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Is Anybody Listening?: Factors Affecting Pain Management in Veterans Within an Acute Care Rehab Setting

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IS ANYBODY LISTENING?: FACTORS AFFECTING PAIN MANAGEMENT IN VETERANS WITHIN AN ACUTE CARE REHAB SETTING

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Laura Oseghae

TABLE OF CONTENTS

Table of Contents—Continued

Table of Contents—Continued

Table of Contents—Continued

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

Abstract

Background. In the United States, pain is a widely discussed issue due to the opioid epidemic stemming from a history of pain mismanagement. Clinical guidelines for successful pain management techniques are readily available for providers to incorporate into the individualized patient care plan. ***Purpose.*** The purpose of this project is to improve pain management through implementation of the VA pain management guidelines and improved interdisciplinary team communication. ***Objectives.*** This project aims to decrease the number of patients reporting moderate to severe pain, enhance staff/provider communication, and improve the provider's overall process for managing pain with an individualized treatment plan. ***Interventions.*** Implementation of the practice guidelines included engaging staff in training, implementing new pain management tools, implementing a provider-initiated pain template, collaborative communication, and supplemental education for the patients and staff. ***Results.*** The results of the project showed improved provider/staff knowledge of pain assessment and management, maintenance of greater than 95% in pain medication effectiveness documentation, compliance with individualized pain template initiation and reassessment in weekly team meetings, and lastly a reduction in the number of veterans reporting moderate to severe pain. ***Implications for Practice.*** The significance of this project lies in its ability to highlight the providers' accountability for managing pain in patients and their role as leaders to ensure the continued assessment and evaluation of patients experiencing pain in this unique and vulnerable population.

Keywords: Veteran, acute care, rehab center, long-term care, pain, pain management, factors

Is Anybody Listening: Factors Affecting Pain Management in Veterans Within an Acute Care Rehab Setting

Pain is one of the most mismanaged symptoms affecting humans across every demographic, and is, in many cases, the first hallmark sign of a disease or disorder, alerting the organism of a displeasing sensation needing consolation. From the agony felt in a mother's womb before a child's birth, to the consuming sorrow after the passing of a loved one, the enigma of its occurrence has yet to be completely understood, due to its subjective and complex nature.

In 2001, the Joint Commission, an accreditation body whose sole purpose is to ensure the safety of medical services, began an initiative to address the under-treatment and underassessment of pain by requiring pain to become assessed along with other vital signs (Baker, 2017). Although JCAHO began the initiative, it was Dr. Mitchell Max, the former president of the American Pain Society who outlined the lack of improvement, treatment, and assessment in pain over the previous 20 years in his 1990 editorial (Baker, 2017).

In the *Annals of Internal Medicine* editorial, Dr. Max explained how previous initiatives from the World Health Organization, American Pain Society, U.S. Agency Health Care Policy and other research had failed to adequately address the under-treatment, underassessment, and mismanagement of pain, which led to patients withholding information about their pain to the nurses and clinicians (Max, 1990). Pain was invisible and no one was held accountable for its assessment or control.

Dr. Max set out to transform pain in the healthcare arena by recommending tools for clinicians and nurses to use for an accurate assessment. The tools included ways to assess the patient and initiate the appropriate therapy to address the pain. Collaborations with narcotic

authorities were encouraged to create therapeutic approaches that were beneficial to the patient without causing harm (Baker, 2017). Dr. Max also sought to have the patient included in the dialogue about their pain, to decrease the chance of a misunderstanding or miscommunication about their treatment. Although the nurses are the frontline staff, Dr. Max expressed that overall, it was the providers who are to initiate and ensure quality guidelines are being followed for pain management; providers are to be held accountable for assessing and evaluating pain satisfaction (Baker, 2017). After the success of the editorial, The American Pain Society released standards on addressing acute and cancer pain. The standards were based on Dr. Max's recommendations and included proper documentation of pain characteristics and selecting a valid tool to measure pain intensity and other criteria (Baker, 2017).

Within a Veterans Affairs (VA) facility lies a mesosystem comprised of various healthcare services meant to meet the needs of our nation's veterans. This includes an acute care rehab unit, whose main purpose is to improve patient functionality using an interdisciplinary approach consisting of medical care, restorative care, physical/occupational therapy and other disciplines of the health care team. This paper will be addressing pain management in this acute care rehab unit and the multifactorial variables that affect its occurrence, such as a lack of communication, health literacy/education, system errors, and a need for protocol standardization.

