

Appendix, Figure 1. Trial Profile

Appendix: Insulin Protocol

Insulin initiation and titration protocol

Insulin Naïve T2D Patients Treated with Oral Agents or GLP1-RA Prior to Admission

- Discontinue antidiabetic drugs
- Starting total daily insulin dose (TDD):
 - 0.4 U/Kg/day when randomization BG between 140-200 mg/dL
 - 0.5 U/Kg/day when randomization BG between 201-400 mg/dL
 - TDD was reduced to 0.3 U/Kg/day in patients ≥ 70 years of age and/or with an eGFR < 60 ml/min.
- Half of TDD was given as basal insulin and half as rapid-acting insulin.
- Basal insulin was given once daily, at the same time of the day.
- Rapid-acting insulin was given in three equally divided doses before meals.
- To prevent hypoglycemia, if a subject was not able to eat, prandial insulin dose was held.

Patients T2D Treated with Insulin Prior to Admission

- Discontinue antidiabetic drugs
- Subjects treated with insulin prior to admission received 80% of the total daily dose (TDD) given as basal bolus regimen.
 - Half of TDD were given as basal insulin and half as rapid-acting insulin.
 - Basal insulin was given once daily, at the same time of the day.
 - Rapid-acting insulin was given in three equally divided doses before meals.
 - To prevent hypoglycemia, if a subject was not able to eat, prandial insulin was held.

Insulin Titration Protocol

Standard of care group: insulin adjustment was based on point of care capillary glucose values on the previous 24 hours.

CGM group: insulin adjustment was based on the previous 24-hour CGM glucose profile.

Basal Insulin adjustment.

- Daily basal insulin dose was adjusted as following:
 - If the fasting and pre-dinner glucose values were between 100 - 140 mg/dl in the absence of hypoglycemia the previous day: no change
 - If the fasting and pre-dinner glucose values were between 141 - 200 mg/dl in the absence of hypoglycemia: increased basal insulin by 10% every day
 - If the fasting and pre-dinner glucose values were between 201 - 280 mg/dl in the absence of hypoglycemia: increased basal insulin by 20% every day
 - If the fasting and pre-dinner glucose values were >281 mg/dl in the absence of hypoglycemia the previous day: increased basal insulin (glargine) dose by 30% every day
 - If the fasting and pre-dinner glucose values were between 70 - 99 mg/dl in the absence of hypoglycemia: decreased TDD (basal and prandial) insulin dose by 10% every day
 - If glucose values were <70 mg/dL, the insulin TDD (basal and prandial) decreased by 20%.
 - If glucose values were <40 mg/dL, the insulin TDD (basal and prandial) decreased by 30-40%.

Supplemental/correction insulin protocol:

- If a patient was able and expected to eat most of his/her meals, supplemental insulin was administered before meals and at bedtime following the “usual” dose of the insulin scale protocol.
- If a patient was not able to eat, supplemental insulin was administered every 6 hours following the “sensitive” dose of the supplemental insulin scale protocol.
- Table indicates number of units to be added to scheduled insulin dose.

BEFORE MEAL, Supplemental Sliding Scale Insulin (number of units) - Add to scheduled insulin dose.

****Check appropriate column and cross out other columns**

*BG (mg/dL)	<input type="checkbox"/> Insulin Sensitive	<input type="checkbox"/> Usual	<input type="checkbox"/> Insulin Resistant
< 141	No sliding scale (supplemental)insulin		
141 – 180	2	3	4

181 – 220	3	4	6
221 – 260	4	5	8
261 – 300	5	6	10
301 – 350	6	8	12
351 – 400	7	10	14
> 400	8	12	16

BEDTIME Supplemental Sliding Scale for BG > 220 mg/dL

***BG (mg/dL)** ☐ **Insulin Sensitive** ☐ **Usual** ☐ **Insulin Resistant**

< 220	No sliding scale (supplemental) insulin		
221 – 260	1	2	4
261 – 300	2	3	5
301 – 350	3	4	6
351 – 400	4	5	7
> 400	5	6	8

*BG by POCT will be used in the standard of care group and CGM values at time of insulin administration will be used for those in the Dexcom CGM group.