Improving Nurses’ Recognition of Delirium in Geriatric Populations

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Introduction & Background

Delirium. An acute confusional state characterized by a fluctuating mental state and cognitive impairment (Tieges et al., 2017).

- Overlooked in 30-75% of hospitalized geriatric patients (Middel & Miklanic, 2015).
- Increases risks of morbidity and mortality, length of stays, and healthcare costs (Weng et al., 2019).

Geriatric population. Comprises 16% of the general population of the US — will increase to 23% by 2060 (U.S. Census Bureau, 2011).

Cost of delirium incidence in hospitals.
- >$60,516 per patient
- >$143 billion per year (Leslie et al., 2008).

Current Training Protocols. The project site did not have a standardized educational module to address delirium in the geriatric population.

Review of literature.

- Nurse educational interventions improve confidence and competence in identifying delirium symptoms (LaFever et al., 2018).
- The 4 AT cognitive assessment instrument is the most effective but often underutilized for recognizing delirium (Shenkin et al., 2018).
- An online module is an effective resource to equip nurses with the proper delirium knowledge and assessment instrument (Van de Steeg et al., 2015).
- Improved delirium recognition improves health outcomes for this hospitalized geriatric patients (Destroyer et al., 2018).

Purpose & Aims

The purpose of this quality improvement project was to implement and evaluate a structured delirium educational program.

Aim 1. Enhance nurse knowledge of the early signs and symptoms of delirium, as measured by a Delirium Knowledge Questionnaire (DKQ) in pre- and post-test phases.

Aim 2. Improve the utilization and frequency of the 4AT cognitive assessment instrument in hospitalized geriatric patients, measured by self-reporting data over a period of four to eight weeks.

Methods

Design. Post intervention quality improvement project

Setting. Two inpatients 28 beds medical-surgical units at an urban academic medical center in the Mid-Atlantic.

Participants. Nursing staff members

- Pre-test phase: N=43
- Post-test 1 phase (immediately after intervention): N=38
- Post-test 2 phase (4-8 weeks after intervention): N=20

Measures

- Demographic Questionnaire - 8 items
- DKQ - 13 items, yes/no answers
- The 4AT Cognitive Assessment Instrument - 4 items, yes/no answers

Intervention. Online delirium educational module

- 20-minute online module including instructional lectures, a case scenario

Measures (Continued)

- Project limitations
  - Relatively small sample sizes
  - General lack of nurse awareness about the importance of delirium recognition
  - Lack of participation due to COVID-19 pandemic

Results

Pre-test to Post-test 1 DKQ Summary Score

- Median score improved by 0 point
- Results not statistically significantly different between median pre-test and post-test 1 summary score (p=0.580)

Post-test to Post-test 2 DKQ Summary Score

- Median score improved by 0 point
- Results not statistically significantly different between median post-test 1 and post-test 2 summary score (p=0.761)

Usage of The 4AT Cognitive Assessment Instrument

- Results from a descriptive statistics indicate that the delirium education module clinically improved utilization and frequency of the 4AT cognitive assessment instrument among nurses in medical-surgical units.

- The post-test 1 group
  - 45.2% (n=14) utilized 4AT
  - 54.8% (n=17) did not utilize 4AT

- The post-test 2 group
  - 64.6% (n=11) utilized 4AT
  - 35.4% (n=6) did not utilize 4AT

Conclusions

Aim 1: Enhancing nurse knowledge of early signs and symptoms of delirium

- No statistically significant results found, likely due to fluctuations of sample size
- Clinically-meaningful implications for nurse knowledge and recognition were noted

Aim 2: Utilizing the 4AT instrument in hospitalized geriatric patients

- Clinically meaningful results for the improved utilization and frequency of 4AT
- Clinically-meaningful implications
- Increases overall quality of care for hospitalized geriatric patients
- Is associated with improved outcomes and safety including mortality rates, lengths of stays, institutionalizations, and risk of long-term morbidities
- Reduces financial burdens placed on organizations
- Sustainable for long-term implementation, since this intervention aligns with the organization’s goals and is financially feasible

References


