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An Evidence Based Education for Registered Nurses Working in a Delirium Room

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AN EVIDENCE BASED EDUCATION FOR REGISTERED NURSES WORKING IN A DELIRIUM ROOM

by

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This capstone, submitted by Sheila M. Wiegman in partial fulfillment of the requirements for the Degree of Doctor of Nursing Practice from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This capstone is being submitted by the appointed advisory committee as having met all of the requirements of the University of North Dakota and is hereby approved.

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Department Nursing and Professional Disciplines

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Sheila M. Wiegman

27 July 2015

Abstract

Delirium is an ongoing and complex medical issue for hospitalized patients, especially the elderly. Early diagnosis, treatment and prevention all play a role in improving outcomes for patients who are experiencing delirium. Interventions with potential to improve outcomes for delirium include considering risk factors when assessing patients to allow for early detection, use of pharmacologic and non-pharmacologic interventions, and multicomponent programs such as delirium rooms. This capstone was developed to determine if registered nurses who work in a four-bed delirium room on a medical unit show an increase in their knowledge and feeling of confidence to care for patients with delirium after completing a delirium room education session. Increase in knowledge and reported feeling of confidence in caring for patients with delirium was found via pre-tests and post-tests. The mean test scores for knowledge questions increased by 26.3 percent and the standard deviation decreased by 13.1 percent between the tests, demonstrating an increase in knowledge and decreased variation in the scores. The nurses' agreement on feeling confident to care for patients with delirium increased after the education session, decreased four weeks after the delirium room opened and then increased at eight weeks after opening. This capstone demonstrates nurses' knowledge of delirium and confidence to care for patients with delirium can increase with education. Nonpharmacologic interventions are considered very effective based on previous research and were emphasized. Use of a protocol for this is recommended in the future along with delirium assessment tools to determine which interventions are most effective.

Evidence Based Education for Registered Nurses Working in a Delirium Room

Background and Significance

Delirium

Delirium, a sudden, serious disturbance in mental abilities and decreased awareness, is considered the most common presenting disease of old age, however patients of every age can experience this with hospitalization. It occurs in 14 to 42 percent of patients admitted to general medical units, 28 to 61 percent of patients treated for hip fractures (Lundstrom et al., 2005), and 80 percent of critically ill patients (Zaubler et al., 2013). Delirium factors include age, dementia, depression, male gender, multiple medications, comorbid conditions, pneumonia, use of benzodiazepine and anticholinergic medications, alcohol use, dehydration, hypoxia, use of restraints and visual impairment (Reston & Schoelles, 2013). Delirium is estimated to be preventable in up to one third (Eeles, Thompson, McCrow & Pandy, 2013) to forty percent (Zaubler et al., 2013) of all hospitalized medical patients

Delirium has a number of significant impacts. It is associated with an increased (up to 14.3 percent) mortality rate up (Reston & Schoelles, 2013). Length of stay is reported to increase with delirium and hospital costs are 2.5 timeshigher in patients with delirium as compared to those who do not have this condition (Reston & Schoelles, 2013). Patients who experience delirium often develop functional decline (Reston & Schoelles, 2013) and are subsequently discharged to long term care facilities rather than home (Eeles et al., 2013). Delirium is frequently not detected and goes untreated. This is reported in 32 to 67 percent of elderly patients (Zaubler, et al., 2013). Post operative

delirium after a hip fracture can be prevented and treated, (Lundstrom et al., 2005), but few hospitals implement interventions (Zaubler, et al., 2013).

Identification and Treatment of Delirium

Delirium is considered a psychiatric diagnosis per the *Diagnostic and Statistical Manual of Psychiatric Disorders* (American Psychiatric Association (APA), 2013) with symptoms that include a sudden change in attention and/or awareness in addition to change in cognition that cannot be explained by any other condition, including those already in existence or a new neurocognitive disorder. The person has trouble focusing attention, thoughts wander, is unable to answer questions appropriately, is easily distracted, and is not oriented to his environment. This develops over a few hours to a few days and it is noted to worsen in the evenings (APA, 2013).

A multifactorial model for detecting delirium during hospitalization was developed (Inouye & Carpenter, 1996) and looks at the relationship between predisposing factors such as dementia, severe illness and precipitating factors which include major surgery, anesthesia, and multiple psychoactive medications. The model suggests that someone who is vulnerable may develop delirium when exposed to a minor precipitating event as compared to a younger person who may not develop delirium even after a severe precipitating event (Hochang et al., 2011). Knowing precipitating factors can help to assess for risk of delirium and provide for early detection, treatment and development of preventative strategies.

Treatment of delirium involves the use of antipsychotics and other measures, including nonpharmacological techniques. In a review of random controlled

studies comparing the use of antipsychotic medication found that these are efficacious in all types of delirium when compared to patients without underlying cognitive impairment in medically and surgically ill patients. Both typical and atypical antipsychotics were found to be effective, although Haldol was associated with more extrapyramidal symptoms (Lacasse, Perrault, & Williamson, 2006).

A number of projects and studies endeavored to improve the assessment and treatment of delirium by pharmacologic and non-pharmacologic methods. Ahmed, Taylor, McDaniel & Dyer (2012) studied an acute care for the elderly (ACE) approach to hopefully decrease the impact of delirium on the elderly which included four components, a specialized environment, patient centered care, a pharmacologic review, and interdisciplinary care. These types of units have been shown to decrease length of stay, hospital costs, and readmission rates. The average length of stay was found to decrease from 7.76 days at baseline to 5.55 days and readmission rates decreased from 14.04 to 11.89 percent and were statistically significant. These decreases contribute to lower cost for the hospital as well as improved patient, physician and nursing satisfaction (Ahmed et al., 2012).

Delirium has been found to be preventable in many cases. Unfortunately, few hospitals implement interventions for prevention. One program, Hospital Elder Life Program (HELP), was developed at Yale and includes a multicomponent prevention protocol which addresses cognitive impairment, sleep deprivation, immobility, visual and hearing impairment and dehydration. This program has been implemented in over one-hundred hospitals since 1999 (Zaubler et al., 2013). Studies have demonstrated that the HELP program has contributed to substantial reduction in the incidence of delirium in the

hospital as compared to usual care and was found to be cost effective for patients at immediate risk for delirium, but not at high risk. Cost savings were also noted due to shorter hospital stays, a decrease in long term care costs and saving on costs for one to one supervision (Reston & Schoelles, 2013; Yue et al., 2014)).

Another approach to delirium, the delirium room, was started in 1997 at St Louis University as part of an ACE unit (Flaherty et al., 2003). This is described as a four-bed unit with intensive nursing care and was started after evaluating patients who were either admitted for delirium or developed it after hospitalization. The impetus behind the delirium room was that changes were needed to better deal with patients with delirium and included the need for alteration in the hospital environment, low technology but more intensive care for patients from their caregivers, and flexibility to use more individualized care (Flaherty et al., 2003). In addition, one to one staffing was not considered practical. This is a nursing driven approach with one staff person in the room at all times, curtains are used, noise and sources of distraction were minimized, training for staff on delirium with weekly briefings at change of shift was provided, and included discouragement of physical restraint, including foley catheters. Evaluation of the delirium room indicated that there is more of a preservation of function when there is early mobilization of patients and higher nurse to patient ratios (Flaherty, et al., 2003). Another study found the delirium room to improve quality of care and be cost-effective (Wong Tin Niam, Geddes, & Inderjeeth, 2009).

