Pathway for Transition to Subcutaneous Insulin in Patients Presenting in DKA

The following information is intended as a guildeline and as all clinical scenarios cannot be anticipated, it is important to use clinical judgement before starting long-acting insulin in this patient population.

Exclusion Criteria (Please call Pediatric Endocrinology for specific recs for these cases:
Renal failure, Obtundation, Hyperosmolar hyperglycemia, Severe acidosis (pH<7.0), Bicarb <5, Age <12 mo

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Patient in DKA and does NOT meet exclusion criteria. **Utilize DKA protocol and proceed down pathway**.

Newly diagnosed diabetes?

No (Patient has an established insulin regimen)

On BID insulin regimen (NPH and Regular, or 70/30) and ready to transition (see Transition Criteria)

1. Patient should be transitioned to subcutaneous insulin as close to breakfast or dinner as possible. If this is not possible, please contact the on-call Pediatric Endocrinologist for recommendations.

   - For those able to transition at breakfast or dinner, please order diet that is consistent with patient's home consistent carb diet. Be aware that some patients report "carb choices." 1 carb choice = 15g carbs.

   - AFTER food arrives at the bedside, give the prescribed NPH or 70/30 insulin, prior to eating and the patient should eat.

   - The insulin drip should be discontinued 30 minutes AFTER BID insulin is given. Patient must start eating within 30 mins of insulin bolus administration

2. Once subcutaneous insulin regimen has been initiated, continue to check blood glucose levels EVERY 3-4 HOURS or before mealtime (whichever is sooner) and administer short-acting insulin sliding scale (or correction factor) for hyperglycemia if indicated and insulin for carb coverage.
   a. Continue to check urine ketones for every void or serum beta-hydroxybutyrate every 3 hours and continue IV fluid hydration without dextrose until ketones are small/trace. Most patients will continue to have elevated serum ketones and will require frequent subcutaneous doses of insulin and additional fluids to clear ketones.

On Multi-dose regimen (Proceed using home insulin doses)

Yes

Resident or Attending to page the on-call Pediatric Endocrinologist upon admission. Please call for any questions/concerns at any time.
- In the page, please include the patient's **age** and **weight**.
- The Pediatric Endocrinologist will make recommendations for the subcutaneous insulin regimen, to avoid delays at time of transition.

Is patient ready to transition to subcutaneous insulin?

Transition Criteria
-DKA resolved (HCO3≥15, pH >7.25 or serum beta-hydroxybutyrate <1)
-Normal mental status
-Offer sips of water when ready to transition and, if tolerated, proceed .

Yes

No

Continue routine DKA care until ready to transition

1. Discontinue any dextrose-containing fluids prior to eating (be mindful of when food tray will arrive prior to discontinuing)
2. While **CONTINUING insulin drip**
   a. Have the patient/family order food, using the nutrition guidelines below. If family is bringing up food ensure that it is consistent with the amount of carbs being ordered.

Age	Consistent carb diet
Preschool age	45g-45g-45g
School age	60g-60g-60g
Adolescent	75g-75g-75g

   b. AFTER food arrives at the bedside, but prior to eating, check blood glucose and give the recommended dose of short-acting insulin via subcutaneous route
   c. Also administer subcutaneous Glargine dose (as separate injection)
   d. 30 minutes after subcutaneous fast acting insulin, discontinue insulin drip AND ALLOW PATIENT TO EAT. Patients must start eating within 30 mins of insulin bolus administration.
3. Once subcutaneous insulin regimen has been initiated, continue to check blood glucose levels EVERY 3-4 HOURS or BEFORE MEALTIME (whichever is sooner) and administer short-acting insulin sliding scale (or correction factor) for hyperglycemia if indicated and insulin for carb coverage
   a. Continue to check urine ketones for every void or serum beta-hydroxybutyrate EVERY 3 HOURS and continue IV fluid hydration without dextrose until ketones are SMALL/TRACE. Most patients will continue to have elevated serum ketones and will require frequent subcutaneous doses of insulin and additional fluids to clear ketones