**Height**_____________________
**Weight**_____________________
**Allergies**_____________________

### General

**Diet**

- [ ] Diet NPO
  
  Diet effective now, Starting S
  NPO Except: Sips of clear liquids
  Diet Comments:

- [ ] Advance diet as tolerated
  
  Once
  Target Diet: Diet Liquid

- [ ] Diet Diabetic
  
  Diet effective now, Starting S
  Diet, Diabetic:
  Select/Nonselect:
  Additional Modifiers:
  Viscosity/Liquids:
  Texture:
  Fluid Restriction / day:
  Supplement:
  Diet Comments:

### Notify Provider

- [X] Notify provider
  
  Routine, Until discontinued, Starting S
  Pulse greater than:
  Respiratory rate less than:
  Respiratory rate greater than:
  Temperature greater than (celsius):
  Urine output less than (mL/hr):
  Systolic BP greater than:
  Systolic BP less than:
  Diastolic BP greater than:
  Diastolic BP less than:
  Other:
  * Potassium level greater than 5 mEq/dL, Sodium greater than 145
  * When blood glucose falls below 250 to assess for DKA resolution
  * If patient moves down one algorithm on the insulin infusion chart
  * Blood glucose less than 70 mg/dL
  * pH less than 7.2 on repeat results
  * Patient is receiving greater than 20 units insulin/hr

**Provider's Initial: ____________________________**
**Notify Provider for insulin infusion discontinuation**

- Routine, Until discontinued, Starting S
- Pulse greater than:
- Respiratory rate less than:
- Respiratory rate greater than:
- Temperature greater than (celsius):
- Urine output less than (mL/hr):
- Systolic BP greater than:
- Systolic BP less than:
- Diastolic BP greater than:
- Diastolic BP less than:
- Other:
- Call provider to transition to insulin per Glycemic Control
- Subcutaneous Orders when all criteria met for diagnosis:

**Criteria for insulin infusion discontinuation (HHS):**
- * Serum glucose less than 250mg/dL
- * Anion gap less than or equal to 12 mEq/L
- * Patient is tolerating clear liquids

**Criteria for insulin infusion discontinuation (DKA):**
- * Serum glucose less than 200mg/dL
- * Serum bicarbonate greater than or equal to 18 mmol/L
- * Venous pH greater than 7.3
- * Anion gap less than or equal to 12 mEq/L
- * Patient is tolerating clear liquids

### Ancillary Consult

[ ] Inpatient consult to Diabetes educator

**Reason for Consult?**

### Labs

**POCT Labs**

[X] **POCT glucose**

- Routine, Every hour, Starting S
- * If result shows "HI" or "LOW" place stat serum glucose "per written order".
- * Continue hourly then modify this order to frequency of every 2 hours once 3 consecutive blood glucose results within goal range (100 mg/dL - 180 mg/dL).

