

INTRODUCTION

- Local anesthetics are frequently indicated in medical settings
- When administered intravascularly, these medications pose a threat to patient safety
 - Can lead to systemic toxicity
- Despite potential danger from incorrect administration, these medications may be stocked in various automated medication dispensing cabinets (AMDC) across hospital departments, regardless of their demand, utilization rates, or indication
- Having this medication readily available in departments where its use is not indicated creates opportunity for adverse drug events
 - Creates opportunities for patient safety incidents
 - Allows for expiration of unused medications
 - Waste and significant expenditure
- This study aimed to identify and remove potentially harmful medications from anesthetizing locations
- This resource stewardship intended to reduce preventable drug waste and improve safety in the operating rooms

BENCHMARK DATA

- Over approximately 28 weeks, 33 AMDCs across 5 anesthesia-related departments were evaluated
- Anesthesia patient care areas which had inventory of local anesthetics were evaluated and analyzed for medication utilization rates
- Inventory parameters studied:
 - Total amount of the medication used within the study period
 - Maximum amount used in a day
 - Average daily use
 - How many days this medication ran out
- Results:
 - Bupivacaine 0.5% 50mg/10mL, 10mL vials were stocked in 2 endoscopy rooms at an inventory max of 10 units and min of 5
 - Bupivacaine 0.25% 25 mg/10mL, 10 mL vials were stocked in 2 endoscopy rooms where they were stocked at a maximum of 5 units and a minimum of 3
 - Ropivacaine 0.5% 150 mg/30mL, 30 mL vials were stocked in 2 endoscopy rooms at a maximum of 4 and a minimum of 2

INTERVENTION

- A systematic review of AMDCs across the institution revealed that:
 - Bupivacaine 0.25% 25mg/10mL vial
 - Bupivacaine 50mg/10mL vial
 - Ropivacaine 0.5% 150 mg/30 mL vials
- were all stocked in two endoscopy rooms where they remained **unused** during the time period of our study
- Despite this, the maximum inventory of up to 10 vials was maintained
- Given that these medications do not have indications in the endoscopy suite, there is an opportunity for significant medication administration error, thus threatening patient safety

OUTCOMES

- The decision was made to remove the aforementioned local anesthetics in the two Endoscopy suites
- This change will lead to:
 - Overall cost savings
 - Reallocation and optimization of current resources
 - Minimization of the risk of human error
 - Elimination of the potential for incorrect and hazardous intravenous local anesthetic drug administration
- Investigation into additional opportunities for inventory adjustments was performed

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