

Location: _____

Nursing**Fingerstick Blood Glucose (FSBG) Monitoring**

- ☒ **Bedside glucose monitoring** Every hour, 4, Hours, S, Routine, Blood, Now, then every 1 hour for 4 occurrences, then every 2 hours until BHB < 0.6. If/when DKA protocol is discontinued, continue every 2 hour checks for the next 4 hours after the last dose of insulin is administered.

Nursing

- ☒ **Mild DKA worksheet** Until discontinued, Routine

Notify

- ☒ **Notify Provider** Until discontinued, Routine, - If glucose is LESS THAN 70 mg/dL AFTER following hypoglycemia protocol. - If glucose is LESS THAN 120 mg/dL: do not administer any more insulin and notify provider immediately. - If potassium is LESS Than 3.5 mEq/L and do NOT initiate or continue insulin, treat potassium per DKA/HHS potassium replacement protocol and initiate/resume insulin only once potassium is GREATER THAN 3.5 mEq/CL. - If potassium is GREATER THAN 5 mEq. - If at the first 4 hour lab check there is an NO CHANGE or an INCREASE in the BHB from prior value - If blood glucose is LESS THAN 200 mg/dL and BHB <0.6 mmol/L (Resolution of DKA) to consider transition to basal-bolus insulin. - If at the 8 hour lab check DKA is not resolved (i.e. blood glucose LESS THAN 200 mg/dL and BHB LESS THAN 0.6 mmol/L).

DKA Potassium Replacement

- ☒ **DKA/HHS Potassium Replacement Protocol** Until discontinued, S, Routine, Provider will order 1st potassium replacement dose if needed. Then RN to follow the 'DKA/HHS Potassium Replacement Scale Protocol' order set, using 'Per Protocol' for associated orders.
Provider will order 1st potassium replacement dose if needed. Then RN to follow the 'DKA/HHS Potassium Replacement Scale Protocol' order set, using 'Per Protocol' for associated orders.

IV Fluids**Initial IV fluids**

- ☒ **Initial IV fluids**

☒ **lactated ringers bolus** 1000 mL, intravenous, once, 1, Occurrences, 60.000 Minutes

- ☐ **Subsequent IV fluids (Rates adjusted by following protocol every two hours based upon BG reading)** (Required)

- ☒ **LR and D10W DKA IV Fluids** (Required)

- ☒ **lactated Ringer's (LR) infusion for DKA** 0 - 250 mL/hr, intravenous, titrated
LR Titration:

For:

Glucose greater than 299 mg/dL: 100% hourly fluid rate

Glucose 200 - 299 mg/dL: 50% hourly fluid rate

Glucose 150 - 199 mg/dL: 30% hourly fluid rate

Glucose 100 - 149 mg/dL: 10% hourly fluid rate

Glucose 70 - 99 mg/dL: 0% hourly fluid rate

Glucose less than 70 mg/dL: 0% hourly fluid rate - HOLD Insulin and send blood glucose to lab confirmation.

- ☒ **dextrose 10 % (D10W) infusion for DKA** 0 - 250 mL/hr, intravenous, titrated

D10W Titration:

For:

Glucose greater than 299 mg/dL: 0% hourly fluid rate.

Glucose 200 - 299 mg/dL: 50% hourly fluid rate

Glucose 150 - 199 mg/dL: 70% hourly fluid rate

Glucose 100 - 149 mg/dL: 90% hourly fluid rate

Glucose 70 - 99 mg/dL: 100% hourly fluid rate

Glucose less than 70 mg/dL: 100% hourly fluid rate - HOLD Insulin and send blood glucose to lab confirmation.

