

Pediatric DKA PowerPlan for Providers, Nurses, and Pharmacists

Cerner PowerChart and FirstNet EDUCATION

At MHC Cadillac, Grayling, Kalkaska, and Paul Oliver Memorial Hospital, a Pediatric Diabetic Ketoacidosis (DKA) PowerPlan is available for use 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 the 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:

- More efficient, effective, and safe closure of anion gap and correction of acidosis
- Decreased time on IV insulin
- Less hypoglycemia
- Decreased IV fluid waste

Initial Management

Initial Fluid Bolus

- 10 mL/kg bolus of 0.9% sodium chloride

Maintenance Fluids

- **Bag 1:** 0.9% Sodium Chloride + 40 mEq Potassium Chloride*
- **Bag 2: Select one option below**
- Dextrose 5% / 0.9% Sodium Chloride + 20 mEq Potassium Chloride*
- Dextrose 10% / 0.45% Sodium Chloride
- *If serum potassium level > 5.5 use fluids that do not contain potassium (0.9% sodium chloride and dextrose 5% / 0.9% sodium chloride)
- 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 in Plum Pump 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

New PEDS DKA PowerPlan

Search and select **PEDS DKA PowerPlan** and check the appropriate orders.

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

Before signing the PowerPlan, user must complete required fields using the appropriate dosage calculator for two of the three continuous infusions.

| Order Name | Status | Start | Details |
|----------------------------------------------------------------|--------|----------------------|----------------------------------------------------------------------------------------------------------------------|
| Dextrose 5%-Sodium Chloride 0.9%+KCl 20 mEq/L IV SOLN 1,000 mL | Order | 8/2/2022 8:52 AM EDT | 1,000 mL, IV, Start 8/2/2022 8:52 AM EDT, mL/hr, Routine, St EDT, **TWO BAG METHOD** This is one of three bags to be |
| Sodium Chloride 0.9%+KCl 40 mEq/L IV... | Order | 8/2/2022 8:52 AM EDT | 1,000 mL, IV, Start 8/2/2022 8:52 AM EDT, mL/hr, Routine, St EDT, **TWO BAG METHOD** This is one of three bags to be |
| NS 0.9% IV BOLUS 10 mL/kg | Order | 8/2/2022 8:52 AM EDT | 10 mL/kg, IV, ONCE, infuse as rapidly as possible, Bolus, P 8:52 AM EDT, Stop 9/1/2022 8:51 AM EDT |

| Base Solution | Bag Volume | Rate | Infuse Over |
|-------------------------------------------------------|---------------|------------|-------------|
| Dextrose 5%-Sodium Chloride 0.9%+KCl 20 mEq/L IV SOLN | 1000 mL | mL/hr | |
| Additive | Additive Dose | Occurrence | |
| Total Bag Volume | 1000 mL | | |