Interior Health

Billie, Rubin
DOB 01/02/1955~~7~~

INSULIN SUBCUTANEOUS ORDERS
ADULT – Eating / Bolus Enteral Feeds

Weight (kg)
79.37 kg

Bulleted orders are initiated by default, unless crossed out and initialed by the physician / prescriber. Boxed orders (☐) require physician / prescriber check mark (☑) to be initiated.

NOTE: COMPLETE A NEW PPO FOR ANY SINGLE CHANGE TO THE PREPRINTED ORDER.
DO NOT USE FOR PATIENTS ON AN INSULIN PUMP (PPO # 826387) OR FOR INTRAPARTUM CARE (PPO # 829384 or # 829385)

1. **ALLERGIES:** See Allergy / ADR record

2. **BLOOD GLUCOSE MONITORING** *(see back of page for guide)*
   - ☑ All times listed on this line ****OR**** ☐ Breakfast ☐ Lunch ☐ Supper ☐ 2200 H
   - ☐ 0200 H *(no insulin to be administered at this time)*
   - Follow Acute Care Adult Hypoglycemia Protocol *(#829518)* if blood glucose is less than 4 mmol / L
   - Notify physician of poor glucose control, including hypoglycemia or hyperglycemia *(see back of page)*

3. **CALCULATION OF TOTAL DAILY DOSE [TDD]**
   - Patient's TDD = sum of all insulins in a 24-hour period = _____ **units** *(see back of page for calculation if not known)*

4. **INSULIN – SCHEDULED BASAL / BOLUS** – BASAL dose calculated at ½ TDD; BOLUS dose calculated at ½ TDD
   - **Discontinue all previous insulin orders** *(see back of page for therapeutic interchange and Formulary equivalent conversion)*

BASAL [check one]	Before Breakfast	Before Lunch	Before Supper	Bedtime 2200 H	
☐ glargine	units	units	units	units	Usually given at 2200H ****OR**** split dose with 50% AC breakfast and 50% at 2200H
☑ NPH	6 units	units	units	6 units	
Non Formulary: Use Patient's Own *Concentration Alert*					
☐ degludec 100 unit / mL (Tresiba®)					
☐ degludec 200 unit / mL (Tresiba®)					
☐ glargine 300 unit / mL (Toujeo®)	units	units	units	units	

BOLUS	Before Breakfast	Before Lunch	Before Supper	Bedtime 2200 H	Give within **15 min before meals**
☑ aspart ☐ Patient may self-adjust*	4 units	4 units	4 units	Not recommended	*Prescriber to write dose range, patient to choose, nurse to document administered dose

5. **INSULIN – CORRECTION** – **MUST select ONE box for mealtimes and ONE box for bedtime correction**
   Mealtimes: ☐ No insulin correction ****OR****
   ☑ add SUBCUT aspart *(dose from table below)* **to each mealtime BOLUS insulin dose**
   Bedtime: ☑ No insulin correction ****OR****
   ☐ give SUBCUT aspart at one-half (½) of the correction dose *(from table below)* at 2200 H

☑ ISF: 4 If TDD 30 units or less		☐ ISF: 3 If TDD 31 to 50 units		☐ ISF: 2 If TDD 51 to 80 units		☐ ISF: 1 If TDD 81 units or more		☐ CUSTOM	
Blood glucose	Insulin	Blood glucose	Insulin	Blood glucose	Insulin	Blood glucose	Insulin	Blood glucose	Insulin
				4.1 – 8	0 units	4.1 – 8	0 units		units
				8.1 – 10	1 unit	8.1 – 10	2 units		units
		4.1 – 8	0 units	10.1 – 12	2 units	10.1 – 12	4 units		units
4.1 – 9	0 units	8.1 – 11	1 unit	12.1 – 14	3 units	12.1 – 14	6 units		units
9.1 – 12	1 unit	11.1 – 14	2 units	14.1 – 16	4 units	14.1 – 16	8 units		units
12.1 – 16	2 units	14.1 – 17	3 units	16.1 – 18	5 units	16.1 – 18	10 units		units
16.1 – 20	3 units	17.1 – 20	4 units	18.1 – 20	6 units	18.1 – 20	12 units		units
20 or greater	☐ Call MD ☐ See CUSTOM	20 or greater	☐ Call MD ☐ See CUSTOM	20 or greater	☐ Call MD ☐ See CUSTOM	20 or greater	☐ Call MD ☐ See CUSTOM		Call MD

ISF = Insulin Sensitivity Factor *(see back of page for calculation)*

6. **INSULIN – SCHEDULED PREMIXED** – **Do not order with other Basal or Bolus insulin. ISF not recommended.**
   - **Discontinue all previous insulin orders** *(see back of page for therapeutic interchange and Formulary equivalent conversion)*

PREMIXED	Before Breakfast	Before Lunch	Before Supper	Bedtime 2200 H	Give within **15 min before meals**
Sound-A-Like Drug Alert ☐ HumaLOG® **MIX 25** *(lispro 25% + lispro protamine 75%)*	units	units	units	Not recommended	TDD usually split – breakfast and supper

Date *(dd/mm/yyyy)*	Time	Prescriber's Signature	Printed Name or College ID#
Day # 0 post op.	1445		01234

Therapeutic Interchange Protocol and Formulary Equivalent Conversion Table

Pre-hospital (at home insulin)	Dose conversion	Insulin supplied
BASAL		
detemir (Levemir®)	reduce by 20%	glargine (Lantus®)*
glargine (Basaglar® or Lantus®)	unit-per-unit	glargine (Lantus®)
NPH (NovoLIN®ge NPH)	unit-per-unit	NPH (HumuLIN® N)
degludec 100 unit/mL **OR** 200 unit/mL (Tresiba®)	no substitution – use Patient's Own Med	
glargine 300 unit/mL (Toujeo®)	no substitution – use Patient's Own Med	
BOLUS		
aspart (Fiasp®), glulisine (Apidra®), lispro (HumaLOG®), regular (NovoLIN®ge Toronto, HumuLIN® R)	unit-per-unit	aspart (NovoRapid®)
PREMIXED		
HumuLIN® 30/70, NovoLIN®ge 30/70, NovoMix® 30	unit-per-unit	HumaLOG® **MIX 25**

* Note: administer glargine (Lantus®) twice daily if patient was on detemir (Levemir®) twice daily

Guidelines for Completion of the Insulin Subcutaneous Orders – Adult (Eating)

- The EATING PPO should be used for adults on **intermittent** (bolus) enteral feeding. Use the NPO PPO for adults on **continuous** enteral feeding and, at the discretion of the physician, for patients receiving clear fluids.
- All adult insulin orders (except stat orders) must be on an appropriate Preprinted Order (PPO).

BLOOD GLUCOSE MONITORING

- Meal time blood glucose testing is to be done within 30 minutes **before** each meal.
- **Note**: The 0200 H blood glucose is to assess the 2200 H basal dose – *no correction insulin is to be given.*

PHYSICIAN NOTIFICATION – required to assess and to change insulin orders:

- **Immediately** (or at least before next insulin dose) for severe hypoglycemia (hypoglycemia requiring assistance).
- **Within 24 hours** (e.g. during the next day's visit to the patient care unit) for:
  - Consistently low blood glucose (where 50% or more of the glucose values are between 4.0 and 5.0 mmol/L)
  - Mild hypoglycemia – requiring oral treatment
  - Hyperglycemia (where 50% or more of the blood glucose values are greater than 11 mmol/L).

INSULIN DOSING – ONCE TOTAL DAILY DOSE (TDD) IS KNOWN

Note: A decrease in insulin may be required in patients with Type 2 diabetes who have liver failure, decreased eGFR (less than 30 mL/min) or those who are not eating well. Increased insulin doses (usually at breakfast and lunch) may be needed if patient is on corticosteroids or if an infection is diagnosed.

TDD depends largely on weight. To calculate TDD if not known:

- Type 1 or slim Type 2 (BMI less than or equal to 25): TDD = weight × 0.3 to 0.6 units/kg = _____ units/24 H
- Type 2 obese (BMI greater than 25): TDD = weight × 0.3 *(if insulin naïve)* to 1 unit/kg = _____ units/24 H
- **BASAL insulin is required to cover rise in blood glucose between meals and overnight.**
  - Use the pre-admission basal insulin dose **OR**
  - Calculate based on weight with dose estimated at ½ of TDD.
- **BOLUS insulin is required to cover rise in blood glucose due to meals.**
  - Use the pre-admission meal (bolus) dose **OR**
  - Calculate dose (½ of TDD) divided equally amongst the three meals **OR**
  - Some patients, especially Type 1 diabetics, may achieve better control if allowed to determine their meal time dose to match food intake. Physicians should select a reasonable dose range after consultation with these patients. Nurse to document on appropriate Insulin Administration–Blood Glucose record.
- PREMIX insulin used only in Type 2 diabetes. Breakfast dose can vary from 50% to 70% of the TDD dose given.

INSULIN CORRECTION DOSE – CALCULATION OF ISF (Insulin Sensitivity Factor)

- Additional insulin **added** to the **meal** (bolus) dose to correct elevated blood sugars, based on how sensitive the patient is to insulin.
- Not recommended for patient's on premixed insulin.
- **Insulin Sensitivity Factor** (ISF) = the blood glucose drop in mmol/L per unit of insulin given.
  - **ISF calculation** = 100 divided by TDD. If TDD is 50, the ISF = 2 (100/50). 1 unit of insulin will drop blood glucose by 2 mmol/L.
  - The greater the pre-admission insulin dose, the less sensitive the patient is to insulin.
  - Select one column on the correction scale based on the calculated ISF.
  - **Note:** Physicians may select correction for a blood glucose greater than 20 mmol/L. This is not encouraged and should be the exception. They should include a blood glucose limit for when to call a physician.
- **HS correction** – doses = 50% of ISF correction dose. Round down odd numbered doses (e.g. ½ of 5 = 2 units)
- **If correction doses have been necessary, add the correction amount to the TDD. Follow blood glucose and reassess. Adjust basal and bolus doses until correction dose is no longer required.**