**Diabetes Mellitus: Inpatient Management**

**New Onset Type 1 Diabetes:**

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| **Indications for floor admission:** | **Indications for PICU admission:** |
| Venous pH > 7.25 and Bicarb>15 | Venous pH < 7.25, Bicarb <15 |
| Ketonuria | Need for insulin drip |
| Dehydration and vomiting | Altered mental status |
| Significant electrolyte or renal fxn abnormalities |  |

* **Acute Management on the floor:** Follow the pathway! Here’s the basic:
  + **LABS**
    - **In the ED**: BG q1h, UA, BMP, phos blood gas, CBC, HbA1c
    - **For new diagnosis**: GAD65 +/- TSH, thyroid peroxidase antibody, tissue transglutaminase IgA ( for suspected type 2 CMP, Insulin/c-peptide)
    - **Once on floor**: BG QIDACHS, urine dips qvoid until ketones are cleared (small, trace or negative), +/- daily BMP
  + **IVF:** Rehydrating is most important part of mgmt!
    - **In the ED**: Bolus NS 10-20cc/kg x1hr
    - **Once on floor**: ½ NS + 20mEq KCl + 20mEq(13.6mmol)KPO4 @ 1.5xM
    - **If Na > 145**: Use NS instead of ½ NS to avoid correcting too rapidly
    - **If IVF with KPO4 not available**: Use 40mEq KCl
    - **Dextrose**: Once off insulin drip and tolerating PO, should NOT be on dextrose-containing IVF
    - **Duration**: Most attendings will continue IVF until ketones have cleared (small, trace, negative); others will stop when taking good PO, sugars controlled and otherwise meeting discharge criteria.
    - **INSULIN**: **Insulin drip ONLY in PICU**. Should always begin SQ insulin before stopping insulin drip (in PICU); SQ insulin tx options include basal/bolus with lantus/short acting or NPH/short acting, Current DKA pathway allows for giving lantus 0.4 units/kg at 9 pm for new type 1 >5 yrs and in the morning for new type 1<5 yrs of age.
    - **Patients with established diagnosis with DKA should receive the lantus at their appropriate home dose time**.
      * **Total Daily Dose (TDD):** 0.5-1 unit/kg day [(½ long acting (basal), ½ short acting(bolus divided in three doses)]
      * **NPH and regular/analog**
        + 2/3 of TDD in a.m. (2/3 NPH, 1/3 short acting)
        + 1/3 of TDD in p.m. (2/3 NPH, 1/3 short acting)
      * **Basal/bolus (Lantus/Analog vs. pump)**
        + **Insulin to Carbohydrate Ration (rule of 500):** Carbohydrate coverage ratio = 500 ÷ TDD= units of insulin per g of CHO
        + **Correction Factor (rule of 1800) or sliding scales:** Correction Factor = 1800 ÷TDD = 1 unit of insulin will reduce the blood sugar so many mg/dl
        + **Pump patients:** Always put pump back on a new site after recovery from DKA. If supplies not available, can change to lantus for time being, consult endocrine team.