Standards of Care for Diabetes Management in the School Setting & Licensed Child Care Facilities – Colorado 2020

These are general standards of care for children with Type 1 Diabetes, which are integrated and to be used with Colorado Provider Orders (aka Diabetes Medical Management Plan [DMMP]) & Individualized Health Plans (IHP) (www.coloradokidswithdiabetes.org). The child's diabetes health care provider may individualize and indicate exceptions to these standards on the child's individual orders/DMMP.

Terms used in document:

HIPAA	Health Insurance Portability and Accountability Act was signed into law in 1996. It provides for clarification of and coordination of care between the prescribing provider and the health professional carrying out the orders/DMMP without additional written authorizations by patient. http://www.hhs.gov/hipaa/for-professionals/faq/513/does-hipaa-apply-to-an-elementary-school/index.html
FERPA	Family Educational Rights to Privacy Act of 1974 protects all personally identifiable information of students/children enrolled in institutions that receive federal funding. Requires parent written authorization to share student record information (included in authorization language on standardized care plans.) http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html
Child Care Health Consultant (CCHC)	Child Care Health Consultant: As defined in Colorado, a medical professional who assists the child care program in meeting and exceeding basic health and safety standards. These professionals also serve licensed camps, school-age programs, & family child care by offering trainings. Required to have a monthly visit in Colorado.
School Nurse/Child Care Health Consultant	When school nurse is referenced in Standards, the term will also include the child care health consultant
Child/children	The term child is used to include students, children in child care settings and children participating in extracurricular activities.
>	Greater than the number to the right of the symbol
<	Less than the number to the right of the symbol
~	"Approximately."

Introduction: Under federal and state laws (see *Resources* Section), all schools, camps, child care facilities and recreational programs ***which receive federal funding*** and/or are places of public accommodation such as many private schools, child care facilities, and camp and recreation programs are prohibited from discriminating against children with disabilities such as diabetes. These schools/child care facilities have an obligation under federal and state laws to provide care so that children with disabilities such as diabetes can safely and fully access the setting including school-sponsored field trips and extracurricular activities such as before and after-hours school-sponsored events. The school nurse/child care health consultant leads the "team" to ensure that appropriate and timely care prescribed by the child's individualized DMMP is provided to children enabling the school/child care facility to meet its obligations under federal and state laws.

For Information on COVID-19:

- ADA Return to School Recommendations: https://www.diabetes.org/resources/know-your-rights/safe-at-school-state-laws/safe-school-coronavirus-resources
- CDC Coronavirus Disease 2019 (covid-19): Considerations for Schools https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/schools.html
- CDPHE COVID-19: https://covid19.colorado.gov/
- NASN COVID-19 Resources https://www.nasn.org/nasn-resources/practice-topics/covid19

1. **Communication:** To facilitate appropriate execution of the Diabetes Health Care Provider's orders/DMMP and to ensure safety of the child, the school nurse/child care health consultant will have authorization to exchange health information with the health care provider to assist in developing, updating and carrying out the Individualized Health Care Plans (IHP). Authorization for this coordination of care is per parent signed diabetes health care provider orders/DMMP and IHP, which aligns with both Health Insurance Portability and Accountability Act (HIPAA) and Family Educational Rights and Privacy Act (FERPA) regulations. The school nurse/child care health consultant and health care provider may seek consultation with Colorado's Diabetes Resource Nurses (www.coloradokidswithdiabetes.org) for support and assistance in providing diabetes care in the school and child care setting.
    - The child's IHP developed by the school nurse/child care health consultant must be consistent with the DMMP and developed in collaboration with the parent/guardian(s) and health care provider **prior to the start of school/entering child care when possible.**

