

# NON-DKA/NON-HHNS ALGORITHM

## INITIAL ADMINISTRATION SET UP (NON-DKA/NON-HHNS)

For situations where the patient has high blood glucose that is unable to be controlled due to circumstances outside of DKA/HHNS:

- sepsis
- receiving steroids
- post-surgical
- poorly controlled diabetic (not yet in DKA/HHNS)

1. After setup of pump, identify blood glucose level of patient upon initiation.

2. Review PRN MAR to identify if Insulin Regular IV Bolus x1 has been ordered. (Follow directions per dosing instructions in MAR.)

3. Start with Algorithm 1

(Exception criteria: patient is s/p cardiac surgery, receiving glucocorticoids, or receiving more than 80 units/day as an outpt then start with Algorithm 2)

4. Identify the appropriate units/hr according to the current blood glucose using Algorithm 1.

(Exception criteria uses Algorithm 2).

For example, if BG 281 utilizing Algorithm 1 the rate would be 3.5 units/hr.

5. Begin following steps in 'Ongoing Blood Glucose Assessment' Column

## ONGOING BLOOD GLUCOSE ASSESSMENT (NON-DKA/NON-HHNS)

6. Check blood glucose every hour and utilize new level to identify the appropriate range color (yellow, green, or red; first box of each section)

For example, if BG 159 this is 'Within Goal Range' which is delineated in the top box as 120-160.

7. Upon color identification, look at each box below range (within the appropriate color) to see which correlates with the current blood glucose level.

For example, if BG 159 and has decreased greater than 30mg/dL (from BG 260) utilize directions within the first green box.

8. Read directions in matching box and adjust insulin infusion as directed.

For example, if BG 159 (previously 260) in algorithm 2 adjust to algorithm 1 with a rate of 1.2 units/hr.

**\*DO NOT STOP insulin infusion more than 30 minutes for DM Type I. Contact MD if stopped longer.\***

**\*DO NOT EXCEED 18 units/hr without MD order\***

*consider using ez Calc on Cerner to assist you!*

9. Repeat steps as above until:

A) remaining 'Within Goal Range' x4 hours, then checks may be every 2 hours

B) appropriate to consider transition to subcutaneous insulin. See 'Transition to Subcutaneous Insulin' on back.

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## TRANSITION TO SUBCUTANEOUS INSULIN (NON-DKA/NON-HHNS)

1. Criteria for discontinuation includes (but is not limited to):

A) low dose algorithm for several hours and remaining in goal range

B) blood glucose is 70-99 in Low Dose Algorithm (turn off infusion for 30 minutes, recheck BG, call MD about discontinuation)

C) 5 units/hr or less

D) blood glucose in goal range for at least 4 hours

**\*and when receiving nutrition (eating, tube feeding, or TPN)\***

2. All patients must be given subcutaneous basal insulin (such as ) at least 2 hours prior to discontinuing insulin infusion.

Basal insulin will help prevent potential rebound hyperglycemia and maintain patient safety upon discontinuation of the insulin infusion.

3. Recommendation to check blood glucose no later than 1 hour after discontinuation of the insulin infusion.

4. Ensure you provide information regarding discontinuation of insulin infusion to oncoming primary RN or transfer RN.

This promotes awareness of potential impact of discontinuation of insulin infusion.

## TREATMENT OF HYPOGLYCEMIA (<70 mg/dL) WHILE ON INSULIN INFUSION (NON-DKA/NON-HHNS)

1. Turn off infusion

2. Follow hypoglycemia treatment orders:

A) administer oral gel or D50 as appropriate to patient

B) repeat fingerstick every 15 minutes and re-treat until blood glucose >110 mg/dL

C) notify MD to re-evaluate diabetic orders

D) if blood glucose remains less than 110 after 2 doses, notify MD immediately

3. Once blood glucose is >110 mg/dL proceed according to 'Ongoing Blood Glucose Assessment' steps beginning with step 1.

Unless directed otherwise directed by MD.