

## **Defense Health Agency 2017 Military Health System Awards**

### **Healthcare Quality and Patient Safety**

**Facility: Walter Reed National Military Medical Center**

**Title of Project: High Value Cost Conscious Care: Optimizing the Electronic Medical Record to Reduce unnecessary or redundant lab orders**

Summary: Health care expenditures in the United States are the highest in the world comprising 17.8% of the gross domestic product. Laboratory test overutilization is a major contributor to wasted costs with 16 to 40% of lab orders estimated to be clinically unnecessary or redundant. This issue negatively impacts patient care and health care spending within our institution and the MHS as a whole. The overall goal of this initiative was to sustainably improve delivery of high-value health care to our patient population and promote a culture of cost-consciousness amongst providers. Specifically we designed a novel multi-intervention systems-based approach utilizing the electronic medical record EMR to reduce ordering of clinically unnecessary laboratory studies that add little value to patient outcomes. Between 2014 and 2017 three sequential modifications to the ordering interface in the EMR Essentris were implemented. Data on number of common laboratory studies on the inpatient internal medicine service at our institution were collected over a two-month period following each intervention. Inpatient bed day IPBD data were used to adjust for variations in hospital census. The primary outcome was number of labs/IPBD in a two-month period compared to prior years with secondary outcome of associated cost reductions. Between 2014 and 2017 the number of labs/IPBD in a twomonth study period decreased from 4.99 to 3.26 IRR 0.65 95% CI 0.64 to 0.67 p 0.001 due to cumulative effects of the three serial Essentris interventions. This overall reduction of 34.6% corresponds to estimated cost savings of up to \$1.25 million. Our sequential interventions resulted in major and sustainable reduction in unnecessary laboratory studies. Modification of the EMR to limit automaticity and promote clinically appropriate laboratory ordering is a no-cost strategy that can be easily implemented throughout the MHS leading to significant cost savings and improved value of care.

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**Facility: Fort Belvoir Community Hospital**

**Title of Project: Improve Sterile Instrument and Process Handling**

Summary: Exposure to a patient with unsterile or defective instrumentation unit is a huge concern to any Military Treatment Facility MTF. Despite its state of the art equipment the MTF has been operating at 8% defective unit rate since the hospital became operational in 2011. In order to provide the best care for the facility's patients the Sterile Processing Department SPD Process Improvement initiative was launched. Basically the goal of the project is to improve sterile instrument process and handling in order to reduce defects within the process. With an initial team of seven the mandated was to improve the Sigma Quality Level SQL of the current process from 2.9 to 3.4. The inefficiencies of the current process included ineffective quality assurance QA practice irregular decontamination practices lack of defect monitoring non-value-added process step lack of regular in-service training and quarterly training

reviews. To achieve our objectives the previous QA scorecard was modified to reflect existing challenges and needs. A QA subject matter expert SME was identified and set about to retrain all personnel and ensure standardization of the process throughout the various shifts within SPD. The same approach was used to effectuate the decontamination aspect of the process. In addition to these steps wrapped instrumentation units were placed on transport trays prior to sterilization as opposed to after sterilization to reduce wrapper tears and contamination of units. All these factors helped to achieve an improved sigma quality level of 3.35 which represents 98.5% of the process goal. Since this is the first green belt process improvement project within the SPD department this success rate establishes a solid foundation for quality surgical care for both the current and future patient population. Although there was some financial commitment the project only focused on operational benefits since much of the spending was planned prior to initiation of this project. The positive results of this project imply that improving sterile instrument process and handling requires commitment from staff and leadership to ensure continuous high quality.

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### **Improved Access Award**

#### **Facility: Walter Reed National Military Medical Center Title of Project: Dispensing Pharmacists Prescribing Naloxone for Patients at Risk of Opioid Overdose**

Summary: Opioid overdose is the leading cause of injury-related death nationwide. Since 2000 over half a million people have died from an opioid-related overdose including 33091 people in 2015 alone <sup>12</sup>.

This number has been steadily rising over the past decade and has tripled since the year 2000. More people now die from an opioid overdose than from motor vehicle accidents annually <sup>2</sup>. To combat this epidemic the Centers for Disease Control CDC Veterans Administration/Department of Defense VA/DOD Substance Abuse and Mental Health Services Administration SAMHSA and the American Medical Association AMA all support providing naloxone as a reversal agent to patients at risk of opioid overdose <sup>3456</sup>. As evidence of its effectiveness naloxone administration by non-medical persons has saved the lives of over 26000 people since 1996 <sup>2</sup>. The Naloxone Project was initiated through collaboration between the Anesthesia department and the Pharmacy department in October of 2016. The goal of this project was to improve patient safety by providing naloxone to individuals that had a higher risk for opioid overdose based on their morphine equivalent daily dose MEDD. The process to achieve this goal was three-fold. First we educated pharmacists regarding naloxone prescribing. Second pharmacists were given the authority to prescribe naloxone. Third Pain Management/Anesthesia clinical pharmacists prescribed naloxone for those patients that were missed. In order to make the naloxone prescribing successful it was necessary to adjust our processes to overcome patient resistance and support the pharmacists workflow. Before initiation of the Naloxone Project eleven naloxone prescriptions had been written. Seven months after initiation of the project 246 prescriptions had been prescribed for patients at risk. This demonstrates that naloxone prescribing by dispensing pharmacists has a significant impact on the number of patients who receive the medication