Executive Summary for Delirium Education Evidence Based Practice Project

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Delirium, an acute disorder with decline of attention and cognition, is a clinical complication for many hospitalized older adults. Delirium is characterized by an acute onset and fluctuating course of confusion and disorientation (Inouye, Westendorp, & Saczynski, 2014). It occurs frequently, affecting as many as 50% of hospitalized adults 65 years of age and older, however in many cases, it is unrecognized, and is often a fatal condition for this population (Greer et al., 2011; Inouye, Foreman, Mion, Katz, & Cooney, 2001; Leslie, Marcantonio, Zhang, Leo-Summers, & Inouye, 2008). Patient outcomes associated with delirium during a hospital stay include increases in mortality, length of stay, falls, rate of discharge to long-term care, as well as cognitive and functional decline (Inouye, 2006; Inouye et al., 2014; Leslie & Inouye, 2011). The estimated yearly cost to care for one patient with delirium, during and after hospitalization, ranges from $60,516 to $64,421 (Leslie et al., 2008). In the United States, the overall annual health care costs related to delirium range from $143 to $152 billion (Leslie & Inouye, 2011).

Thirty to 40 percent of cases are preventable (Inouye, Bogardus, & Carpentier, 1999). Early delirium recognition, prevention, and management are needed to improve safety and quality of care for this vulnerable population. Nurses are key to detecting and reporting delirium symptoms because they are the direct caregivers (Baker, Taggert, Nivens, & Tillman, 2015). Multiple authors indicate that opportunities for improvement in nurses’ delirium knowledge exist, particularly regarding the predisposing factors (Fick, Hodo, Lawrence & Inouye, 2007; Flagg, Cox, McDowell, Mwose, & Buelow, 2010; Hare, Wynaden, McGowan, Landsborough, & Speed, 2008, Steis & Fick, 2008). Delirium education and training for nurses is an immediate
need, specifically regarding key features seen during routine care such as fluctuations in attention, cognitive function, and levels of consciousness (El Hussein, Hirst, & Salyers, 2014; Inouye et al., 2001). The geriatric clinical nurse specialist identified this need at the project unit through discussions with staff, physicians, and patient record review.

**Model For Evidence-Based Practice Project**

The Johns Hopkins Nursing Evidence Based Practice (JHNEBP) model and its 18-step PET process provide the framework for this project. The PET process includes three phases described as practice question, evidence, and translation (Dearholt, 2012). The project leader is the executive summary author. JHNEBP model was selected for its step-by-step guidance and because it is the EBP model used by nurses in the organization where the project will take place.

**Practice Question**

The evidence synthesis and translation project is designed to answer the following practice (PICO) question: “Does implementing a multifaceted delirium education program for nurses result in increased delirium recognition as evidenced by documentation of delirium screens, risk factors, nonpharmacological interventions, and an interdisciplinary plan of care for patients 65 years and older on a medical/surgical unit?”

**Evidence**

A thorough literature search for original studies regarding delirium education for nurses yielded 246 articles from the 1990s to 2015. Databases searched included CINAHL plus, Medline, EBSCOhost, PsychARTICLES, and PsychINFO. Key words searched included nursing education, delirium, acute confusion, web-based education, dementia, delirium knowledge, recognition, treatment, management, and nonpharmacological interventions. Following title and abstract review and exclusion of studies impertinent to the PICO question, 24 articles were
included in the literature review. Only articles with evidence quality rated as “A,” high quality, or “B,” good quality, were included in the synthesis. Sources of A and B quality evidence were found for all five JHNEBP evidence levels.

**Evidence Synthesis and Recommendations for Change**

Evidence indicates that education programs regarding delirium recognition and management are needed and are a key priority in delirium clinical practice guidelines (American Geriatric Society [AGS], 2015; Flagg et al., 2010; Inouye et al., 2001; National Institute for Health and Care Excellence [NICE], 2010). Multiple authors recommend that hospitals and healthcare systems implement delirium education programs with ongoing updates on the topic (AGS, 2015; Hare et al., 2008; Tabet et al., 2005; Wand et al, 2013; Yanamadala, Weiland, & Heflin, 2013). Education is often part of a multi-component delirium protocol and is delivered through various methods.