- Non-religious child care facilities, camps have legal obligations under the Americans with Disabilities Act. Children will have a DMMP or physician's order and health care plan (per Colorado Nurse Practice Act, Rules and Regulations-Chapter 13)..
- Section 504 Plan (generally for school age children): Section 504 of the Rehabilitation Act of 1973, an Individualized Education Program (IEP): Individuals with Disabilities Education Act (IDEA) or other written accommodation plan: Prohibits discrimination in any program or activity (academic, nonacademic, extracurricular) that receives federal funding. Applies to all public schools and to private schools including religious schools that receive federal money. The identification for Section 504/IEP services must be based upon evaluations and conducted by a team of individuals knowledgeable about the child, including the parents, school nurse, administration, teachers, etc. It should be consistent with and incorporate the provider orders/DMMP for reference (please communicate with providers if discrepancies occur).
- Communication of blood glucose readings and coordination of care between child, school nurse/child care health consultant, health care providers, school staff/teachers and/or parents may include a variety of options, e.g. cell phone applications, web-based applications, email, and texting, which will be noted in the child's Section 504 plan/IEP or an agreement with the child care facility. Shared cellular data plans and/or Wi-Fi may need to be provided by the parents as necessary for cellphone service and/or remote site monitoring if school wi-fi guest sign in is not available. School districts are encouraged to provide guest internet access if available. Parents and school nurses will create a communication plan regarding diabetes care while at school (e.g. communicating changes in dosing from parent to school nurse (such as logs, texting/emails or independent child's communication with parent and/or school nurse). School nurses should be aware of all communication arrangements.

2. **Diabetes Health Care Provider Orders/DMMP: The orders/DMMP should be obtained annually at the start of each school year and ongoing basis as needed or annually/ongoing based on enrollment in the child care facility for coordination of care.** If ongoing changes to the insulin dosing is a total of +/- 3 units per dose outside the current orders on file, new orders/DMMP are needed to reflect these changes. ***Additional school or district specific medication forms are unnecessary unless they contain additional information not specified for this child's diabetes care or are needed for the care of another chronic condition.***
    - The health care provider may individualize the DMMP per the child's individual needs, which may vary from the Standards but fall within reasonable and safe accommodations.

3. **Monitoring Blood Glucose:** *The child's health care provider should indicate individualized blood glucose target ranges on the child's individual orders/DMMP.*

Standard Target Ranges: The student's target ranges are indicated by the diabetes health care provider on the orders/DMMP. If the target range is not indicated, please refer to ADA recommendations of 70-180mg/dl. *Targets for Continuous Glucose Monitoring Data Interpretation: Recommendations From the International Consensus on Time in Range (Battelino, et al. 2019*) https://doi.org/10.2337/dci19-0028
Health care provider may indicate different target ranges from the ADA recommendations on the child's DMMP.

Notification to Parents*:
Low < target *range* and **High** > 300 mg/dl (unless otherwise indicated on Provider orders/DMMP)
**See Hypoglycemia and Hyperglycemia Sections for notification recommendations*

- The frequency of routine blood glucose monitoring should take into consideration the child's schedule and participation in classroom learning/activities. Too frequent routine glucose monitoring may impact learning and school participation. On average, a child would have routine glucose monitoring one to three times during the school day unless otherwise indicated on orders/DMMP.

4. **Hypoglycemia**
General Guidelines for all children with or without a pump:
    - Child should be treated ***immediately and onsite*** *(i.e. classroom, playground)* if symptomatic or if blood glucose is below *Target Range.* If the child needs to go to the Health Office – the student should be accompanied by responsible person (to be determined in collaboration with the parent, child and school nurse/child care health consultant) as indicated in the child's IHP and/or Section 504 plan.

- The school nurse/child care health consultant should encourage the parent to contact the health care provider for insulin dose adjustments if hypoglycemia occurs frequently (when there are 3 or more days per week with 2 or more blood glucose readings **below target range** at the *same time* of day).
- The amount of carbohydrates used in treatment of mild-moderate hypoglycemia (with or without pump) is based on child's sensitivity to carbohydrates and may be individualized by the parents/guardians and/or specified in the provider's orders/DMMP.
- Do not give insulin for carbohydrates (do not enter in pump) given to treat low blood glucose. The School Nurse/Child care health consultant should discuss with the parent whether the child is given an insulin bolus for snacks immediately following hypoglycemia (School nurse/CCHC to make note on the IHP).
- **Notify Parents after child has been treated for hypoglycemia to avoid delaying treatment. However, in the case of mild hypoglycemia (> 60mg/dl and NO symptoms), the parent may indicate they want to be contacted prior to treatment to determine treatment. This should be indicated on the child's IHP. If parent cannot be contacted, then treatment should be provided immediately per Table 1.**