Nurses' Knowledge of Delirium and Treatment

The literature widely observes that nurses' knowledge of delirium and its management is poor, supporting the need to increase education about delirium identification and its management for nurses. In one study, a questionnaire was used to assess the knowledge of hospital nurses on delirium, and their knowledge was found to be inadequate, except on one unit where the nurses had been educated on delirium (Hare, Wynaden & McGowan, 2008). Registered nurses' recognition and treatment of delirium has been documented as poor, as low as 12 percent in one study (Marcontonio,Bergmann, Keily, Oray & Jones, 2011). Yanamadala, Wieland & Hefflin (2013) report that in studies on nurse knowledge of delirium, 75 percent of nurses interviewed stated that even though they received formal education on delirium, they could not differentiate between delirium and dementia. It is also suggested that the perceived lack of interventions for delirium may cause providers to have a sense of futility that impacts delirium recognition (Yanamadala et al., 2013). Featherstone, Hopton, and Siddiqi (2010) found that it is important that nurses learn how to distinguish between delirium, dementia and depression as delirium can be prevented by targeting risk factors and triggers.

Nurses working in a delirium room can play a key role in assessing and caring for patients with delirium, and it is essential that they are educated in techniques to assess and manage this. The DNP student author worked with nursing staff on a medical unit in a metropolitan hospital where a four-bed delirium room had been developed. The registered nurses working in this unit required education on evidence based techniques and interventions for assessment and management of patients with delirium.

Literature Review

Efforts and research have been undertaken to improve nurses' knowledge of delirium and their confidence in caring for patients with delirium as well as to determine how to best enhance these via education. This capstone seeks to increase nursing knowledge on delirium and increase the confidence of those nurses caring for in caring for patients experiencing delirium. This literature review examined research completed on the results of delirium training for nurses, techniques previously used for educating nurses on delirium, and content of delirium training, in particular on nonpharmacologic interventions for delirium management.

Three databases, CINAHL, PsychInfo, and PubMed, were used to complete the search. The terms used for search were "delirium", "nurse knowledge", "nurse education", and "nonpharmacologic interventions". CINAHL generated 81 relevant articles, PsychInfo yielded 11 applicable articles, and PubMed yielded 42 pertinent articles. Many of the same articles were found in each of the databases, therefore a total of 52 articles were reviewed.

Delirium Education for Nursing

There are a number of studies on improving care for delirium through educating nurses that demonstrate an increase in knowledge and confidence for the nurses. Wand et al. (2014) provided hour sessions on delirium which included general information on delirium, risk factors, symptoms, epidemiology, prevention and how to address risk factors, used a pre-test and post-test and found that there was a significant improvement in staff confidence in managing risk factors for delirium, getting access to help and in staff knowledge. The profile of delirium was raised and in particular, staff

valued case based discussions. This effort also included posters and weekly meetings with program staff. Varghese, Macaden, Premkuma, Matthews, & Kumar (2014) found that there was significant improvement in knowledge levels and practice of nurses after an educational program on delirium using pre-tests and post-tests. A number of other studies support the findings of improvement in knowledge on delirium by nurses after training. Marcontonio, Bergmann, Keily, Oray & Jones (2011) found that 41 percent of nurses were able to detect delirium after starting a delirium abatement program as compared to 12 percent in the control group, and delirium training for 392 nurses in a hospital resulted in a positive impact on the nurse's self confidence to treat delirium (Akechi, Isiguro & Okuyama, 2010). In addition to changes in nurses knowledge and confidence in assessing and treating patients with delirium, Ahmed, Taylor, McDaniel & Dyer (2012) found that when nursing staff received twelve weeks of training on care of the elderly, including delirium, length of stay and readmission rates were decreased.

Studies have demonstrated positive effects of educating nurses on delirium, but some limitations have also been noted. Studies on education for nursing staff were found to be effective for the preventing delirium in hospitalized men but not women and more effective with patients who did not have dementia or impairment in caring for themselves prior to the delirium (Reston & Schoelles, 2013). One article on behavior training for nursing home staff on use of effective strategies was maintained for six months, while the staff stopped using ineffective techniques, they did not increase their use of effective techniques (Hwang, 2008).

Educational Techniques for Delirium

Studies on techniques for education of nurses on delirium provide a range of

trials. Yanamadala et al. (2013) reviewed the literature on educational interventions for the recognition of delirium and found that improvement in knowledge and skills are not enough to make the change, but that effectiveness is greatest when formal teaching is interactive, leadership is engaged and clinical tools are used. Other studies also emphasize the use of interactive techniques (Featherstone et al., 2010; Brajtman,Wright, Hall, Bush, & Bekele, 2012; and Devlin et al., 2012).

In one study, an educational package that included a formal presentation on the ward, group discussion, written management guidelines, and follow up sessions for support resulted in a significant decrease in the prevalence of delirium among older inpatients and increase in the recognition of delirium (Tabet et al., 2005). Devlin et al. (2012) evaluated the use of didactic presentations before and after case scenarios where script concordance (cases with gaps requiring the use of clinical reasoning and past experience) and found that after the training, the number of nurses who could evaluate delirium increased significantly. E-learning was piloted to provide learning to a larger number of individuals, but use of this in place of didactic training was not known due to the lack of research (Irving, Detroyer, Foreman, & Milisen, 2009).

Education is described in particular in relation to delirium room projects as necessary and collaborative. In the delirium room at St. Louis University, nurses received training after the room was opened and had brief weekly training at the change of shifts and the presence of the delirium room itself raises the awareness of physicians and nurses about the phenomena (Flaherty et al., 2003). Nursing inservices on delirium were important in preventing use of restraints and were done at bedside and at change of shift to reinforce buy in and allow all shifts to participate (Flaherty & Little, 2011). In the study by

Eeles et al. (2013), on a delirium room experience, the training included definitions of delirium and dementia, environmental considerations, communication styles, practice partnership models of care and delirium room operations.

Nonpharmacologic Delirium Interventions

Nonpharmacologic nursing interventions can assist in the prevention and treatment of delirium if nurses have received appropriate education on these interventions. Lundstrom et al. (2005) reviewed interventions to prevent delirium that included education for nurses. This focused on interacting with patients with reduced attention and orientation and how to best manage these patients. Two recent studies documented the effectiveness of nonpharmacologic interventions for delirium, especially those that target the risks for delirium which include cognitive impairment, sleep deprivation, immobility, visual impairment, auditory impairment and dehydration (Inouye & Campbell, 1996). One is a meta-analysis that reviewed multicomponent interventions to prevent delirium (Martinez, Tobar & Hill, 2015). Multicomponent interventions most often include physical and occupational therapy, orientation, and avoidance of sensory deprivation, removal of medications that can exacerbate delirium, immobility, sleep deprivation, and loss of circadian rhythms is also emphasized. In this study, multicomponent interventions were found to prevent the incidence of delirium in the elderly, no matter the type of unit with a relative reduction in delirium rates at 30 percent (Martinez et al., 2015). Comparatively, Rivosecchi, Smithburger, Svec, Campbell, & Kane-Gill (2015) looked at seventeen articles on nonpharmacologic interventions and found that among the interventions considered most beneficial (mobilization, reorientation, education of nurses and music therapy), mean reduction of delirium was

24.7 percent and the duration and severity of delirium were decreased after the addition of nonpharmacologic interventions. This review suggests that development of a nonpharmacologic protocol for delirium care that targets the risk factors for delirium are most effective (Rivosecchi et al., 2015).

