. This would include students who walk home, ride the bus, go to after school care or are home without an adult present.
 - ii. Anytime insulin is given after lunch, a parent must be notified to avoid the stacking of insulin and the possibility of subsequent hypoglycemia later in the day.
 - iii. A carbohydrate only dose (no correction for hyperglycemia) may be given any time after lunch but should be done a maximum of one time per day to avoid possible errors and the stacking of insulin.
 - iv. A carbohydrate only dose cannot be given prior to lunch due to the insulin action time, and the subsequent correction dose for lunch.
 - v. A correction dose for hyperglycemia may be given after lunch if a minimum of 3 hours has passed from the time of the last rapid acting insulin injection.

- vi. If a snack and hyperglycemia occur at the same time, AND it has been a minimum of 3 hours from the last dose of rapid acting insulin, insulin may be given for the hyperglycemia and the carbohydrates.
- vii. If an insulin injection is given after lunch, another injection CANNOT be given for the rest of the school day to avoid the stacking of insulin and possible hypoglycemia.

EXERCISE AND PHYSICAL ACTIVITY

Per the DMMO or the IHP, glucose may be checked prior to physical activity which may include P.E., recess, or any other physical activity that may cause hypoglycemia.

A student should not exercise:

- 1. If their glucose is below their target or they have symptoms of hypoglycemia.
- 2. If their glucose is above their target AND they have symptoms of moderate to severe hyperglycemia, including but not limited to stomachache, nausea, vomiting, labored breathing, slurred speech, change in mental status, dehydration.

ILLNESS

If a child with diabetes shows any symptoms of being ill, follow your school/district protocol.

In the state of Utah, there are no guidelines or recommendations to test for ketones at school. Parents/guardians are responsible for testing for ketones.

BUS AND WALKING HOME

Prior to walking home or riding a bus, the student's glucose level should be above their low target. Treat according to glucose and symptoms.

DIY ARTIFICIAL PANCREAS SYSTEMS

DIY AP systems are not FDA approved, and there are concerns regarding tampering with a medical device outside the bounds of rigorous scientific research, potential coding errors, and/or potential malfunctions.

HOWEVER, the school nurse and school staff may support the student with a DIY AP system if the student has a current DMMO/provider order. Support may include inputting or supervising the input of glucose and carbohydrate numbers into the pump for insulin dosing and hypo-hyperglycemia management per the DMMO and EAP. School nurses and staff cannot provide support beyond entry or supervision of data entry and assistance with the treatment of hypoglycemia.

INTERVENTIONS OUTSIDE OF THE DMMO

Parent/guardian requests of multiple interventions per day, calling/texting UAP or RN multiple times per day to intervene or treat trend arrows, or request frequent overrides or changes to the DMMO or pump calculations are beyond "reasonable accommodations." These contacts are frequent interruptions to the student's education, other class members' education, the teacher's ability to teach, and increases the potential for error (e.g., more hypoglycemia).

This does not include treatment for hypoglycemia, hyperglycemia, or occasional changes to the DMMO due to dose changes discussed with provider or diabetes healthcare team.

I-PORT

An iPort is a patch that sticks to the student's skin allowing for direct insulin delivery from a syringe or pen. It looks much like a pump site, without the tubing. If the site fails, the parent or guardian will need to replace the device.

https://www.medtronicdiabetes.com/products/i-port-advance

SCENARIOS

- 1. A.J. comes to school using an insulin pump and has a BG of 380. He notes he ate breakfast at home and that mom gave him insulin. Three hours later his BG is >400 on his CGM. What's wrong, and what should be done?
 - a. He very likely has a bad pump site. A correction should be given with an injection based on his DMMO and a parent should be contacted. The parent should come change the pump site or take the student home.
- 2. What can schools do if the parent refuses to come or is unable to come?
 - a. Contact your head district nurse for your school district.
- 3. The mother of J.R. calls the school and tells the front office that she's changed the lunch carb ratio from 1:20 to 1:15 and she wants them to dose for lunch with the new carb ratio. What should be done?
 - a. Mom should be advised to contact their provider to send a new DMMO or addendum to the DMMO with the new carb dose. Until that happens, the old carb ratio will be used.
- 4. P.H. comes to the office for lunch, their CGM says "no data", is not reading or simply shows "HIGH" of "LOW". What should be done?
 - a. A blood glucose meter should be used to check a finger stick glucose. This information should be used for all treatments, including the treatment of hypoglycemia or hyperglycemia.
- 5. What if the student does not have a meter at school?
 - a. Contact the parent.
 - b. Q: What if the parent cannot be reached, cannot come to bring a meter to school, or refuses to come?
 - c. Dose for carbohydrates based on the DMMO and treat hypoglycemia based on symptoms. This is the best way to keep the child safe without all the proper devices.
- 6. The DMMO signed by the provider states "do what the parents want." Is this an order that can be used by a RN?
 - a. No. If unable to obtain a complete DMMO that includes all necessary insulin doses from the provider, contact your lead school nurse, your district provider and/or the Utah Department of Health and Human Services.
- 7. J.P.'s mother wants the CGM continually monitored at school and texts the UAP hourly, sometimes 4 times per hour. She is also texting J.P. to eat small amounts of carbs throughout the day. J.P. is in 1st grade and has some developmental delays and is not hearing or addressing alarms. What can be done?
 - a. Come up with a plan with his mother. For example, offer "touchdowns" to check the CGM upon arrival to school, before AM recess, before lunch, before PM recess and prior to dismissal.

