

## Sentara Prepares for VBP Measure Changes with SCIP Inf-4 by Turning to Patient-Centric IV Insulin Dosing Software

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Hyperglycemic control has long been associated with improved in-hospital mortality and morbidity in the cardiac surgical population. Successful experience with Glucomander, a web-based insulin algorithm integrated with the hospital EHR, in inpatient insulin protocols suggested that its expanded use across the Sentara Health System would provide both safe and improved outcomes for SCIP Inf-4. We plan to study the effectiveness of the Glucomander (GM) system for the treatment of hyperglycemia in the post-surgical cardiac patient population.

This 12-month quality initiative is being conducted at Sentara Healthcare System in southeast Virginia with the Sentara Heart Hospital (HH) at 157 inpatient and pre/post rooms undergoing interventional cardiac procedures serving as our study site. All post-surgical cardiac patients are placed on GM for their glycemic management.

In 2012, the HH had a baseline result of 26 fallouts for a score of 95.1%. From January 1 - June 16, 2013, before GM, the HH had 10 fallouts for a score of 95.9%. From June 17 - November 30, 2013, GM achieved two fallouts for a score of 99.2%. Both Glucomander fallouts were the result of the tool being discontinued too soon or not being initiated within the measurement window. Glucomander achieved a SCIP Inf-4 score of 100% when utilized during the entire measurement window for post-surgical cardiac patients. Patient safety also improved as hypoglycemia <70 mg/dl was reduced by 52%, from 1.63% to 0.78% when Glucomander was used.

Use of the patient-specific insulin infusion algorithm GM to treat post-surgical cardiac patients improved HH into the top 10% of performers for the VBP Measure SCIP Inf-4, for a score of 95% to 99%+ in under 6 months with a decrease in hypoglycemia. Our results suggest that Glucomander is a safe and efficient tool for improving patient care and increasing the hospital's performance on the VBP SCIP Inf-4 measure.