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Tayyiba Shaik
Childrens Health

Viktoria Gudmundsson
Childrens Health

Skyelar Hester
Childrens Health

Veronica Pacheco
Childrens Health

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Standardized Labeling of IV Infusions to Decrease Medication Errors and Increasing Nurse Workflow Efficiency

By: Tayyiba Shaik, Viktoria Gudmundsson, Skyelar Hester, Kelsey Fitzgerald, Hadley Hanna, Kelsey Robison, & Veronica Pacheco

Background/Problem

In the PICU, there is an increased risk for medication errors due to the high likelihood of a patient requiring multiple IV medications through multiple lines. We hope to decrease medication errors caused by unlabeled lines by creating a process that requires the standardization of labeling IV lines that are infusing high risk medications.

PICOT Question

For patients in the pediatric ICU receiving IV medications and infusions, would the use of standardized labels and implementation of a visual system decrease medication errors and improve nurse workflow efficiency as compared to the current practice of inconsistent labeling based on nurse preference?

Implementation

- Pilot a group of 10 nurses for a month on C11 and C12 to utilize a specific method of line labeling
- Create a tool for the nurses to use to assess the effectiveness of the new policy throughout the 4 weeks
- At the end of the 4 week period, determine if the labels created a safer environment for patients with multiple lines

Literature Review

- Infusion errors do occur and are more likely when a patient is receiving multiple infusions
- Unless a medication is going to be used immediately after preparation, it is safer practice to have the medication, and the medication line labeled.
- Labels on high-risk medications can serve as a redundancy cue to the nurse to pay extra attention when administering the medication and medication boluses
- Color coding medications can reduce the time it takes to administer medications in emergency situations
- Color coded systems help to decrease medication errors as well and increase efficiency in the nurse workflow by providing a consistent practice used in every patient room

Recommendations

Color coded systems help decrease medication errors. We recommend that the ICU trial a medication labeling system and collect feedback from nurses on if it would be beneficial to implement into our practice.

Anticipated Outcomes

A decrease in medication errors by creating a visual system to cue nurses to check and confirm line placement and medication routes before administration. In addition, a more efficient system for nurse handoff when assessing patient access and reviewing which medications are going through which lines.

