

Diabetic Ketoacidosis (DKA)

Associated Power Plans: EDP Diabetes: DKA Pathway;

PICU: PICU DKA;

Inpt: DKA - Diabetic Ketoacidosis Pathway



Children's Mercy
KANSAS CITY

Evidence Based Practice

Pt presents with known Diabetes Mellitus, suspected new-onset Diabetes Mellitus, or documented glucose > 200
[Diabetes Mellitus epidemiology](#)

Is pt unstable?

Provide appropriate stabilization care

- Nursing action items:**
- Obtain weight (kg)
 - Place on CR and pulse oximetry monitors
 - Assess neurologic status at least every 1 hour
 - Place IV
 - Obtain BMP, iSTAT (AH ED) or venous blood gas (CMK)
 - Assess pt POC chemistries (Blood glucose & Beta-hydroxybutyrate (BOHB [ketones]) every hour
 - Assess vital signs every 2 hours
 - Measure I&O
 - Obtain other labs for new onset diabetes if not previously obtained

Abbreviations excluding labs and radiology:

- DKA = Diabetic ketoacidosis
 HHS = Hyperglycemic Hyperosmolar syndrome
 AH ED = Adele Hall Emergency Department
 POC = Point of Care LOC = Level of consciousness
 I&O = Input & Output NS = Normal saline
 CR = Cardiorespiratory N/V = Nausea/Vomiting
 Pt = Patient PICU = Pediatric Intensive Care Unit
 YR = year CMK = Children's Mercy Kansas

Obtain the following labs if not obtained previously for new onset diabetes:

- HgbA1c
- Insulin antibodies
- GAD antibodies
- IA-2 antibodies
- Zinc transporter 8 antibodies
- C-peptide
- Celiac diagnostic algorithm
- TSH diagnostic algorithm

[See DKA/HHS differentiating algorithm](#)

Is POC Glucose > 500?

Is serum osmolality ≥ 320?

If serum osmolality = 320 - 350 mOsm/kg:

- Call Endocrine on Call for next steps

If serum osmolality ≥ 350 mOsm/kg, admit to PICU:

- [See PICU HHS algorithm](#)

Is the CO₂ /Bicarb ≥ 16 mmol/L?

Call Endocrine on Call for next steps

Has the pt received an IV fluid bolus?

Administer IV bolus of 10 mL/kg over 1-2 hours of isotonic crystalloid [max: 1000 mL] followed by NS at 1.5 maintenance fluids (max: 200 mL over 1 hour)

Is the pt currently using an insulin pump?

Disconnect insulin pump from patient until a Diabetes Team member is available to assess the equipment

Administer basal insulin (glargine), one time only, based on age

- PICU admission criteria for DKA (any of the following):**
- Serum osmolality ≥ 350 mOsm/kg
 - Persistent glucose > 500 mg/dL
 - CO₂/Bicarb:
 - < 10 for pts less than 5 years of age
 - < 5 mmol/L for any age
 - Hemodynamic instability (such as hypotension, significant tachycardia, arrhythmia)
 - Altered LOC
 - Significantly elevated BUN
 - Significant hyperkalemia

- Age dosing for basal insulin (glargine):**
- < 5 YR: 0.2 units/kg
 - ≥ 5 to < 8 YR: 0.3 units/kg
 - ≥ 8 to < 11 YR: 0.4 units/kg
 - ≥ 11 YR: 0.5 units/kg

If N/V consider: Ondansetron

[Initiate Insulin Drip and DKA IV fluids](#)

Does the pt meet any of the PICU admission criteria?

Admit to PICU

Call Endocrine on Call for disposition



QR Code for mobile view

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