Use of the eGlycemic Management Solution by Glytec Provides Safe and Effective Meal Coverage for CV Patients Managed on IV Insulin Therapy

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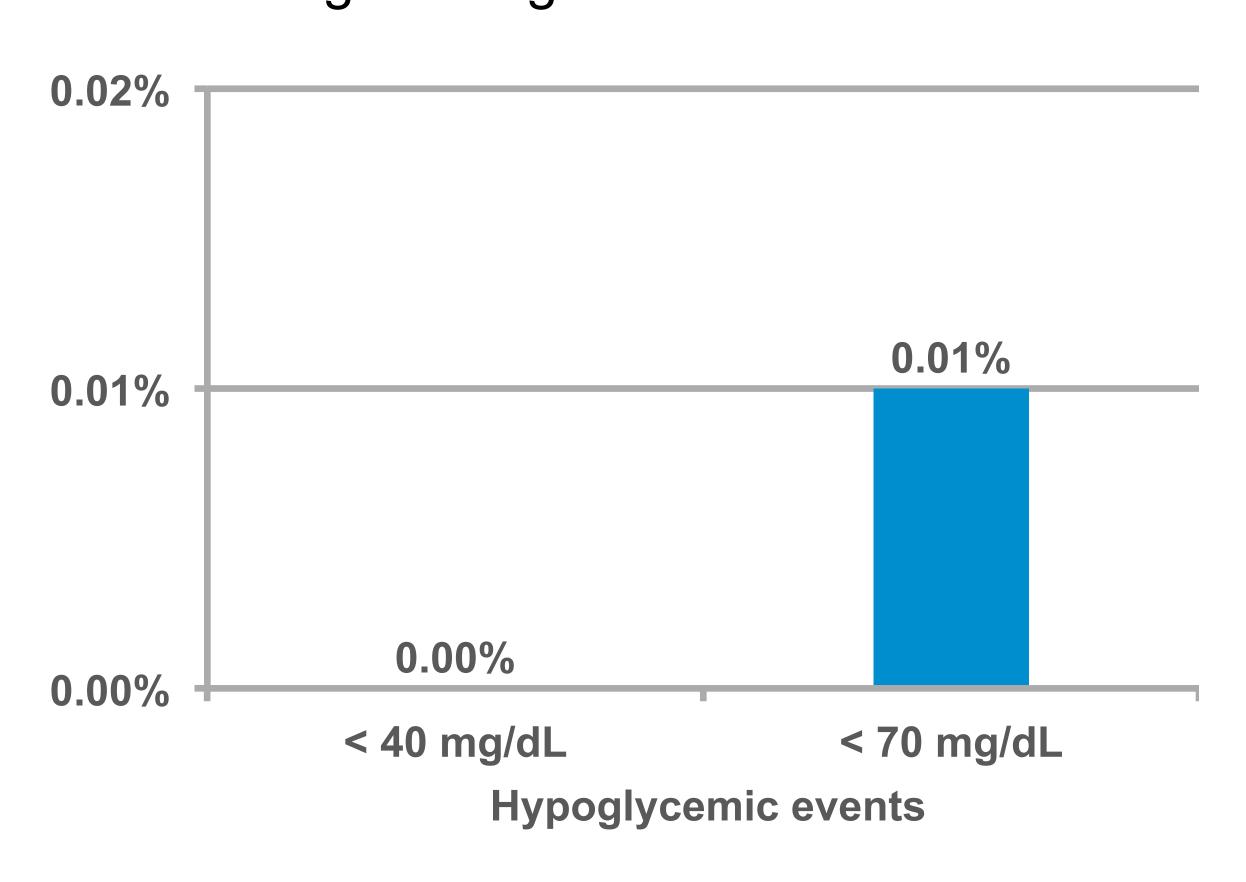
OBJECTIVE

Nutrition is an important factor in the healing process, especially for patients undergoing surgery. Clinicians face challenges maintaining optimal glycemic control while feeding patients carbohydrate containing diets, particularly when using insulin infusions. This study evaluates the effectiveness of an intravenous meal bolus using Glucommander (GM) to keep patients in target blood glucose range.

METHODS

803 CV surgery patients consuming carbohydrates while on IV insulin therapy were evaluated. Qualifying patients were treated with IV insulin using GM. Efficacy and safety were evaluated by the following: (1) Blood Glucose (BG) Average at 3 main measurement points Pre-meal, During Meal and At Meal End mg/dL (2) Percent of hypoglycemic events <40 and <70 mg/dL (3) Percent of BG in target 70-180 mg/dL (4) Portion of meal consumed.