Table 1: Hypoglycemia Scenario	**Action**
Student reports feeling "low" and/or symptoms are noted by staff or CGM is alarming.	• Check blood glucose (BG) with glucometer or use CGM (If Dexcom G5 <80, check fingerstick). If CGM reads "LO" then check fingerstick • If no meter/sensor is available assume BG is low and treat per symptoms
Mild Symptoms with or without BG below target range or Meter reads "LO": Symptoms: Dizziness, irritability, moodiness, anxiety, hunger, shakiness, sweating (usually cold sweat), rapid heart beat	• If <5 y.o. treat with -7.5g fast-acting carbohydrates* • If >5 y.o. treat with -15g fast-acting carbohydrate* • *Do not give insulin for these carbohydrates* • Recheck BG in 10-15 min (15-20min for CGM). Once glucose level is above 70mg/dl, and child is asymptomatic, child can return to class • If still below *Target Range*, repeat steps until within target range • Once in *Target Range*, consider following with a 15g complex carb **(protein & carb) or protein snack or lunch/meal per parent and/or provider • Follow **Snack/Meal Protocol*** ** (see below)
Moderate Hypoglycemic Symptoms with or without BG target below target range: Symptoms: Confusion, headache, poor coordination	• Check BG with glucometer if available • If unable to drink juice administer glucose gel/cake icing • Recheck BG in 10-15 min (15-20min for CGM) • Re-treat until within *Target Range* • Follow **Snack/Meal Protocol**** (see below)
Severe Symptoms with or without BG below target range: Symptoms: Severe drowsiness, fainting, loss of consciousness, seizures, unable or unwilling to eat or drink or take glucose gel	• **Call 911**! • Check BG with glucometer if available • Administer glucagon per manufacturer's instructions, orders/DMMP ○ Trained personnel should be available for administration of glucagon • Contact/Notify parent

Note: In all cases, notify parents after student has been treated unless otherwise indicated on DMMP/IHP
*Fast-acting carbohydrates can include but are not limited to: juice, glucose tablets, Skittles, honey, regular soda, etc.
**Complex Carb Snack can include crackers and cheese, meat and crackers, apple and cheese, etc.
****Snack/Meal Protocol:*** Do not give insulin (do not enter in pump) for carbohydrates given to treat low blood glucose per IHP.

At mealtime, after blood glucose is within target range, send the student to lunch and give insulin after eating (If on a Hybrid Closed Loop System such as Tandem Control IQ, then the meal bolus may need to be given before meal –see DMMP), based on the grams of carbs only unless otherwise indicated on orders/DMMP. **For Pumps: After eating**, enter grams of carbs eaten into pump and use the pump calculator to determine amount of insulin to be given unless otherwise indicated on orders/DMMP, The BG should not be entered into the pump when determining insulin dose after a low event.

5. Hyperglycemia

General Guidelines:

- The school nurse/child care consultant should take into consideration upcoming activities including PE, lunch dosing, walking home, afterschool activities, etc. when giving insulin corrections.
- For all children (with or without pump), the school nurse/child care health consultant should encourage the parent to contact the health care provider for insulin dose adjustments if hyperglycemia occurs frequently (when there are 3 or more days per week with 3 or more blood glucose readings **above target range** at *same time* of day).
- Whenever a child with T1D has symptoms of illness, nausea, vomiting, and/or stomachache, check ketones. If the school is unable to test for ketones, and the child has any of these symptoms, notify the school nurse. Then the child should be treated/monitored by parent/guardian *outside of school. The presence of ketones may indicate impending* diabetic ketoacidosis (DKA). If symptoms of nausea, vomiting and/or stomachache persist or worsened while at school then call 911.

- Potential pump malfunction: The concern for a student on a pump w/ hyperglycemia is a malfunctioning pump/infusion site failure & the risk of quickly going into DKA. Unlicensed Assistive Personnel should contact school nurse/child care health consultant for further instructions re: insulin by injection or new infusion set by parent or independent student.

  - If pump calculator is not working then the school nurse/child care health consultant may calculate and give insulin according to the child's insulin dosing using this formula*:

$$\frac{\text{Current blood glucose} - 150}{\text{Sensitivity/Correction factor}} + \frac{\text{Grams of carbohydrates}}{\text{Carbohydrate Ratio}}$$

Example: $\frac{275 - 150}{50} + \frac{60}{15} = 6.5\text{units}$

**Once dose is calculated, the school nurse may reference previous doses to check this calculated dose is in the child's range. Alternatively, the school nurse/child care health consultant may contact the health care provider for one-time order for insulin dosing or correction if carb ratio/correction factor dosing is not provided on orders/DMMP.*

Table 2: Hyperglycemia: BG higher than target as indicated in orders/DMMP

Definition of *Symptomatic* as used below*: Flu-like symptoms, nausea and/or vomiting, abdominal pain, severe drowsiness, rapid, shallow or deep breathing, confusion.