### DKA Panel

[ ] **Comprehensive metabolic panel**

- STAT, Starting S For 1 Occurrences

[X] **Lipase**

- STAT For 1 Occurrences

**Provider's Initial:** _________
**DIABETIC KETOACIDOSIS (DKA) AND HYPERGLYCEMIC HYPEROSMOLAR SYNDROME (HHS)**

<table>
<thead>
<tr>
<th>Test Description</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>CBC and differential</td>
<td>STAT For 1 Occurrences</td>
</tr>
<tr>
<td>pH Venous</td>
<td>STAT For 1 Occurrences</td>
</tr>
<tr>
<td>Ketones, urine</td>
<td>STAT For 1 Occurrences</td>
</tr>
<tr>
<td>Hemoglobin A1c</td>
<td>STAT For 1 Occurrences</td>
</tr>
<tr>
<td>Blood Culture - Adult</td>
<td></td>
</tr>
<tr>
<td>Blood culture - Specimen #1</td>
<td>STAT For 1 Occurrences</td>
</tr>
<tr>
<td>Blood culture - Specimen #2</td>
<td>STAT For 1 Occurrences</td>
</tr>
<tr>
<td>Troponin I - 3, 6, 12 hour timed study</td>
<td></td>
</tr>
<tr>
<td>Troponin I</td>
<td>Q3 hours, Starting S For 2 Occurrences 3 and 6 hours after the first set of enzymes.</td>
</tr>
<tr>
<td>Troponin I</td>
<td>In 12 hours For 1 Occurrences 12 hours after the first set of enzymes.</td>
</tr>
<tr>
<td>CK isoenzymes - 3, 6, 12 hour timed study</td>
<td></td>
</tr>
<tr>
<td>CK total and CKMB</td>
<td>Q3 hours, Starting S For 2 Occurrences 3 and 6 hours after the first set of enzymes.</td>
</tr>
<tr>
<td>CK total and CKMB</td>
<td>In 12 hours For 1 Occurrences 12 hours after the first set of enzymes.</td>
</tr>
<tr>
<td>Lactic acid, arterial, whole blood</td>
<td>Once</td>
</tr>
<tr>
<td>TSH</td>
<td>Once</td>
</tr>
<tr>
<td>Pregnancy, urine</td>
<td>Once</td>
</tr>
<tr>
<td>Ketones, qualitative (if urine Ketones absent)</td>
<td>Once</td>
</tr>
<tr>
<td>Urinalysis (culture if indicated)</td>
<td>Once, MICROSCOPIC WILL REFLEX WHEN: Blood trace or greater, Protein 1+ or greater, Leukocyte Esterase 1+ or greater, Nitrate +, Clarity other than clear (CPT Code 81001)</td>
</tr>
<tr>
<td>TPN 10 Panel</td>
<td>&quot;And&quot; Linked Panel</td>
</tr>
<tr>
<td>TPN panel 10</td>
<td>Every 2 hours, Starting S with First Occurrence Include Now For 3 Occurrences In conjunction with electrolyte protocol do not draw patient's blood more than every 2 hours.</td>
</tr>
</tbody>
</table>

Provider’s Initial: ____________
**DIABETIC KETOACIDOSIS (DKA) AND HYPERGLYCEMIC HYPEROSMOLAR SYNDROME (HHS)**

**PATIENT INFORMATION**

**TPN panel 10**
- Every 6 hours
- Discontinue when anion gap is less than 12.

**Continue TPN panel 10 stat every 6 hours until anion gap is less than 12**
- Routine, Until discontinued, Starting S, Continue TPN panel 10 stat every 6 hours until anion gap is less than 12. Then enter order for TPN Panel 10 Daily with “per written order, no cosign required”. In conjunction with electrolyte protocol do not draw patient’s blood more than every 2 hours.

**Imaging**

**Diagnostic Tests**

- **ECG 12 lead**
  - STAT, Once
  - Reason for Exam (Signs & Symptoms): Hx of Diabetes Mellitus

- **X-ray chest PA or AP**
  - STAT, 1 time imaging For 1
  - Reason for Exam: Other (Please Specify)
  - Is the patient pregnant?
  - Reason for Exam (USE SIGNS AND SYMPTOMS):
    - Transport Mode: Bed

**IV Fluids**

**IV Fluids - Initial**

- **sodium chloride 0.9% (NS) infusion**
  - Routine, IntraVENous, 30 mL/kg, Continuous, For 2 Hours. 15 ml/kg/hr for 2 hours. Call physician for IVF orders for hemodialysis or heart failure patients.
  - Note to pharmacy: call physician for IVF orders for hemodialysis.

