CHaD Emergency Services Guidelines

Pediatric DKA Management
(see CHaD DKA protocol on Intranet for full details)

Definition of DKA:
• Blood glucose ≥ 250 mg/dl AND
• Ketonuria AND
• Serum bicarbonate < 15 mEq/L AND/OR
• Capillary pH ≤ 7.30

Consult Pediatric Endocrinology
Arrange for PICU admission

Fluid deficit replacement:
• Assume fluid deficit of 7.5% (= 75 cc/kg)
  • If hypotensive or ↓ peripheral pulses, give 20 cc/kg NS and assume fluid deficit of 10% (= 100 cc/kg)
• Calculate to replace fluid deficit over 48 hours
• Type of fluids: Normal saline, plus
  • Dextrose (goal blood glucose 100-200 mg/dl while on insulin drip)
    • For blood glucose >300 mg/dl → add no dextrose
    • For blood glucose ≤ 300 mg/dl → add 5-10% dextrose
  • Potassium: Add 40 mEq/L of potassium once pt is urinating

Maintenance fluids (in addition to fluid deficit replacement):
• Maintenance fluid requirements =
  4 cc/kg/hr for 1st 10 kg
  + 2 cc/kg/hr for next 10 kg
  + 1 cc/kg/hr for remaining kg
• Type of fluids: based on Corrected Na = measured Na + 0.016 x (glucose – 100)
  • For Corrected Na > 145 mmol/L → use Normal Saline
  • For Corrected Na ≤ 145 mmol/L → use ½ Normal Saline

Insulin drip:
• Regular insulin at 0.1 units/kg/hr
  (no insulin bolus)

Labs:
• Lytes, BUN/creatin, VBG every 2 hrs
• Blood glucose every 60 min
• All urine for glucose and ketones
• Beta-hydroxybutyrate initially and after 4 hrs
• Hgb A1C, IgA and TTG on admission

Watch neurologic status closely
(risk of cerebral edema)