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## **Pain Assessment and Protocol for Transitional Care and Long-Term Care Residents: Lessons Learned from Implementing Change in a Long-Term Care Organization**

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and have found that it is complete and satisfactory in all respects,  
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DEPARTMENT OF NURSING

Pain Assessment and Protocol for Transitional Care and Long-Term Care Residents: Lessons  
Learned from Implementing Change in a Long-Term Care Organization.

DNP Project  
Submitted in Partial Fulfillment  
of the Requirements for the  
Doctor of Nursing Practice Degree

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### Abstract

Two Interprofessional teams addressed the issue of resident pain at St Gertrude's Health and Rehabilitation Center (SGHRC). The groups included members of Saint Catherine University Clinical Scholars Program and clinical staff from SGHRC. Both teams utilized evidence-based practice and the Plan-Do-Study-Act (PDSA) quality improvement method as a model for implementation, leading to valuable insight into how to approach change when working with interprofessional teams in the long-term care (LTC) and transitional care unit (TCU) settings.

Exploration of the evidence resulted in the development of a quality improvement initiative to improve pain scores for LTC and TCU residents. The application of the plan-do-study-act method allowed for the evaluation of staff education, pain assessment, and integrative pain reduction methods on pain management. The rapid-cycle approach permitted for and determined changes needed to improve procedures and an organized way of implementation (healthIT.gov, n. d.). An educational component on pain assessment in the TCU and integrational pain reduction methods in the LTC unit provided by nursing assistants, nurses, and therapy associates was developed to reduce moderate to severe pain.

*Key-words: Acute pain, chronic pain, pain assessment, pain management, quality improvement, PDSA, staff education, patient education, interprofessional teams, skilled nursing facility, long-term care and nursing homes.*

Pain assessment and protocol for Transitional Care and Long-Term Care Residents: Lessons learned from implementing change in a long-term care organization.

### **Problem Formation**

A quality improvement project implemented as part of the Interprofessional Evidence-based Clinical Scholars Program (IECSP) (Chapman & Larson, 2016), a partnership between a university and a rehabilitation center and St. Gertrude's Health & Rehabilitation Center (SGHRC), a facility of Benedictine Health. Interprofessional membership on each team included graduate students from occupational therapy and nursing, faculty from the university joined with care center staff from nursing, occupational therapy (OT), physical therapy (PT), wellness staff, integrative therapy and administration. Management from Benedictine Health System and St. Gertrude's Health & Rehabilitation Center reported to the IECSP team that resident's pain scores remained at high levels and proposed a group of clinical scholars come together to determine approaches to assist in decreasing pain scores and improve the quality of life of each of their residents.

Pain is a personal experience, an experience that poses detrimental effects such as insomnia, depression, anxiety, poor appetite, agitation, differences in activity, and diminished quality of life (AGS panel, 2002; Hutt, Pepper, Vojir, Fink, & Jones, 2006; Russell, Madsen, Flesner, & Rantz, 2010). Pain perception is subjective and for some individuals is difficult to describe and carries an impact that is real (Guerriero, Bolier, Van Cleave, & Reid, 2016). The significance of pain in the United States, both with human suffering and economic consequences, are at a crisis point. It is estimated that 116 million adults in the United States suffer from chronic pain alone (Institute of Medicine of the National Academies, 2011). The cost of pain to society is at \$560-635 billion annually (Institute of Medicine of the National Academies, 2011). Chronic pain has even more significant human suffering and economic consequences for the older

population in the long-term care setting which includes transitional care units (Molton & Terrill, 2014).

Pain is ineffectively and inconsistently managed in the older person. Sources have discovered that pain ranges between 45%-80% in nursing homes (Gloth, 2001; Manias, Gibson, & Finch, 2011; Buhr & White, 2006). Even though many older adults are free of pain, there is a disproportionately higher prevalence of chronic pain in this age group. Unfortunately, physicians and other clinicians are reluctant to prescribe pain medication to older adults. Therefore, pain is often undertreated (AGS panel, 2002; Russell et al., 2010; Arnstein & Herr, 2015). Many older persons expect pain as they age and believe that nothing can be done to improve it. Therefore, they do not express pain or the need for relief.