Nonpharmacological approaches also include communication techniques and behavioral management. In 2011, Flaherty & Little found that the delirium room could be restraint free in six months and that staff have learned alternative methods for working with patients called the Tolerate, Anticipate, Don't Agitate and Affirm method. Through this method, patients are allowed to respond naturally in behavior that is not impacting their medical care in a way that allows them some semblance of control. Nurses tolerate disorientation instead of correcting this over and over. When events that might agitate a patient are anticipated, patient's patterns can start to make sense (Flaherty & Little, 2011).

Based on the information reviewed from the literature, an evidence based education session was developed for this capstone that included a didactic session and interactive portions on delirium and care of patients with delirium. Communication techniques and nonpharmacologic interventions for delirium were emphasized in the education session then applied via an interactive portion of the training. The interactive portion involved showing videos demonstrating the symptoms of a patient with delirium such as confusion, hallucinations, and voices and former patients sharing their experience of delirium. The nurses then discussed how the techniques and interventions from the training could be applied in the cases portrayed in the videos.

Capstone Purpose, Goals and Outcomes

The overall purpose of this capstone project was to improve the care of patients experiencing delirium by educating registered nurses who will work closely with these patients in a newly created delirium room. The first capstone goal was to increase the knowledge of registered nurses who care for patients in a four bed delirium room. The outcome measure for this goal was that by April 1, 2015, at least 75 percent of the registered nurses who completed an education session will demonstrate an increased knowledge related to delirium identification and treatment as evidenced by an improvement of scores from pre-test to post-test immediately and at four and eight weeks after the delirium room opened.

The second capstone goal was to increase the confidence of registered nurses in competently caring for patients in a four bed delirium room. The outcome measure for this goal was by May 10, 2015, at least 75 percent of the registered nurses working in a four- bed delirium room would agree or strongly agree that they feel their confidence on caring for patients with delirium has improved from before the education session based on their responses to likert scale questions on a pre-test and post-test and at four and eight weeks after the delirium room opened.

Theoretical Framework

The focus of this capstone project was the care of patients with delirium and educating nurses to manage patients with delirium within a delirium room setting. Delirium rooms have an emphasis on nonpharmacologic interventions such as providing a structured environment with day and night lighting, a clock, and a schedule, mobilizing patents several times per day, orienting patients in thoughtful, appropriate manner or

accepting disorientation, and use of cognitive stimulation. Delirium room interventions are primarily accomplished through the nurse-patient relationship and interactions, and Peplau's theory of interpersonal relations can be applied here. This theory illuminates the nurse-patient relationship and is a foundational theory in nursing. Peplau describes three phases in the nurse-patient relationship, orientation, working and resolution (Masters, 2015). In the orientation phase, a problem is identified and assistance from the nurse is sought. The working phase involves the patient determining who can help him and, then, with the nurse, feelings are explored and new goals are considered. Lastly, during the resolution phase, new goals are adopted and the patient no longer needs the nurse (Peterson & Bredow, 2013).

Peplau uses four psychobiological elements in her theory. These are needs, frustrations, conflict and anxiety. These elements contribute energy and action for goal formation and nursing intervention (Masters, 2015). Anxiety, a major symptom of delirium, is generated when there is a perceived threat, and anxiety and illness are seen by Peplau as directly related. Assessing anxiety, recognizing its effect on a patient's behavior, and then understanding how to reduce this anxiety are vital evidence based nursing skills that can be used to move the patient from symptomatic state to a problem-solving mode that ultimately reduces the impact of delirium.

The theory of interpersonal relations includes concepts on person, environment, health, and nursing. Person refers to the patient and the nurse. Forces outside of the person and related to culture is the environment (Masters, 2015). Health is seen as "forward movement of personality and other ongoing human processes in the direction of creative, constructive, productive, personal, and community living." (Peplau, 1952).

Nursing is viewed as therapeutic with the interpersonal process between the nurse and the patient (Masters, 2015).

To improve the care of patients with delirium, nurses can be empowered by knowing that what really matters is their relationship with the patient, not necessarily some distant and complicated skills. The delirium room training emphasized the importance of the relationship between the nurse and patient being at the root of their care in the room as the delirious patient has altered and shifting consciousness and cognition and look outside of themselves to the nurse to help make sense of their environment. If the nurse can recognize that the patient can feel threatened, anxious, scared, and have had to give over some control of their lives to others, the nurses can see the patient is looking to them for assistance in coping with these issues. With this understanding of nurse's role as theorized by Peplau and interventions to help the patient deal with the anxiety related to confusion and disorientation symptoms of delirium, registered nurses can provide compassionate care to these patients and assist them to move forward toward health.

Design and Methods

Setting

This DNP capstone took place at a 455 bed public hospital located in a metropolitan area. The facility has been in operation since 1887 (Nathanson & Mattison, 2012). The hospital serves as a safety net for the community and the range of services includes trauma, emergency, burn as well as community clinics and home care. This capstone provided advanced delirium educational training to registered nurses providing care in a newly-developed four-bed delirium room at the hospital on the medical floor. Patients

typically assigned to this room include those diagnosed with delirium, cognitive impairment and/or altered mental status. There is one bathroom for the room and curtains are provided for privacy as both men and women can be assigned to the room. One nurse and one health care assistant (HCA) are assigned to the room and one of these staff is always required to be in the room.

Recruitment

The capstone participants were registered nurses scheduled to work in the delirium room on the medical unit of the hospital. In order to participate in the capstone, the nurses must have attended the education session and then worked in the delirium room after it opened. After obtaining IRB approval, recruitment of nurses to participate in this project occurred just prior to the delirium room education when the capstone project was explained to the nurses. Information regarding participation, use of the pre-test and post-test for the education and follow up delirium management room surveys at four and eight weeks after the delirium room was opened, was explained. The nurses were provided with the information sheet that outlined data collection and assured anonymity.

Measures and Data Sources

This capstone was evaluated by a one group unmatched pre-test and post-test design to determine if an increase in nursing knowledge was found after an education session on delirium and delirium room techniques. The training consisted of a four hour education session conducted by the DNP student. This session was designed to provide information on assessment and treatment of delirium as well as techniques for nurses to assist patients in coping with the symptoms of delirium and included a combination of didactic and interactive approaches as suggested to be most effective by the literature. The education

session was didactic with the use of presentation by powerpoint (See Appendix A) and the interactive portion included videos on the experience of a persons with delirium including hallucinations and confusion and discussion of application of interventions provided in the didactic portion.

Data for this capstone was gathered through the use of two tools developed specifically for this: pre-test and post-test and a delirium room management survey (see Appendix B). The pre-test and post test was administered immediately before and after the education session. These tests contained the same ten questions focused on assessing knowledge of treatment and interventions for managing delirium as well as questions asking the nurses to rate their confidence on caring for patients with delirium on a Likert scale. The post-test included open questions regarding perceived usefulness of the education session and the opportunity to provide feedback about the session and the challenges they anticipate in managing patients in the delirium room.

