

Diabetes: Filling in the Blanks

indicate not concerning, concerning, or greatly concerning

Monitoring Blood Glucose	Assessment	Rationale
<p><i>“Would you show me how you check your Blood Sugar?”</i></p> <p>* See QR codes for specific meter instructions</p>	<p>Has their own blood sugar meter Can demonstrate correct use* Can show you recent memory with recent date If they do not have a sensor, they should be checking blood sugars before each meal and at bedtime at the very least</p> <p>The child does not have their own meter; sharing with another family member; they can't go back through meter memory (correctly dated) and show you recent blood sugars. They have a meter that cannot be downloaded (so that we can see what blood sugars have been and can adjust insulin)</p>	<p>If the patient is currently wearing a sensor, they should still have a meter; patients need to check using fingerstick and a meter instead of trusting the sensor after treating a low blood sugar and if the sensor doesn't match their symptoms. Diabetes care providers can only make decisions based on data including blood sugars, doses and carbs. All 3 are needed in order to adjust insulin.</p>
<p><i>“Is your child wearing a continuous glucose sensor?” (LIBRE, DEXCOM)</i></p> <p>* See QR Codes</p>	<p>Can't find it, or it's somewhere else Doesn't have strips or can't get meter to work Date wrong Family unable or unwilling to give you a logbook, sensor download, meter download or pump download</p> <p>Currently wearing sensor; sharing data*, including meal doses, carbs, times</p> <p>Not currently wearing sensor; has insurance issues</p> <p>Has had them but won't wear or they always fall off</p>	<p>Regardless of how they check and track their blood sugars, if the family cannot show them to you as a meter download, logbook, CGM download or pump download, this means that either they are not looking at blood sugar and/or the provider cannot adjust the insulin. This puts them at high risk of DKA or severe low blood sugar.</p> <p>Sensors are now the Standard of Care. Medicaid covers them. There may be temporary lapses in coverage, but if they are not interested in getting a sensor for the child, that should be a red flag. The parent can see the child's blood sugar from Dexcom if they both are using phones. This makes supervision much easier. If someone can not use their iPhone or Android phone, they would</p>

Giving Insulin	Assessment	Rationale
<p><i>"How does your child receive insulin?"</i></p> <p>Answers could include from a vial and syringe, from an insulin pen, from a SMART PEN (In-Pen) or from an INSULIN PUMP.</p> <p><i>"How do you calculate the dose the child receives?"</i></p> <p>If the patient and family cannot do the math, we may have given them a SLIDING SCALE. See next page. These are answers for patients receiving insulin with a vial and syringe or an insulin pen that does not calculate the dose. See next page for questions about smart devices.</p> <p><i>"Please draw up a dose of 2 units in your syringe or pen and show me how it is injected into this towel"</i></p>	<p>Can tell you:</p> <ul style="list-style-type: none"> • Who supervises and gives each dose • name of the long-acting insulin • what the dose is • time of day taken • name of short-acting insulin • ratio used for breakfast • ratio used for lunch • ratio used for supper • ratio used for snacks • Correction Factor • Target • The process to calculate the meal dose with correction <p>Meal doses are ideally given before the meal. They may be given after the meal if the child is ill or under 5.</p> <p>The insulin should appear perfectly clear; once opened it may be kept at room temperature but unopened vials should be kept in the refrigerator.</p>	<p>The clinic will tell you the last doses patient has been told to use. This will include</p> <ul style="list-style-type: none"> • Long-acting dose • Breakfast ratio • Lunch ratio • Supper ratio • Snack ratio • Correction Factor • Target <p>The dose of short acting insulin is calculated by dividing grams of carb to be eaten by the denominator of the ratio for the meal or snack; this is the Meal Dose; The calculation for correction is:</p> <p>Blood sugar – Target=X X divided by Correction Factor= Y Y + Meal Dose are added to provide the dose given.</p>

Giving Insulin	Assessment	Rationale
<p>"Who gives the insulin?"</p> <p>"Is your child supervised when they get the insulin?"</p> <p>"Would you show me how you calculate and inject a dose of insulin?"</p> <p>(You can have them inject into a towel if it is not time for the child to receive a dose.)</p>	<ul style="list-style-type: none"> • Parent cannot tell you what doses are or how doses are calculated, child under 12 can • The child does not check in with anyone; doses after meal; A1c over 8.5% • Insulin date opened is not marked; school reports they do not have supplies <p>No one is assigned to supervise or give the insulin dose, child is under 12 and/or A1c more than 10% (any age); can't find insulin or it has been in the car or is cloudy</p>	<p>If you would like to see an example of how the dose is calculated, there is an example included at the end of this section. There are also examples that you can ask the parents/patient to do (with answers on the next page!)</p>



