

Pediatric DKA PowerPlan for Providers, Nurses and Pharmacists

Cerner PowerChart and FirstNet EDUCATION

At Munson Medical Center, a Pediatric Diabetic Ketoacidosis (DKA) PowerPlan is used in the emergency department and within the hospital to guide the treatment of children 21 years of age and younger with diabetic ketoacidosis utilizing a **two-bag infusion method**.

Two-Bag Infusion Method

The goal of the Pediatric DKA PowerPlan is to standardize the treatment approach for management of pediatric DKA utilizing provider directed fluid adjustment. The two-bag infusion method aligns with consulting and referring centers and clinical partner health systems. Literature support for a two-bag infusion method includes:

- Faster closure of the anion gap
- Earlier correction of acidosis
- Decreased time on IV insulin
- Less hypoglycemia
- Decreased IV fluid waste

Note: BOTH fluid bags **MUST** be present before hanging insulin drip.

Initial Management

- Initial Fluid Bolus**
 - 10 mL/kg bolus of 0.9% sodium chloride
- Maintenance Fluids**
 - To be present before hanging insulin drip
 - **Bag 1:** 0.9% Sodium Chloride +/- Potassium*
 - **Bag 2:** Dextrose 10% / 0.9% Sodium Chloride +/- Potassium*
 - *Depending on serum potassium level. See Electrolyte Abnormalities below
 - When blood glucose is approaching or is less than 300 mg/dL, the dextrose containing solution will need to be y-sited into the NS fluid bag
 - Fall in blood glucose should not exceed 100 mg/dL/hr
 - The two bags will be titrated based on blood glucose and rate of blood glucose fall to maintain the blood glucose within goal
 - Please consider infusing as primary line(s)
 - Fluid entries are found under "DKA Bag 1 PED" and "DKA Bag 2 w/Dextrose PED"
- Insulin Drip**
 - Do NOT bolus insulin
 - Insulin infusion should be started AFTER initial fluid bolus is complete
 - Maintain insulin drip at a constant rate. If blood glucose concentration decreases too quickly (> 100 mg/dL/hr) or falls too low (< 100 mg/dL/hr), notify provider
 - Infuse as a primary line

[Reference text](#) is also included in this PowerPlan.

The screenshot shows the 'Orders' tab in PowerChart. Under 'Plans', 'PEDS DKA' is expanded to show 'DKA - Orders (Planned Pending)' and 'DKA - Resolution (Planned Pending)'. The 'Component' list includes 'Nursing - Peds DKA Instructions' and 'IV Start (Autopage to IV Therapy)'.

Completing the PowerPlan in PowerChart

After selecting the appropriate orders in the PEDS DKA PowerPlan, click Initiate Now or Orders for Signature.

The user will then be required to complete both Dosage Calculator forms:

- Dextrose 25% IVPush
- NS 0.9% IV Bolus

The image shows two overlapping 'Dosage Calculator' windows. The top window is for 'Dextrose 25% IVPush' and the bottom window is for 'NS 0.9% IV BOLUS'. Both windows include fields for 'Dose Values' (Target, Calculated, Adjusted, Final), 'Reference Data' (Date of birth, Sex, Ethnicity, Height, Actual weight, Adjusted weight, Serum creatinine, C/Cl), and 'Dose Forms' (listing various insulin and fluid products). The NS 0.9% IV Bolus window also includes 'Source' and 'Algorithm' dropdown menus.