### Diabetes Management – Subcutaneous Insulin Therapy NPO Order Set (Adult)

**See Suggestions for Management on Reverse***

**Consider intravenous insulin therapy with prolonged NPO status***

**Non-insulin antihyperglycemic agents or corticosteroid therapy may impact glycemic control***

#### Capillary Blood Glucose Monitoring

- **qd and prn**
- **Other**: q___ h

#### Scheduled Insulin

- **Discontinue all previous insulin orders**

<table>
<thead>
<tr>
<th></th>
<th>Subcutaneous at 0800 h</th>
<th>Subcutaneous at 2000 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-Acting Twice Daily</td>
<td>□ Insulin glargine</td>
<td>_______ units</td>
</tr>
<tr>
<td></td>
<td>□ Insulin detemir</td>
<td></td>
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<tr>
<td>OR</td>
<td>□ Insulin glargine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>□ Insulin detemir</td>
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<tr>
<td>Long-Acting Once Daily</td>
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<tr>
<td>Basal Insulin</td>
<td>□ Insulin glargine</td>
<td></td>
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<td></td>
<td>□ Insulin detemir</td>
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<tr>
<td>OR</td>
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<tr>
<td>Intermediate-Acting Twice Daily</td>
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<tr>
<td></td>
<td>□ Insulin NPH</td>
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#### Correction Dose Insulin Algorithms

**Use Titratable Medication Administration Record***

- **Administer insulin aspart subcutaneously in addition to scheduled insulin dose with capillary blood glucose measurements.**

_select one of the following algorithms:_

- **Insulin Sensitive**: for patients requiring 40 units or less of scheduled insulin/day
- **Usual**: for patients requiring 40 to 80 units of scheduled insulin/day
- **Insulin Resistant**: for patients requiring 80 units or more of scheduled insulin/day

<table>
<thead>
<tr>
<th>Capillary Blood Glucose (mmol/L)</th>
<th>□ Insulin Sensitive (units)</th>
<th>□ Usual (units)</th>
<th>□ Insulin Resistant (units)</th>
<th>□ Individual (units)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1 to 12.0</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>12.1 to 14.0</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>14.1 to 17.0</td>
<td>6</td>
<td>8</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>17.1 to 20.0</td>
<td>8</td>
<td>10</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>20.1 to 22.0</td>
<td>10</td>
<td>12</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Over 22</td>
<td>12</td>
<td>14</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

[Pharmacy Use Only: Reviewed by: ____
Entered by: ____
Checked by: ____]
SUGGESTIONS FOR SELECTING A BASAL-BOLUS REGIMEN IN AN NPO PATIENT

**Step 1. Calculate Starting Total Daily Dose (TDD) of Insulin**

For patients previously on insulin:
Calculate the total daily dose of insulin by adding up all the doses of insulin they take in an usual day.

For patients previously not on insulin:
- Use 0.3 units/kg/day if patient has “insulin sensitivity” (lean or malnourished patients, elderly, acute or chronic kidney disease (especially dialysis-requiring))
- Use 0.4 units/kg/day in “usual” patients (no features of insulin sensitivity or insulin resistance)
- Use 0.5 – 0.6 units/kg/day if patient has “insulin resistance” (obese patients or receiving high doses of glucocorticoids)

Adjust TDD up or down based on:
- Past response to insulin
- Presence of hyperglycemia inducing agents (e.g. corticosteroids), stress

**Step 2. Determine Scheduled Insulin Dose**

Give 50% of the TDD as basal insulin. If patient was not on insulin prior to hospitalization, start the basal insulin at 2000 h, the day of admission.

Glargine or detemir are preferred as they are non-peaking, long acting insulins that provide continuous action.

Do not give bolus (mealtime) insulin as patient is not eating.

**Step 3. Select an Appropriate Correction (Supplemental) Insulin Scale QID**

Correction (supplemental) insulin: usually rapid-acting insulin. Frequent use suggests a need to modify the basal insulin dose.

Initially select the Correction Dose Insulin Algorithm that matches the total daily dose of scheduled insulin per day.

**Step 4. Low-dose dextrose infusion (D5 at 75-125 ml/hr) recommended for prolonged NPO status**

Example:
80 kg obese woman admitted for hip replacement
Step 1: TDD = 80 kg x 0.5 units/kg/day = 40 units
Step 2: Give 50% basal (20 units)
Select glargine or detemir 20 units typically given at 2000 h
OR
10 units given at 0800 h and 2000 h
Step 3: Select “Usual” Correction Dose Insulin Algorithm as total daily dose of scheduled insulin per day is 40 units
Step 4: Start D5 at 75 to 125 mL/hour

**For Patients Previously Controlled on Non-Insulin Antihyperglycemics**

May use Correction Dose Insulin Algorithm alone for patient with type 2 diabetes