The older person may be wary of reporting pain, afraid of painful tests, potential addiction, or have side effects from pain medication. However, patients who take opioids for acute and chronic pain can be prescribed in a comprehensive, systematic, collaborative, and patient-centered fashion and managed without addiction (AAPM, 2013). There are many differences in how an older person's body reacts to pain medication. For example, physiologically, drug absorption and distribution are different in the older person. There are changes in blood circulation affecting how medications are metabolized in various organs of the body, especially the liver and kidneys. Also, the older population lacks education about pain management.

There are challenges in successfully managing a resident's chronic pain (Ersek & Jablonski, 2014). As pain is described differently by everyone, practitioners also assess pain differently (Liu & Lai, 2014). For example, pain may be assessed using a pain scale, scoring pain from zero for no pain to ten, extreme pain. Another practitioner may ask when assessing pain,

“How did you sleep last night?” The potential for a different answer is likely from practitioner to practitioner. The need for reliability in pain scoring between practitioners is needed to assess pain and manage pain in the older person accurately.

Persistent pain is individual (Russell et al., 2010), is often underrecognized and undertreated because of cognitive impairments or communication barriers (Hadjistavropoulos, Williams, Kaasalainen, Hunter, Savoie, & Griffiths, 2016; Herman, Johnson, Ritchie & Parmelee, 2009). The population of elderly in LTC facilities is close to 1.5 million (Centers for Disease Control and Prevention [CDC], 2010), and estimates of cognitively impaired LTC residents with chronic pain ranges from 45-80% (Reynolds, Hanson, DeVillis, Henderson, & Steinhauser, 2008). The identification of pain in nursing home residents is necessary to manage persistent pain through evidence-based interventions (Arnstein & Herr, 2015). Nursing assistants, non-licensed facility staff, and licensed staff should report a resident’s description of pain to the nurse to trigger a pain assessment. The assessment then guides implementation of appropriate pain interventions. Identifying pain whether chronic or acute and instituting an effective pain protocol can assist with pain management.

Nursing home staff have had to assess the prevalence and severity of pain in nursing home residents using the minimum data set (MDS) protocol since 1998. The MDS protocol is used to detect variations in pain scores from one nursing home to another, inferring that a lower pain score signifies better care. When correctly applied, the MDS is "quite valid in detecting pain" (Cohen-Mansfield, 2004, p. 343). Unfortunately, inadequate training of nursing MDS evaluators provides a challenge in nursing homes. Nursing staff need appropriate training to detect pain using the MDS pain assessment tool. Conversely, there is a high turnover rate of skilled nursing

staff in LTC and TCUs. High turnover rates may interfere with the quality of MDS data and continuum of care (Castle, Engberg & Men, 2007).

Nursing Home Compare presents a star rating system from 1 to 5 and allows consumers to compare scores issued by the Centers for Medicare and Medicaid Services (CMS) on three categories, inspection results, staffing data, and quality of resident care (CMS, 2017). Pain scores from the MDS are a component of the quality of resident care category. St. Gertrude's Health and Rehabilitation Center's current MDS pain score rating is above the state and national average. Consequently, their star rating at the start of this project was 3 stars out of 5.

Assessing and managing pain in older adults is complicated. Pain is subjective, and response to pain varies from individual to individual. Thus, the assessment needs to be appropriate and educating nursing staff on how to employ it adequately is paramount. Hence, receiving care from an interprofessional team that focuses on individual assessment and treatment of pain using both pharmacological and nonpharmacological therapies was recommended.

### **Background**

Management from St. Gertrude's Health & Rehabilitation Center reported to the IECSP team that resident's pain scores in 2016-2017 were higher than the national average (16.9%), state average (22.8%) and were even higher in 2007 at 55-56% (Benedictine Health System [BHS], n.d.). Despite organizational efforts to reduce MDS pain scores, they continue to be twice as high as the national average of 16.9% and higher than the state average of 22.8%. (Medicare.gov, n.d.). Up to this point, efforts have centered on the medical model of pain management. The medical model includes evidence-based approaches to assessment, pharmacological management and nonpharmacological approaches such as positioning, and heat/cold application. With these



interprofessional projects, the organizational goal was to decrease MDS pain scores to 27% or lower.

