Utilizing a Pediatric Emergency Drug Sheet to Enhance Clinical Preparedness and Self-Efficacy in Medication Administration

Martha Renteria  BSN, RN, RRNArianna Sinkovich  BSN, RN, RRNA

Prevention of Medication Errors

- Medication errors are a well-defined cause of preventable adverse events in pediatrics
- Despite correct calculations of dosages, errors continue to occur during preparation and administration
- Emergency situations have a tenfold increase in errors
- Epinephrine and atropine have a very high potential for harm in patients less than 10 kg

Project Chair: Maureen McFarley Anderson, DNP, CRNA, APN
Team Member: Michael McLaughlin, DNP, CRNA, APN

OBJECTIVES

- Familiarize RNs to drug sheet outside of an emergency
- Create a non-punitive environment where staff can practice skills without compromising patient safety
- Self-evaluate their practice for potential knowledge gaps in drug preparation

Practice without compromising patient safety

SOURCES OF ERRORS

- Weight-based miscalculation
- Adult formulation
- Lack of pharmacology training
- Medications administered in chaotic environment
- Transitions of care

Preparedness

- Emergency Dosage Calculation Sheet
- Found provider’s using a patient-specific drug sheet during simulated pediatric emergencies obtained the correct dose 3X faster and were 21.4% more accurate compared to paper-based methods

Background

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- Pediatric medication errors are 3X higher than adults

Pre-Intervention Survey

- Evaluate current use of pediatric drug sheet and level of confidence in preparing and administering Epinephrine and atropine in patients less than 10 kg

Intervention

- PowerPoint presentation regarding basic epinephrine and atropine pharmacology
- Review location of sheet
- Work in groups to solve a case scenario in which a patient less than 10 kg requires epinephrine or atropine administration by using the pediatric drug sheet
- Return demonstration of dose in mL and mg
- Mock syringes supplied

Post Intervention Survey

- 1-month Post-intervention Survey

RESULTS

- There are response percentages for questions 1-7. The higher the score the greater the self-efficacy, four being the highest score
- In the presurvey, the percentage for a score of 4, was always less than 50% of the participants, a score of four was greater than 50% in the post survey for all questions

Pre, post Intervention Survey

- Below are response percentages for questions 8-10
- These questions correspond to the aim of change in behavioral intention after an educational session

DISCUSSION

- Although the RNs were already inclined to use the drug sheet, their self-efficacy in preparing and administering medications via the drug sheet was higher post implementation
- Future studies can ensure sustainability by conducting a 3-month post implementation survey to show the impact over a prolonged period of time.
- Our results highlight how crucial it is for healthcare institutions to provide cognitive aids and establish policies that promote patient safety by supporting nursing staff to translate knowledge into practice

REFERENCES

- Scan QR code below to view references and more information

References

- Anderson, DNP, CRNA, APN
- Scan QR code below to view references and more information

Sustainability via Mandatory Annual Pediatric Competency Day