Figure 1. Hypoglycemic events: 100-140 & 120-160 mg/dL targets combined



RESULTS

Patients placed on GM Meal Coverage had an average BG of 127.5 mg/dL pre-meal, 139 mg/dL during meal, 145.5 at meal end and 137.5 mg/dL total meal coverage average. Hypoglycemic events <40 mg/dL were 0.0% and hypoglycemic events <70 mg/dL were 0.01%. The percent of glucose readings in target was 93.1% during the treatment window. No change was noted in hypoglycemia <70 mg/dL post meal end. There were 1,420 meals covered during the study period.

Table 1.

Category	Results
Patients Total	803
Meal Total	1,420
Average Meals Per Patient	1.8
Average BG During Meal 100-140 Target	126 mg/dL
Average BG During Meal 120-160 Target	149 mg/dL
Hypoglycemia < 70 mg/dL – 100-140 Target	0.02%
Hypoglycemia < 40 mg/dL - 100-140 Target	0.0%
Hypoglycemia < 70 mg/dL – 120-160 Target	0.0%
Hypoglycemia < 40 mg/dL – 120-160 Target	0.0%
Average BG During Meal Combined Target	137.5 mg/dL
Percent of BG in Combined Target Range	93.1%

Figure 2. Meal Coverage results for each prescribed target range

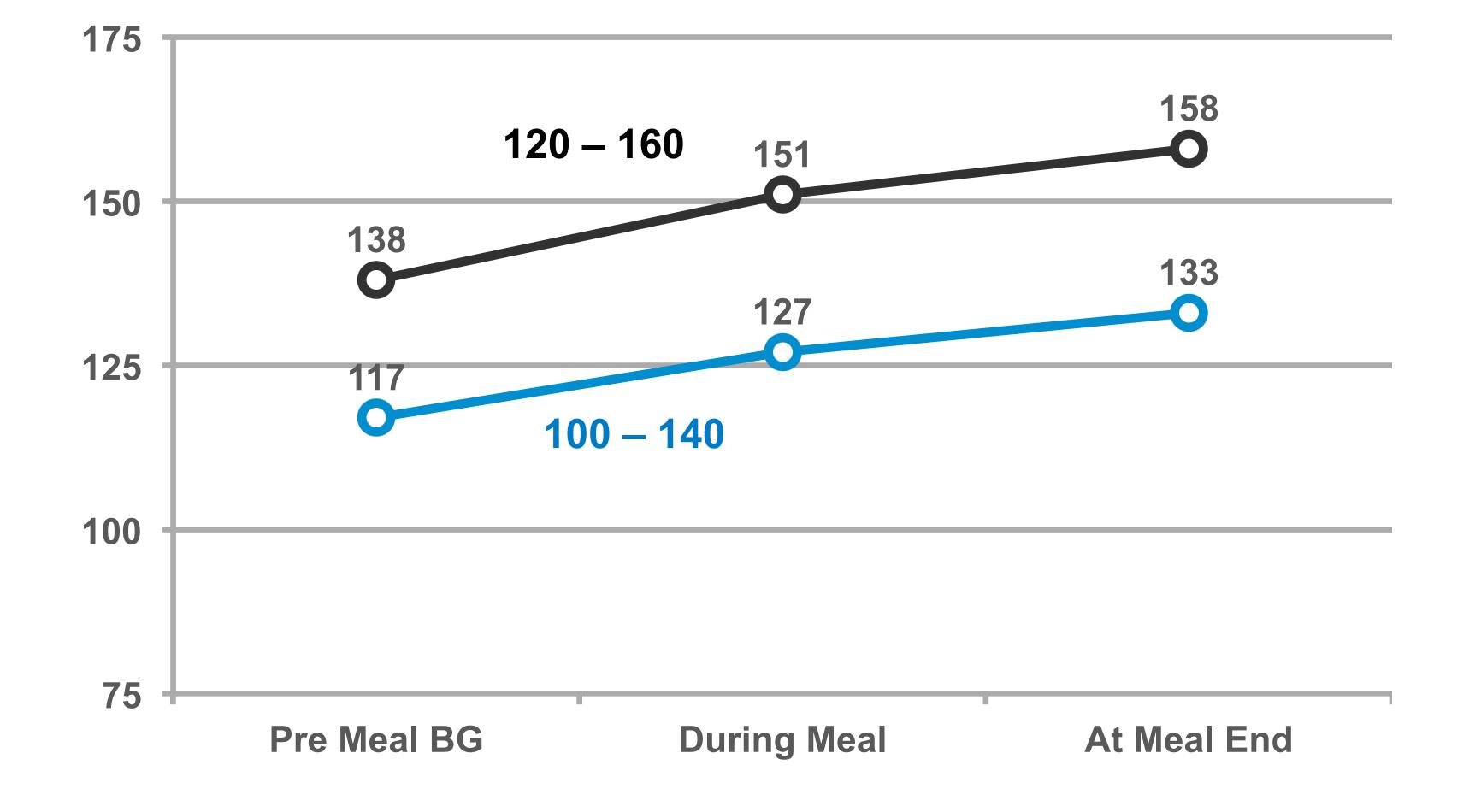


Figure 3. Average BG values (mg/dL) prescribed targets combined.