Statement of the Problem

The problem was a lack of appropriate pain management due to insufficient team communication. The unit must comply with standards set forth by Minimum Data Set (MDS) 3.0. These standards are assessed in various time intervals and provide the unit with feedback as to how the unit is meeting quality measures such as falls, catheter-associated urinary tract infection, pain, and more (RTI International, 2017). Out of all the measures, the unit was failing

to meet the MDS 3.0 standards for pain. The MDS 3.0 measure was titled *Percent of Residents Who Self Report Moderate to Severe Pain*. This measure aimed to assess what percentage of short-stay residents self-reported moderate to severe pain (RTI International, 2017).

Background

The terms *acute* and *chronic* have various meanings depending on the source, but according to the U.S. Department of Health and Human Services, chronic pain is defined as pain in one or more body parts lasting more than 3 months (U.S. Department of Health and Human Services, 2016). By contrast acute pain is defined as pain in one or more body parts lasting less than 3 months (U.S. Department of Health and Human Services, 2016). This proposal will be focused on the assessment, evaluation, and management of veterans in a post-acute care rehab setting with a small emphasis on chronic pain.

Although this project takes place in what is referred to as a "short stay" unit, long term care encompasses a variety of services designed to meet the person's need for a short or long period of time (U.S. Department of Health and Human Services, 2017). The goal of long-term care (LTC) is to improve functionality and increase independence. Discharge dates are dependent upon the patient and there is no definitive length of stay, which is why, for the purpose of this paper, research conducted in a long-term care facility was included in the literature review.

The patients on the unit were considered short stay residents because of criteria determined by MDS 3.0, which states patients who stay 100 days or less are considered short stay residents (Centers for Medicare & Medicaid Services, 2012). MDS 3.0 is a health status screening that long-term care facilities use to assess quality measures for the residents with Medicare or Medicaid, regardless of the payer (Centers for Medicare & Medicaid Services, 2012).

Behavior and Function

Behavior and function are one of the many variables affected by pain; yet its influence is often times discounted. LaMotte et al. (2017) explores the relationship between pain and behaviors in veterans. Behavioral disturbances in the veteran population is a topic recognized by many, as one of the most unfortunate and devastating consequences U.S. military veterans face. The authors discuss this topic and uncover the relationship between sleep problems and physical pain as it relates to Post Traumatic Stress Disorder (PTSD) and aggressive behaviors in veterans (2017). The study included 103 (89 males, 14 female) returning military service members and veterans, from the Boston area, who were deployed in support of Operation Iraqi Freedom/Operation Enduring Freedom/Operation New Dawn.

General aggression and intimate partner aggression were assessed using the 12-item Physical Assault and 8-item Psychological Aggression subscales of the Revised Conflict Tactics Scales. For assessing GA, both subscales were used to assess aggressive behavior toward someone other than the participants' partner/loved one. Participants who were not in a relationship 12 months prior to the study were excluded (LaMotte et al., 2017).

The results of this study showed that sleep problems, physical pain, and PTSD symptoms were positively associated with physical GA and psychological IPA. There were significant relationships between physical pain as a moderator of PTSD symptoms and aggressive behaviors. The relationship between pain and function is not linear, rather, it interweaves as any one of these variables can affect the other.

Gender and the General Population

Pain is complex in its ability to affect every individual and organism differently. Murphy et al. (2016) wanted to discover the differences between male and female veterans' response to pain and pain management in a rehabilitation center. The intervention was a treatment program within an inpatient unit called the Chronic Pain Rehabilitation Program. The program consisted of a 3-week intense multidisciplinary collaboration that aimed to address pain and improve the quality of life for the patient by teaching them self-management skills (Murphy et al., 2016).

Both male and females had improved pain outcomes from admission to discharge and discharge to follow-up. However, males showed a sustained improvement in pain, while females did not and instead had improvements in the intensity of the pain. Both genders had the same levels of fear at admission, while males reported higher levels at discharge and follow-up. Both groups showed improvement in catastrophizing pain (described as pain felt much worse than it actually is) from admission to discharge and from discharge to follow-up (Murphy et al., 2016).

