Abstract 26

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Title: Process Improvement Project: Improving Heparin Dosing for AMI Patients

Background:
For patients with either NSTEMI or STEMI, American College of Cardiology/American Heart Association (ACC/AHA) guidelines recommend that intravenous unfractionated heparin (UFH) be dosed by weight with a limit to the max dose. Excessive dosing increases the patient’s risk for complications, extended length of stay and mortality. This clinical recommendation is monitored via the national surveillance system for high-risk AMI patients admitted with STEMI/NSTEMI – ACTION Registry as a Quality Metric. The measure assesses the proportion of AMI patients that received: • A initial bolus dose of UFH >70 units per kilogram OR • A total initial bolus dose exceeding 4000 units OR • An initial infusion > 15 units per kilogram per hour OR • A total infusion >1000 units per hour According to the ACTION Registry data, Jersey Shore University Medical Center (JSUMC) compliance with this measure is 19.5% with the mean excessive dosing rate of 80.5% for Q1 2013 through Q2 2014. This falls approximately in the 10th percentile rank when compared to other national hospitals. When compared to compliance rates for this measure within the organization, low compliance existed across all Meridian Health campuses.

Methods:
A multidisciplinary, corporate process improvement team was sponsored by the Corporate Director of Cardiovascular Services, championed by a cardiologist, and led by JSUMC’s ACS Care Manager (APN). Team members included clinical pharmacists, cardiovascular care managers, clinical educators, and database administrators. The PDCA improvement cycle was managed by a Project Coordinator/PI Coach. The team reviewed the available compliance data and current guidelines. They completed a retrospective review of “fallouts” to identify root causes/contributing factors to noncompliance. The current policy and process was reviewed, mapped and compared to best practice. Gap analysis was performed. The plan for improvement included implementation of new electronic ordersets, reference guidelines, hard-stop pharmacy review, and an aggressive education plan. Implementation/DO phase began December 3, 2014.

Results:
Post-implementation compliance rates are pending. However, real-time concurrent data abstraction is demonstrating an increased compliance with the clinical guideline. Excessive initial unfractionated heparin (UFH) dose Q1 2013 61.8 Q2 2013 82.2 Q3 2013 84.4 Q4 2013 82.9 Q1 2014 81.4 Q2 2014 90 MEAN 80.5%
Conclusion:

The implementation of new order sets, aggressive education and pharmacy oversight are part of a robust plan for change. Clinical and administrative leadership and engagement were critical factors for change. Post implementation monitoring will include Heparin Medication Variance Fallout Drilldown Mandatory Nursing Education Annually; Orientation Ongoing Communication Plan to Share Results.