UVA Health

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PLACE LABEL HERE.

IF LABEL NOT AVAILABLE, WRITE IN PT NAME & MR#

# DOWNTIME ADULT ACUTE CARE INSULIN INFUSION FLOW SHEET

## Date:

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**ADDITIONAL COMMENTS / EXPLANATION OF PROTOCOL VARIANCE**

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# NURSING PROTOCOL FOR INSULIN INFUSION IN ACUTE CARE

**Use protocol only when physician's order is in place. NOT FOR USE IN INITIAL TREATMENT OF DKA.**

**TARGET BLOOD GLUCOSE (BG) RANGE: 125 TO 175 mg/dl**

**Accu-Chek™ frequency:** **Perform Accu-Chek™ every hour.**
**Exception: Hypoglycemia (glucose ≤70 mg/dl); test glucose every 15 minutes until >100 mg/dl then resume hourly Accu-Chek™ schedule.**

Symbol Key: ↑(increase); ↓(decrease); > (greater than); < (less than); ≥ (greater than or equal to); ≤ (less than or equal to)

| Minimal Change in BG<br>BG has changed less than 50 mg/dl in the previous hour | BG has DECREASED<br>BG has decreased 50 mg/dl or more in the previous hour | BG has INCREASED<br>BG has increased 50 mg/dl or more in the previous hour |
|---|---|---|
| ≤70* STOP INFUSION | ≤70* STOP INFUSION | ≤70* STOP INFUSION |
| **INITIATE HYPOGLYCEMIA TREATMENT PROTOCOL** | **INITIATE HYPOGLYCEMIA TREATMENT PROTOCOL** | **INITIATE HYPOGLYCEMIA TREATMENT PROTOCOL** |
| 71 – 124 ↓ 1 unit / hr | 71 – 124 ↓ rate 50% | 71 – 124 ↓ by 0.5 unit/hr |
| 125 – 175 no change | 125 – 175 ↓ rate 50% | 125 – 175 no change |
| 176 – 200 ↑ by 0.5 unit/hr | 176 – 200 no change | 176 – 200 ↑ by 0.5 unit/hr |
| 201 – 250 ↑ 1 unit/hr | 201 – 250 ↑ 0.5 unit/hr | 201 – 250 ↑ 1 unit/hr |
| > 250** ↑ 2 units /hr | > 250** ↑ 1.5 units/hr | > 250** ↑ 2 units/hr |

**Notify physician if BG is >250 mg/dl for three consecutive readings.** Physician may order one-time off-protocol increase in infusion rate. In that case, resume hourly BG tests at the next hour *and* resume infusion adjustments per protocol when the glucose is <250 mg/dl. If glucose remains above 250 mg/dl, notify physician.

**Notify physician** when insulin infusion rate reaches 15 units/hour.

***Glucose <40 mg/dl** –repeat test on another meter to ensure accuracy, treat hypoglycemia, and **notify physician**. Physician may send sample to lab for verification.

****Glucose >400 mg/dl** – repeat test on another meter to ensure accuracy, treat hyperglycemia, and **notify physician**. Physician may send sample to lab for verification.

**NUTRITION –** Reduce insulin infusion rate by 50% and notify physician for significant changes in delivery of nutrition (i.e., tube feeding interrupted or discontinued, NPO status, prolonged vomiting).

## HYPOGLYCEMIA TREATMENT PROTOCOL

***Glucose ≤ 70 mg/dl***

☐ Stop insulin infusion

*If patient is conscious and able to eat or drink:*

- Give 15 Gm of carbohydrate
- 3 to 4 glucose tablets (preferred treatment if available without delay) *or*
- 4 oz juice or regular soda or 1 cup skim milk

*If patient is conscious and on tube feedings*

- Give 4 oz apple juice or soda via feeding tube

*If patient is unconscious or unable to eat or drink*

- Give 25 ml (1/2 amp) of Dextrose 50% slow IV push STAT *or* 1 mg Glucagon IM STAT if no IV access.

**Retest BG in 15 minutes**

- Repeat treatment every 15 minutes if needed until glucose is >100 mg/dl (then resume schedule for hourly BG tests)
- Notify MD

**Restart insulin infusion**

- When glucose is ≥ 150 mg/dl
- At 50% previous rate
- Continue hourly BG tests

## CONVERSION TO SUBCUTANEOUS INSULIN

1. The physician should evaluate the continued need for insulin infusion:
   a. Every 8 hours
   b. When glucose remains within target range for 3 hours
   c. When patient is tolerating solid food or enteral feeding

2. Stop insulin infusion and begin subcutaneous insulin administration per physician order. *Note:* Subcutaneous intermediate acting or long-acting insulin (e.g., NPH or Glargine) should be given at least 4 hours prior to stopping the infusion. During the transition to subcutaneous insulin, meals require coverage with Regular insulin.

## TRANSPORT OF PATIENT DURING INSULIN INFUSION

The physician will decide if infusion can be temporarily stopped for transport, and may order subcutaneous insulin as coverage during the transport. If the infusion cannot be stopped, an insulin infusion-competent nurse must accompany the patient. If staffing does not allow the patient to be accompanied, then consideration is given to delaying the procedure. Take the Insulin Infusion Travel Kit during transport after adding a glucose meter.