**IV Fluids - Maintenance (Single Response)**

**If Na+ less than or equal to 145 mmol/L**

- **sodium chloride infusion 0.9%**
  - Routine, IntraVENous 250 mL/hr, Continuous PRN, other, For blood sugar greater than 250mg/dL and if Na+ less than or equal to 145 mmol/L
  - Change to D5 NS when the blood sugar is 250 mg/dL or less.
  - Note to pharmacy: call physician for IVF orders for hemodialysis

**Provider’s Initial:**
### Medications

**Pharmacy Consult Insulin Drip - Highline Only**

<table>
<thead>
<tr>
<th>[ ]</th>
<th>Highline Only Pharmacy Consult for Insulin Drip</th>
<th>Routine, Once</th>
</tr>
</thead>
</table>

**Pharmacy Consult**

<table>
<thead>
<tr>
<th>[X]</th>
<th>Pharmacy general consult</th>
<th>Routine, Once</th>
</tr>
</thead>
</table>

**Insulin Regimen**

- **Insulin Regimen - Select Your Patient's Nutritional Intake Pattern**

Any previous inpatient insulin orders (except an insulin infusion, when transitioning from Intravenous to Subcutaneous insulin) should be discontinued when writing new insulin orders using this order set.

**NOTE:** Correctional insulin only options are not appropriate for type 1 diabetics or for patients with fasting glucose values above 150 mg/dL.

For those patients transitioning from an insulin infusion:

- Total Daily Dose (TDD) = average hourly insulin drip rate for last 6 hours, multiplied by 20 (20% reduction).
- Give basal insulin 2 hours prior to stopping the infusion.

**Provider's Initial:**

---

**DIABETIC KETOACIDOSIS (DKA) AND HYPERGLYCEMIC HYPEROSMOLAR SYNDROME (HHS) [1550]**

<table>
<thead>
<tr>
<th>[ ]</th>
<th>dextrose 5 % and NaCl 0.9 % infusion</th>
<th>250 mL/hr, IntraVENous, Continuous PRN, For blood sugar less than 250mg/dL and if Na+ less than or equal to 145 mmol/L. Note to pharmacy: call physician for IVF orders for hemodialysis.</th>
</tr>
</thead>
</table>

If Na+ greater than 145 mmol/L

<table>
<thead>
<tr>
<th>[ ]</th>
<th>sodium chloride 0.45% (HALF SALINE) infusion</th>
<th>250 mL/hr, IntraVENous, Continuous PRN, For blood sugar greater than 250mg/dl and if Na+ greater than 145 mmol/L. Change to D5 1/2NS when the blood sugar is 250 mg/dL or less. Note to pharmacy: call physician for IVF orders for hemodialysis patients.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>[ ]</th>
<th>dextrose 5 % and NaCl 0.45 % infusion</th>
<th>250 mL/hr, IntraVENous, Continuous PRN, For blood sugar less than 250mg/dL and if Na+ greater than 145 mmol/L. Note to pharmacy: call physician for IVF orders for hemodialysis patients.</th>
</tr>
</thead>
</table>
**DIABETIC KETOACIDOSIS (DKA) AND HYPERGLYCEMIC HYPEROSMOLAR SYNDROME (HHS)**

**INSULIN INFUSION - Start at Algorithm 1**

**DO NOT abruptly stop insulin drip. Failure to overlap therapies will result in recurrence of DKA.**

**Blood glucose should be decreased by 60-100 mg/dL per hour. Do not exceed algorithm 3 or 24 units per hour.**

**If patient does not meet any criteria notify provider for further direction.**

**No insulin to be given until initial potassium result verified. If potassium is less than 3.3 mEq/dL, hold insulin until corrected potassium replacement initiated.**

ALWAYS START ON ALGORITHM 1

1. If blood glucose decreases by greater than 100 mg/dl, decrease one algorithm or if on algorithm 1 reduce insulin infusion by half and call physician.
2. If blood glucose does not decrease by 60 mg/dl, increase one algorithm.
3. If blood glucose decreases between 60-100 mg/dl, follow current algorithm.
4. If blood glucose is less than 109 mg/dl, stop infusion and restart at next lower algorithm when glucose is greater than 120 mg/dl. If on algorithm 1, restart on same algorithm when glucose is greater than 120 mg/dl.