Scenario	Action Without Pump	Action With Pump
BG above target but <300 mg/dL once (i.e.: prior to lunch)	• Provide Correction as indicated in orders/DMMP • Recheck in 3 hours, if >300mg/dl – contact school nurse and follow scenario below "*BG >300mg/dl twice for at least 2 hours in duration OR *symptomatic as described above or Meter reads "Hi"*	• Provide correction per pump calculator • Recheck in 2 hours. if greater than 300mg/dl –contact school nurse and follow scenario below "BG>300mg/dl twice in a row"
BG >300 once and non-symptomatic	• Provide Correction as indicated in orders/DMMP if greater than 3 hrs. since last insulin dose • If <3 hours since last dose, recheck at 3 hrs. unless symptomatic (see below if symptomatic)	• Check for ketones • If mod-large ketones, follow scenario below "BG>300mg/dl twice in a row" • See General Guidelines: Potential Pump Malfunction

BG > 300 mg/dL for at least 2 hours in duration. OR ***symptomatic as described above OR** **Meter reads "HI" (use highest reading meter goes to (most meters stop at 600mg/dl)** ***Note: Do not give extra correction if student on a sliding scale before contacting provider for assistance and notify parent.***	• Recheck BG with fingerstick • Check for ketones • Provide water • If mod-large ketones, contact parent/guardian as child should be treated at home. If unable to contact parent, monitor and call health care provider for assistance. • If < 3 hours since last insulin dose recheck blood sugar when >3 hours, then give correction dose per orders/DMMP. • If >3 hours since last insulin dose and no ketones, contact school nurse –may give correction per orders/DMMP.	• This may indicate pump/site malfunction • Pump site will need to be changed by parent/guardian or independent student • ← Follow "Action Without Pump" protocol • Insulin should be given by injection

Hyperglycemia (>180mg/dl but less than 300mg/dl) other than lunchtime and >3 hours since last insulin dose
 	
Note: *If student is on a sliding scale, contact provider first for assistance before giving extra correction and then notify parent*
 	
Note: In general, children on multiple daily injections should not get corrections more than every 3 hours unless specifically indicated by provider on DMMP. Those on a pump may get correction every 2 hours also if indicated by the provider.
	• Contact school nurse/child care health consultant for approval and provide insulin via injection using indicated correction factor on orders/DMMP.
	• If correction factor not available, school nurse should contact Diabetes Health Care Provider for one-time orders.
	• Contact/Notify parent of correction dosing
	• To avoid insulin stacking:
	  ○ If lunch is within 30 minutes at the time of hyperglycemia, wait for lunch and recheck blood glucose prior to dosing.
	  ○ If > than 30 minutes until lunch, give correction now. Then at lunchtime give ONLY insulin for carbs eaten and NO insulin for correction.
		• ← Follow "Action Without Pump" protocol but provide correction per pump calculator
		• If unable to use pump calculator use correction formula provided on orders (See General Guidelines)
		• If no orders available RN should contact Diabetes Health Care Provider for one-time orders
		• Contact/Notify parent if available

• ***If at anytime a child (with or without a pump) has moderate – large ketones or blood ketones ≥ 1.0 and the student has labored breathing, change in mental status and/or may be dehydrated – call 911.***		

6. Exercise and School Attendance:

Table 3: Exercise and School Attendance (for children on insulin injections and/or pump):

IF Child's Symptoms & BG level are…	**and Ketone Level is … then**	**Exercise**	**Stay in School**
≥300mg/dl first time, no symptoms	Not required *unless on pump*	Yes	Yes
≥300mg/dl - 2 consecutive times (for 2 hours or more), no symptoms	Negative to small	Yes**	Yes
≥300mg/dl ***with symptoms****	Negative or any ketones	No	No
≥300mg/dl, with or without symptoms and *urine ketones are moderate-large or blood ketones ≥1.0*	Urine: Moderate-Large or Blood ketones ≥1.0	No	No
≥300, 2 consecutive times, *no symptoms*	*Unable to check ketones*	No	Yes
≥300, with symptoms	*Unable to check ketones*	No	No

*Moderate to Severe symptoms include stomachache, nausea, vomiting, labored breathing, slurred speech, change in mental status, dehydration.

