

Improving Insulin Use and Practices at Doctors Community Hospital

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Problem: Non-standard insulin ordering, administration and monitoring have resulted in unsatisfactory blood sugar levels management and treatment. Hospitalized patients have suboptimal control of their blood glucose levels with the current sliding scale insulin coverage. There were 19 various types of insulin available in the hospital formulary increasing the potential for patient safety issues related to insulin usage.

Evidence: Maintaining a blood glucose level in the 80-110 mg/dL has been proven to decrease hospital length of stay and improve patient outcomes. The Center for the Advancement of Patient Safety and JCAHO have established recommended practices to prevent insulin errors and improve insulin.

Strategy: Establish a multidisciplinary committee to identify insulin administration issues for patients in the emergency department, on in-patient units and patients preparing for surgery. Each of these patient populations has special insulin administration considerations.

Practice change: Establish pre-printed insulin protocols providing a standard protocol for insulin dosing, correctional dosing and converting patients from continuous intravenous insulin infusion to subcutaneous administration. Correctional doses of short-acting insulin will be individualized based upon the patient's weight or total daily insulin needs.

Evaluation: The Insulin Committee has been effective in decreasing the available insulins from 19 to 5 and switching from multiple dose vials of insulin to Flexpens.

Results: Blood glucose levels (n= 334) of a random sample of 32 telemetry and medical-surgical patients revealed that 179 (54%) of the blood sugar levels were greater than 150 mg/dL validating the need to individualize pre-prandial dosing. Streamlining of insulin products has lead to decrease wastage and increasing safety. The pre-printed insulin protocol will be piloted in the critical care units.

Recommendations: Additional data will be collected after the protocols are implemented to evaluate the effect on blood glucose management. Develop guidelines for use in pre- and peri-operative patients.

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