**Insulin Drip Algorithm for DKA and HHS 0.9%NaCl 100 mL/regular insulin 100 units (Concentration 1 unit/mL)**

<table>
<thead>
<tr>
<th>BG Units/hour</th>
<th>Algorithm 1</th>
<th>Algorithm 2</th>
<th>Algorithm 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 109 OFF</td>
<td>0.5</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>109-119</td>
<td>2</td>
<td>120-149 1</td>
<td>120-149 1.5</td>
</tr>
<tr>
<td>120-149 1.5</td>
<td>150-179 2</td>
<td>150-179 2</td>
<td></td>
</tr>
<tr>
<td>150-179 4</td>
<td>180-209 3</td>
<td>180-209 3</td>
<td></td>
</tr>
<tr>
<td>180-209 6</td>
<td>210-239 4</td>
<td>210-239 4</td>
<td></td>
</tr>
<tr>
<td>210-239 8</td>
<td>240-269 5</td>
<td>240-269 5</td>
<td></td>
</tr>
<tr>
<td>240-269 10</td>
<td>270-299 6</td>
<td>270-299 6</td>
<td></td>
</tr>
<tr>
<td>270-299 12</td>
<td>300-329 7</td>
<td>300-329 7</td>
<td></td>
</tr>
<tr>
<td>300-329 14</td>
<td>330-360 8</td>
<td>330-360 8</td>
<td></td>
</tr>
<tr>
<td>330-360 16</td>
<td>Greater than 360 12</td>
<td>Greater than 360 12</td>
<td></td>
</tr>
<tr>
<td>Greater than 360 6</td>
<td>Greater than 360 24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Provider’s Initial:** _________
**Patient Information**

**Insulin aspart (NovoLOG) injection**

3-6 Units, SubCutaneous, 3 times daily with meals

**Nutritional Insulin**

If patient remains on insulin infusion while eating, do not adjust the infusion within 2 hours of giving insulin aspart, but continue to check BG every hour. Insulin aspart needs to be given before the meal or if uncertain that the patient will eat, give after.

- If patient eats less than 50% of meal - give 3 units of insulin aspart subcutaneously
- If patient eats greater than or equal to 50% of meal - give 6 units of insulin aspart subcutaneously

**Will this be administered via an insulin pump?**

**Hypoglycemia Protocol**

**[X] Hypoglycemia Protocol (Blood glucose less than 70 mg/dL)**

Routine, As needed, Starting S, 1. If patient awake and able to take PO - give 4 oz of clear regular soda (i.e. Sprite)

2. If patient awake and unable to take PO - give 25 ml 50% dextrose in water (D50W) IV push

3. If patient obtunded (due to hypoglycemia) - give 50 ml 50% dextrose in water (D50W) IV push

4. Recheck blood glucose in 15 minutes. If blood glucose less than 70 mg/dL, repeat above treatment. Recheck blood glucose every 30 minutes until greater than or equal to 80 mg/dL.

5. If glucose remains less than 70 mg/dL after 2 doses of soda/dextrose, then notify provider

**[X] dextrose 50% IV**

25-50 mL, IntraVENous, As needed, low blood sugar, see admin instructions

1. If patient awake and unable to take PO - give 25 ml 50% dextrose in water (D50W) IV push.

2. If patient obtunded (due to hypoglycemia) - give 50 ml 50% dextrose in water (D50W) IV push.

**[X] Glucagon (human recombinant) (GLUCAGEN) injection**

1 mg, IntraMuscular, Once, when indicated (remains on MAR), low blood sugar, For blood sugar less than 70 If patient unable to take PO AND no IV access. Give glucagon 1 mg IM x 1 dose only. Turn patient on side as nausea and vomiting frequently occur. Notify provider. Obtain IV access and start D5W if deem appropriate by provider. Routine.