**School nurse/child care health consultant should determine if type of exercise is appropriate, weather conditions (e.g. very hot weather – exercise may not be appropriate), child's hydration status, school's ability to monitor symptoms during exercise, etc.
Note: *Always check blood glucose and/or ketones before exercise if the child is not feeling well.*

7. Insulin Management

- Fast-acting insulins are interchangeable (insulin lispro or Humalog, insulin aspart or Novolog, Apidra) unless child is allergic to a certain brand or otherwise indicated on provider orders/DMMP
- The parent and/or Unlicensed Assistive Personal (UAP) should notify the school nurse/child care health consultant for changes in insulin dosing so the IHP can be updated per orders/DMMP and any further delegation can occur.
- In the school/child care setting, fast-acting insulin is generally given approximately 5-15 minutes prior to lunchtime, unless otherwise indicated on provider orders/DMMP. Since it is difficult to determine precisely when the child will actually eat their meal at school due to varying factors, fast-acting insulin is not given earlier than 10-15 minutes to avoid an episode of hypoglycemia.
- The two-digit rule (a rule using the first 2 digits of the blood glucose reading to determine how much in advance to give insulin prior to a meal, e.g. if blood glucose is 200 then give insulin 20 minutes before eating) for giving insulin prior to meals is not practical in the school setting due to the inability to predict the exact timing of the meal.
- Refer to child's individualized orders/DMMP for snack dosing.
- After 28 days, opened vials/cartridges/pens of insulin will begin to lose their potency and be susceptible to bacteria contamination; therefore the insulin should no longer be used in the school/child care setting.
- School nurse/child care health consultant should notify parent of insulin and glucagon expiration dates in advance so parents can bring in new medication.
- Please check with parents to see if they would like the expired insulin to be returned to them or discarded.
- Long-acting insulin may be given during school / when indicated by the provider (e.g. adherence to insulin regimen is not occurring at home).

8. Pump Management

- The computerized features/calculator of pump should be used for insulin boluses.
- **Delegated staff must always get approval from their school nurse to override pump insulin calculations.**
- **All** blood glucose values and carbohydrate grams (with the exception of treatment for hypoglycemia) must be entered into the pump for delivery of pump-recommended boluses.
- Parents/guardians are responsible for ensuring all pump settings align with orders/DMMP.
- The pump bolus calculator rarely should be overridden (e.g. in dosing changes). Encourage parents to follow-up with their health care provider for insulin pump dose adjustments if frequent overrides are being requested.
- Due to the infrequency of changing sites and the school staff/school nurse/child care health consultant's ability to maintain expertise in insertion of pump infusion sets/CGM sensors, insulin will be given by injection if pump site fails and the BG meter will be used if the CGM fails. In the event of pump infusion set malfunctions, the school staff should contact the school nurse/child care health consultant for further instructions regarding insulin by injection or new infusion set/CGM sensor insertion by parent or independent child. The school nurse/child care health consultant will coordinate with parents/guardians.

9. Continuous Glucose Monitors (CGM)

- CGM systems use a tiny sensor inserted under the skin to monitor glucose levels (ongoing or short term) in interstitial fluid. Some CGMs need to be calibrated using a finger stick glucose reading when readings are stable, approximately two- three times/day, typically outside of school. Parents/independent children are responsible for changing sensor/site. Calibration may need to occur in school if prompted by CGM and should ideally occur when the blood glucose levels are stable (not rising or falling rapidly) typically before meals, and not after meals.
- In the school setting, delegated school staff should respond to low and high BG alarms rather than the constantly fluctuating trends and numbers.
- The FDA has approved non-adjunctive use of the **Dexcom G5** (requires calibration 2x/day), **G6 CGM** and **Freestyle Libre 2 iCGM (**does not need calibration**)** which means that CGM can be used directly to make

treatment decisions without needing to validate with finger-stick blood glucose (BG) values. Please refer to the *Collaborative Guidelines for CGM/iCGM Therapeutic Dosing in the School Setting –Colorado 2020*, www.coloradokidswithdiabetes.org.

