Patient safety in the neonatal intensive care unit setting: an audit of current medication-related management practices

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Learning Objectives

• Discuss the value of staff competency/education and patient education in relation to implementation of safe medication use in the NICU setting
• Describe 3 areas in which clinical familiarity might augment safe medication use in the NICU setting

The Problem of Mis-Medicating

• Medication errors as cause of substantial cost burden
  • Financial
  • Patient-outcomes
• Neonates not immune to threat
  • Up to 91 errors per 100 NICU admissions

Spectrum of Knowledge

• Clinical Insight
  • Evidence-based medicine
  • Experiential wisdom
• Patient / Family Influence
  • Ongoing communication
  • Active listening
  • E.g., Josie King (2001)

Methods

• Inclusion Criteria
  • Age ≥ 18 years old
  • Employment at St. John Medical Center (SJMC) between December 2014 – May 2015
• Primary Endpoint
  • Proportion of clinical staff/employees with appropriate level of competency before and after educational in-service

Conflict of Interest

• Nothing to disclose
Methods (cont.)

- Data Collection
  - Mixed-mode survey (December 2014); baseline assessment
- Intervention
  - Pharmacist-conducted educational in-service
- Data Collection
  - Mixed-mode survey (May 2015)

Data Collection: Topics Covered

- SJMC Web-Interface ("MedWeb") Navigation Skills
  - Variance reporting
  - High-alert medications
  - Look-alike / sound-alike medications
  - IV infusion standards
- USP <797> Standards
  - Immediate-use compounded sterile preparations (CSPs)
- IV Medication Dose Calculation Proficiency
- Miscellaneous Clinical Insight

Results (December 2014)

- Total Survey Responses
  - 23 submissions (13 web-based, 10 paper-based)
    - Approximate response rate: 32.9%
- Most Common Participant (Reported)
  - Registered nurse (RN)
- Median Score
  - 53.91%

Pre-Education Survey Scores

![Bar chart showing survey results](chart)

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<th>Score</th>
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Topics Covered (Score Results)

- Misc. Clinical Insight: 32%
- MedWeb Skills: 19%
- IV Dose Calculation: 28%
- USP <797> Standards: 21%

Limitations

- Retrospective Review
- Unbalanced Clinical Representation
  - Predominantly nursing input
- Limited Sample Size
- Unsupervised Survey Input
Self-Assessment Question #1

The “five rights” involved in the medication administration process include which of the following?

A. Right duration
B. Right route
C. Right (of patient) to refuse

Self-Assessment Question #2

In the event of a sudden emergency, a sterile preparation of dobutamine (for IV infusion) may be mixed in the NICU for use within how many hours?

A. 1 hour
B. 3 hours
C. 6 hours (refrigerated)
D. 24 hours (refrigerated)

References and Supplemental Reading


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