A multifaceted education intervention is described most frequently in the reviewed evidence (Gesin et al., 2012; Lundstrom et al., 2005; Mudge, Maussen, Duncan, & Denaro, 2012; Ramaswamy et al., 2011; Tabet et al., 2005; Vidan et al., 2009; Wand et al., 2013; Yanamadala et al., 2013). This method includes didactic lecture, web-based and visual resources, and interactive case studies. A bedside coach was recommended as an additional educational resource as part of multifaceted education or concurrent with didactic education (Gordon, Melillo, Nannini, & Lakatos, 2013; Hshieh et al., 2015; Mudge et al., 2012; Wand et al., 2013). Use of a delirium-screening tool improved nurses’ ability to evaluate a patient for delirium risk (Gesin et al., 2012, Gordon et al., 2013; Mudge et al., 2012; Wand, et al., 2013). When screening tool information was included in the education, there was increased delirium screening and documentation of delirium signs and symptoms. Multifaceted education improved staff
knowledge, recognition, delirium screening and documentation, and adherence to delirium protocols (Gesin et al., 2012; Ramaswamy et al., 2011; Vidan et al., 2009; Wand et al., 2013; Yanamadala et al., 2013). Based on the evidence appraisal and synthesis, the recommendation is to proceed to translation of the evidence into practice. The evidence is compelling and has consistent results that support a practice change (Dearholt, 2012).

Translation

Determine Fit, Feasibility, and Appropriateness of Recommendations

Support was obtained at the organizational and unit level from various stakeholders including the chief nursing officer as well as the project unit’s clinical director, nurse managers, hospitalists, rehabilitation medicine staff, and nursing staff. The project fits into the organization’s focus on quality and patient safety goals. The major resource to consider for the project is nursing time to complete the education. The unit managers granted approval for two hours of education time per nurse. This education is beneficial in improving nursing competence in caring for an increasingly complex population of both medical and surgical geriatric patients. Improved competence in preventing and managing delirium helps to reduce cost associated with incidence of the condition (NICE, 2010). One potential barrier identified is the exclusion of float nursing staff participating in the education intervention and project goals. Staff buy-in is another identified potential barrier that will be addressed through the education intervention with the goal of greater confidence and knowledge in the effective care of patients with delirium.

The Action Plan

A multifaceted delirium education program is scheduled for implementation during September 2015 for all nurses working in the project unit. The intervention includes a computer-based training (CBT) with content covering delirium risk factors, causes, signs and symptom as
well as prevention and management measures. The NuDESC delirium screen will be reviewed. Steps to take if the patient’s score indicates delirium are identified. Knowledge acquisition will be assessed using a pre-test and post-test comparison. Weekly in-services will be scheduled throughout the month of September to reinforce the CBT information and to introduce the delirium algorithm. Throughout the implementation time, the project leader will round as a bedside coach on a daily basis. Feedback from stakeholders at the unit level will be solicited during delirium rounds. Brief weekly meetings with the unit stakeholders will be scheduled to share results and help ensure continued successful implementation of the project.

Outcome metrics will be gathered during October, November, and December 2015. These metrics will be compared with data collected retrospectively for the same metrics for October, November, and December 2014. Outcome metrics will be collected through concurrent chart review of nursing documentation and include baseline assessment screen and delirium screen on admission, delirium screen completed twice daily, documented risk for delirium, nonpharmacological interventions implemented, and an interdisciplinary delirium plan of care. The results for each measure will be “yes,” consistently completed or “no,” not done, or inconsistently completed. Delirium incidence will also be measured in the pre and post phases.

Conclusion

Delirium education and training for nurses is an important project for acute care hospitals to undertake (El Hussein et al., 2014; Inouye et al., 2001). This low cost, education intervention for nurses working with patients 65 years and older is important step toward preventing delirium and improving safety and quality of care for this population (Inouye et al., 1999). Nurses are key in detecting and reporting delirium so that early management of the condition is realized, and risk and cost to the patient and the organization are minimized.
References


An educational intervention can prevent delirium on acute medical wards. *Age and Ageing, 34*, 152-156. doi:10.1093/ageing/afi031

