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 hour 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