This older population resides in the TCU and LTC units at SGHRC. The TCU is designed for the short-term provision of nursing care and therapies, after illness or injury, to strengthen and prepare the patient to return home safely. Residents in the TCU have a variety of diagnoses and comorbidities along with pain. The average length of stay in the TCU is 20 days. Long-term care is designed for the older person who requires 24 hour attention as they are unable to care for themselves. Consequently, two interprofessional teams investigated the problem of high MDS pain scores for moderate to severe pain.

Exploration of the evidence resulted in the development of a quality improvement initiative to improve pain scores for LTC and TCU residents. The application of the plan-do-study-act method allowed for the evaluation of staff education, pain assessment, and integrative pain reduction methods on pain management. The rapid-cycle approach permitted for and determined changes needed to improve procedures and an organized way of implementation (healthIT.gov, n. d.). An educational component of pain assessment in the TCU and integrational pain reduction methods in the LTC unit provided by nursing assistants, nurses, and therapy associates was developed to reduce moderate to severe pain.

### **Needs Assessment**

At SGHRC, specially trained nurses implement the Centers for Medicare and Medicaid Services (CMS) Minimum Data Set (MDS) pain questions to determine resident pain level on admission, quarterly, and when a substantive change in the resident's condition occurs. The facility currently has MDS pain scores that are higher than other facilities within the state and nationally, which suggests the need to improve pain management in this facility. Interviews with

organizational leaders revealed the need to reduce MDS pain scores to 27% or lower and increase star ratings to a 5 out of 5.

Chart reviews were completed to reveal resident diagnoses, pain assessments achieved, pain scores and resident response to interventions. The findings indicated that residents were not consistently assessed for pain and scheduled and PRN (Pro re nata or “as needed”) medications were provided but not routinely re-assessed for effectiveness. Completed re-assessments revealed pain scores remained at a score of 7-9 on a 0-10 scale where 0 is no pain and 10 is extreme pain, and with no other interventions offered.

St. Gertrude’s Health and Rehabilitation Center has multiple resources available to address chronic pain in residents. However, the facility does not have a protocol for assessment, staff communication regarding the resident’s pain, or non-pharmacologic treatment offerings. Seven employees are trained in integrative health modalities, but to date, achievement of facility-wide implementation has not occurred. Integrative health therapies provided by trained staff include healing touch, aromatherapy, reflexology, comfort massage, Alpha-Stim, Korean Hand Therapy (KHT), and Tuning Fork Therapy. Nursing Assistant Registered (NAR) have been trained in Comfort Massage during their orientation period after hire.

As pain is a significant issue at SGHRC, the importance of these projects cannot be overstated. Nurses have a considerable obligation in the management of persistent pain in the elderly. Nurses have more contact with residents in the TCU and LTC than other healthcare professionals and allow nursing the ability to identify pain and implement interventions. This ability to mitigate pain and deter its effects is a nurse’s professional responsibility.

### **Purpose**

The purpose of this quality improvement project was to determine an appropriate pain assessment tool and implementation of non-pharmacologic pain management strategies that are available at the facility. In the short-term, a goal of decreased pain in residents while providing comfort and increased quality of life was paramount. The desired outcome of this project long-term was to explore evidence-based practices that could decrease pain triggers on the MDS. To garner implementation, a nursing theory was identified to guide the projects.

### **Theoretical Framework**

The Theory of Comfort is a logical nursing theory selection to incorporate into a quality improvement project on pain. Kolcaba's Theory of Comfort has been tested and supported in multiple healthcare populations (Kolcaba & DiMarco, 2005). The Theory of Comfort is a mid-range nursing theory that has minimal concepts and propositions, a low level of abstraction, and is easily applied to nursing practice (Kolcaba and DiMarco, 2005). Kolcaba defines comfort as "the immediate state of being strengthened by having the human needs for relief, ease, and transcendence (types of comfort) addressed physically, psychospiritually, socioculturally, and environmentally (contexts in which comfort is experienced)" (Wilson & Kolcaba, 2004, p. 166). Relief is the first type of comfort and provides for a release from pain and discomfort; the second type of comfort is ease and allows the resident to be comfortable; and the third type of comfort is transcendence which embodies motivation or inspiration (Wilson & Kolcaba, 2004). For example, with pain and the use of nonpharmacologic therapies which include exercise, heat/cold pack, guided imagery, hand/foot rub with pre-mixed aromatherapy lotion, a resident can have decreased pain as they become relaxed to rise above the pain.