**Provider's Initial:**

---

**CHI Franciscan Health**

**Provider Orders**

**Patient Information**

**Diabetic Ketoacidosis (DKA) and Hyperglycemic Hyperosmolar Syndrome (HHS)**

Page 7 of 9
**Electrolyte Protocol**

<table>
<thead>
<tr>
<th>[X] Electrolyte Protocol</th>
<th>Electrolyte Replacement Protocol: Critical Care (ICU/PCU)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>If creatinine greater than 3 mg/dL and/or documentation</td>
</tr>
<tr>
<td></td>
<td>of Renal Failure or Dialysis, contact physician for</td>
</tr>
<tr>
<td></td>
<td>specific replacement orders.</td>
</tr>
<tr>
<td></td>
<td>RN to order specific medication needed based on the</td>
</tr>
<tr>
<td></td>
<td>following lab results: Potassium less than 4.1,</td>
</tr>
<tr>
<td></td>
<td>Magnesium less than 1.8, Ionized Calcium less than</td>
</tr>
<tr>
<td></td>
<td>1.12, and Phosphorus less than 2.6. Use ORAL when able.</td>
</tr>
<tr>
<td></td>
<td>If multiple electrolytes to be replaced, please consult</td>
</tr>
<tr>
<td></td>
<td>pharmacist.</td>
</tr>
</tbody>
</table>

| [X] Potassium | As needed PRN. Check level 1 hour post infusion or 4 hours after oral dose(s) and replace per order. |
| [X] Calcium, ionized | As needed PRN. Check level 2 hour post infusion or 4 hours after oral dose(s) and replace per order. |
| [X] Magnesium | As needed PRN. Check level 2 hour post infusion or 4 hours after oral dose(s) and replace per order. |
| [X] Phosphorus | As needed PRN. Check level 2 hour post 50 mEq IV infusion and replace per order. Check level in AM after ORAL or 20 mEq or 30 mEq IV infusion and replace per orders. |

**Electrolyte Protocol (Single Response)**

( ) Labs for Electrolyte Replacement - Med Surg or Med Surg/Tele

[ ] Electrolyte Replacement Protocol: Med Surg or Med Surg/Tele

If creatinine greater than 3 mg/dL and/or documentation of Renal Failure or Dialysis, contact physician for specific replacement orders.

[ ] Potassium

As needed PRN. Check level 1 hour post infusion or 4 hours after oral dose(s) and replace per order.

[ ] Calcium, ionized

As needed PRN. Check level 2 hour post infusion or 4 hours after oral dose(s) and replace per order.

**Provider's Initial:** __________
<table>
<thead>
<tr>
<th>Magnesium</th>
<th>As needed PRN. Check level 2 hour post infusion or 4 hours after oral dose(s) and replace per order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>As needed PRN. Check level 2 hour post 50 mEq infusion and replace per order. Check levels in AM after phosphate powder dose or phosphate 20 mEq or 30 mEq IV infusion and replace per orders.</td>
</tr>
</tbody>
</table>

**Labs for Electrolyte Replacement - Critical Care (ICU/PCU)**

<table>
<thead>
<tr>
<th>Electrolyte Replacement Protocol: Critical Care (ICU/PCU)</th>
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<tr>
<td>Calcium, ionized</td>
<td>As needed PRN. Check level 2 hour post infusion or 4 hours after oral dose(s) and replace per order.</td>
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<tr>
<td>Magnesium</td>
<td>As needed PRN. Check level 2 hour post infusion or 4 hours after oral dose(s) and replace per order.</td>
</tr>
<tr>
<td>Phosphorus</td>
<td>As needed PRN. Check level 2 hour post 50 mEq infusion and replace per order. Check levels in AM after phosphate powder dose or phosphate 20 mEq or 30 mEq IV infusion and replace per orders.</td>
</tr>
</tbody>
</table>

**DATE** **TIME** **ORDERING PROVIDER PRINT NAME**

**PROVIDER SIGNATURE**

**DATE** **TIME** **RN ACKNOWLEDGED**