Utilizing an Education Intervention to Improve the Quality of Nursing Care for Pediatric Epilepsy Monitoring Unit Patients

Abstract

There are multiple types of seizures in pediatric epilepsy. Staff nurses in a Pediatric Epilepsy Monitoring Unit (EMU) have expressed a knowledge deficit in differentiating among types of seizures as well as a deficit in self-efficacy (confidence) in seizure management. It is especially important for the staff nurse to understand the various types of seizures as well as the appropriate interventions to safely direct the nursing plan of care. This unit based nursing led research study was intended to ascertain whether an education intervention with nursing staff regarding the assessment and care of the pediatric epilepsy patient will increase staff nurse knowledge and self-efficacy to ultimately improve the safety and quality of care of this vulnerable population.

Study Purpose

Nurses participating in the seizure management education program will:

- Demonstrate significantly increased scores related to knowledge of seizure management.
- Demonstrate significantly increased seizure management self-efficacy scores.

Results

36 RNs were sent the survey via email
Pre-Survey Respondents n=24
Post-Survey Respondents n=12
Attrition rate=50%

Post-educational intervention:
- The percent of correct answers increased for Questions: # 2, 3, 4, 8, 9, 10, 12, 13, and 15
- The percent of correct answers unchanged for Questions: #1, 5, and 6
- The percent of correct answers decreased for Questions: # 7, 11, and 14

Discussion

A significant result was a rise in Question #4:
"Describe your comfort with caring for a patient with epilepsy:"
1) Very comfortable, I feel ready for any situation.
2) Somewhat comfortable, although a little unsure when dealing with active seizures.
3) Uncomfortable, I feel very unsure when responding to seizure activity.
4) Not sure, I do not have very much experience with responding to seizures.

After the intervention there was an increase from 0.52% to 1.0 % when answering for #1 "Very comfortable" suggestive of an increase in nurses' self-efficacy when dealing with seizure patients after the education sessions.

Implications

In continuing efforts to improve the quality of care and safety for our Pediatric EMU patients several unit based projects were initiated as an outcome of this study:
- Response Testing unit based competency developed
- Bedside EMU checklist created
- Bedside Response Testing Guide created
- Custom fitted padded side rails were acquired

Conclusion

9/15 questions had an increase in correct answers signifying that the education intervention improved knowledge in these areas.
3/15 questions remained the same indicating that baseline education was sufficient in these areas.
3/15 questions showed a decrease in the correct answer signifying possible confusion about the education provided and the need for further clarification in these areas.

Statistical Procedures

Descriptive statistics were done to analyze the information using frequencies, percentages, and measures of central tendency. In addition, a T-test was done to measure the difference in scores prior to and after the educational program.

Study Team

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Study Protocol # IRB-AAAE1099

Methods

Nursing staff from a Pediatric Epilepsy Monitoring Unit were invited to answer a survey from an online link regarding the assessment and nursing care of various types of seizures potentially seen in a pediatric epilepsy monitoring unit. After completion of the six educational sessions during a 12 week period of time, the staff nurses participating were invited to again complete the online survey.

Instrument

A knowledge-based instrument consisting of 15 items was developed for use in this study. All of the questions were multiple choice. Members of nursing leadership were asked to review the questionnaire for accuracy and appropriateness before being administered to the staff.

References

Epilepsy & Behavior, 10, 163-169.