The four contexts of the Theory of Comfort, physical, psychospiritual, environmental, and sociocultural allow nursing to implement comfort interventions to match individual resident needs (Wilson & Kolcaba, 2004). Physical comfort looks at the physiological aspects of the individual; psychospiritual comfort is an internal self-awareness; sociocultural comfort is described as relationships personally, with family, and with society; environmental comfort encompasses the external factors surrounding the human experience (Kolcaba, Tilton, & Drouin, 2006).

Comfort is a significant outcome in the profession of nursing (Kolkaba & Kolkaba, 1991) and is ultimately an outcome desired for the residents of this project in each of the four contexts. Health seeking behaviors are said to be a result of resident comfort; and when residents project comfort, the facility benefits in satisfaction scores and positive publicity (Kolcaba, Tilton, & Drouin, 2006). Therefore, comfort was an ideal theory to guide a pain strategy.

### **Review of Literature**

The clinical scholar teams collaboratively conducted a literature search using EBSCO, CINHALL, PUBMED, and ProQuest using the key terms quality improvement, Plan-Do-Study-Act, PDSA, pain management, pain assessment, nursing homes, skilled nursing facility, long-term care, staff education, patient education, acute pain, chronic pain, and interprofessional teams. Search inclusion criteria encompassed articles in English, peer-reviewed, scholarly articles, full text, and within the past ten years, with the addition of classic resources. Limits were also selected from research evidence to include random controlled trials (RCTs), meta-analysis/systematic reviews, cohort studies, descriptive studies, and qualitative studies. Also, non-research evidence was examined for quality improvement studies. The respective projects had the focus of pain, pain assessment, pain management, resident/patient education, staff education, and utilization of the PDSA process.

### **Acute and Chronic Pain**

Multiple classifications of persistent pain are beyond the scope of this paper. Two categories encompass most conditions in the elderly: Nociceptive pain which originates in the organs and is called visceral pain or is somatic and occurs where the tissue damage has occurred; and neuropathic pain that results from loss or dysfunction of the peripheral or central nervous system and is linked to sensitivity (AGS, 2002).

Persistent or chronic pain is defined as a state in which an individual experiences severe discomfort or pain that continues or recurs over a prolonged period, caused by various diseases or abnormal conditions (Trakalo, 2015). Pain usually requires a combination of a variety of therapies and pharmacological approaches to render relief. Care must be taken when prescribing opioids for chronic pain. A recent study conducted by Dr. Erin Krebs at the Minneapolis VA Health Care System found opiates were no better than non-opioid medications for treating chronic pain and should be used only if other methods fail (Heussner, 2018). Chronic pain is not accompanied by autonomic symptoms, persists longer than three months, and intensity is often higher than any apparent physical injury or impairment (Trakalo, 2015). Chronic pain has both perceptual and affective components making it difficult to obtain an accurate pain intensity score. The goal of total pain relief may not be possible, although it can be managed at a reasonable level (Vaismoradi, Soderberg, & Bondas, 2016).

Acute pain typically has an apparent cause and is of short duration. Acute pain is accompanied by autonomic symptoms of high blood pressure, elevated pulse, and diaphoresis. Immediate management and handling of severe pain can help prevent the development of chronic pain symptoms. Acute pain can be caused by an injury or surgical procedure and may be easier to

manage than chronic pain (Trakalo, 2015). Acute pain can be controlled with analgesics until the cause is resolved.

### **Pain Assessment**

Nursing home patients in short-term care consist of cognitively intact and communicative, having recent surgery, exacerbation, or injury requiring rehabilitation. Residents in LTC are considered a vulnerable population as they are dependent on the LTC team to meet their healthcare needs including addressing pain and discomfort. Assessment of pain and discomfort may be limited by the resident's cognitive status and inability to communicate needs effectively. Consequently, the resident's autonomy to engage with therapeutic interventions.

