System Dose Conversion Protocol Evaluation and Formulary Exclusion of U-500 Insulin

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SERVICE

- HealthEast is the largest health system in the Minneapolis-St. Paul east metro area
- HealthEast hospitals removed U-500 insulin from formulary and implemented a conversion protocol for hospitalized patients
- Dose conversion protocol was approved by HealthEast's Pharmacy and Therapeutics Committee and Medication Safety Council
- All U-500 home doses were converted to a basal/prandial insulin regimen in a 50:50 ratio utilizing insulin glargine and insulin aspart with a custom resistant correction bolus
- U-500 insulin pumps were exempt from conversion and continued upon admission

JUSTIFICATION

- Prior to formulary removal U-500 insulin, a High-Alert medication, was stored in a locked box in the refrigerator requiring a key to be dispensed from the narcotic vault.
- Inconsistencies and confusion regarding doses and management of the product delayed treatment and left room for error
- The Institute for Safe Medication Practices (ISMP) recognizes an increase in medication errors related to dose conversion of home U-500 insulin to inpatient regimens
- Syringe confusion exists between patients and healthcare providers
- Inaccuracies in reported home insulin doses are common and may contribute to a 5-fold overdose

TRANSFERABILITY

- Protocol acceptance by providers is required prior to insulin conversions
- Impact was tracked utilizing Pharmacy entered progress notes and safety events

Summary of HealthEast U-500 conversion protocol:

All U-500 regular insulin orders are converted to an alternative regimen

Patients are not allowed to use home supply of U-500 insulin excluding U-500 insulin pumps

A pharmacist verifies the U-500 insulin dose including the type of syringe utilized by patient

A diabetes educator consult is ordered

Total daily dose of regular insulin will be converted to a basal/prandial insulin in a 50:50 ratio with a correction sliding scale. Basal insulin is divided into twice daily dosing and prandial insulin is divided three times a day with meals

At discharge, the physician only continues the prior to admission dose of U-500 insulin if appropriate

REFERENCES

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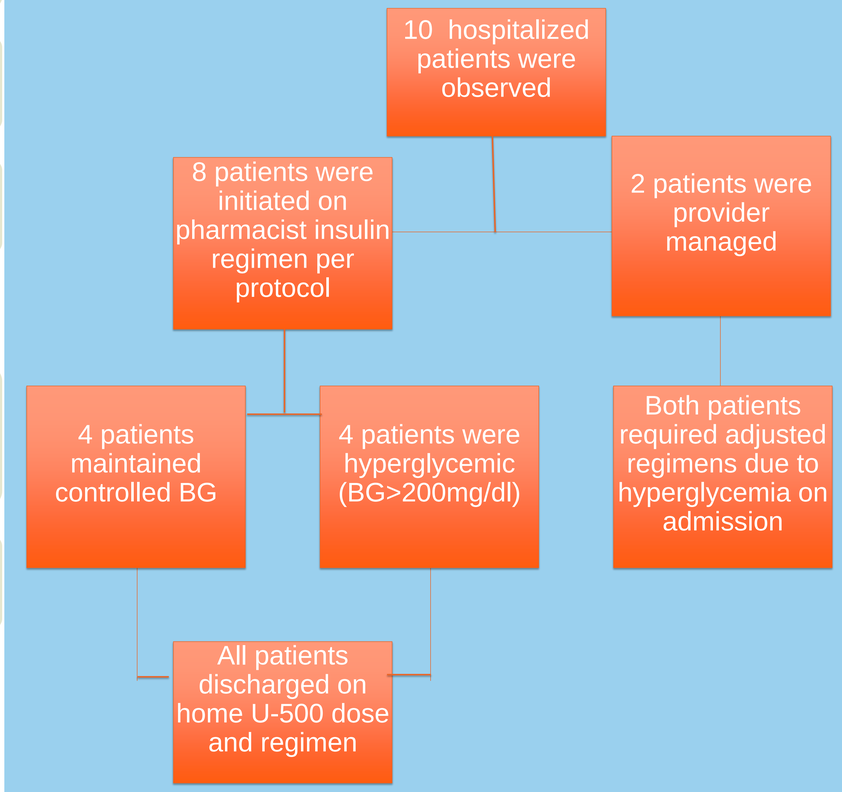
2. "As U-500 Insulin Safety Concerns Mount, It's Time to Rethink Safe Use of Strengths above U-100." Institute for Safe Medication Practices, 13 Oct. 2013. Web. 02 Apr. 2016. S
3. HealthEast Pharmacy/Nursing Policies. Medication Management of U-500 Regular Insulin

IMPACT

- Eight of ten patients were eligible for the U-500 conversion protocol from January 1st - December 23rd, 2015
- Zero hypoglycemic events (BG<70mg/dL) were recorded
- No incorrect U-500 insulin doses were recorded
- Zero safety events reported following protocol initiation



DISCLOSURE

The authors have no conflicts of interest to disclose.