- The **benefits of a CGM** in the school/child care setting includes real-time, dynamic glucose information, which enhances the safety of the child and their diabetes control. The school nurse/child care health consultant should support the use of CGMs and establish parameters so that there is little disruption to the student's school activities, thereby, enhancing their education. The use of the CGM in the school setting includes using alarms sparingly and setting alarms for blood glucose levels that require an immediate action/response. This will help the child avoid alarm fatigue, and enhance learning by avoiding unnecessary disruption to their learning in the classroom. Alarms should be set for low BG and high BG when treatment/action is needed (for example: sensor glucose is <80 or >250).
- School and child care 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 management techniques at school (e.g. sugar surfing). Diabetes care at school will be provided in accordance with the regimen prescribed in the child's medical orders.
- Remote monitoring of the CGM in the school/child care setting by school/child care staff is generally not required as the child is usually adult-supervised by trained staff and alarms are used to identify urgent blood glucose levels requiring action. However, in certain unique cases (e.g. preschool age, non-verbal, impaired cognition, severe hypoglycemia unawareness) monitoring/remote monitoring may be appropriate and the school nurse/child care health consultant along with the Section 504 Team, will do an assessment and determine the accommodations based on the child's individual need(s) and the DMMP. When determined appropriate, the school nurse/child care health consultant will indicate these accommodations on a Section 504 plan and the Individualized Health Plan.
- Parents are responsible for setting the alarms and notifying the school nurse/child care health consultant of the parameters. Alarms should be used sparingly and for safety to avoid unnecessary disruption of the child's activities/education. Recommend: set alarms for blood glucose levels that require an immediate action/response.
- Trend Arrows: The health care provider may indicate on the DMMP the use of trend arrows at mealtime in determining insulin dosing/treatment.
  - For the DEXCOM G5 & G6 CGM these trend arrows may be used in treatment decisions (as agreed upon by the school nurse and parent or per DMMP):
    CGM 70-80 with 1 arrow facing down give 7.5gm of fast-acting carbohydrate*
    CGM 70-80 with 2 arrows facing down give 15gms of fast-acting carbohydrate*
    CGM 70-80 with level arrow consider giving complex carb snack (10-15gms of carbs) without insulin bolus per parent and school nurse as indicated on the IHP.
    *No insulin should be given for the treatment of lows or pending lows as described above.

10. **Emerging Pump Technologies in the school setting:** ***(See Addendum A for current FDA approved)*** Collaboration with parents, children, health care providers and school nurses to individualize use and treatment with this new technology is important. (For example: allowing or assisting the child in checking blood glucose levels to enter back into auto mode with the Medtronic 670G pump)

11. **Do-It-Yourself (DIY)** Artificial Pancreas (AP) Systems (e.g. looping): The *Collaborative* does not endorse DIY AP systems due to 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 DMMP/provider order. Support may include inputting glucose and carbohydrate levels into the pump for insulin dosing and hypo-hyperglycemia management.

12. **Multiple Interventions Per Day Outside of DMMP/Provider Orders and/or overriding insulin pump:** In general, regarding care when parents request multiple interventions per day to override or change the DMMP and/or insulin pump's dose calculations - this type of care is beyond "reasonable accommodations" due to the frequent disruptions to the child's education and the potential for error (e.g. causing hypoglycemia). Therefore, the school nurse and school staff cannot provide this type of care in the school or child care setting. *However, the school nurse and school staff may provide hypo-hyperglycemia treatment for the child per Tables 1, 2 & 3 or per*

DMMP. Note: This does not include the occasional changes to insulin dosing as noted above in *#2 Diabetes Healthcare Provider Orders/DMMP.*