A communicative patient should have pain evaluated and assessed using easily understood questions and screening tools (The Australian Pain Society, 2005). The Defense and Veterans Pain Rating Scale (DVPRS) is an evidence-based pain assessment tool that includes verbal, numeric and faces methods of assessing pain and is easily interpreted by most patients (Defense and Veterans Pain Rating Scale, n. d.). Herr et al. (2004) finds that evidence-based guidelines are recommended as an approach for pain assessment and management, and ultimately, the improvement in the quality of care of the older person. When documenting pain: Intensity, location, cause (if any), duration, interventions, results, reassessment, and follow-up are important components to include. The cause of pain and individualized approaches to pain are essential to determine (Williamson & Hoggart, 2005). Handoff communication regarding patient pain using the Situation-Background-Assessment-Recommendation (SBAR) format (IHI, 2018) is a robust communication tool (Labson, 2013) and results in stellar patient care. All staff must be thoroughly educated in the same evidenced-based pain assessment methods to obtain consistent pain intensity ratings for all patients in their care.

Nurses may not recognize pain in dementia patients as verbal communication may be altered or unexpressed. Fries, Simon, Morris, Flodstrom, and Bookstein (2001) found that there was decreased reporting of pain in residents with cognitive impairment. Horner, Hanson, Wood, Silver, and Reynolds (2005) found that providing a complete pain assessment improved pain management versus partial or no pain assessment for residents with daily pain. The PAINAD tool allows for caregivers involved in patient care the opportunity to become aware of what a resident's pain behaviors are and respond with an approach that is individualized to the resident (Hargas & Miller, 2008; Liu & Lai, 2014). Liu and Lai (2014) proposed the implementation of a pain protocol using the PAINAD assessment tool when pain scores were  $>1$ . Pain assessment for residents with a diagnosis of dementia need to be assessed with an appropriate tool for pain to be managed and ultimately improved quality of life.

### **Pain Management**

**Exercise.** Pain management and function are common measures with activity in LTC facility research with a significant decrease in pain and an increase in range of motion, and mobility (Laubenstein & Beissner, 2016; Tse, Wan, & Ho, 2011; Tse & Ho, 2010; Tse, Tang, Wan, & Vong, 2013). It was also noted that with exercise, residents in LTC had an increase in mood and psychological well-being (Tse, Tang, Wan, & Vong, 2013; Tse, Vong, & Ho, 2011; Barthalos et al., 2016). An increase in mood and psychological well-being can be distractions from pain.

**Heat/Cold.** Cold therapy also known as cryotherapy is the application of an ice pack, coolant spray, or cold bath to decrease tissue temperature resulting in decreasing blood flow and causing vasoconstriction, and decreasing inflammation and pain (Nadler, Weingand, & Kruse, 2004). Heat or thermotherapy is the application of heat which increases blood flow to reduce pain

(Nadler, Weingand, & Kruse, 2004). Nadler, Weingand, & Kruse (2004) found that both modalities provide significant pain relief with a low side-effect profile. While Yidirim, Ulusoy, and Bodur (2010) utilized heat in their research to decrease osteoarthritis pain with similar results. Petrofsky, Batt, Bollinger, Jensen, Maru, & Al-Nakhli (2011) additionally found that muscle soreness was reduced after applying moist heat, both immediately after and up to two days after exercise.

**Foot/Hand rub with aromatherapy lotion.** Aromatherapy is the use of essential oils to provide therapeutic action to a symptom (Battaglia, 2002). A finding of studies shared a decrease in pain scores with an intervention of massage and aromatherapy (Cino, 2014; Metin & Ozdemir, 2016; Sritoomma, Moyle, Cooke, & O'Dwyer, 2013; Vasiri, Mahmodi, & Nobakht, 2016). Sritoomma, Moyle, Cooke, & O'Dwyer (2013) found that ginger used with massage has an analgesic and anti-inflammatory effect on musculoskeletal pain. Vasiri, Mahmodi, & Nobakht, (2016) found that lavender with massage had additional therapeutic effects of relaxation and sleep. If a resident can relax, pain will decrease, and rest or sleep will follow.