The article by Nahin (2017), highlights data retrieved from the 2010-2014 National Health Interview Survey Sample Adult Core and the National Health Interview Survey Sample Adult Functioning and Disability Supplement The data collected showed that women were more likely to have severe pain when compared to their male veteran counterparts (Nahin, 2017). Veterans are a unique and vulnerable population experiencing pain at a rate much higher than those in the general population with an estimated 65.5% of United States Veterans reporting pain the previous 3 months compared with 56.4% of non-Veterans (Nahin, 2017).

Nahin also found differences in pain experienced by veteran and non-veteran females. Female veterans of the same age were more likely to report pain than non-veteran females

(Nahin, 2017). Both studies are relevant in their ability to recognize that both genders and nonveterans have an overall separate perception and intensity of pain, adding to the notion that pain must be individualized and managed according to the perception of the patient.

Pain Scale

Douglas et al. (2014) examines veteran pain scale preference using four common pain scales: The Faces Scale, the Visual Analog Scale, the Numeric Rating Scale, and the Mankoski Pain Scale (Douglas, Randleman, DeLane & Palmer, 2014). This study included 200 veterans at a VA medical center residential rehabilitation treatment program and a surgical and specialty care (SSC) outpatient clinic (Douglas, Randleman, DeLane & Palmer, 2014). Both genders were included; males represented 94% of the study. All participants had different diagnoses and types of pain, but the scales provided to the veterans were also different allowing the veterans to choose one that best represented their pain (Douglas et al., 2014).

The authors had the patient complete all four scales at two separate times, 1 week apart (Douglas, Randleman, DeLane & Palmer, 2014). The Mankoski pain scores were compared to the other three pain scales. The veterans were then asked to choose which of the four pain scales they preferred, and the results were tallied to determine a preference. The results showed that almost 50% of the veterans preferred the Mankoski scale, which displayed strong validity. The Mankoski scale has no animated facial expressions; however, it does provide detailed descriptions of pain for the patient to consider. The Mankoski pain scale was found to be a good measure for pain with moderate test-retest reliability, which was found among the other three scales (Douglas, Randleman, DeLane & Palmer, 2014).

Unit Assessment

The microsystem was a long-term care inpatient rehab unit located inside an acute care facility. The unit was 17% female and 83% male; the average resident age was 64; 62% of patients were between the ages of 51 and 65, 22% were between 66 and 75, while 16% of patients were over the age of 76. The unit on average had about 18 patients at any given time and an average length of stay of 21 days. The different types and numbers of healthcare personnel within the unit can be viewed below in Table 1.

Table 1

Type and Number of Healthcare Staff on the Unit

Staff	No. of staff
Medical Doctor	1
Nurse Practitioner	3
Registered Nurse	7
Licensed Vocational Nurse	12
Certified Nurse Assistant	7
Restorative Aids	2
Dietician	1
Speech Therapist	1
Occupational therapists	3
Physical therapist	3
Nurse Managers	2
Clinical Nurse Leader	1
Minimum Data Set Nurse	2
Psychologist	1

All members of the healthcare team excluding the nurses and CNAs were regularly on the unit Monday through Friday from 8:00 a.m. to 4:00 p.m., while the nurses were on the unit 24/7. There was a total of seven nurses for the morning shift, six in the evening shift, and six for the night shift. The unit had 24 beds and 15 rooms. There were no more than about three or four nurses for each shift; typically, the nurses cared for four or five patients on any given day.

The providers oversaw creating and managing the plan of care for each patient to include diagnoses, assessments, evaluations, and treatments. They also collaborated with the interdisciplinary team about treatments. RNs/LVNs conducted daily assessments to include safety, skin, intake and outputs, pain, and sleep. Nurses also performed wound care and coordinated with the interdisciplinary team about patient needs. CNAs assisted the nurses in performing activities of daily living for the patient to include showering/bathing, grooming, eating, transportation, toileting, and ensuring safety of the patient. A resident assistant is a CNA with specialized training in performing techniques to improve a patient's quality of life through mobility and strength exercises. The dietician on the unit oversaw patients' nutritional risks, managed tube feedings, parenteral nutrition and provided inpatient diet education for chronic diseases. The speech therapist on the unit assessed medical conditions involving the vocal and pharyngeal tracts by conducting dysphagia assessments and examinations to assess a patient's ability to swallow water, food, and medications. PT/OT determined baseline cognitive and physical function then developed attainable goals and treatment plans to improve function and independence in daily activities. Psychologists provide patient care, manage psychiatric medications, and coordinated with the interdisciplinary team on best practices to manage psychiatric behaviors and disorders. MDS nurses are RNs who were responsible for overseeing smooth operations of the unit to include monitoring unit quality measures; the MDS nurses also enforced MDS 3.0 standards and completed the assessments for all the patients.