- b. Address the not hearing alarms: consider a device with the UAP (either provided by parents or a "school healthcare specific device"). Those with access to the device can address alarms between touchdowns. If the alarms are set to go off too frequently, they may become nuisance alarms and simply be ignored by the student.
- c. "Sugar surfing" and frequent interruptions are inadvisable and are not recommended. Treatment of glucose using CGM arrows requires nursing judgement and assessment and cannot be delegated to the UAP.
- 8. A child is on MDI (multiple daily injections) and not an insulin pump or smart pen. Parents are asking that the class snack be dosed for on a daily basis.
 - a. A student on injections or MDI can only receive insulin at breakfast and/or lunch. The snack option AFTER lunch is at the discretion of the school nurse and is not required. Ask the teacher if the snack can be removed, moved to lunch time or to the end of the day.
 - b. Ask the parent to provide low/no carb snack as an alternative.
- 9. The 1st grade class in having a class party at 2pm and there will be cookies and punch. Can the student with diabetes participate?
 - a. Yes. They should not and cannot be left out of such events. The issue happens with insulin dosing.
 - b. If the student is wearing an insulin pump or using a smart pen that is communicating with the smart pen app they can be given insulin for the carbohydrates AND the glucose at any time, including for the class party.
 - c. If the student is receiving insulin via MDI they can be given a carb only dose if it has been less than 3 hours from the last dose of rapid acting insulin, or a carb dose and correction dose if it has been more than 3 hours from the last dose of rapid acting insulin AND the school nurse is available to give the injection. This cannot be delegated to a UAP.
 - d. Another option is to move the treats to the end of the day and hand it to all the students as they walk out the door.
 - e. A parent could also come and give insulin for the treats, but they must give insulin for the rest of the day anytime they intervene. With an afternoon class party this is usually not an issue.

DEFINITIONS

Term	Definition	Responsible Party
BG	Blood Glucose	
Meter or Glucometer	Blood Glucose Meter	Prescribed by provider
CGM	Continuous Glucose Monitor	Prescribed by provider
DMMO	Diabetes Medical Management Orders	Created by and signed by provider. Compliance with Utah Codes UCA 53G-9- 504 and 53G-9-506
IHP	Individualized Healthcare Plan	Created by school nurse and parent
HIPAA	Health Insurance Portability and Accountability Act and Privacy Rule	The Health Insurance Portability and Accountability Act of 1996 (HIPAA) is a federal law that required the creation of national standards to protect sensitive patient health information from being disclosed without the patient's consent or knowledge. A major goal of the Privacy Rule is to make sure that individuals' health information is properly protected while allowing the flow of health information needed to provide and promote high-quality healthcare, and to protect the public's health and well-being. The Privacy Rule permits important uses of information while protecting the privacy of people who seek care and healing.
MDI	Multiple Daily Injections	V
Supervision	The action of supervising someone or something, observing	
Laws	"The system of rules which a particular country or community recognizes as regulating the actions of its members and which it may enforce by the imposition of penalties."	These can be found here: https://heal.health.utah.gov/sn-documents/
Guidelines	"General rule, principle, or piece of advice"	