**Guided imagery.** Guided imagery uses focused relaxation through visualization and direct suggestion to increase a person's coping mechanisms (Bruckenthal, Marino & Snelling, 2016). A study by Baird, Murawski, and Wu (2010) found a significant reduction of pain intensity ratings and medication use with guided imagery. Guided imagery is a safe and effective method. One caveat is that the individual must have the cognitive ability to follow direction given by the facilitator. A person with mild cognitive deterioration may benefit from guided imagery as it has a calming and distracting effect from pain.

### **Effects of Staff Education on Pain Assessment and Management**



A study by Manias et al., (2011) found that role-playing pain simulation improved the nurse's ability to assess pain accurately and ultimately reduced pain intensity ratings. Consistent use of a pain assessment scale assists nurses to narrow in on the causes of patient's pain and ways to reduce it (Manias et al., 2011). Machira, Kariuki, and Martindale, (2013) found that many nurses lacked pain knowledge before an educational intervention and had a statistically significant improvement after. Educational interventions are important, but it has been found that the clinical environment is just as important (McNamara, Harmon, & Saunders, 2012). Following an educational course on pain education and assessment taught by the same educators, nurses showed improvement in knowledge and attitudes towards patient pain intensity (McNamara et al., 2012). It is crucial for providers to have continuous professional development on pain assessment and management. Nurses with adequate pain assessment and management knowledge can serve as mentors and resources to other novice nurses (Machira et al., 2011).

### **Plan-Do-Study-Act (PDSA)**

The Institute for Healthcare Improvement (IHI, 2018) labels the PDSA cycle as shorthand for testing a change. The PDSA cycle recommended by the IHI, developed by Edwards Deming includes the following steps for testing change: 1) developing a method to assess the change, 2) carrying out the plan, 3) observing and learning from the results and 4) determining what modifications should be made. The PDSA promotes small-scale projects to test interventions in a rapid style while minimizing risks to patients and building valuable evidence (Taylor, McNicholas, Nicolay, Darzi, Bell, & Reed, 2014).

### **Project Implementation**

The Plan-Do-Study-Act exemplar proposed by the Institute for Healthcare Improvement (IHI, 2018) as part of the quality improvement process was selected for project implementation.

### **Transitional Care Unit**

The focus of this project was to improve management, assessment and documentation of pain in the TCU with an educational approach and the use of the Defense and Veterans Pain Rating Scale (DVPRS). Ten residents on the first floor of St Gertrude's TCU were selected by nursing and therapy management staff. Patients were selected according to the following criteria: Recent surgery, residing on the first floor of the TCU and having moderate to severe pain ratings.

Cycle I: Analyzed pain documentation using ten chart audits to determine the frequency and type of pain assessment and management documented. Patient names were deidentified.

Cycle II: Analyzed employees knowledge about pain management and assessment using a pre-educational test, an educational intervention, and a post-educational test. Staff names on the pre and post-tests were deidentified. Nursing and therapy staff were invited to the educational session, which was announced via an educational recruitment flyer delivered to each of the employees. Nursing management encouraged staff to attend while therapy management allotted time off from patient care to attend the educational session. The educational intervention was offered four times over the course of two days accommodating all three shifts. A total of twenty-eight nursing and therapy staff attended the educational interventions. As part of the educational module, information was provided on pain assessment, management, myths, and common misconceptions regarding pain and how to administer the DVPRS pain assessment scale accurately.

Cycle III: Staff implemented the DVPRS pain assessment scale for one week. After the week was over, an evaluation was administered eliciting suggestions for improvement and feedback on the implementation and training of the DVPRS. The evaluations were given to the 27 staff who attended the educational session; 15 staff evaluations were de-identified by nursing

management and returned to the clinical scholar team. Post-intervention chart audits were completed during the week following the intervention. Nursing and therapy management staff selected ten patient charts using the same criteria as the pre-intervention audits. The patients were deidentified, and the results were presented to SGRHC and Saint Benedictine Health administration.