13. **InPen Smart Pen:** The InPen is a reusable injector pen that tracks dosing and assists with diabetes management by calculating bolus insulin doses (similar to a bolus calculator in an insulin pump) using a mobile app. It takes into account insulin on board and subtracts insulin when the child is below 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 unless otherwise indicated on the orders/DMMP. If the child is eating additional carbs within 2 hours of previous insulin dose, only the carbohydrate amount should be entered in app calculator. Parents are responsible for maintaining the insulin dose settings within the InPen app.
14. **Self-Care Management:** Ability level to be determined by the parent and provider with consultation from the school nurse and specified on the provider orders/DMMP (which may direct parent and school nurse to set ability level) and then applied to the school setting as specified in the IHP. All children regardless of age or expertise require a plan (e.g. Emergency Action plan, and/or hypo/hyperglycemia flow sheet) and may need assistance with hypoglycemia and illness.
15. **Bus Transportation to Home/Walking Home:** Prior to riding bus or walking home, the child's glucose levels should be above 80mg/dl (unless otherwise indicated in DMMP/IHP) and stable (no down arrow on CGM unless above target). For hyperglycemia, if glucose level is above target range but child's ketone levels are negative-small (check ketones per Tables 2 & 3) and child is asymptomatic, then child may ride the bus or walk home unless otherwise indicated on DMMP/IHP.
16. **Mental Health Considerations:** Children that have been in Day treatment, hospitalized, or have active mental health concerns (e.g. suicide watch) should have a transition plan in place prior to returning to school. The providers, social workers, parents, school staff and school nurse should collaborate to develop the transition plan (e.g. determine safe use of pump, BG monitoring, insulin administrative oversight by school staff).
17. **Non-adherence to diabetes care:** For children not adhering to treatment (not checking BG, not taking insulin, not checking ketones), the school nurse, parent and providers should communicate concerns and collaborate on problem solving interventions as possible.
18. **Children with private duty nurses:** The *Standards of Care* may be individualized or exempt at the discretion of the parents and/or health care provider and per any agreement with the school district.
19. **Emergency Preparedness:** Schools/Parents should develop a plan to have emergency diabetes supplies available for the child in the event of fires, tornados, lockdowns, evacuations, etc. and practice the emergency plan during the school drills. The specifics of the plan may be addressed on the child's Section 504 plan.

NOTE: School and Child Care nurses should determine their individual scope of practice regarding new diabetes treatment therapies and/or diabetes care practices.
https://www.colorado.gov/pacific/dora/Nursing_laws.

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Resources:

1. Colorado Office of Early Childhood http://coloradoofficeofearlychildhood.force.com/oec/OEC_Providers?p=providers&s=Rules-and-Regulations&lang=en
2. Healthy Child Care Colorado: https://healthychildcareco.org/health/child-care-health-consultation/

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ACKNOWLEDGEMENT OF AUTHORS:

Editor: Leah Wyckoff, MS, BSN, RN, NCSN	Instructor, Barbara Davis Center, University of Colorado Diabetes Resource Nurse Team Consultant
G. Todd Alonso, MD	Associate Professor, Barbara Davis Center, University of Colorado
Cari Berget, MPH, RN, CDE	Clinical Research Nurse/Artificial Pancreas Research Team Manager, Barbara Davis Center, University of Colorado
Sarah Blumenthal, MSN, RN	Assistant Director Health and Wellness Unit, Colorado Department of Education
Pam Brunner Nii BSN, RN, NCSN, AE-C	Clinical Resource Coordinator, School Health Program, Children's Hospital Colorado
Theresa Cox, BSN, RN, CDE	Head Nurse, Senior Instructor, Barbara Davis Center, University of Colorado

Kelly Driver, BSN, RN, NCSN	Diabetes Resource Nurse, Douglas County Schools
Christine Fallabel, MPH	Director, State Government Affairs & Advocacy, American Diabetes Association
Greg Forlenza, MD	Assistant Professor, Barbara Davis Center, University of Colorado
Andrea L. Houk, RN, CDE	Diabetes Resource Nurse Team Lead; Living with TID, President of Diabetes Care Services, LLC, Regional DRN El Paso County
Stephanie HSU, MD, PHD	Associate Professor, Pediatric Endocrinology, University of Colorado, Children's Hospital Colorado
Laura Graser RN, BSN	Parent of T1D Student & Diabetes Resource Nurse, JEFFCO Public School
Cheryl Lebsock	Parent of T1D Student
Sunil Nayak, MD	Pediatric Endocrine Associates, Clinical Associate Professor of Pediatrics, University of Colorado School of Medicine
Rebecca Ohman – Hanson, MD	Pediatric Endocrinology & Diabetes, Children's Hospital Colorado, Colorado Springs
Kathleen Patrick, MA, BSN, RN, NCSN, FNASN	Diabetes Resource Nurse Team Consultant, & Retired Assistant Director Health and Wellness Unit, Colorado Department of Education
Theresa Rapstine MS, RN	Coordinator, Healthy Child Care Colorado, Child Care Health Consultant, Children's Hospital Colorado
Kathy L Reiner, MPH, BSN, RN	National Association of School Nurses (NASN) Director, Colorado
Bridget Russum	Parent of T1D student
David Samson, MBA	Area Executive Director, Colorado, Montana, Utah, Wyoming, American Diabetes Association
Mako E. Sather, MSN, CPNP	Rocky Mountain Pediatric Endocrinology
Robert H. Slover, MD	Professor of Pediatrics, University of Colorado Anschutz Medical Campus, Director of Pediatrics, The Barbara Davis Center for Diabetes, Wagner Family Chair in Childhood Diabetes
David Swaschnig, CPNP-PC, CDE	Nurse Practitioner, Barbara Davis Center, University of Colorado
Crystal C. Woodward	Director, Safe at School, American Diabetes Association