The delirium room management survey was provided to the nurses at at four and eight weeks post education session. This tool contained several types of questions including demographic information, one question asking them to rate their confidence with caring for patients in the delirium room, one questions on helpfulness of the education session, two questions regarding the challenges faced in working with delirious patients and a final question asking for any comments or questions.

Implementation

Capstone implementation began with the education session, which took place on

February 25, 2015, after IRB approval by the University of North Dakota and the hospital. Nurses who chose to participate were given the pre-tests which were completed and collected prior to the education session. Similarly the post-tests were distributed and collected after the education session. All completed tests were placed in a manila envelope and locked in a file in the student's office until review.

The delirium management surveys were distributed at four and eight weeks after the delirium room opened (March 2, 2015). These were delivered in a manila envelope to each staff nurse who attended the education session in their mailbox with a copy of the information sheet and instructions to return the completed survey in the envelope to the opaque box provided in the staff lounge. The surveys were then collected from the box after ten days after distribution. The surveys were stored in a locked file in the student's office until review.

Data Analysis and Interpretation

Data Analysis

All data collected were collated and placed on spreadsheets. Statistical Package for Social Sciences (SPSS v22) was used for analysis. Descriptive statistics including percentages, frequencies, mean percentages and standard deviation were used to determine change between the pre-test, post-test, four week and eight week test scores and responses to questions.

Participant Demographics

Sixteen nurses attended the education session and all of them completed pre-tests and post tests. Fourteen participants completed the management survey at four weeks after the delirium room opened, and six nurses completed the management survey eight weeks

after the room opened. Demographic information was requested in the four and eight week management surveys and these data are provided in Table 1 below.

Table 1. Management Survey Demographics

	Four Week Survey	Eight Week Survey
Number completing survey	14	6
Age between 20 and 50	10	6
BSN degree	9	4
0 to 10 years of medical floor experience	11	5
Working 1 to 3 times in delirium room	11	5

Participant Knowledge

Figure 1 (below) shows the percentage of correct responses on the pre-test and post-test for each knowledge question. The responses to the ten knowledge questions in the pre-tests and post-tests demonstrated an increase in scores in seven questions. There was no change in the answer to one question and a decrease in scores in two questions.

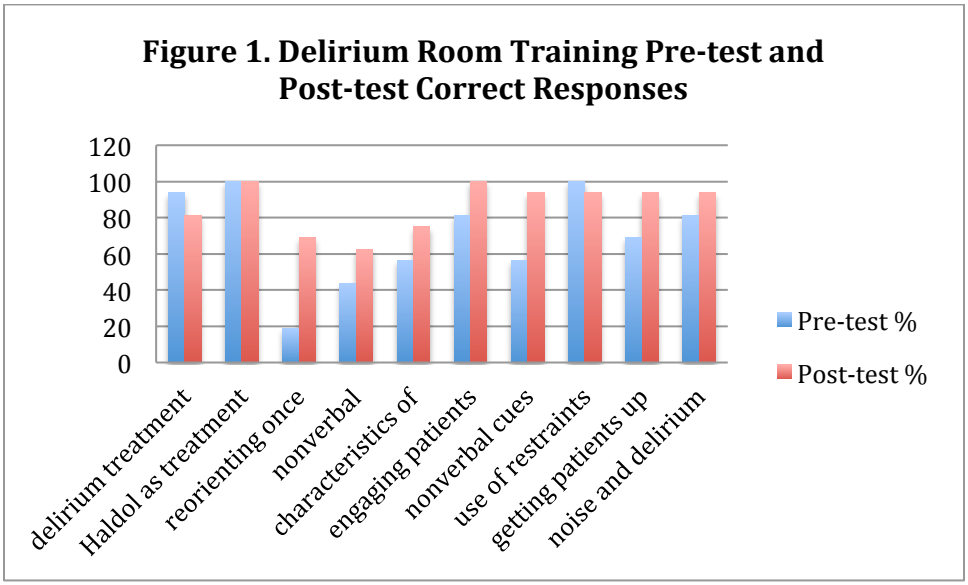
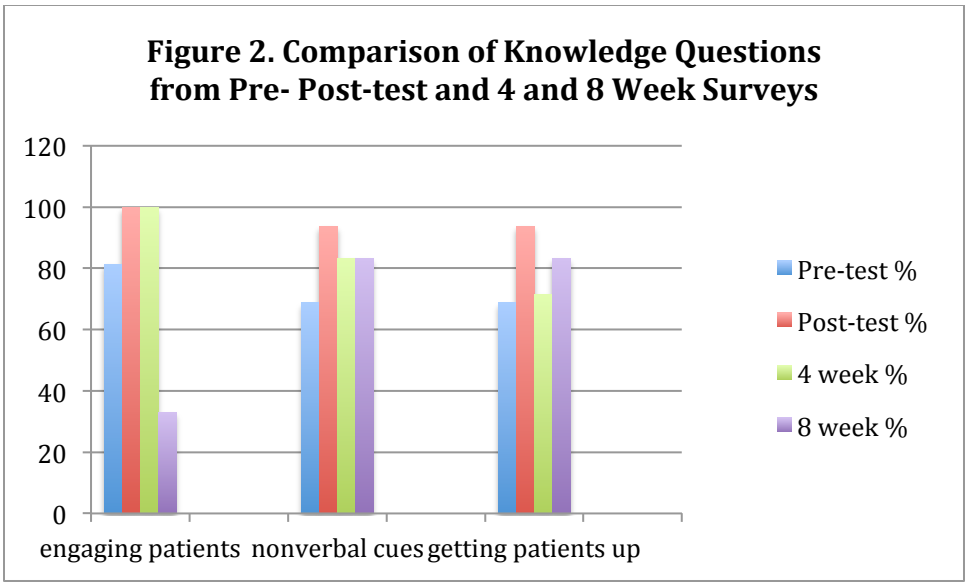


Table 2 (below) provides the mean test scores and standard deviations for these tests. The pre-test mean percentage of all ten questions was 70.0 percent with a standard deviation of 26.5 percent, and the post-test mean percentage of all ten knowledge questions was 86.3 percent with a standard deviation of 13.4 percent as shown in Table 2

Table 2. Mean (%) and Standard Deviation (%) on Pre-test and Post-test Knowledge Questions

	Mean Score (%)	Standard Deviation (%)
Pre-test	70.0	26.5
Post-test	86.3	13.4

The four and eight week management survey included three questions from the pre-test and post-tests. Figure 2 depicts responses to three questions also on the pre-test and post-test. These questions addressed keeping the patients active and engaged, cognitive impairment and the use of nonverbal cues and managing the patients when they want to get up. At four weeks, the responses to the questions showed a decrease in scores as compared to the post-test. At eight weeks, the percentage of correct responses to knowledge questions showed a decrease in one question, an increase in one and stayed the same in one.



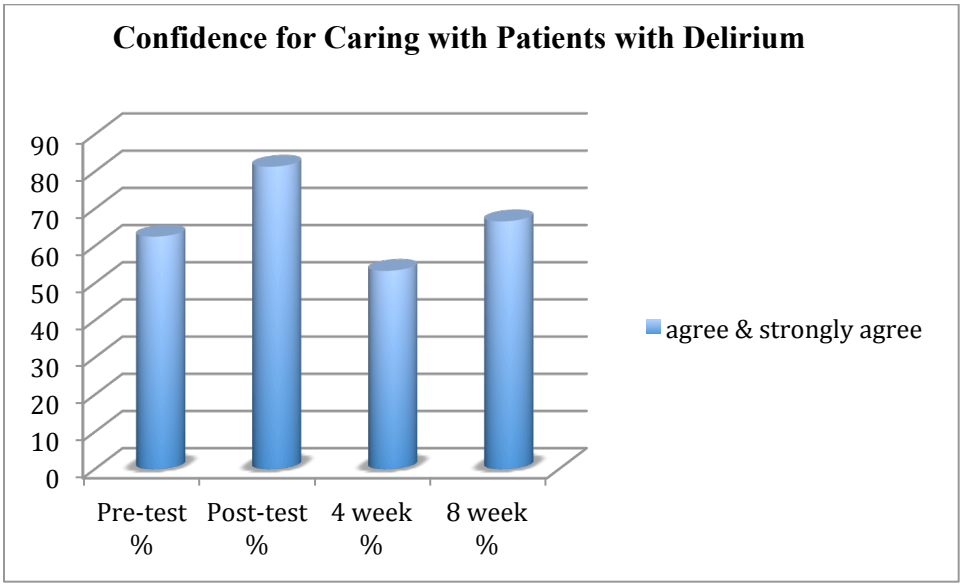
The outcome measure for this capstone related to knowledge was that at least 75 percent of the nurses participating in the training would show an increase of knowledge through comparison between results on pre-test and post-tests administered at the delirium room education and at the four and eight week management surveys. On eight of the knowledge questions in the pre-test and post-test, the nurses either showed an increase in the correct number of responses or no change with all answering correctly. The outcome objective of an increase in knowledge of 75 percent of the nurses was not met; however, the pre-test mean percentage of all ten questions was 70 percent with a standard deviation of 26.5 percent, and the post-test mean percentage of all ten knowledge questions was 86.3 percent with a standard deviation of 13.4 percent. These results not only show an increase in knowledge as a result of training intervention, but also show a reduction in variation, as indicated by the smaller standard deviation of the smaller standard deviation of the post-test results.

The changes between the pre-test and post-test and the management surveys on three knowledge questions showed a similar pattern in two questions where there is some

decrease from the post tests, but the third question showed consistency between post-test and the four week survey, then a significant drop at eight weeks. Possible explanations for the decreased percentages in the knowledge questions at the four and eight week management surveys are the gap time between the training and the surveys as well as the lack of consistency in nurses who complete the survey over the capstone time frame.

Participant Confidence

The nurses rated their confidence in how they felt about caring for patients with delirium at four points: the pre-test, immediate post-test, and through four week and eight week management surveys as shown in Figure 3.



The nurses were asked to rate how confident they feel in caring for patients with delirium on a Likert scale. On the pre-test, 62.5 percent agreed or strongly agreed they feel confident, while on the post-test, 87.5 percent of the nurses agreed or strongly agreed that they felt confident to care for patients with delirium. This rating decreased to 53.3 percent at four weeks, then increased to 66.6 percent at eight weeks. The capstone objective regarding confidence on caring with patients with delirium was to have 75

percent of the participants rate that they agree or strongly agree in response to this question. The differences in rating of confidence in caring may be related to the newness of the care model in the room, the few experiences most nurses had (one to three experiences) in the room at the time of the management surveys, that the nurses felt overwhelmed in caring four patients in the same room, and the decrease in the number of respondents to the management survey between the four and eight weeks. Another important factor was that some of the health care assistants (HCAs) were not trained when the room opened or untrained HCAs were placed in the delirium room due to staffing shortages, and the nurses had to oversee the HCAs at the same time as manage the patients in the room. The nurses reflected this in their responses to the open questions in the post-tests and the management surveys. All HCAs were trained by time of the eight week management survey.

Participant Challenges in Working in the Delirium Room

On the post-test, four week and eight week surveys, the nurses were asked to comment on challenges that they anticipated (post-test) and met (in four week and eight week management surveys) in working in the delirium room and these are discussed here. These questions were to provide the nurses with an opportunity to provide feedback on their experience of working in the delirium room, the applicability of the education session to their work, and issues and concerns from their perspective in an anonymous fashion. This information assisted in improving future education sessions as well as alerted the DNP student to any operational problems that could be addressed. Concerns prior to opening of the delirium room reflected in the post-tests were compared to those after the room opened on the four and eight week management surveys. The

primary issues of concern were with regard to education and motivation of health care assistants (HCAs), delirium room configuration and operation, and overall planning for the room and response by the staff.

A number of concerns were expressed with regard to the HCAs before the delirium room opened and after. Before the room opened at the post-test, nurses were concerned about the expectations for the HCAs in the room, delegating tasks to them, and the competency of the HCAs to care for the patients. Most of the HCAs did not receive training until after the delirium room was open, and this was an issue in some cases, but not all. The nurses noted that it was important that HCAs assigned to the room want to work there and demonstrate motivation. Inadequate staffing was noted as a problem at times, and that it was difficult when one patient is restless and wants to walk, but the HCA cannot leave the room. The HCAs had been trained, but the nurses noted that some prefer to keep the patients in bed rather than mobilize them, one of the important interventions emphasized in the training. The nurses saw that some HCAs did not seem to want to engage the patients, but that some HCAs were active and liked working in the room. One nurse reported that variations in the combination of staff and patients in the room affects the quality of care, suggests more consistency and care in choosing staff.

Room configuration and management issues were reported by the nurses. Room design and space was not considered optimal and sightlines make it difficult to observe all patients at the same time. One person felt that the milieu in the room is difficult to control and that the patients need a common area in which to sit. One nurse felt that there were not enough activities for the patients. In some cases, nurse felt patients were admitted to the room that were not appropriate or did not fit room criteria such as

withdrawal from alcohol, one was loud and distracting to others, and while others were a high fall risk, or impulsive. Nurses reported that it was difficult to manage patients at varying functional levels in the room, to provide care patients may need simultaneously and to coordinate their care and implement the interventions to help them in the time available. At times, patients whose mental status had cleared were left in the delirium room which was difficult if not uncomfortable for the patient. Staff on night shift felt that the patients should not be disturbed as they were trained and that taking vital signs should be done at the end of the evening shift and any patients if they are stable should be left to sleep.

Staff nurses also commented on delirium room development in general. They felt coordination on development of the delirium room could have been better between management, nursing staff and physicians. A number of nurses did comment that their experience in the delirium room was positive as well as provided suggestions they noted from their work there. This includes the use of reading to the patients as an intervention that one HCA used, having the patients play games together, and that the use of music may be beneficial and requested a CD player with music from the 1940s and 1950s.

Discussion

Delirium is a serious condition faced in health care, especially in hospitals and is found to impact length of stay, mortality, decline in function and disposition to long term care. Delirium rooms, utilizing appropriate evidence based nursing interventions, have been demonstrated as a successful approach to preventing and treating delirium. In order to assist patients in the delirium room, nurses require knowledge and confidence in their the ability to implement interventions in an effective and timely manner. This capstone

evaluated if registered nurses working in a delirium room who received education increased their knowledge and the confidence in caring for patients in the room.

While the outcome objective of an increase in knowledge for 75 percent of the nurses was not met, there was an increase in knowledge between the pre-test and post-test which is promising. There was some decrease in scores at the four and eight week management surveys in knowledge. Some decrease in knowledge is to be expected when a new care model is introduced that requires the nurses to adjust and change their typical mode of practice. The nurses may need more cues with regard to implementation of the interventions from the education when they first work in the room to assist with integrating these in their care. Use of weekly bedside briefings and inservices at change of shift was found to be effective in previous delirium room education (Flaherty et al., 2003 and Flaherty & Little, 2011) and would likely be beneficial for this hospital delirium room.

The nurses agreement on feeling confident in caring for patients with delirium decreased at the four week management survey as compared to the pre-tests and post-tests where an increase was found, but then increased at the eight week management survey, and this may reflect that the nurses feel more confident after experience working in the delirium room. Ensuring nurses work in the delirium room on a consistent basis may assist in continuing to build their confidence. In addition, some HCAs had not received the delirium room education but were assigned to the room due to staffing needs and this could have affected the nurse's feeling of confidence at four weeks contributing to a decrease. All of the HCAs were trained by the eight week management survey

which may have contributed to the increased feeling of confidence agreed to by the nurses at that time.

The post-test and surveys provided additional feedback and suggestions. Responses included positive feedback and some suggestions for future education sessions including the need for attention to the HCA education and motivation. In addition, feedback on room configuration, patient management issues and a sense from the nurses that the project could have been developed and implemented with more involvement on their part. This should be considered in future efforts for the delirium room and when other changes or new projects are anticipated.

Strengths and Limitations

The strengths of this capstone include that it provided a unique opportunity to provide delirium education to registered nurses and evaluate the results of this education prior to the implementation of a new care model. The techniques learned in the education session, communication methods and a focus on nonpharmacological techniques, are applicable to other patients on the medical floor especially with dementia, cognitive impairment or altered mental status so may help improve patient care in other areas. Written feedback and comments on the post-test and management surveys were honest, robust and constructive. It provides a picture of how the nurses are coping with implementation of the new care model, deficits and benefits both were identified. This will contribute to making improvements in the delirium room as well as in the future education. The nurses identified additional interventions either they had tried or suggest for use that will help in the delirium room.

The limitations of the capstone were that the pre-test and post-test were not matched

as pairs nor were the management surveys. There was no control group. Demographic information was obtained for the four and eight week management surveys but not the pre-tests and post-tests, preventing a better understanding of the background of the nurses who completed those tests in relation to the results. There was attrition through the course of the project and the last management survey had six participants while the first one had fourteen. This lessens the strength of the results. More insights and information may have been gained if there were more of the same questions in every test as there were only four questions in common among the tests and survey. Greater understanding of knowledge retention and implementation might have been obtained.

Implications and Future Directions

This capstone has generated findings on educating nurses who scheduled to work in a delirium room and the impact on the knowledge and confidence in caring for the patients there. As the delirium room was a capital cost with expected savings, its continuance while showing positive outcomes is highly likely as is the need for nurses to be educated on delirium and delirium management techniques. Education sessions have continued since this capstone was completed, so education of the nurses and any changes based on this capstone are sustainable. In addition, the education sessions can improve based on feedback including more involvement from the nurses. The nurses suggested that their involvement earlier in the development of the project might have made feel more engaged and ready. This is a consideration for other new projects that will require a major role for nurses in implementation.

The results of this capstone can be applied to other circumstances where patients are cohorted. While hospitals have moved away from this in favor of private rooms, cost

savings on one to one supervision and maintaining patient safety for falls and impulsivity in those with traumatic brain injury, confusion, and dementia, there is a movement now toward use of cohorting. The value of educating nurses on delirium can be used to support educating nurses to care for cohorted patients in these other circumstances.

Another consideration, as discussed in the delirium room literature, is to provide training or inservices on a routine basis which allows for case discussion and inclusion of staff at change of shift or even at the bedside. The hospital may want to add the HELP program as another initiative to improve delirium outcomes for patients.

Some research has been done on the use of delirium rooms and nonpharmacological interventions but little has been done where both of these are in place. Use of delirium assessment in conjunction with implementation of the interventions has potential to determine which interventions are most effective and when. Delirium rooms and nonpharmacologic interventions are nurse driven model and with that, nurses can take the lead, in implementation and research. Nonpharmacologic protocols have been demonstrated as effective in delirium prevention and treatment and provide a more comprehensive approach as compared to use of interventions as needed. Further implementation and research on use of these in relation to the delirium room shows some

Conclusion

Delirium is a serious condition faced in health care, especially in hospitals and is found to impact length of stay, mortality, decline in function and disposition to long term care. A delirium room and nursing interventions used there have been demonstrated as a successful approach to preventing and treating delirium. This capstone endeavored to evaluate if registered nurses working in a delirium room who received education

increased their knowledge and the confidence in caring for patients in the room. The findings affirm that nurses knowledge and confidence improves with education and that they can play an important role in delirium prevention and treatment. Development and use of nonpharmacologic protocols for delirium prevention and treatment is recommended as the next step as well as the addition of delirium assessment in conjunction with implementation of interventions. Research on this can assist to determine which interventions are most effective.

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Appendix A

8/2/15

Delirium:

Symptoms, Assessment and Treatment

Symptoms of Delirium

- serious disturbance in mental abilities not accounted for by dementia
- decreased awareness of one's environment
- fluctuating levels of consciousness
- alternating patterns of hyperactivity to hypoactivity
- impaired attention span
- confused thinking
- sudden onset
- alteration in sleep wake pattern
- fear and high levels of anxiety

Mnemonic for Causes of Delirium

D	Drugs
E	Ears, Eyes
L	Low oxygen states (MI, stroke)
I	Infection
R	Retention of urine or stool
I	Ictal
U	Underhydration, undernutrition
M	Metabolic
S	Subdural hematoma

Contributing Factors for Development of Delirium

- Severe, chronic mental illness
- Medication
- Infection
- Surgery
- Drug or alcohol use

Types of Delirium

Hyperactive

hyperarousal, hypervalert, agitated and most often characterized by hallucinations, delusions, agitation and disorientation

Hypoactive

hypoarousal, hypoalert, lethargic and most often characterized by confusion and sedation but rarely the others listed above

Mixed Type

Elements of both of the above.

Subsyndromal

Restlessness, anxiety, irritability, distractibility, or sleep disturbance in days before onset of overt delirium and may progress to full-blown delirium over 1–3 days

Assessment for Delirium

- Assess fluctuating levels of consciousness—the key to delirium
- Interview family and caregivers
- Assess for past confusional states (such as prior diagnosis of dementia)
- EEG or lab abnormalities
- Assess VS, level of consciousness, and neurological signs

Video on Delirium

- https://www.youtube.com/watch?v=hwz9M2jZi_o
- https://www.youtube.com/watch?v=mKcbeXVdygg

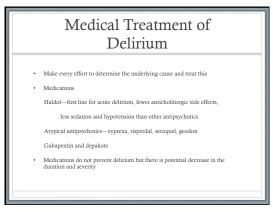
Assessment for Delirium (2)

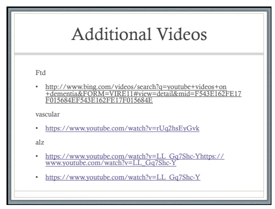
- Assess potential for injury
- Assess need for comfort measures—pain, cold, positioning
- Are immediate medical interventions available to prevent brain damage

Confusion Assessment Method (CAM)

See handout.

8/2/15


Medical Treatment of Delirium
• Make every effort to determine the underlying cause and treat this
• Medications
Haldol—first line for acute delirium, fewer anticholinergic side effects,
less sedation and hypotension than other antipsychotics
Atypical antipsychotics—zyprexa, risperdal, seroquel, geodon
Gabapentin and depakote
• Medications do not prevent delirium but there is potential decrease in the duration and severity


Additional Videos
Ftd
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vascular
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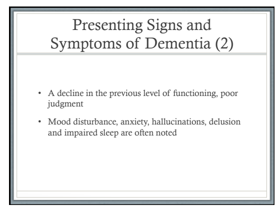
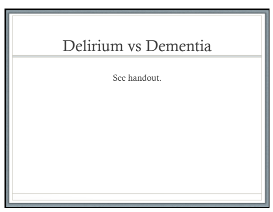

Presenting Signs and Symptoms of Dementia (2)
• A decline in the previous level of functioning, poor judgment
• Mood disturbance, anxiety, hallucinations, delusion and impaired sleep are often noted


Delirium vs Dementia
See handout.

8/2/15

Delirium Room Management

Topics

- Room Environment
- Daily Procedures
- Behavioral Management
- Use of Restraints

Room Environment

- Clock
- Calendar
- Orientation board
- Patient photographs—family, etc.
- Signs/pictures such as on the bathroom door
- Avoid overstimulation but prevent too little stimulation

General Patient Management

- Patient care plans should include adequate pain management, bowel frequency, hydration and nutrition
- Restraints of all kinds should be avoided—limb restraints, catheters, IVs…cover up any needed tubes as possible.
- The patient's day and schedule should be arranged to take advantage of daylight and night to promote orientation and sleep
- When a patient is pulling on tubes, use a decoy (false IV on non-dominant arm)
- When patients try to get out of bed, it may be at unnatural times, try to anticipate this, let them do it and allow him to do as much by themselves as possible

Inouye, Zimmerman & Rudolph, 2013

Daily Procedure–Daytime

- Cognitive stimulation during the day
- Make sure patients have glasses, hearing aids, magnifying devices
- Regularly communicate the day's events and plan
- Avoid medications that affect cognition
- Patients need to be systematically mobilized—walk or range of motion at least 3 times per day

Inouye, Zimmerman & Rudolph, 2013

Daily Procedure—Day Time

- Use cognitively stimulating activities such as reminiscence, current events, word games
- Facilitate regular visits from family and friends
- Resolve any reversible cause of impairment (i.e. remove ear wax)
- Consider need for adaptive equipment
- Watch for dehydration
- Assist with feeding, if needed

Daily Procedure—Night Time

- Relaxing environment—warm drink, pleasant music, massage
- Nighttime noise reduction—try to eliminate beepers, alarms, minimal vocera use
- Time vital signs and procedures in a way that maximizes restfulness
- Sleep regulated with melatonin has been correlated with reduced delirium

Inouye, Zimmerman & Rudolph, 2013

Behavioral Management

- Caregiver demeanor and the quality of the relationship with the patient can affect their behavior
- Those with cognitive impairment are sensitive to nonverbal cues and mirror the behavior around them —calm nurse, calm patient!
- It has been found that increased social attention by staff helped a patient stop screaming
- With decreased cognition, external factors are a more important determinant of behavior—we can do more by focusing on external factors rather than trying to change the patient's behavior

Behavioral Management (2)

- Consistency in caregivers and our interactions with the patient can help.
- A consistent structured plan of care is needed
- Constant presence of family members can help.
- Use active listening and validation, even if the patient's behavior does not make sense.
- SEE SITTER TIP SHEET

8/2/15

Guidelines for Working with Cognitively Impaired Individuals

- Provide only one visual clue at a time
- Know the patient may not understand the task assigned
- Remember that relevant information is remembered longer than irrelevant
- Give only one instruction at a time

Communication Techniques for Dementia

- Use a variety of nonverbal techniques to support communication
  1. Point, touch or demonstrate an activity
  2. Ask them to point to the part of the body they are talking about
  3. When the person is trying to find a word, guess what it might be and ask if you are correct
  4. Use cue cards, flash cards, alphabet cards, and pictures

Communication Techniques for Dementia (2)

- Encourage reminiscing about happy times in life
- If 2 patients argue, stop them, separate them and then after about 5 minutes, explain to them why you intervened
- Reinforce patient's speech via pictures, nonverbal gestures, Xs on calendars, etc.

TADA Approach

1. ***T***olerate
2. ***A***nticipate
3. ***D***on't agitate
4. ***A***ffirm disorientation

TADA
1. Tolerate

- Try re-orientation once, if not effective, do not continue, allow the patient to act naturally
- Watch the patient to get cues about their needs—if they are trying to get out of bed, they may need to go to the bathroom
- This approach gives the patient a semblance of control

TADA
2. Anticipate

- Look for situations that may agitate or irritate a patient
- Discontinue unnecessary attachments
- Hide necessary attachments

TADA
3. Don't Agitate

- Avoid short term memory questions
- Some sources of agitation are predictable and others are not.
- Suggest using distraction such as changing the subject or go along with the disorientation.
- Reflect the underlying feeling the patient is experiencing—being scared, anxious, lost, trying to maintain control, etc.—"you must be really scared"

TADA
4. Affirm disorientation

- Rather than re-orienting

Behavioral Management—Use of Medications

- Medications should be avoided if possible but if a patient is acutely agitated:
  1. Haldol or atypical antipsychotics can be used
  2. Benzos can be used for alcohol withdrawal or if antipsychotics are contraindicated

Kovács, Zimmerman & Rudolph, 2013

Appendix B

Delirium Room Training Pre Test

In the following questions, please choose the best answer or provide a written response as appropriate.

1. Delirium is best treated via:

    a. transferring the patient to the psychiatric unit
    b. distracting patients and using limits to control their behavior
    c. determining the underlying cause for delirium and treating this
    d. I don't know

2. Treatment for delirium on the Medicine Unit includes:

    a. Haldol
    b. warfarin
    c. Tylenol
    d. propofol

3. Patients experiencing delirium are best managed by:

    a. keeping them in bed 24/7
    b. allowing them to sleep whenever they want
    c. re-orienting them to reality every time they fail to know who they are, where they are, why they are hospitalized or the date
    d. re-orient the patient once, then if not effective, do not continue and allow the patient to act naturally

4. Patients with delirium respond best when we emphasize verbal communication over any other type of communication.

    a. true
    b. false
    c. I don't know.

5. Delirium is only characterized by hyperarousal, hyperalertness, agitation, hallucinations, delusions, and disorientation

    a. true
    b. false
    c. I don't know

6. Keeping patients active and engaged through out the day prevents them from recovering from delirium.

    a. true
    b. false
    c. I don't know.

