# Use of the eGlycemic Management Solution by Glytec Achieved ADA Glycemic Targets with Low Hypoglycemia for Patients Managed on Subcutaneous Insulin Therapy

Melanie Mabrey, DNP, ACNP-BC, BC-ADM, FAANP ; Joseph Aloi, MD; Paul Chidester, MD; Jagdeesh Ullal, MD;
Amy B. Henderson, RN, BSN; Raymie S. McFarland, PT; Robby Booth, BS

## OBJECTIVE

American Diabetes Association guidelines recommend a basal bolus correction insulin regimen as the preferred method of treatment for non-critically ill hospitalized patients. The target for premeal blood glucose (BG) of <140 mg/dL and random BG of <180 mg/dL are well defined. However, achieving these targets safely, without hypoglycemia, is challenging. With this study we evaluated glycemic control with fasting and pre-prandial BGs for patients using Glucommander Subcutaneous (GM SubQ) treatment for insulin therapy.

## METHODS

769 patients treated with GM SubQ insulin therapy were evaluated. Qualifying patients had two BGs > 180 mg/dL in 24 hours and required insulin. The target glucose was set at 100-140 mg/dL fasting and pre-prandial. The safety and efficacy was evaluated at the following time points: before each meal (breakfast, lunch, dinner) and at bedtime via (1) BG averages (2) BG reductions (3) Hypoglycemic events <70 mg/dL and <40 mg/dL.

## RESULTS

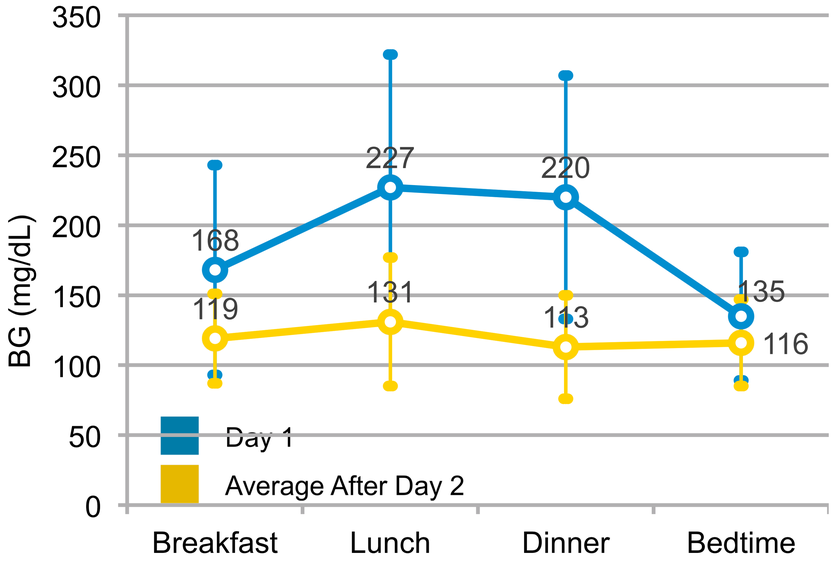
Patients treated on GM SubQ achieved an average pre-prandial BG at breakfast of 119 mg/dL, lunch 131 mg/dL, dinner 126 mg/dL and bedtime of 116 mg/dL. Initial BG average was 227 mg/dL. BG average over length of stay was 132 mg/dL.

Reduction of BG at breakfast was 84 mg/dL, lunch 106 mg/dL, dinner 100 mg/dL, and bedtime 105 mg/dL. Average BG reduction was 98.75 mg/dL. Hypoglycemia <70 mg/dL at breakfast was 2.3%, lunch 1.9%, dinner 3.0% and bedtime 2.0%. Hypoglycemia <40 mg/dL at breakfast was 0.0%, lunch 0.1%, dinner 0.1% and bedtime 0.1%.

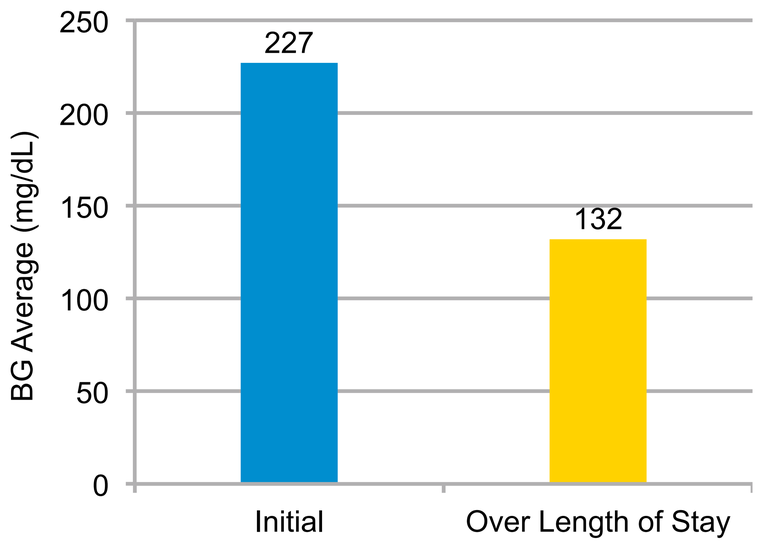
**Table 1.**

| Category | Data |
|---|---|
| Patients | 769 |
| Initial BG Average | 227 mg/dL |
| Glucommander BG Average | 132 mg/dL |
| Hypoglycemia < 70 mg/dL – Breakfast | 2.3% |
| Hypoglycemia < 70 mg/dL – Lunch | 1.9% |
| Hypoglycemia < 70 mg/dL – Dinner | 3.0% |
| Hypoglycemia < 70 mg/dL – Bedtime | 2.0% |
| Hypoglycemia < 40 mg/dL – Breakfast | 0.0% |
| Hypoglycemia < 40 mg/dL – Lunch | 0.1% |
| Hypoglycemia < 40 mg/dL – Dinner | 0.1% |
| Hypoglycemia < 40 mg/dL – Bedtime | 0.1% |

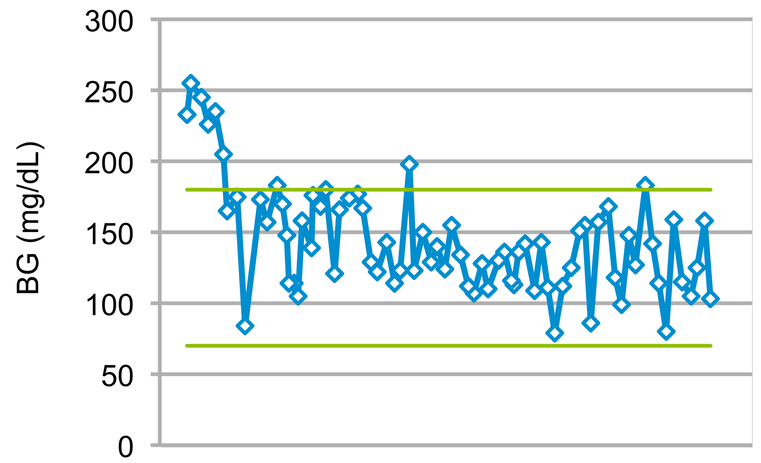
**Graph 1. Total Patient Trends**




**Graph 2. Glucose Average**




**Graph 3. Patient Case Study**




## CONCLUSION

Patients using GM SubQ achieved prescribed glycemic target at each meal and bedtime with low incidence of hypoglycemia (<70 mg/dL & <40 mg/dL). These results suggest GM SubQ can maintain glucose control in ADA recommended targets without increased risk of hypoglycemia.

Glytec®
Revolutionizing Glycemic Management