Addendum A
Emerging Pump Technologies: FDA Approved

- **Medtronic MiniMed 530/630G Pump with:** Threshold Suspend/Suspend on Low *is a feature on Medtronic pump and CGM systems which automatically suspends* insulin delivery when the sensor glucose is low. When triggered, the pump sounds a siren alarm and requires the user to choose between leaving the basal insulin off or restarting it. If no choice is made, the pump continues to alarm and insulin delivery will remain suspended for up to 2 hours or until the user chooses to resume insulin delivery. While insulin suspension is active, no bolus insulin can be given. If threshold suspend/suspend on low alarms, a fingerstick BG should be done and if BG is below the student's target range, hypoglycemia treatment guidelines should be followed and basal insulin should be resumed once hypoglycemia resolves. For more information: Contact the Colorado Diabetes Resource Nurse for your area, Medtronic pump representative and/or www.coloradokidswithdiabetes.org
- **Medtronic MiniMed 670G with Smartguard Technology** consists of the 670G insulin pump & Guardian 3 CGM. It can operate in two modes: **Manual Mode** and **Auto Mode**. In Manual Mode, the insulin pump delivers basal and bolus insulin per the programmed basal rates and bolus calculator settings, and when using the CGM, also contains two levels of hypoglycemia prevention technology: 1) *Suspend On Low* and 2) *Suspend Before Low*. The user can choose to use either one. *Suspend on Low* is described above. With *Suspend Before Low,* the pump automatically suspends insulin delivery when hypoglycemia is predicted to occur within the next 30 minutes. Thus, it suspends insulin delivery before the sensor glucose is low, in an attempt to prevent hypoglycemia. The pump then automatically resumes insulin (with or without alerts) when hypoglycemia is no longer predicted. In Auto Mode, basal insulin is NOT delivered per the basal rates programmed in the pump, but instead the pump automatically calculates basal insulin delivery every 5 minutes in response to the sensor glucose values, aiming to keep glucose levels in target range more often. When using Auto Mode, there are some situations where the system will exit the user from Auto Mode to Manual Mode **(this is not an emergency).** When the pump exits to Manual Mode, it stops calculating the basal insulin and starts delivering the programmed basal rates. Most often, users can return to Auto Mode by entering a blood glucose level, as prompted by the pump. All children should be allowed and/or assisted in checking blood glucose for re-entry into auto mode. For more information: Contact the Colorado Diabetes Resource Nurse for your area, Medtronic pump representative and/or www.coloradokidswithdiabetes.org.
- **Tandem's Basal-IQ system** consists of the t:slim X2 pump and Dexcom G6 CGM. Basal IQ is a predictive low glucose suspend (PLGS) feature, which will automatically suspend basal insulin delivery when hypoglycemia is predicted to occur within the next 30 minutes. It will automatically resume insulin delivery once the glucose levels start to rise. *May require less carbohydrates when treating hypoglycemia (collaborate with parent and/or as indicated in the health care provider orders).*
- Tandem's Control IQ system is a hybrid closed-loop system that consists of the t:slim X2 pump and Dexcom G6 CGM. Similar to the Basal IQ system, Control IQ utilizes a predictive low glucose suspend (PLGS) feature but will automatically resume insulin delivery only once the glucose level is above target. It also gives automatic correction boluses which will appear in the "insulin on board" calculations, and has an exercise and sleep mode option. Cleared for ages 6 years and older. *May require less carbohydrates when treating hypoglycemia (collaborate with parent and/or as indicated in the health care provider orders).*