

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 \geq 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

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