### **Long-Term Care Unit**

The Clinical Scholars team created a CARE bundle mnemonic to promote pain intervention on the LTC units of SGHRC and stands for Communication/Comfort, Assessment, Referral, and Encourage. To address the communication aspect of the bundle, the team devised a communication tool in the form of a stoplight. This tool was placed at the entrance of the resident's room indicating resident pain level, red being an intense pain (4-10), yellow indicating pain is present (1-3), but tolerable and could be managed better, and green indicating no pain or manageable pain (0). Nursing staff on the first and second shifts completed the Pain Assessment in Advanced Dementia (PAINAD) (Assessment part of the CARE bundle) or the Numeric Rating Scale (NRS). The assessment instrument the nurses selected was dependent on the cognitive status of the resident and whether a diagnosis of dementia was documented in the electronic health record (EHR). Upon completion of the assessment, the nurse used the stoplight communication tool to visually communicate to the staff on each shift about the resident's level of pain. The Communication tool guided the interventions the staff selected according to their scope of practice from the CARE bundle. The Comfort interventions included in the CARE bundle were exercise, heat/cold pack, guided imagery, hand/foot rub with pre-mixed aromatherapy lotion, and pharmacologic pain interventions ordered in the EHR. Referral in the CARE bundle required nursing staff to obtain physician orders if not already requested for hot packs, pharmacological

pain interventions, the exercise group, or a palliative care consult. The Encourage component of the CARE bundle involved both nurses and nursing assistants encouraging the resident to reflect on the effectiveness of and acceptance of the comfort interventions on a consistent basis when the pain was experienced or to prevent pain, as in the case of regular attendance to the exercise group.

St. Gertrude's Nursing Management selected four residents based on the following criteria: The resident triggered high pain scores on the Minimum Data Set (MDS); diagnosis of pain in the resident's EHR, and a resident living in LTC. St. Gertrude's Nursing Management invited all nursing and nursing assistant staff from the three LTC units to participate in the initial education session conducted by the IECSP team. Education included training of the nurses on the Pain Assessment in Advanced Dementia (PAINAD), the stop light communication tool, and the positive messaging or encouragement scripts. Nursing Assistants (NA) were only trained on the stoplight communication tool and positive messaging. The Clinical Scholars team was blinded to the education session attendees who were directly involved with the residents in each cycle. St. Gertrude's nursing management elicited anonymous feedback on the educational portion of each cycle from all nursing and nursing assistant attendees. Using the feedback and random observation forms, management collected data on the nursing and nursing assistant staff about the use of the communication tool and positive messaging with the selected residents. Only the nursing and nursing assistant staff directly caring for the identified resident/s on the first and second shift provided feedback on the implementation of each cycle. St. Gertrude's nursing management de-identified the data and distributed to the Clinical Scholars team for analysis to shape modifications to the CARE components after Cycle I and II.

Cycle I: St. Gertrude's nursing management selected the first resident to participate based on the following criteria: the resident triggered high pain scores on the Minimum Data Set

(MDS); diagnosis of pain in the resident's electronic health record (EHR) and living in LTC. St. Gertrude's nursing management invited all nursing and nursing assistant staff from the three LTC units to participate in the initial education session via an educational recruitment flyer.

Cycle II: Consisted of re-implementation of Cycle I with modifications of education huddles. Also, collecting data about nursing staff using scheduled or PRN medication when the resident was in the red or yellow zone of the stoplight communication tool and follow-up on resident response to pharmacological pain intervention after administration. Follow-up included the nurse determining changes in the pain level based on a subsequent pain assessment that was also documented in the EHR.

Cycle III: Consisted of re-implementation of Cycle II with the addition of data collected on nursing staff utilization of scheduled or PRN medication protocol when the resident was in the red and yellow zones of the stoplight communication tool. Comfort interventions included in the CARE bundle: Exercise, heat/cold pack, guided imagery, and hand/foot rub with premixed aromatherapy lotion. Follow-up on pharmacologic and non-pharmacologic resident response to the pain intervention after administration to determine the pain level using a subsequent pain assessment and documented the pain assessment in the EHR. Results were presented to SGHRC and Benedictine Health Administration.

