

# 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?

Yes → Provide appropriate stabilization care

**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

**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 glucose every hour and BMP every 4 hours
  - \*POC blood ketones can no longer be obtained
- Assess vital signs every 2 hours
- Measure I&O
- Obtain other labs for new onset diabetes if not previously obtained

**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

Is POC glucose > 500?

Is serum osmolality ≥ 350 mOsm/kg AND Bicarb ≥ 16 mmol/L?

Admit to PICU  
[See PICU HHS algorithm](#)

[See DKA/HHS differentiating algorithm](#)

Has the pt received an IV fluid bolus?

No → 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?

Yes → 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

If N/V consider: Ondansetron

**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

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

Does the pt meet any of the PICU admission criteria?

Yes → Admit to PICU

No → Call Endocrine on Call for disposition

**PICU admission criteria for DKA (any of the following):**

- Serum osmolality ≥ 350 mOsm/kg
- Persistent glucose > 500 mg/dL
- CO<sub>2</sub>/Bicarb:
  - < 10 for pts less than 5 yrs of age
  - < 5 mmol/L for any age
- Hemodynamic instability (such as hypotension, significant tachycardia, arrhythmia)
- Altered LOC
- Significantly elevated BUN
- Significant hyperkalemia



QR Code for mobile view

Contact: [EvidenceBasedPractice@cmh.edu](mailto:EvidenceBasedPractice@cmh.edu)

Last Updated: December 2024

For additional information, [link to DKA synopsis](#)

This clinical pathway is meant as a guide for the healthcare provider, does not establish a standard of care, and is not a substitute for medical judgment which should be applied based upon the individual circumstances and clinical condition of the patient. Copyright © The Children's Mercy Hospital 2023. All rights reserved.