RN	Registered Nurse	
Provider	MD, DO, APRN/NP, PA	
School	Any private or public institution of primary or secondary education, including a charter school, preschool, kindergarten, or special education program.	
Unlicensed Assistive Personnel (UAP)	An unlicensed individual who performs health care services in a complementary or assistive role to a nurse in carrying out acts included within the definition of the practice of nursing.	School personnel helping with diabetes management, not licensed as healthcare personnel. This might include front office staff, a principal, cafeteria workers, teachers, administrative aids, etc.
Delegate	Entrust a task or responsibility to another person	School nurses delegate diabetes management tasks per Utah state law to UAP
Pump/CSII	Continuous Subcutaneous Insulin Infusion Pump	
Section 504 Plan	Protects the rights of individuals with disabilities in schools to provide a "free appropriate public education" regardless of the nature or severity of their disability.	Developed by school personnel and parents.
EAP	Emergency Action Plan	School nurses complete these upon receipt of the DMMO and can be done with input from parents. These include the treatment plans for hyperglycemia, hypoglycemia, and hyperglycemia prior to meals.
School staff	Any adult who works for the school in any capacity	
Touchdown	Time when CGM will be reviewed to verify there is a number and an arrow	Times are determined by nurse and parent but should not interfere with their education. Reasonable times would be upon arrival to school, prior to physical activity such as recess and PE and before going home.

ACKNOWLEDGEMENT OF AUTHORS

Vandana Raman, MD Division Chief, Medical Director of the

> Primary Children's Diabetes Clinic, Associate Professor, University of Utah School of Medicine, Department of Pediatrics, Division of Pediatric

Endocrinology

Allison Smego, MD Pediatric Endocrinologist, Outpatient

> Medical Director Primary Children's Diabetes Clinic, Assistant Professor, University of Utah School of Medicine, Department of Pediatrics, Division of

Pediatric Endocrinology

Pediatric Endocrinologist, Inpatient Scott Clements, MD

Medical Director Primary Children's Diabetes Clinic, Associate Professor, University of Utah School of Medicine, Department of Pediatrics, Division of

Pediatric Endocrinology

Trina Brown, MS, APRN, CPNP-PC, CDCES Certified Pediatric Nurse Practitioner,

> Certified Diabetes Care and Education Specialist, Primary Children's Diabetes Clinic, University of Utah School of Medicine, Department of Pediatrics, Division of Pediatric Endocrinology, Adjunct Professor University of Utah

College of Nursing

Registered Nurse, Certified Diabetes Kaylynn Buxton, RN, BS, CDCES

> Care and Education Specialist, BS Health Promotion and Education, Primary Children's Diabetes Clinic, Mother of 2 children with T1D

Registered Nurse, Certified Diabetes Bri Dougall, RN, BSN, CDCES

Care and Education Specialist, Primary

Children's Diabetes Clinic, T1D

BettySue Hinkson, RN Registered Nurse, Utah State School

Nurse Consultant, Utah Department of

Health and Human Services, Health Environments Active Living (HEAL)

CRC, Master of Rehabilitation

 $Counseling, Disability \ Advocate, \ Mother$

of child with T1D

Registered Nurse, School Nurse, School Health Clerk and Mother of child with

T₁D

Wendy Nye, PhD

Jessica Allen, RN, BSN

REFERENCES

US Department of Health and Human Services, "Health Insurance Portability and Accountability Act of 1996 (HIPAA)",

https://www.cdc.gov/phlp/publications/topic/hipaa.html#:~:

text=The%20Health%20 Insurance%20

Portability%20and,the%20patient's%20consent%20or%20knowledge, Centers for Disease Control and Prevention, June 27, 2022.

Utah Department of Health, "School Nursing Documents",

<u>https://heal.health.utah.gov/sn-documents/</u>, Utah Department of Health and Human Services, 2022.

Utah State Legislature, "Section 203 Definitions -- School personnel -- Medical recommendations -- Exceptions -- Penalties",

https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S203.html, Utah.gov, 9/1/2022

Utah State Legislature, "Section 204 Nursing services in the public schools -- Collaborative efforts" https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S204.html, Utah.gov, 5/4/2022.

Utah State Legislature, "Section 301 Definitions", https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S301.html, Utah.gov, 7/1/2022.

Utah State Legislature, "Section 502 Administration of medication to students -- Prerequisites -- Immunity from liability - Applicability,

https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S502.html, Utah.gov, 514/2019.

Utah State Legislature, "Section 504 Administration of glucagon -- Training of volunteer school personnel -- Authority to use glucagon -- Immunity from liability", https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S504.html, Utah.gov, 514/2019.

Utah State Legislature, "Section 506 Diabetes medication -- Possession -- Self-administration" https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S506.html, https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S506.html, Utah.gov/xcode/Title53G/Chapter9/53G-9-S506.html, https://le.utah.gov/xcode/Title53G/Chapter9/53G-9-S506.html, ht

https://diabetes.org/sites/default/files/2023-03/CGM-guidance-3-23-23.pdf

https://diabetes.org/tools-support/know-your-rights/safe-at-school-state-laws

https://diabetes.org/tools-support/know-your-rights/safe-at-school-state-laws/help-for-schools