### **Ethical Considerations and Social Justice**

Approval from the Internal Review Board (IRB) at St. Catherine University was obtained prior to implementation. Risks and benefits were identified by the interprofessional teams. The primary threat ascertained was confidentiality with the data collected from the feedback form, random observation form, and EHR data. However, all resident and staff information was de-identified.

A social justice issue that warranted consideration with pain assessment and management is that of ageism. In the past forty years, there has been a decrease in attention provided to ageism and inequities based on age (Estes & Wallace, 2013). Also, aging is not always thought of in a positive light especially if the older individual is unhealthy, has dementia, and is living in a nursing home. Prioritizing care for chronic conditions to include pain for those in short-stay or long-stay in nursing homes promotes efficacy and quality of life for the older adult (Estes & Wallace, 2013). Older adults expect and need to have their pain controlled at an acceptable level and deserve to be comfortable.

### **Evaluation**

#### **Transitional Care Unit**

After the educational intervention pre- and post-test scores on pain management and assessment were compared. In overall knowledge, the scores showed a 5.6% improvement. In identifying pain, the scores indicated a 3.7% improvement. When selecting the appropriate pain scale to use, 81.5% answered correctly on the post-test. A comparison of the pre and post-educational test score data showed an overall improvement. After the intervention of the DVPRS was completed, the staff were requested to complete an evaluation. Fifteen out of 27 evaluations were completed by participants. On a scale of 1-5, 1=poor, and 5=excellent, the staff rated the intervention as follows: Usefulness in managing pain 3.9, usefulness in assessing pain 4.2 and value in rating patient's pain 4.3.

Comparison of pre and post-chart audits of the medication record demonstrated an overall increase in the selection and completion of the DVPRS pain assessment by nursing and therapy professionals. Also, there was an increase in documentation found in nursing and therapy notes.

Employees discovered the DVPRS pain scale was user-friendly. Two different computer programs utilized that didn't communicate, presented some challenges during chart audits.

### **Long-Term Care Unit**

Attendance at the scheduled education sessions participants was minimal, with two nurses and two nursing assistants present. Discussion by the team resulted in the proposal of huddles for educating staff to the project at designated times within the two shifts for all staff that would be working with the four residents each day of the cycles. Thirty-seven nursing assistants were trained via huddle along with seven nurses in addition to the four that attended the education sessions.

Analysis of the data collected on the four residents that triggered pain shared both areas of consistency/improvement and areas of opportunity. It was consistently found that initial pain assessments were completed every shift for all three cycles and scheduled and PRN pain medications were given and documented after the initial assessment. Data also indicated that follow-up pain assessments were rarely documented. Non-pharmacological pain interventions were only offered/documented three times during the three cycles. It was also found, that nursing assistants were not able to document whether they provided a delegated pain intervention in the EHR.

### **Recommendations**

The two interprofessional team outcomes provided relevant data from the PDSA cycles implemented. Quality improvement process refinements allowed each of the teams the ability to control inconsistencies and improve outcomes using PDSA rapid cycles (Rouen, 2017). Therefore, the incorporation of the PDSA approach as a quality improvement method to promote organizational change is recommended. This rapid cycle method allows the implementation of

change in real-time. Also, the merger of educational methods including huddles and mandatory education sessions is advised. If two interprofessional teams at one facility were to continue, the collaboration between teams is essential.

Future recommendations:

- It would be important to replicate the PDSA cycles to assess the effectiveness of the intervention over an extended period.
- If two teams are working simultaneously at the same organization, a collaboration between the teams will allow for additional learning.
- Educate staff frequently. Make education a part of annual education and new employee orientation.
- Have the DVPRS in the admission packet. Educate and explain the DVPRS to the resident.
- Test a larger sample size.
- Continue project with a new inter-professional team.

### **Conclusions**

Three lessons gained from an innovative interprofessional project team include:

1. Organizational staffing deficits impacted the participation of nursing and nursing assistant staff in the project.
2. Methods of implementing a PDSA cycle utilizing the four-repetitive step approach on a small scale allowed the team to develop and implement a plan, observe the results and incorporate changes into the next cycle.
3. Mandatory education sessions and huddles were effective methods to communicate and implement project interventions.



Successes and challenges were documented and provide an opportunity for additional teams to investigate further and continue to address pain with additional PDSA cycles.

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