Initial Electrolytes Replacement**Potassium**

Sign: _____ Printed Name: _____ Date/Time: _____

☐ **Potassium Replacement**

Initial Potassium Replacement			
Potassium Level (mEq/L)	Potassium Chloride Dose	Monitoring	Comments
LESS than 3.0	80 mEq oral or IV	HOLD insulin until potassium >3.5 mEq/L Re-check in 1 hour (IV) or 2 hours (oral), then RN to follow DKA/HHS Potassium Replacement Scale Protocol	Oral route preferred. Give IV if unable to tolerate PO intake. Total dose may be given as a combination of IV/PO.
3.0 – 3.5	60 mEq oral or IV		
3.6 – 4.0	40 mEq oral or IV		
4.1 – 5.0	20 mEq oral or IV		
GREATER than 5.0	No replacement	Repeat potassium level in 2 hours For subsequent replacement and monitoring, RN to follow DKA/HHS Potassium Replacement Scale Protocol	

☐ **Potassium LESS than or EQUAL to 3.3**
☐ **Oral replacement - Potassium**

☒ **potassium chloride (K-DUR) CR tablet** once, 1, Occurrences

Hold Paramaters:

☒ **potassium chloride (KLOR-CON) packet** 20 , once, 1, Occurrences

Hold Paramaters:

Dissolve the contents of 1 packet in 4 ounces of water or other beverage

☐ **Peripheral IV - potassium 60 mEq** 10 mEq, intravenous, every 1 hour, 6, Occurrences

Recheck level 1 hour after the end of IV administration and reapply orders if needed. If the potassium is less than 3.3 mEq/L, it MUST be administered FIRST prior to giving the insulin. ONCE the potassium current level is assessed, if potassium is required, it MUST be administered first prior to giving the insulin. Rate of administration should be adjusted according to patient tolerance.

Sign: _____ Printed Name: _____ Date/Time: _____

☐ **Central IV - potassium 60 mEq** 20 mEq, intravenous, every 1 hour, 3, Occurrences
For Central Line Only; Recheck level 1 hour after the end of IV administration and reapply orders if needed. If the potassium is less than 3.3 mEq/L, it MUST be administered FIRST prior to giving the insulin. ONCE the potassium current level is assessed, if potassium is required, it MUST be administered first prior to giving the insulin. Recheck level 1 hour after the end of IV administration and reapply orders if needed.

☐ **Potassium 3.4 - 4.0**

☐ **Oral replacement - Potassium**

☒ **potassium chloride (K-DUR) CR tablet** once, 1, Occurrences

Hold Parameters:

☒ **potassium chloride (KLOR-CON) packet** 20 , once, 1, Occurrences

Hold Parameters:

Dissolve the contents of 1 packet in 4 ounces of water or other beverage

☐ **Peripheral IV - potassium 40 mEq** 10 mEq, intravenous, every 1 hour, 4, Occurrences

Recheck level 1 hour after the end of IV administration and reapply orders if needed.

Rate of administration should be adjusted according to patient tolerance.

☐ **Central IV - potassium 40 mEq** 20 mEq, intravenous, every 1 hour, 2, Occurrences

For Central Line Only; Recheck level 1 hour after the end of IV administration and reapply orders if needed.

☐ **Potassium 3.4 - 4.0**

☐ **Oral replacement - Potassium**

☒ **potassium chloride (K-DUR) CR tablet** once, 1, Occurrences

Hold Parameters:

☒ **potassium chloride (KLOR-CON) packet** 20 , once, 1, Occurrences

Hold Parameters:

Dissolve the contents of 1 packet in 4 ounces of water or other beverage

☐ **Peripheral IV - potassium 40 mEq** 10 mEq, intravenous, every 1 hour, 4, Occurrences

Recheck level 1 hour after the end of IV administration and reapply orders if needed.

Rate of administration should be adjusted according to patient tolerance.

☐ **Central IV - potassium 40 mEq** 20 mEq, intravenous, every 1 hour, 2, Occurrences

For Central Line Only; Recheck level 1 hour after the end of IV administration and reapply orders if needed.

