

Title: Evaluation of appropriate heparin titration dose adjustments after implementation of a dose adjustment calculator

Author(s) and Institution(s): Jeremy Andis, Pharm.D., Julia Schimmelpfennig, Pharm.D., BCPS, Dawn Dankenbring, Pharm.D., BCPS, Jared Sheley, Pharm.D., BCPS. HSHS St. Elizabeth's Hospital

Introduction: Unfractionated heparin is commonly associated with medication errors. The United States Pharmacopeia (USP) released findings of more than 17,000 heparin medication errors that occurred during a five-year period. The Institute for Safe Medication Practices has classified heparin as a high-alert medication due to the frequency and severity of events. As such, health systems have placed a significant amount of resources into the standardization and safe administration of heparin. The advancement of technology has provided improved medication safety tools with the integration of electronic medical records (EMR) and bar code medication administration (BCMA). Recently, Hospital Sisters Health System (HSHS) has employed an EMR-based heparin dose calculator to aid in the adjustment of heparin infusion rates based on laboratory values. The purpose of this study is to determine the number of unfractionated heparin infusion errors before and after implementation of the EMR-integrated calculator.

Methods: This IRB-approved study is a single-center retrospective analysis utilizing a pre/post implementation design to assess outcomes. Inclusion criteria included patients ≥ 18 years who received a heparin infusion that required an adjustment in the infusion rate. The pre-intervention group includes patients admitted between June 11, 2019 to December 11, 2019, while the post-intervention group includes patients admitted between December 13, 2019 through January 31st, 2020. The primary outcome is the number of dosing adjustment errors that occurred. Secondary outcomes include appropriate use of the heparin protocol, number of adjustment errors formally reported, and appropriate use of the calculator.

Results/Conclusion: Data is currently being analyzed and results and conclusions will be presented at the conference.