Pediatric Diabetic Ketoacidosis Management Algorithm
Children's Hospital and Research Center Oakland

1) First Hour –
    a. Establish IV (2 if possible).
    b. Labs – venous or capillary blood gas with electrolytes, blood glucose, bun, creat, cbc, phosphorus
    c. Fluid bolus with isotonic fluids – NS, LR, Plasmalyte. 20ml/kg ok. Consider repeat 20 mL/kg ONLY if hemodynamics are unstable.
        i. Goal of fluid resuscitation is to assure perfusion and restore blood pressure NOT to normalize HR and mentation.
        ii. NO Bolus insulin.
        iii. NO sodium bicarbonate UNLESS patient hypotensive or in cardiopulmonary arrest.
2) Second hour –
    a. Recheck blood glucose (hourly)
    b. Assess labs sent in first hour.
    c. Start insulin infusion – NOT bolus insulin
        i. Regular Humulin Insulin 250 units/250mL NS at 0.1 units/kg/hour, or 0.05 units/kg/hr in (toddlers/infants) to 0.1 units/kg/hour.
    d. IV fluids
        i. If K > 5.0 and/or if NO urine output
            1. NS at 1.5 x maintenance
        ii. If K < 5.0 AND urine output documented
            1. NS + 20meq/l KCL + 20 meq/Kphos
                a. (if no Kphos available, then NS + 40 meq/L KCL)
        iii. When glucose <= 250
            1. If K > 5 and/or if NO urine output
                a. D10 NS + 20meq KCL/L + 20 meq Kphos/L
            2. If K < 5 AND urine output documented
                a. D10 NS+ 20meq KCL/L + 20 meq Kphos/L
                b. If no Kphos available, then D10 NS + 40 meq KCL/L
3) Thereafter
    a. Check mentation continuously
        i. If altered mentation,
            1. PUSH 0.5 gm/kg mannitol and/or 6 mL/kg of 3% saline (hypertonic saline) = 3 meq/kg
            2. Consider CT scan
            3. Consider controlling airway
    b. Check glucose hourly
        i. If glucose dropping by > 100 mg/dL consider INCREASING fluids to 2X maintenance and/or INCREASING dextrose in IVF, or TEMPORARILY decreasing insulin infusion.
    c. Check VBG with lytes q 2 hourly
    d. Note: Ice chips generally ok to give patient for dry mouth but otherwise patient remains STRICTLY NPO.