Giving Insulin Continued...	Assessment	Rationale
<p>Using a SLIDING SCALE</p> <p>May be only for correction</p> <p>May have different one for each meal</p> <p><i>Example</i></p> <p>if blood sugar</p> <p>100-200 give 3 units</p> <p>201-300 give 4 units</p> <p>301-400 give 5 units</p> <p>Insulin using INPEN</p>	<p>Should be able to show you the Sliding Scale; there should be copy at school and at least one at home.</p> <p>Cannot find a copy of sliding scale at home or none at school.</p> <p>Family can show you how a dose is administered with their In-Pen and can pull up a report; settings match what clinic has ordered.</p> <p>Family can show you how device works, but cannot show you a report or settings do not match what provider says they should be</p> <p>Cannot find pen. App is not on the phone or they can't show it to you. Insulin expired or no insulin to put in pen. Cannot tell you how it works or how to do a report.</p>	<p>Sliding scales are given to parents who are unable to do the math; they are updated at each visit.</p> <p>This indicates that the child is not being given doses we have prescribed.</p> <p>The In-Pen is a pen device that will calculate the dose of insulin for the patient; it records the carbs, dose, and time of the dose the pen delivered.</p> <p>InPen CANNOT TELL YOU THAT THE INJECTION WAS ACTUALLY GIVEN TO THE CHILD.</p> <p>If they cannot produce the device to give insulin to the child, have no record of the insulin having been given, there is no evidence of insulin being given to the child by another method, this is a grave concern.</p>



WHAT TO ASK

Ask **provider** if a download of recent data available; if there is, what it says about the following;

- **Treat low blood sugars**
- **Program insulin for meals**
- **Fill reservoir or pod with insulin and change pod or infusion set, tubing and reservoir every 3 days**
- **Respond immediately to all alerts and alarms. If blood sugar is continually high, the pump is not working and the site should be changed**

ASSESSMENT

- **Not changing pod or infusion set every 3 days, but no ED visits or hospitalizations due to DKA**
- **Do not have pump on their body and cannot show you vials and syringes or pens and pen needles for both short and long-acting insulins. Not changing pod or infusion set every 3 days and having ED visits or hospitalizations due to poor Diabetes control or DKA**
- **Not providing pump data to providers consistently**
- **Not providing pump data to providers after multiple requests**

RATIONALE

This is information that is easiest to tease out from a download of the pump, however we may not have it.

- **Patients/families may make no attempt to upload the data from the pump**
- **May not know how to do or be willing to work with us to teach them**
- **May not be able to afford cell phone that is compatible with pump**
- **If not wearing pump and can't show you how they are administering short and long-acting insulins, this is a grave concern.**

We are here to assist you with pump downloads, including our assessment of their control

Insulin pumps

What to Ask

Assessment

Rationale

*Uses CGM to calculate dosing

<p>"What kind of pump are you using?" "Please show it to me".</p>	<ul style="list-style-type: none"> • Omnipod Dash no tubing • Omnipod 5 * no tubing • Minimed 630 * • Minimed 770 * • Minimed 780 * • Tandem Basal IQ * • Tandem Control IQ * <p>Any pump can fail to maintain blood sugar if it is off for more than an hour at a time or if patient is not changing out every 3 days, or is not attending to alarms.</p> <p>The Omnipod pump can be left on to swim or shower. Other pumps must be taken off and left off for no more than 1 hour. If they must be off longer than that, insulin will have to be given by injection</p>	<p>Omnipod pumps cannot be temporarily removed without injections being given to replace.</p> <p>The others may be temporarily removed for bathing, swimming for an hour or so; if removed for a longer period of time need injection replacement.</p> <p>Because there is nothing in pumps but short acting insulin, if the Cannula is crimped the patient is at high risk for serious, life-threatening DKA (Diabetic Keto-Acidosis). Unfortunately, you cannot see this except by looking at blood sugar and measuring ketones.</p>
<p>"Do you take your pump off?"</p>		
<p>"What do you do when you don't have it on?"</p>		