Evaluation and Implementation of a Nurse Driven Insulin Infusion Protocol for the Medical/Cardiac Intensive Care Patient
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**Problem:** After 2 (two) random episodes of severe hypoglycemia (blood glucose (BG) < 40 mg/dl), on patient’s that were receiving continuous insulin infusions in the Intensive Care Unit; our facility decided to conduct further investigation to see if these results were truly random or if these episodes of hypoglycemia were more frequent than we believed.

**Evidence:** After the first month of data was collected, there was found an overall 21.5% compliancy with the current protocols. Of these results, 6.5% of hourly BG were not being performed. A total number of patients with BG 60-80 mg/dl was 7, BG 41-59 mg/dl was 3, and BG < 40mg/dl as 1 (one).

**Strategy:** The data we chose to collect was whether or not 1) the hourly BG was performed, 2) the current insulin protocols were being followed, and 3) to also monitor for any episodes of hypoglycemia, defined as BG < 60 mg/dl.

**Practice Change:** The decision was made to utilize the Atlanta Protocol for all continuous insulin infusions in the ICU. The Benchmarks established were missed hourly BG was to be <2.5% and compliance with the protocol was 90% +/- 1.5 units/hr, with hypoglycemia being defined, for our facility, as BG < 80mg/dl and severe hypoglycemia (BG < 40 mg/dl) as not being acceptable.

**Evaluation:** Upon evaluation of this protocol it was found that our facility had a decrease of 5.1% in non-compliance with performing hourly blood glucose values, with a simultaneous decrease in hypoglycemia from 10 incidences with the previous protocol to no episodes of hypoglycemia.

**Results:** Compliance with the insulin protocol (+/- 1.5 units) increased from 21.5% to 97.4%. Rate of Hypoglycemia went to zero (0).

**Recommendations:** The findings we have at the current time are comparable to published results for other insulin protocol evaluations, and we continue to evaluate our current clinical practices in relationship to continuous insulin infusions.

**Lessons Learned:** Our previous insulin protocol was ineffective and difficult for nurses to use. It was evident that implementing a workable insulin protocol decreased our incidences of hypoglycemia and that our staff was much more compliant with monitoring blood sugars; this improved patient care in the ICU.
Bibliography: