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Engaging Patients with Dementia in the Acute Care Setting: A Quality Improvement Initiative for Staff

Andrea Lee
University of New Hampshire, Durham

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University of New Hampshire

Faculty Mentor: Lauryn Legacy Frost, DNP, APRN, FNP-C

Practice Mentor: Bonnie Russell, DNP, MSN, RN

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Abstract

Caring for dementia patients in the acute care setting can be challenging. Staff are trained to manage the acute illness and the symptoms of dementia can impact that care. Training for the care and management of the patient with dementia is not routinely provided for the acute care setting. According to the Alzheimer's Association (2018), 5.7 million people are living with Alzheimer's Dementia with the numbers projected to continue to rise. Training in the management of symptoms can alleviate stress and complications for not only the patient, but staff members as well. The goal of this project is to educate inpatient nursing staff on methods to interact with the patient inflicted with dementia. Having a clear understanding of methods to decrease confusion, apprehension and fear with this population will improve patient and family satisfaction of the care provided. A literature review was conducted to identify methods of engaging the patient, thus improving satisfaction rates. Staff members received training about distraction methods as well as techniques to engage the patient followed by a return demonstration. Interventions were evaluated with a post-implementation survey of knowledge satisfaction. Education was provided via an all-day seminar as well as in-services. The development of a toolbox to include everyday items assists staff members when engaging the patient with dementia. Pre and post education surveys show an improvement in understanding about methods to engage the patient with dementia thus reducing the need for safety sitters by 17.3% or 192 hours between quarter 1 and quarter 2. Based on the average salary of a safety sitter, the reduction in hours utilized equates to a savings of approximately $3,456. Additional training of staff in the acute care setting will enhance not only patient experience, but decrease the need for safety sitters, reduce costs, and improve satisfaction for staff and family members.

Keywords: dementia, acute care, interventions, staff, engagement

Engaging Patients with Dementia in the Acute Care Setting:

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Dementia patients experience numerous cognitive changes over a period of years. The onset, duration and course vary from person to person. Characteristics include memory changes, problems with language skills and a decline in problem-solving skills. These changes inevitably impact ones' ability to perform daily activities thus creating safety issues and a decline in health status. According to the Alzheimer's Association (2018), 5.7 million people are living with Alzheimer's Dementia (p. 17) with the numbers projected to continue to rise. The symptoms may exacerbate when the dementia patient requires hospitalization. A study by Morrison and Siu, (2000) showed 80 pneumonia patients with end-stage dementia had died compared with 5 (13%; 95% CI, 4%-27%) of 39 cognitively intact patients (adjusted hazard ratio, 4.6; 95% CI, 1.8-11.8) (p. 49). Costs associated with the care of the dementia patient is significant if complications arise. For example, a general acute care bed costs $3,834 per day. If the patient has a fall with injury and requires placement on the orthopedic ward the cost rises dramatically to $13,140 per day. Factor in the increased length of stay and the need for a safety caregiver and costs will continue to rise. The safety caregiver, generally a certified nursing assistant, is assigned to monitor patients at risk for falls or injury. For instance, for one increased LOS of 3 days on a general medical ward, the facility would incur an additional $12,798. The cost would include a safety caregiver 24-hours per day, ensuring the patients safety.

Dementia, a slow cognitive loss is not to be confused with delirium, a reversible acute diagnosis. Delirium is typically caused by acute illness or drug toxicity (sometimes life threatening) and is often reversible. Delirium occurs abruptly, and symptoms can fluctuate

during the day. Alternately, dementia is typically caused by anatomic changes in the brain, has slower onset, and is generally irreversible. Dementia develops over time, with a slow progression of cognitive decline. The hallmark sign separating delirium from underlying dementia is inattention. The individual simply cannot focus on one idea or task.

Family members cite engagement in meaningful activity as one of their most persistent and critical unmet needs (Miranda-Castillo, Woods, & Orrell, 2013). Meeting the needs of the dementia patient requires improvements in the approach of how patient-centered care is delivered. Safeguarding that the patient remains engaged while in the acute care setting, minimizes a further decline in cognitive status. The healthcare team strives for the best outcomes for all patients as they enter the hospital by utilizing cost-saving, effective measures and providing exceptional evidence-based care.

Problem Description

A patient suffering with an illness is vulnerable. A diagnosis of dementia contributes substantially to this vulnerability as the patient is now in unfamiliar surroundings and their normal routine is disrupted. Currently in one large medical facility, safety caregivers are hired to watch dementia patients at risk for falls, combative behavior, and/or wandering. Subsequently, while the staff are trained to provide daily care and assist with feeding if necessary, they are not provided necessary skills to actively engage the patient throughout the admission leading to increased anxiety, frustration and potential violent behaviors towards staff.

The increased demands of this population divert care from other patients, thus straining resources. Often the use of overtime is required to ensure the safety and care of the ward as a whole. Furthermore, the aggressive patient is likely prescribed an anti-psychotic medication, thus increasing his/her length of stay until stabilized. This is turn, increase costs to the facility as

long-term facilities delay accepting the patient until the behaviors are controlled. One additional day in the acute care setting with the need for a safety caregiver can cost the facility as much as $4,200 and the costs continue to rise with each added day for behavioral issues. Should the patient incur an injury secondary to a fall, the costs can quadruple if the patient requires orthopedic care, treatment for lacerations, or expensive scans secondary to a fall with a head strike.

Dementia exacerbates the patients' confusion as the surroundings in the acute care setting are unfamiliar and noisy potentially increasing anxiety or aggression. The patient may strike out at those attempting to provide care, yell out causing disturbances for the other patients, or may wander, causing staff to remain on high alert to ensure the safety of the patient. Patients with a diagnosis of dementia are particularly prone to adverse reactions to medication. Antipsychotics, for example, can cause over sedation, dysphagia, parkinsonism, stroke and increased mortality (Gill, Bronskill, Normand, et. al., 2007).

One challenge to the inpatient setting, is how to optimally engage the dementia population in activities while in the acute care setting. Cognitive impairments including deficits in memory, language, and spatial recognition offer inimitable challenges in engaging the dementia patient in activity. For activity to be a viable therapeutic modality to comprehensive dementia care, identifying strategies that best foster engagement is required (Trahan, Kuo, Carlson, & Gitlin, 2014). Consequently, when adverse behaviors increase, the patient is likely prescribed sedating medication or an adverse event occurs further escalating the behaviors. Add in the high level of activity, noise levels, and unfamiliar surroundings, the patient becomes a high risk for poor outcomes such as falls, further cognitive decline, infection, or increased length of stay.

Available Knowledge

Those diagnosed with dementia is expected to double in the United States by the year 2050 (Wharton, Paulson, Macri, & Dubin, 2018). As the frequency of dementia increases, the utilization of hospital and outpatient health care services rise concurrently. The patient may also have multiple co-morbidities including a limited functional or cognitive reserve. Documentation shows unfamiliar surroundings such as an acute care facility may lead to an intensification of disorientation, aggressive behavior, and the potential for acute delirium surfacing adding to the dementia symptoms (Wharton et al., 2018). One must understand the differences between dementia and delirium as symptoms can be similar.

Dementia is most commonly caused by:

1. Neurodegeneration—Alzheimer's disease, frontotemporal damage, abnormal tau protein formation, Lewy body proteins, Parkinson's disease2.

2. Vascular defects—infarcts, arteriopathies, vasculitis3.

3. Toxins—alcohol, lead, manganese, drugs (medicinal or illicit)

4. Infections—prion disease, human immunodeficiency virus, herpes, neurosyphilis, Whipple's disease, progressive multifocal leukoencephalopathy

5. Inflammatory or autoimmune disorders—multiple sclerosis, paraneoplastic or autoimmune limbic encephalitis, systemic lupus erythematosis, Sjogren's syndrome, Behcet's disease

6. Neurometabolic disorders—leukodystrophies, adult neuronal ceroid lipofuscinosis

7. Other—endocrine disorders, space occupying lesions, trauma, neoplasia, paraneoplastic syndromes, normal pressure hydrocephalus, Wilson's disease, Huntington disease, overwhelming changes of environment.

Delirium is most commonly caused by:

1. Metabolic disorders—hypoxia; hypoglycemia; electrolyte derangements; alcohol or sedative withdrawal; endocrine disorders; paraneoplastic syndromes; hyperthermia; hypothermia; and/or post-operative, anesthetic, or post-cardiac pump states

2. Toxins—alcohol, drugs (medicinal or illicit), anticholinergic toxicity, herbs/herbal medicines, some over-the-counter agents, poisons

3. Infections—intracranial or extracranial

4. Anatomic disorders—various space occupying or structural brain lesions, tumors, neoplasms, trauma

5. Environmental disorders—sensory and/or sleep deprivation

6. Other—fever, postictal states, urinary retention, fecal impaction (Lippmann, & Perugula, 2016).

A number of things have been correlated with dementia in the literature as triggers for aggressive behavior. Delirium, changes in the environment, unidentified needs, excessive noise or activity, and limited privacy or space – all common to the inpatient setting, can be problematic (Enmarker et al., 2011; Kunik et al., 2010). The acute care setting may not meet the extra demands the patient requires, thus putting him or her at risk for further decline in cognition or current functional level. Hospital staff are trained to manage the acute care needs versus chronic issues potentially exacerbating the symptoms of dementia. Acute care facilities are in the business of caring for those with life-threatening or urgent medical issues. The facility's effectiveness largely depends on time-sensitive and, frequently rapid intervention. Furthermore, the immediate hospital requirements for efficient bed management may take precedence over

individualized care (George, Long, & Vincent, 2013). In doing so, the time-consuming demands of the patient may not be fully met as the high acuity patient will take priority.

Familiarity for the dementia patients' individualized care needs is not present in the acute setting. This may not only create fear or anxiety, but also, the patient may have a lost sense of purpose. While the acute care setting has a goal of speedy recovery and timely discharges, the patient suffering with a diagnosis of dementia requires the opposite. Changes in the approach to care in the acute care setting are required. Personal space must be acknowledged while meeting the challenging needs of the patient. The staff must approach care with an easy-going, non-rushed attitude or face negative responses such as hitting, kicking, or yelling as the patient may have increased confusion or apprehension in the unfamiliar setting.

The Montessori Method, originally developed for use with children, shows promising results when providing care to the patient with dementia. Montessori revolutionized education for children by providing choice within prepared environments, the same way it can revolutionize the way we work with persons with dementia (Camp et al., 2017). Developmentally and programmatically based, Montessori techniques seem well-suited for persons with dementia (Camp, 2010). Each lesson is first presented at its simplest level and each subsequent lesson, increases in complexity. This variation allows for mastery of skills by repetition and small amounts of new information to be gradually introduced allowing for acclimation. Materials are taken from the everyday environment and are designed not to be toys but tools to practice independent living. Persons with dementia need structure and order in their environment and activities; changes in routine or physical surroundings may be upsetting (Vance et al., 1996).

Complementary methods of cognitive therapy may help the patient more than standard treatment options such as prescriptions and simple exercises to work the mind. The Montessori Method is a means of support for the dementia patient; giving them a social, interactive environment that can simultaneously soothe them and encourage active mental engagement ("The Montessori Method," n.d.). The environmental surroundings and simple supplies allow patients to completely employ each of their senses to actively engage their minds. Utilization of the appropriate tools will enhance the patient experience while providing quality care to the patient. Persons living with dementia in Montessori-based programs showed significantly more constructive engagement and less passive engagement versus those engaging in regular activities programs (Camp, 2010).

The Montessori Method has shown great promise in long-term care facilities as well as day-health centers. One such study including sixteen residents in long-term care with advanced dementia (14 women; average age = 88) showed significantly more constructive engagement (defined as motor or verbal behaviors in response to an activity), less passive engagement (defined as passively observing an activity), and more pleasure while participating in Montessori-based program versus those participating in regularly scheduled activities programs (Orsulic-Jeras & Judge, 2000). Many areas around the world are now using this knowledge in the acute care settings. Toronto, Canada utilizes the methods in the emergency department and those with dementia do not show the same levels of agitation, anxiety, and disorientation that are commonly seen in this setting (Camp, et. al, 2017). The method is also showing promise when utilized in France's acute-care hospital setting. A particular unit within the facility dedicated the staff to ensure the dementia is well cared for utilizing the Montessori Method. This resulted with the patients' returning to baseline status and were discharged from the hospital in half the time as

those patients with dementia in other French hospital settings (Camp, et. al. 2017). Additional

research has shown that music can be beneficial for patients with dementia as music can prove to

be soothing (Bédard, et. al., 2011).

Rationale

Nurses strive to improve outcomes of all the patients under their care. Older patients'

complex health issues paired with dementia place a strain on an already busy shift for the nurse.

While facing the acute phase of an illness, the nurse must also be aware of the complexities of

the patient with dementia such as, wandering, striking out when care is provided, or screaming.

The behaviors associated with dementia may be exacerbated with an acute care hospitalization

(Miller, 1999). Providing safe care requires the development of a care plan tailored specifically

for the patient. Three elements require attention: identification of the patient with dementia,

health care training and education, and a plan specifically tailored to the patients' individual

needs.

Dementia care requires training as well as an individualized plan of care. Acute care

facilities operate with the need to address immediate needs in a fast-paced environment. Many

staff are pressed for time and are unable to accurately address the needs of this particular patient

population. A multiple step approach will assist in providing quality care for the dementia patient

in the acute care setting. Changing outcomes are achievable when staff are appropriately trained

and tools are provided. Staff members will obtain the needed skills known to enhance patient

safety. Communication skills are particularly important, and teaching staff members how to

effectively communicate with cognitively impaired people will assist with identifying specific

problems to each patient, thus allowing members of the interdisciplinary team to formulate a

tailored plan to safely care for the patient. Furthermore, keeping patients safe relies upon sound,

clear task design and the availability and utility of protocols and necessary patient-related information (George, Long, & Vincent, 2013).

The hurried pace of an acute care facility, can make appropriate clinical assessments and treatment increasingly challenging in patients with dementia. He or she may be unable to articulate their needs or concerns such as pain or fear. Additional information is essential from caregivers, providing details about functional ability and cognition level (George, Long, & Vincent, 2013). This is made difficult by the rapid transit through the admissions process, currently not designed with the patients with cognitive decline in mind. A decline in cognitive function creates barriers to safety as he or she is not able to be as involved in their individualized care as those who are cognitively intact, for example, questioning about his or her plan of care or potential new medications.

The immediate hospital requirements for efficient bed management may take precedence over individualized care. For example, there is often poor insight and appreciation of falls risk in an individual patient when decisions are made regarding ward allocation. The patient may be subject to multiple moves and room changes, sleep deprivation, and being in unfamiliar surroundings. This will increase the risk of unintentional harm to the patient (McCusker, et.al, 2001).

Currently, no formal training specific to the patient with dementia in the acute care setting is available in the 160-bed acute-care facility located in Boston, MA. Problems arise when the patient returns to his or her previous level of health following an acute event and begins wandering or lashing out at staff as the patient is unaware of not only their surroundings, but also are unfamiliar with the staff. When the behaviors escalate, staff must now spend additional time away from other patients requiring care as they work to deescalate the behavior

problem. The problems include physical aggression towards staff, wandering, and yelling out, and causing disturbances to other patients on the ward. In many instances this can create the need for a safety caregiver, however this staff member has not had in-depth training how to approach the patient or the many different diversionary methods that will facilitate an improved experience for the patient. The goals of the project are to improve training practices for all caregivers, initiate a dementia diversionary toolbox, and enhance the environment.

Specific Aims

Changing outcomes are achievable when staff are appropriately trained in the care of the patient with dementia. Staff members will obtain the needed skills known to enhance patient safety. Communication skills are particularly important, and teaching team members how to effectively communicate with cognitively impaired people will assist with identifying specific problems to each patient, thus allowing members of the interdisciplinary team to formulate a tailored plan to safely care for the patient. Keeping patients safe relies upon sound, clear task design and the availability and utility of protocols and necessary patient-related information (George, Long, & Vincent, 2013). The project proposal will change how direct care staff approach the daily needs of the patient with a diagnosis of dementia, thus decreasing aggression, anxiety and length of stay (LOS). A strong educational foundation will assist direct care providers meet the needs of this patient population. Within the training, multiple types of dementia will be explained such as, Alzheimer's Dementia, Vascular, or Wernicke-Korsakoff, to name a few. Furthermore, the different stages will be examined, offering insight into how the corresponding symptoms and behaviors are categorized. The age range for those with dementia varies with each level of the disease process and the level of cognitive impact. The current age span with the disease process ranges from early 60's-late 90's and are predominantly male with

extensive combat training, placing staff at higher risk should the patient become violent.

Additional groups will be either in the early or middle stage of dementia. For the purpose of the

project, those in the late stage of dementia will not be included. Symptoms and behaviors are

depicted in table 1.

Table 1

Stages and Symptoms

Dementia Stage	Symptoms and Behaviors
Early Stage (Mild)	• Forgetfullness and recent or short-term memory problems • May use strategies to cope or disguise memory problems • May have increased difficulty with concentration • Episodes of anxiety and depression may occur
Middle Stage (Moderate)	• Significant problems with memory (recognizing people, lapses of time) • Difficulty with self and home care (dressing, cooking, money management, shopping, & sleep) • Disinhibited or other problematic behaviors (Champagne, 2018)
Late Stage (Severe)	• Generally, around the clock care is required • Will not be examined in the proposal

Education will be provided to direct care staff to include basic facts about memory loss,

Alzheimer's disease, and related dementias. A dementia workshop provides staff with

information regarding not only the stages of dementia, but also the many forms of dementia. The

workshop will further discuss methods to improve outcomes for the patient. The use of music

and colors will be discussed, as will the Montessori Method, wherein different activities are

explained. The method creates lessons and activities specifically designed to engage the senses (Huntsman, 2014). Additional educational training will include how to utilize tools from the Montessori Method to assist direct care providers how to offer care thus improving outcomes by decreasing aggression, falls, or wandering. Hospital employees may also improve patient outcomes by gaining information from a family member regarding what approach works best with the person with dementia. Finding out what distresses or upsets him or her, and what type of techniques or activities have been used successfully to reduce the anguish. Staff must also acknowledge that the unfamiliar surroundings, treatments, invasive procedures, and post-operative delirium can add to the confusion of a patient with a diagnosis of dementia. He or she will likely need more assistance with activities of daily living (ADLs). Employees will benefit from understanding the patients' baseline cognitive status, signs and symptoms of pain or discomfort, and whether the patient has any hearing or vision deficits. Having a clear understanding about the patients' needs will assist the team in differentiating whether the dementia patient may also be suffering with acute delirium.

Adding to the education about dementia and the use of the Montessori Method, a tool box will be developed to ensure patients are provided activities to offer a diversion from the activity and noise of the hospital setting. The toolbox will include simple activities providing diversionary activities such as puzzles, cards, modeling clay and music to name a few. Music preferences will be facilitated by communication with family members. Staff can inquire about the types of music the patient enjoyed to ensure appropriate music therapy is provided. Small environmental changes such as placing murals on exit doors will assist with the diversionary process. The expected goals of the project include: training staff in methods to engage the dementia patient, improve the hospital experience for the patient, potentially decrease length of

stay, and show a reduction in behavioral outbursts. Additional goals include a reduction in the need for restraints when a patient becomes aggressive towards staff or becomes a harm to himself/herself. Restraint is considered 'an emergency measure to prevent imminent harm to the patient or other persons when other means of control are not effective or appropriate' (Metzner et al. 2007; p. 417). Hospital policy requires a physician's order to place a patient in restraints. Currently the use of restraints has declined however in extreme cases, an order would be obtained to ensure the patient and staff remain safe.

Methods

Context

The 160-bed facility cares for a variety of patients from ICU-level of care to those requiring hospice care. When complications arise, such as behavioral outbursts, bed availability becomes minimal secondary to a delayed discharge. Challenges arise when a patient with a diagnosis of dementia requires acute in-patient care as the home setting or the long-term care facility is unable to meet his or her immediate acute needs. The addition of unfamiliar surroundings, faces, and noises, can increase potential fears of becoming unable to perform simple tasks previously performed at home or in the long-term care setting. Dementia is generally defined as a condition in which various cognitive functions, such as acquired memory, judgment, orientation, languages, and so on, have become impaired, causing varying degrees of inability to perform normal activities of daily living (ADL) (Yokoi & Okamura, 2013). What cognitive function makes it difficult for a patient to perform normal ADL's? In the case of dementia, the impaired ability of judgment is said to be the inability to take an appropriate action suitable to an actual situation (Takeda, 2005). Utilizing Orem's self-care nursing model, the proposal will focus on how to address the self-care deficit needs and assist the patient adapt to

their current environment. The areas will include ADL's, privacy and social interaction, sleep and activity, and risks. The proposal provides support in the assessment of agitated behavior by offering a framework for interpreting data, development of the plan of care, directing the staff members to the appropriate intervention, and portraying challenging behaviors (Roper, Shapira, & Chang, 1991).

Cost Benefits Analysis

The stakeholders for this project included direct care staff, family members, the facility, and most importantly, the dementia patient. The goal provided patient-centered care creating a positive experience while maintaining the patients' current quality of life. The first step towards the cost/benefit analysis was the cost of training staff, development and purchase of supplies, and examining the sustainability of the project. The required costs required approval of the organization prior to implementation.

1. Examined current available training material, obtained conference room for training, and availability of staff to attend training sessions (How many training days were required to educate staff).

2. Examined costs of storage material for supplies, actual supplies, and location of storing "tool box."

3. Examined cost of safety caretaker per day.

4. Examined average need of safety caretakers per month/year.

5. Obtained cost of bed per day (LOS increases due to aggressive behaviors).

The average safety caregiver's hourly wage is $18 per hour for an average of $432 per day.

The average stay for a patient with dementia is 3-5 days equating to a total cost for a safety caregiver at $1296 to $2160.   The costs described in the table below are calculated by the average cost per day multiplied by the average LOS of 3-5 days per patient.

Table 2

Tangible Costs

Description	Cost	Total Cost
Bed/Room/Increased LOS	Acute Medicine Bed: $3834/day Average Increase LOS 3-5 days	$11502-$19170 (3-5 days)
Safety Sitter	$18/hr. x 24 hrs. (avg sal)	$1296-$2160 (3-5 days)
Tool Box	$15/tote x2 totes	$30 (one-time fee)
Supplies for Engagement	$300	$300 (initial start)

Total Cost: $13,128-$21,660

Table 3

Tangible Benefits

Description	Goal	Savings
Decreased LOS	Decrease LOS by 3 days	$11502
Facility Cost	Reduce Sitter Needs	$1296 (3-days)
Savings to Facility		$12,798 per patient

Explanation of Costs

The project will be trialed on a 20-bed medical/oncology ward. The current recommended nursing hours per patient day (NHPPD) is 8.5. The current average is 8.2 NHPPD with an average daily census of 18.21. The costs described above only include the trial ward costs. Patients on the trial ward required coverage with a safety sitter totaling 2750 hours/229 hours per month in FY 18 and for FY 19 the current figure is 708 hours to date with the final quarter not yet calculated. Furthermore, the above figures do not calculate overtime hours or shift

differential which ultimately does increase the total cost. For example, the first 3 quarters of FY 19 (Appendix C) utilized 136 hours of overtime ensuring the safety of the patient and 330 hours of overtime was accrued in FY 18 (Appendix D). Additionally, in FY 19, the ward had to "cover" the sitter needs for a total of 140 hours thus pulling staff from caring for the other patients on the ward. The total sitter hours vary per month and the facility sitters are placed where staffing needs are the greatest. The figures only include the cost for the additional care for a patient with a diagnosis of dementia and does not include other patient diagnosis requiring close monitoring.

The LOS for the patient with cognitive deficits can increase when documentation shows aggressive behavior by the patient or a need for restraints. Many long-term care facilities will not accept the patient until documentation shows there is no need for safety sitters, no restraint use, and the patient has returned to baseline status. This process can increase the LOS anywhere from 3-5 days, if not longer. The cost comparison for a general acute care bed versus the need for a bed on the orthopedic ward (fall with injury) is $3,834 per day versus $13,140 per day should the patient incur a fall and require orthopedic care.

Financial Benefits of training and toolbox development:

1. Decrease in LOS reducing bed days of care to the facility. Potential savings: $11,502.00.

2. Decrease need for 1:1 safety sitter; a sitter could work with and engage more than one patient during the shift and improve productivity. Potential savings: $1,296.00.

3. Potential for increased patient admissions due to bed availability.

Patient Benefit:

1. Decrease confusion/aggressive behavior

2. Engagement during admission/mood enhancement

3. Improved outcomes/decreased LOS

4. Improved patient/family satisfaction; Positive patient satisfaction scores attract additional

    patients to seek care at the facility.

5. Decrease risk of secondary infection due to LOS

Facility Benefit:

1. Staff satisfaction

2. Increased knowledge base

3. Improved patient outcomes: positive scores reflect well on facility which can add

    additional revenue from additional patients seeking care.

4. Financial gains

Interventions

The improvement initiative will include education (Appendix F) of direct-care providers

of the dementia patient. A sister facility currently offers a dementia workshop providing the

education the proposal wishes to disseminate. Many staff within the acute care facility are unable

to attend this workshop due to travel constraints. The workshop will be offered three times per

year to accommodate staff with the goal of including the 1-day workshop into nursing service

orientation. The educational intervention will teach staff the basics of caring for a patient with

dementia and available methods to decrease aggressiveness, decrease the need for restraints,

chemical or physical, and improve outcomes for the patient.

Additional interventions include the purchase of totes to store interactive materials for the

dementia patient. The volunteer service department has offered to supply the tools such as stress

balls, puzzles, music Cd's and players. Additional tools include playing cards, simple games such

as checkers, and easy to read books. The sitters will gain additional training on appropriate

methods on *how* to approach the patient with dementia such as working at a slower pace,

ensuring they are eye level when they approach the patient and understanding spatial needs. Furthermore, the expectation of the sitter will include working with the patient versus "watching" the patient. Additional diversionary measures include environmental changes (Appendix H). The lack of contrast can be used to visually recede objects or elements to blend in the surroundings. For example, exit doors can be made inconspicuous by utilizing murals or paint to match the door to the surrounding walls. Changing the appearance of exit doorways will decrease elopement risks (Calkins, 2002).

1. Clinical educator: Education of direct care staff: Includes a 1-day workshop in the engagement of the patient with dementia (Currently available at sister facility).

2. Clinical educator: Ongoing workshops throughout the year with the goal of incorporating the workshop into nursing service orientation.

3. Volunteer services: Obtain tool box (small totes/tackle boxes) for supplies

4. Volunteer services: Provide tools (cards, writing material, small games, puzzles, & music/players).

5. Nursing/safety caretakers: Engage the patient with methods taught allowing for needed rest periods/sleep, ambulation, assist with feeding and ADL's.

Teaching methods will discuss the importance of the patient's mobility, his/her sensory needs are met (reading glasses, hearing aids, etc.), and hydration status is monitored. Furthermore, methods to minimize sleep deprivation must be in place such as lights off at night, minimal sleep interruptions, and maintaining day/night wake cycles. Additional measures will include reality orientation, and reminders of the day, time, location and identity of key providers (Rudolph, Archambault, & Budd, 2017).

Study of Interventions

During initial phase of project, a log will document why the patient requires a sitter (fall risk, wandering, etc.). Tools utilized for the patient will document engagement as fully participatory, minimally participatory, or no engagement. Documentation will also include "what tools" were effective. Aggressive behaviors and wandering tendencies will also be documented. Was the patient ambulated, toileted, require assistance with feeding? A satisfaction survey for the staff will also be implemented prior to the start of the project and upon conclusion of the project. Survey questions will include:

1. What do you know about caring for a patient with dementia?

2. Do you know how to de-escalate aggressive behaviors?

3. Are you aware of "tools" that will help engage the patient?

Post project implementation questions will include:

1. What tools did you find helpful when caring for the patient?

2. Do you have a better understanding of the needs of the patient with dementia?

3. Do you feel by engaging your patient he/she is more appropriate in the acute setting?

4. Did you find the dementia workshop helpful?

Measures

Fear and confusion can accompany the patient with dementia when faced with new surroundings. Caring for one with dementia poses many challenges as it becomes difficult for the patient to articulate their needs. In addition, dementia can cause mood swings and even change a person's personality and behavior. We are not always trained on the best methods to communicate with the cognitively impaired patient however, we are able to learn. Understanding the appropriate methods to approach the patient will improve the caregiving process while

decreasing stress for the patient. Furthermore, enhanced communication skills will increase ones' ability to handle aggressive behaviors that may arise during the care process (Logan, 2016).

Staff will be provided a pre and post short survey determining their level of knowledge on the care of the patient suffering with dementia. Having a clear understanding of what is understood about the patients' needs will facilitate learning during the workshop to ensure all direct care providers receive clear guidelines and expectations when caring for this population. Additionally, the survey will ascertain whether the workshop and tools provide value to both the staff and the patient population. By evaluating patient quality of care in acute care settings, we can return to a basic aspect of how nurses spend their time caring for patients-the activities that not only involve direct care but also benefit the patient (Upenieks, Akhavan, Kotlerman, Esser, & Ngo, 2007).

The goal of the project is to improve patient outcomes while providing quality, patient-centered care. In doing so, I hope to decrease any adverse effects, decrease length of stay, and improve patient and staff satisfaction.

Analysis

A quantitative review and summary will be performed of the information gathered on the pre (Appendix A) and post surveys (Appendix B). Comparative analysis will be done to examine the impact of the intervention on aggressiveness, wandering and engagement. Additionally, staff satisfaction will be examined. Furthermore, voluntary services have agreed to supply the needed tools for the toolbox (Appendix E) thus having supplies readily available for the patient. A review of two quarters is examined determining if changes are evident with education of staff and provided interventions for the patient.

Ethical Consideration

When we consider that a patient suffering with dementia may not have the capabilities to make his or her own decisions regarding care, nursing must then usurp the patients' autonomy. No patient identifiers will be utilized. Additionally, in an effort to keep the patient safe and free from injury, the patient may also have limited freedom to move about his or her environment. Consequently, nursing has a professional commitment to ensure beneficence and nonmaleficence while providing care (Rabins & Mace, 1986). As professionals we must ensure the patients' rights are not violated and remain compliant with their wishes while providing patient-centered care. Appendix F provides the lesson plan for the educational workshop available for staff members. A PowerPoint presentation will accompany the lesson plan along with interaction sessions (Appendix G).

The goal of the project is to approach the care of the patient with cognitive deficits utilizing non-pharmacological treatments. Non-pharmacological methods pursue methods to augment the lives and encourage the patient to engage in activities to alleviate the stressors associated with an unfamiliar environment such as acute care. In clinical practice, a variety of non-pharmacological techniques have proved successful including reality orientation, reminiscence therapy and music therapy (Woods, 2012). Utilization of alternative methods to engage the patient will assist to decrease anxiety, aggression, and improve the patient experience. Furthermore, while patient-centered care is provided, the patients' dignity and rights will remain intact by direct care providers. Engaging the patient utilizing relearned activities provides respect, dignity, and enjoyment.

Results

During the first two quarters of fiscal year (FY) 20, the interventions were implemented and monitored. Prior to the start of the planned interventions, quarter 1 utilized 1106 hours for safety monitoring of patients with dementia. Staff members took a voluntary survey (Appendix A) prior to implementation. Following the implementation of interventions in quarter 2, the need for safety hours decreased to 914 hours, a decline of 192 hours or 17.35%. Staff were again voluntarily surveyed post implementation (Appendix B) of the project which shows an improvement in knowledge of how to engage the patient with dementia and also improved perceived abilities of the patient suffering with dementia. Following the training sessions, the data collected show an improvement in the knowledge base when caring for the patient with dementia (Appendix I). Modifications with the initial implementation were necessary due to significant budget constraints. The all-day training session was limited to one class during the project time line and additional mini in-services were provided as staffing allowed. Additional changes included minimizing items from the toolbox due to the budget. Many items were provided through voluntary services allowing for the development of the toolbox. No patients during the project required restraints, and was unable to show a decline in wandering due to lack of documentation. There were no incidents of assaults on staff reported during the project however, many staff do not report instances of a patient with combative behavior unless it escalates out of control.

Discussion

Summary

Engaging patients with dementia in the acute-care setting is feasible when staff obtain knowledge about utilizing the principles and methods of the Montessori Method. Patients

provided with tools required less safety reminders, were engaged with staff, and the need for safety sitters declined by 17%. Enthusiasm of staff members to ensure quality outcomes for our patient population and support from volunteer services assisted in making this project feasible.

Interpretation

Utilizing a Likert scale from 1-5, a pre-training survey (Appendix A) shows an average score of understanding how to de-escalate an aggressive dementia patient at 2.65. Following the training, the post-training survey (Appendix B) shows an increased rating to an average of 5 (Appendix I). Staff enthusiasm continues to grow due to the available tools in the dementia toolbox. The most useful tools were picture books, cards, and tactile items such as Rubik's cubes. These items provided distraction for the patient and prompted engaging discussions between the patient and staff members. Items that did not show improved interaction included puzzles, word search games or crossword puzzles with large font. These items received minimal interest. The time frame as well as minimal participants limits gaining data to determine if these processes will continue to work on a larger scale within the inpatient setting. While the project sample size is small, the data offers insight into the needs of the inpatient area with regards to caring for patients admitted for an acute event, yet requires a different approach to how care is provided secondary to dementia.

Limitations

There were several limitations to the study. The literature focused on small sample size studies and minimal work was completed in the acute care setting. One such study examined 16 patients, 14 female and 2 males, in a long-term care facility. While the average age was similar, the majority of the patients examined in this project were male. Budgetary concerns did impact portions of the project. Funding for the environmental changes (Appendix H) was not approved

nor were the music players; voluntary services does continue to seek donations for the music players as well as items for the tool box. During the project phase, accurate length of stay calculations were difficult to obtain due to high census counts, both in the facility and outside agencies, thus slowing the transfer process. Training sessions were limited due to available classroom space. To assist with the education phase of the project, voluntary in-services were offered yet participation in the training was minimal. Moving forward, additional classroom space would provide the appropriate venue for supplementary full-day training sessions. One additional goal is to incorporate the training into hospital orientation for all nursing staff. Continued support from voluntary services will provide the needed donations to maintain the toolbox. Reinforcement about the availability of the toolbox will also remind staff about the tools available to assist in the care of the patient.

Conclusions

The importance of embedding Montessori principles into routine care delivery, rather than viewing the approach as a discrete or standalone intervention can improve outcomes for the patient with dementia (Figure 1). Roberts et al. (2015) demonstrated that implementation at a service level is possible, enabled by strong leadership and use of Montessori champions, effective education and training strategies, remains important for supporting the sustainability of the interventions.

The evidence also proposes that a wide array of people can be educated to enable Montessori activities, including family members (Camp, 2010). Evidence also supports the delivery of Montessori-activities in small group settings, which may offer more feasible staff-to-patient ratios and greater opportunity for socialization (Jarrett, Gozali, & Gigliotti., 2008). Continuation of this project will spread knowledge to staff through continued voluntary in-services and the

option to attend the bi-annual all-day seminar at the sister campus. Additional recommendations include classroom availability within the inpatient setting, approval for music players and the proposed environmental changes. Provide staff with the appropriate tools, and success and sustainability will follow.

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Acknowledgements

Figure 1

Dementia Care

Figure 1 Dementia Care Support Services—Montessori Method, (n.d.) Retrieved from Google Images

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Appendices

Appendix A

Pre-Training Survey

What is your role?   RN   LPN   NA   SNT (please circle one)

_____

Please rate on a scale of 1-5

    1   Completely agree
    2   Somewhat agree
    3   Neither agree or disagree
    4   Somewhat disagree
    5   Completely disagree

1. You have formal training in
    caring for a patient with dementia   1   2   3   4   5

2. You know how to de-escalate an
    aggressive patient   1   2   3   4   5

3. You are aware of methods to engage
    a patient with dementia   1   2   3   4   5

4. Patients with dementia cannot   1   2   3   4   5
    complete ADLs

5. You would benefit from additional
    Knowledge about patients with dementia   1   2   3   4   5

_____

Appendix B

Post-Training Survey

What is your role?   RN   LPN   NA   SNT (please circle one)

Please rate on a scale of 1-5

1   Completely disagree
2   Somewhat disagree
3   Neither agree or disagree
4   Somewhat agree
5   Completely agree

|	
1. You have an improved knowledge base Regarding the care of the patient with dementia	1 2 3 4 5
2. You know how to de-escalate an aggressive patient	1 2 3 4 5
3. You are aware of methods to engage a patient with dementia	1 2 3 4 5
4. Patients with dementia cannot complete ADLs	1 2 3 4 5
5. How likely will you utilize the information and tools provided to engage the patient with dementia	1 2 3 4 5

Appendix C

Fiscal Year 2019-Quarter 1-3

DIAGNOSIS	DEMENTIA
Row Labels	**Sum of TOTAL # HOURS**
⊟ **1**	**110**
⊟ DAYS	38
HOME WARD	16
SAFETY SITTER	22
⊟ EVENINGS	40
HOME WARD	16
SAFETY SITTER	24
⊟ NIGHTS	32
HOME WARD	8
SAFETY SITTER	24
⊟ **2**	**438**
⊟ DAYS	159
HOME WARD	20
OT	40
SAFETY SITTER	99
⊟ EVENINGS	135
HOME WARD	3
SAFETY SITTER	132
⊟ NIGHTS	144
FLOAT	16
HOME WARD	16
OT	72
SAFETY SITTER	40
⊟ **3**	**160**
⊟ DAYS	60
HOME WARD	22
OT	8
SAFETY SITTER	30
⊟ EVENINGS	48
FLOAT	12
HOME WARD	12
OT	8
SAFETY SITTER	16
⊟ NIGHTS	52
HOME WARD	28
OT	8
SAFETY SITTER	16
Grand Total	**708**

Appendix D

Total Hours 2750 Sitter Hours
Fiscal Year 2018-Quarter 1-4
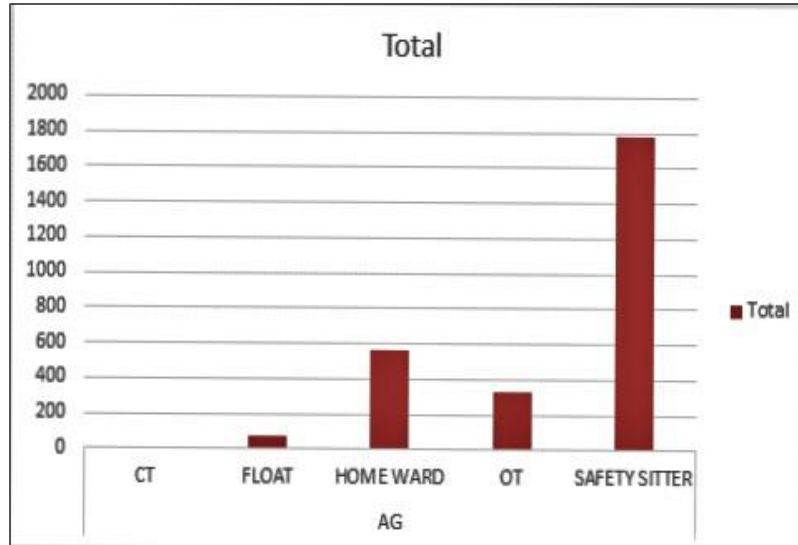
FY 2018	
DIAGNOSIS	DEMENTIA
Row Labels	**Sum of TOTAL # HOURS**
⊟ **AG**	**2750**
CT	8
FLOAT	69
HOME WARD	562
OT	330
SAFETY SITTER	1781
Grand Total	**2750**

Appendix E

Toolbox Items

Music/CD Players

Music: Multiple Genres

Puzzles (varying difficulty)

Fidget Spinners (tactile stimulation)

Modeling Clay (tactile stimulation)

Buttons (varying size for sorting)

Golf Tees (sorting exercise)

Playing cards

Checkers/Simple Board Games

Appendix F

Lesson Plan: Engaging the Dementia Patient in Acute Care

Introductions: Training Overview
Goals of Workshop; Highly interactive
Discussion: "What makes a good patient"
Experiences working with dementia
Break
Types of dementia
Stages of dementia
Lunch
What can we do? Interacting with the patient
Communication methods/Tips
Activity: Role play/Demonstration/Practice
          Current approach
          New approach
Understanding Behavioral Problems
Behavioral Plan: C.A.N.D.L.E.
          C: Communication
          A: Approach
          N: Needs
          D: Distraction
          L: Leave for later
          E: Environment
Break
Introduction of the "Tool Box"
Know your patient (likes/dislikes)
          Work history
          Leisure history
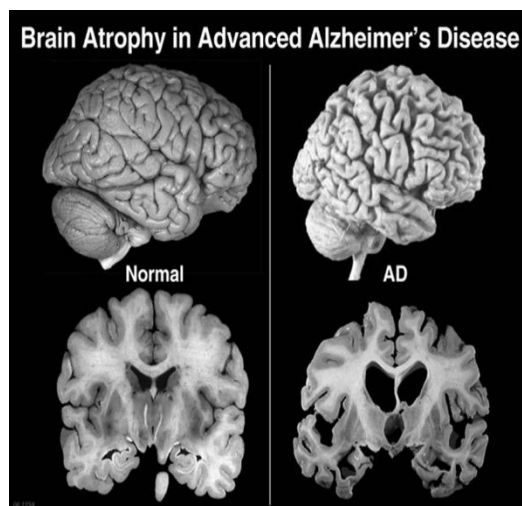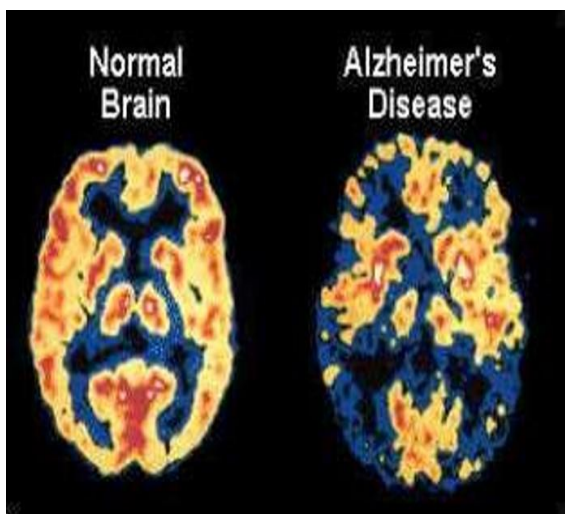   Social history
          Previous daily routine
          Religious/spiritual preferences
Questions

Evaluations

Appendix G

PowerPoint Presentation

Role Play

Wheelchair Activity Demonstration

Interactive Practice

Appendix H

Environmental Change

Before   After

Appendix I

Survey Results