Effect of Falls Prevention Education on Knowledge and Competency in Neurosciences Nursing

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Background and Literature

- Falls remain a leading patient safety event in hospitals and few interventions have proven successful to prevent them.
- Patient events related to falls also contribute to poor quality and financial outcomes.
- According to Wong et al. 2011, patients sustaining falls with injury had charges $4,233 higher and lengths of stay twelve days longer.
- Longer stay increases the risk of contracting nosocomial infections and the likelihood of admission to extended care facilities (Oliver et al., 2010).
- Utilizing a fall prevention educational program has been shown to increase adoption of prevention models in hospitals (Haines & Waldron, 2011; Dykes et al. , 2019).

Objectives

The purpose of this quality improvement project was to determine if an evidence-based training program increased nurses' knowledge and competency in falls prevention and risk mitigation.

- Primary aim of this project was to develop and pilot an evidence-based falls prevention education curriculum.
- Secondary aims (2 & 3) included increased knowledge and competency in fall prevention and risk mitigation.

Methods

- Design: Pre post-test quality improvement project
- Setting: Neurosciences department with 88 beds
- Sample: Total of 102 eligible nurses
- Subjects: Voluntary, self-identified Falls Prevention Leaders (FPLs)
- Intervention: 1) PowerPoint lecture and discussion on falls prevention
  2) patient case study using the Johns Hopkins Falls Risk Assessment Tool (JHFRAT)
  3) an in-patient room simulation exercise to identify falls hazards and demonstrate mitigation strategies

Measures

- A 14 question pre-post knowledge assessment from the Agency for Healthcare Research and Quality (AHRQ). The assessment tool included 14 questions and was scored as percent correct (0-100%).
- Nurses' knowledge and competence in fall prevention and risk mitigation was measured in the ability to correctly score risk level.
- The Johns Hopkins Falls Risk Assessment tool (JHFRAT) to identify fall hazards in a simulation exercise.

Results

- **Aim 2**: Increase FPL's knowledge by 20%. Mean knowledge scores were analyzed using a Wilcoxon Signed Rank Test and there was no statistical difference in the pre-post knowledge results (mean=1.8, median= 1.5, SD= 1.22). Confidence in falls prevention increased to 100 % of feeling "very confident" from 50% pre-intervention.

Demographic characteristics	(N= 10)
Gender identity, n (%)	
Male	0
Female	10 (100)
Unit, n (%)	
12 West	1(10)
12 East	5 (50)
Other nurse leader	4 (40)
Role, n (%)	
RN 1	1 (10)
RN 2	0
RN 3	1 (10)
Lead Clinical Nurse	4 (40)
Other	4 (40)
Years of Nursing Experience, n (%)	
0-3 yrs.	1 (16.6)
3-5 yrs.	1(16.6)
5-10 yrs.	0
10-20 yrs.	4 (66.6)
20 yrs. of greater	2 (33.3)

Related Samples Wilcoxon Signed Rank Test
Total N= 10
Test Statistic 45.000
Standard Error 8.352
Asymptotic Sig. (2-sided test) .007

- **Aim 3**: Increased competency in falls prevention and risk mitigation: The mean percentage who scored the JHFRAT and the room hazards correctly was 100% and 91 % respectfully (n=9). One subject's data was missing.

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Subject	JHFRAT score	Room hazard
1	Correct	90%
2	Correct	90%
3	Correct	100%
4	Correct	80%
5	Correct	100%
6	Missing	Missing
7	Correct	100%
8	Correct	80%
9	Correct	80%
10	Correct	100%
Totals	**100% (for 9 available)**	**Mean score 91%**

Conclusion

Patient falls are one of the most costly and prevalent safety events in hospitals. In 2015, the total medical costs for falls totaled more than 50 billion dollars (CMS, 2015). Education is a vital part of empowering staff in prevention and risk mitigation. While this was a quality improvement project within the Neurosciences department, falls prevention applies to nursing across all units. Nurses play a critical role in promoting patient safety, minimizing medical errors; and are paramount in reducing patient harm. Falls prevention starts with the basics: risk assessment, identifying risk level, and implementing strategies to mitigate falls. These steps are critical and should be incorporated in all fall prevention programs. Further studies are needed to address the effectiveness of falls prevention knowledge and the impact on quality, safety, and financial outcomes.

References

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