7. Patients with cognitive impairment are more sensitive to nonverbal cues and mirror the behavior around them.

    a. true
    b. false
    c. I don't know

8. Use of restraints to manage patients with delirium is encouraged.

    a. true
    b. false
    c. I don't know

9. When a patient with delirium wants to get up, this should be managed by:

    a. Using restraints to remind him not to get up on his own
    b. Allow the patient to get up even at times that are not scheduled or anticipated and do as much as he can
    c. Re-orient him to reality each time he tries to get up
    d. Medicate the patient to keep him sedated so he does not try to get up

10. Which of the following is not a nursing interventions to prevent and decrease delirium:

    a. use of prn Haldol for confusion and agitation
    b. use of a decoy tube on the patient's non-dominant arm when they are pulling on tubes
    c. mobilizing the patient or completing range of motion several times (at least three)
    d. making sure the delirium room and area around it are noisy to assist with patient stimulation

11. I feel confident that I can assess patients with delirium.

    a. Strongly agree
    b. Agree
    c. Neutral
    d. Disagree
    e. Strongly disagree

12. I feel confident that I can care for patients with delirium.

    a. strongly agree
    b. agree
    c. neutral
    d. disagree
    e. strongly disagree

Delirium Room Training Post Test

In the following questions, please choose the best answer or provide a written response as appropriate.

1. Delirium is best treated via:

    a. transferring the patient to the psychiatric unit
    b. distracting patients and using limits to control their behavior
    c. determining the underlying cause for delirium and treating this
    d. I don't know

2. Treatment for delirium on the Medicine Unit includes:

    a. Haldol
    b. warfarin
    c. Tylenol
    d. propofol

3. Patients experiencing delirium are best managed by:

    a. keeping them in bed 24/7
    b. allowing them to sleep whenever they want
    c. re-orienting them to reality every time they fail to know who they are, where they are, why they are hospitalized or the date
    d. re-orienting them to reality once, then if not effective, do not continue and allow the patient to act naturally

4. Patients with delirium respond best when we emphasize verbal communication over any other type of communication.

    a. true
    b. false
    c. I don't know.

5. Delirium is only characterized by hyperarousal, hyperalertness, agitation, hallucinations, delusions, and disorientation

    a. true
    b. false
    c. I don't know

6. Keeping patients active and engaged through out the day prevents them from recovering from delirium.

    a. true
    b. false
    c. I don't know.

7. Patients with cognitive impairment are more sensitive to nonverbal cues and mirror the behavior around them.

    a. true
    b. false
    c. I don't know

8. Use of restraints to manage patients with delirium is encouraged.

    a. true
    b. false
    c. I don't know

9. When a patient with delirium wants to get up, this should be managed by:

    a. Using restraints to remind him not to get up on his own
    b. Allow the patient to get up even at times that are not scheduled or anticipated and do as much as he can
    c. Re-orient him to reality each time he tries to get up
    d. Medicate the patient to keep him sedated so he does not try to get up

10. Which of the following is not a nursing interventions to prevent and decrease delirium:

    a. use of prn Haldol for confusion and agitation
    b. use of a decoy tube on the patient's non-dominant arm when they are pulling on tubes
    c. mobilizing the patient or completing range of motion several times (at least three)
    d. making sure the delirium room and area around it are noisy to assist with patient stimulation

11. I feel confident that I can assess patients with delirium.

    a. Strongly agree
    b. Agree

c. Neutral
d. Disagree
e. Strongly disagree

12. I feel confident that I can care for patients with delirium.

a. strongly agree
b. agree
c. neutral
d. disagree
e. strongly disagree

13. Was the delirium room training helpful?

a. yes
b. no

14. What aspects of the delirium room training were helpful?

15. What challenges do you anticipate in managing patients in the delirium room?

16. Please share any comments or suggestions regarding this training or management of patients in the delirium room.

Delirium Room Management Survey

Please choose the most appropriate answer and/or provide any comments or feedback requested.

1. Age

a. 20 to 30 years
b. 31 to 40 years
c. 41 to 50 years
d. 51 years or older

2. What type of nursing program did you attend?

a. ADN
b. Diploma
c. BSN
d. Masters

3. How long have you been a registered nurse?

a. 0 to 5 years
b. 6 to 10 years
c. 11 to 20 years
d. 21 years or more

4. How many years have you worked on medical surgical units?

a. 0 to 5 years
b. 6 to 10 years
c. 11 to 20 years
d. 21 years or more

5. How many times have you worked in the delirium room?

a. 1 to 3 times
b. 4 to 6 times
c. 7 to 10 times
d. 11 to 14 times
e. 15 or more times

6. Keeping patients active and engaged through out the day prevents them from recovering from delirium.

a. true
b. false
c. I don't know

7. When a patient with delirium wants to get out of the bed or chair, this should best be managed by:

a. Using restraints to remind him not to get up on his own
b. Allow the patient to get up even at times that are not scheduled or anticipated and do as much as he can on his own
c. Re-orient hi to reality each time he tries to get up
d. Medicate the patient to keep him sedated so he does not try to get up

8. Patients with cognitive impairment are more sensitive to nonverbal cues and mirror the behavior around them.

a. true
b. false
c. I don't know

9. I feel confident that I can care for patients with delirium.

a. strongly agree
b. agree
c. neutral
d. disagree
e. strongly disagree

10. The training on delirium room and patient management has assisted in my ability to care for patients in the delirium room.

a. strongly agree
b. agree
c. neutral
d. disagree
e. strongly disagree

11.Which of the following interventions are applicable to the delirium room? Check all that help in delirium room patient management.

--use of day and night lighting such as opening and pulling blinds
--decrease of noise in the room and outside of the room
--medications such as Haldol and other antipsychotics
--hiding tubes or use of a decoy when patients are pulling at tubes
--use of clock, calendar, white board
--allowing the patient to get out of bed when he wants and do as much as he can on his own
--providing cognitive stimulation such as games or reminiscing during the day
--mobilize the patients or complete range of motion at least 3 times per day
--time vital signs and procedures to promote patient sleep

12. Which of the following nursing interventions did you find most helpful in managing patients in the delirium room? Check all that apply.

--use of day and night lighting such as opening and pulling blinds
--decreasing noise in the room and outside of the room
--medications such as Haldol and other antipsychotics
--hiding tubes or use of a decoy when patients are pulling at tubes
--use of clock, calendar, white board
--allowing the patient to get out of bed when he wants and do as much as he can on his own
--providing cognitive stimulation such as games or reminiscing during the day
--mobilize the patients or complete range of motion at least 3 times per day
--time vital signs and procedures to promote patient sleep

13.Which of the following interventions did you feel were not helpful in managing patients in the delirium room? Check all that apply.

--use of day and night lighting such as opening and pulling blinds
--decrease of noise in the room and outside of the room
--medications such as Haldol and other antipsychotics
--hiding tubes or use of a decoy when patients are pulling at tubes
--use of clock, calendar, white board
--allowing the patient to get out of bed when he wants and do as much as he can on his own
--providing cognitive stimulation such as games or reminiscing during the day
--mobilize the patients or complete range of motion at least 3 times per day
--time vital signs and procedures to promote patient slee

14. What challenges are you experiencing in managing patients in the delirium room?

15. Please share any comments or suggestions regarding the training or management of patients in the delirium room.