**MEMO**

**TO:** All Medical, Nursing and Pharmacy Staff  
**FROM:** FIC Endocrine Subcommittee

**DATE:** April 23rd, 2020  
**RE:** COVID Insulin Infusion Protocol for Adult Patients

**Situation:** There is need to provide insulin infusions to markedly hyperglycemic COVID+ and PUI patients while also minimizing room entry for staff safety and conserving PPE.

**Background:** The current Yale New Haven Health Insulin Infusion Protocol (IIP) has been in use since 2011. This protocol targets a blood glucose of 120 to 160 mg/dL and requires frequent blood glucose determinations, every 1 hour, for safe implementation.

**Assessment:** There is opportunity to adapt the current Yale New Haven Health IIP for intravenous insulin delivery needs in COVID+ and PUI patients with a somewhat higher blood glucose range and less frequent blood glucose determinations.

**Recommendation:** Effective April 23rd, 2020 an alternate IIP will be available for use in COVID+ and PUI patients. Key differences to the COVID IIP from the current (non-COVID) IIP are as follows:

1. Higher blood glucose target range of **150 to 199 mg/dL**
2. Blood glucose checks **every 2 hours** with the possibility of every 3 to 4 hours in very stable patients
   a. It is **imperative** that for any adjustments to the infusion rate are based off **HOURLY** rate of change from the prior blood glucose (BG) level
   b. EXAMPLE: BG at 2pm was 150 mg/dL and the next BG at 4pm is 120 mg/dL. The total BG change over 2 hours is a decrease of 30 mg/dL, however, the **hourly rate of BG change** for calculating the insulin rate adjustment is a decrease of **15 mg/dL/hour**
3. Multiple changes in the adjustment values within the Adjusting Infusion Rate section of the protocol. Closely review the COVID Insulin Infusion Protocol for Adult Patients (Nurse-Driven) for these variations.
4. Two new panels with associated nursing and hypoglycemia management orders have been created for the COVID IIP. The protocol should be employed with COVID+/PUI patients with severe persistent hyperglycemia not responding to aggressive titration of SC insulin dosing:
   a. One for use in **critical care units (ALL hospitals in health system)** if BG ≥ 200 mg/dL
   b. A second for use in **non-critical care units (ONLY at Yale New Haven Hospital)** if BG 300-350 mg/dL

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**COVID INSULIN INFUSION PROTOCOL FOR ADULT PATIENTS (NURSE-DRIVEN)**

**CRITICAL CARE UNITS**

**COVID INSULIN INFUSION PROTOCOL FOR ADULT PATIENTS (NURSE-DRIVEN)**

**NON-CRITICAL CARE UNITS**