☐ **Potassium 4.1 - 5.2**

☐ **Oral replacement - Potassium**

☒ **potassium chloride (K-DUR) CR tablet** once, 1, Occurrences

Hold Parameters:

☒ **potassium chloride (KLOR-CON) packet** 20 , once, 1, Occurrences

Hold Parameters:

Dissolve the contents of 1 packet in 4 ounces of water or other beverage

☐ **Peripheral IV - potassium 20 mEq** 10 mEq, intravenous, every 1 hour, 2, Occurrences

Recheck level 1 hour after the end of IV administration and reapply orders if needed.

Rate of administration should be adjusted according to patient tolerance.

☐ **Central IV - potassium 20 mEq** 20 mEq, intravenous, every 1 hour, 1, Occurrences

For Central Line Only; Recheck level 1 hour after the end of IV administration and reapply orders if needed.

☐ **Potassium GREATER than 5.0**

☒ **Potassium level** Once, 1, Occurrences, Routine, Blood, 3

Sodium Phosphate IV

☐ **For phosphorus level less than 2.5 mg/dL** 20 mmol, intravenous, once, 1, Occurrences

Magnesium Replacement

☐ **Magnesium 1.5-2.0** 2 g, intravenous, once, 1, Occurrences

☐ **magnesium 1.0-1.4** 3 g, intravenous, once, 1, Occurrences

Insulin Management

Protocol not indicated for ESRD patients. Use IV insulin via the DKA/HHS Order Set.

Long-Acting Subcutaneous Insulin (Required)

Sign: _____ Printed Name: _____ Date/Time: _____

☐ **insulin glargine (LANTUS) injection - Patient's Home Dose** 100 , subcutaneous, every 24 hours, S
DO NOT HOLD glargine without a prescriber order. If glucose is less than 80 mg/dL, call prescriber for possible dose change.

☐ **insulin glargine (LANTUS) injection** 0.3 Units/kg, subcutaneous, every 24 hours, S
DO NOT HOLD glargine without a prescriber order. If glucose is less than 80 mg/dL, call prescriber for possible dose change.

Fast-Acting Subcutaneous Insulin (Required)

☒ **insulin lispro (ADMELOG) injection** 0.3 Units/kg, subcutaneous, once, 1, Occurrences
X1 dose

☒ **insulin lispro (ADMELOG) injection** 0.2 Units/kg, subcutaneous, every 4 hours
Every 4 hours until Resolution of DKA

Hypoglycemia Management

☐ **Hypoglycemia Management for Adult Patients** (Required)

☒ **Hypoglycemia management - Monitor patient for signs and symptoms of HYPOglycemia and follow standing delegation orders** Per unit protocol, Routine, CLICK REFERENCE LINK TO OPEN ALGORITHM:

☒ **dextrose 50% intravenous syringe** 12.5 g, intravenous, every 20 min PRN, If blood glucose is between 41-69 mg/dL, low blood glucose
For blood glucose between 41-69 mg/dL, give ½ cup juice if patient is able or dextrose 50% intravenous solution 12.5 g (25mL) IV push ONCE.

Contact the provider and recheck blood glucose in 20 minutes until glucose is greater than 100 mg/dL.
DO NOT give further insulin until ordered by a provider

☒ **dextrose 50% intravenous syringe** 25 g, intravenous, every 20 min PRN, if blood glucose is less than or equal 40 mg/dL, low blood glucose
Recheck bedside glucose every 20 min until glucose greater than 100 mg/dL.

☒ **glucagon injection** 1 mg, intramuscular, every 15 min PRN, if patient NPO, unable to swallow safely with no IV access., low blood glucose

If glucose remains LESS than 70 mg/dL, after 2 doses of D50 or Glucagon, send serum glucose level STAT.
Initiate treatment immediately after lab drawn.

Do NOT delay treatment waiting for lab result.

Recheck blood sugar every 20 min until greater than 100 mg/dL.

Notify Provider.

☒ **dextrose 10 % infusion** 40 mL/hr, intravenous, continuous PRN, For bedside glucose LESS than 70 mg/dL
For use after administration of dextrose 50% x 2 and subsequent glucose value LESS than 70 mg/dL.