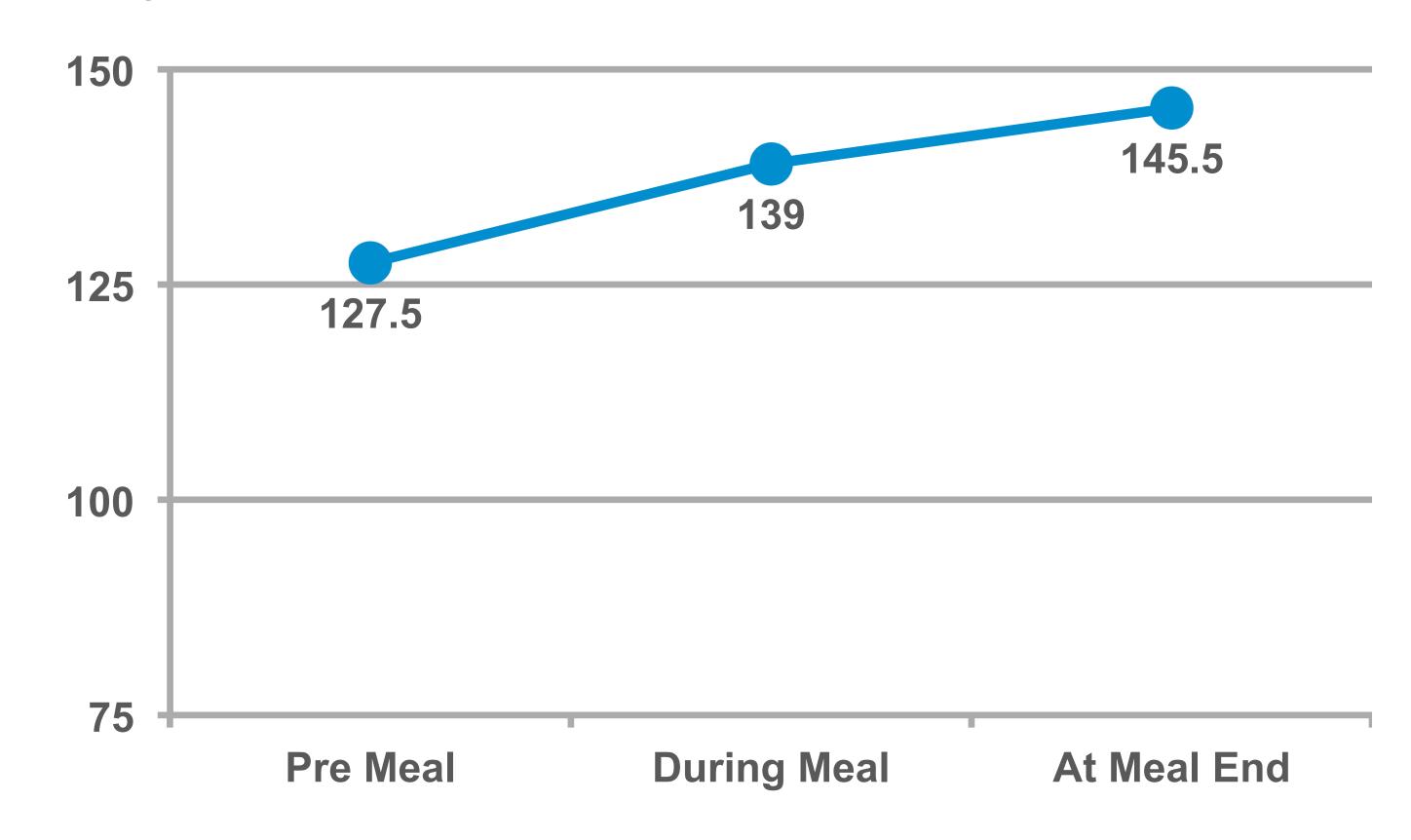
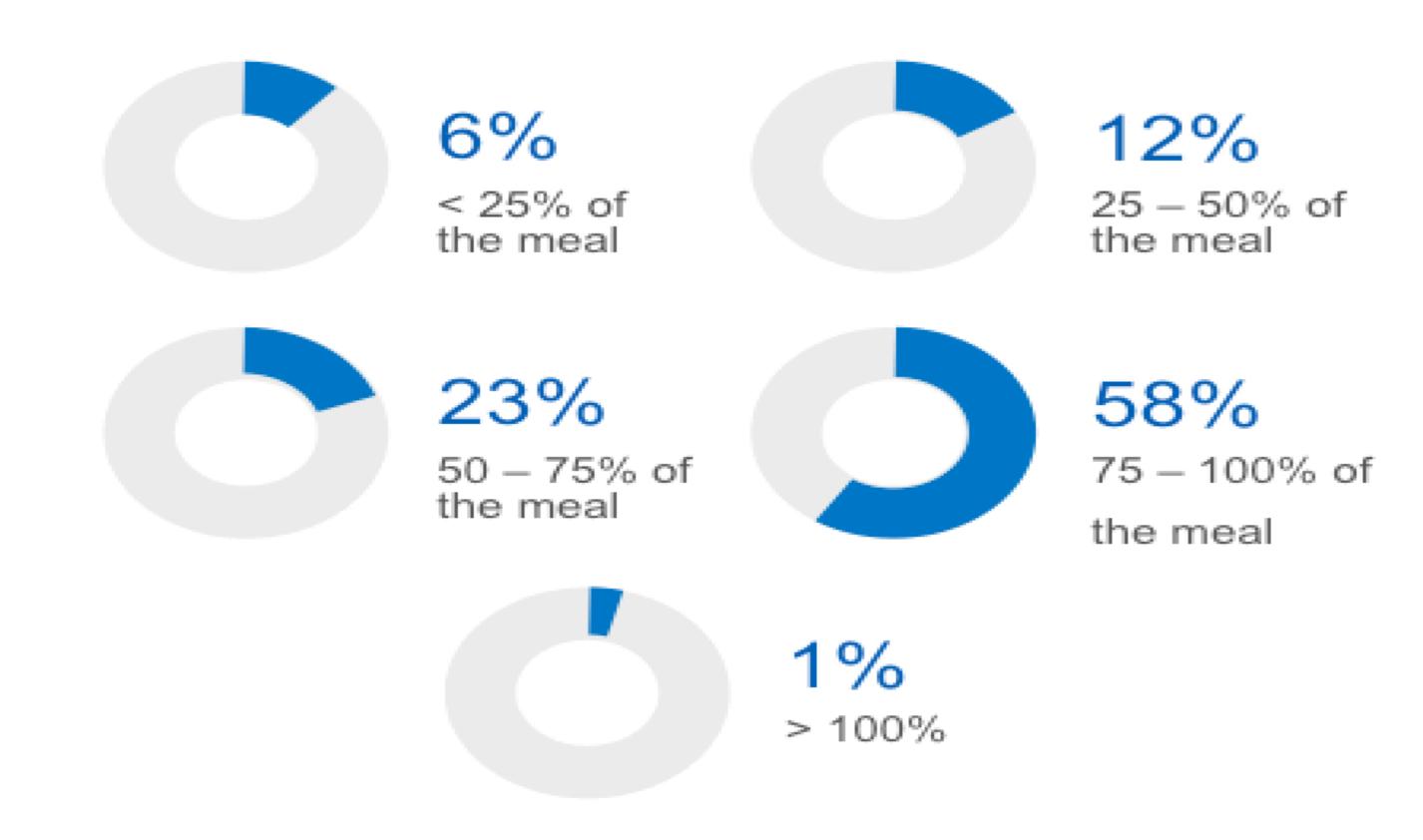


Figure 4. Percent of IV Meal Consumed



CONCLUSION

Patients using the Meal Coverage option in GM achieved a significant number of BG values within the prescribed target range regardless of pre, during, or post meal timeframe, with a very low incidence of hypoglycemia (<70 mg/dl) and no incidence of critical hypoglycemia (<40 mg/dl). These results suggest GM can safely maintain prescribed glucose targets with very minimal risk of hypoglycemia for CV surgery patients consuming carbohydrates and requiring IV insulin therapy.