Notify Provider, consider transfer to ICU. Check Glucose every hour while on D10 infusion. Titrate infusion by 10 mL per hour to keep glucose between 100 and 140 mg/dL.

Notify provider when ANY/ALL of the following occur:

-Dextrose 10% infusion is started

-If glucose is less than 70 mg/dL while on dextrose 10% infusion

-When dextrose 10% infusion rate is increased to greater than 100 mL/hr

Labs

Laboratory - STAT and Repeat

☒ **Blood gas, venous** STAT, 1, Occurrences, Routine, Blood, 3

☒ **Serum ketones (Beta hydroxybutyrate)** Now then every 4 hours, 3, Days, Routine, Blood, 3, Draw until diabetic ketoacidosis resolves.

☒ **Lactic acid level - ONE TIME ORDER ONLY** STAT, 1, Occurrences, Routine, Blood, 3
SEPSIS PATIENTS:

FOR ALL SEPSIS OR SUSPECTED SEPSIS CHANGE FREQUENCY TO: NOW THEN EVERY 3 HOURS FOR 3 OCCURRENCES

☒ **Comprehensive metabolic panel** STAT, 1, Occurrences, S, Routine, Blood, 3

☒ **Basic metabolic panel** Every 4 hours, 3, Occurrences, Routine, Blood, 3

☒ **Magnesium** Now then every 4 hours, 3, Occurrences, S, Routine, Blood, 3

☒ **Phosphorus** Now then every 4 hours, 3, Occurrences, S, Routine, Blood, 3

☒ **CBC with differential** STAT, 1, Occurrences, Routine, Blood, 3

☒ **Hemoglobin A1c** STAT, 1, Occurrences, Routine, Blood, 3

Sign: _____ Printed Name: _____ Date/Time: _____

☒ **Urinalysis screen and microscopy, with reflex to culture** STAT, 1, Occurrences, Routine, Urine

Specimen Source: Urine

Specimen Site:

Specimen must be received in the laboratory within 2 hours of collection.

☒ **Blood culture, aerobic and anaerobic x 2**☒ **Blood culture, aerobic and anaerobic x 2**Most recent Blood Culture results from the past 7 days:

@LASTPROCRESULT(LAB462)@

Blood Culture Best Practices (<https://formweb.com/files/houstonmethodist/documents/blood-culture-stewardship.pdf>)☒ **Blood culture, aerobic & anaerobic** Once, Routine, Blood, Collect before antibiotics given. Blood cultures should be drawn from a peripheral site. If unable to draw both sets from a peripheral site, please call the lab for assistance; an IV line should NEVER be used.☒ **Blood culture, aerobic & anaerobic** Once, Routine, Blood, Collect before antibiotics given. Blood cultures should be drawn from a peripheral site. If unable to draw both sets from a peripheral site, please call the lab for assistance; an IV line should NEVER be used.☐ **Amylase** STAT, 1, Occurrences, Routine, Blood, 3☐ **Lipase** STAT, 1, Occurrences, Routine, Blood, 3☐ **Sputum culture** STAT, 1, Occurrences, Routine, Sputum☐ **Creatine kinase, total (CPK)** STAT, 1, Occurrences, Routine, Blood, 3☐ **Troponin T** STAT, 1, Occurrences, Routine, Blood, 3**Other Diagnostic Tests****Diagnostic Tests**☒ **Chest 1 Vw Portable** 1 time imaging, Routine

Is the patient pregnant?

Release to patient (Note: If manual release option is selected, result will auto release 5 days from finalization.):

☒ **ECG 12 lead** STAT, 1, Occurrences, Routine, 6

Clinical Indications: ○ Other:

Other: DKA

Interpreting Physician:

Consults**Consults**☒ **Pharmacy Consult for Notification of SQ Insulin DKA Patient** Until discontinued, Routine☒ **Consult to Diabetes Education** Once, Routine

Reason for Consult:

Reason for Consult?

Note: Do NOT hold discharge for diabetes education

Sign: _____ Printed Name: _____ Date/Time: _____