Diagnosis and Point of Entry

The top 10 diagnoses were as follows: GI surgical after-care (to include, colostomy placement; peg tube placement), osteomyelitis, end stage renal disease, femur fracture, cervical laminectomy, small bowel obstruction, pancreatitis, upper extremity fracture, debility, and

abscesses. Approximately 21% of the veterans were married, 2% had a domestic partner, 49% lived alone, 28% lived with others and none were homeless.

The point of entry for the patients were as follows: 11% came from the Progressive Care Unit a unit that specializes in treating medical surgical patients whose needs are not serious enough for the intensive care unit, but too complex for the regular hospital floor. Approximately 11% of patients came from the local public teaching hospital, 16% were from the cardiac floor, a unit that cares for patients on telemetry and require care for their cardiac diagnoses, 27% were from medical surgical floors, 13% came from the Surgical Intensive Care Unit a unit that cares for critically ill patients requiring close monitoring post-surgery, and 22% came from a designated post-surgical floor. Patients from this unit come directly from Post Anesthesia Care Unit.

Following discharge, 83% of the patients will go home, while the remaining 17% will go to a skilled nursing facility (SNF) or rehab. Forty-four percent of the patients are medical patients, who are not admitted because of a surgical related diagnosis, and the remaining 56% are post-surgical patients. The unit does not accept direct admissions from home or the emergency room; all patients must had been on one of the hospital units prior to admission.

Pain Management Assessment

Interdisciplinary meetings were held every Thursday at 9:00 a.m. in the unit conference room. All members of the healthcare team are encouraged to come; the meeting was led by the MDS nurses. All the patients' goals, issues, and concerns, on the unit were discussed, as well as any updates or changes. Out of all the patients discussed, three were scheduled to participate in the interdisciplinary meeting which gave the veteran a chance to talk face-to-face with the health care team and voice any concerns. This also gave the team a chance to talk with the patient about

their progress and any concerns regarding discharge or any other aspect of their stay. Safety huddles were held twice a day and led by one of the two nurse managers; the huddles were held Monday through Friday at 7:30 a.m. and 3:30 p.m. The huddles were brief and lasted on average about 3 min to 5 min; topics about safety, nurse/patient concerns were discussed as well as any information regarding administrative issues and safety.

Staff Communication

Clinicians and nurses met every Friday at 8:00 a.m., once the oncoming nurse had received report from the previous nurse. The meeting was held in the medication room to protect patient privacy, and one by one, each nurse went over their assigned patients and stated any concerns or comments they had. Doing so gave the nurse and clinician time to clarify unclear orders or inform the nurse of oncoming changes or discharges. The meeting lasted on average 14 minutes and was led by the nurses; the providers interjected as needed, and not all nurses were able to attend due to late reports or other issues delaying their presence. Usually only one or two nurses showed up late, which equates to about three patient reports. Patient reports consisted of information about the patient that the nurse needed to understand for the upcoming shift. The report typically included information such as date and reason for admission, code status, intravenous access and site, medical diagnosis, fall precautions, wound care (if any), immediate concerns expressed by the patient/family, and other information relevant to the patient.

MDS Monitoring

The MDS measure captured the percent of short stay residents, with at least one episode of moderate/severe pain or horrible/excruciating pain of any frequency in the last 5 days. As mentioned previously, MDS nurses were in charge of evaluating all residents for quality measures. The MDS nurses visited the patient on day 7, 14, 30, 60, and 90 and asked about their

pain in the last 5 days. The pain score was calculated by dividing the numerator (the number of patients who met the pain requirements) by the denominator (overall total number of patients), then multiplying by 100. Figure 1 shows the criteria for pain, while figure 2 describes the criteria each MDS nurse must address with the patient in regard to their pain.

Figure 1

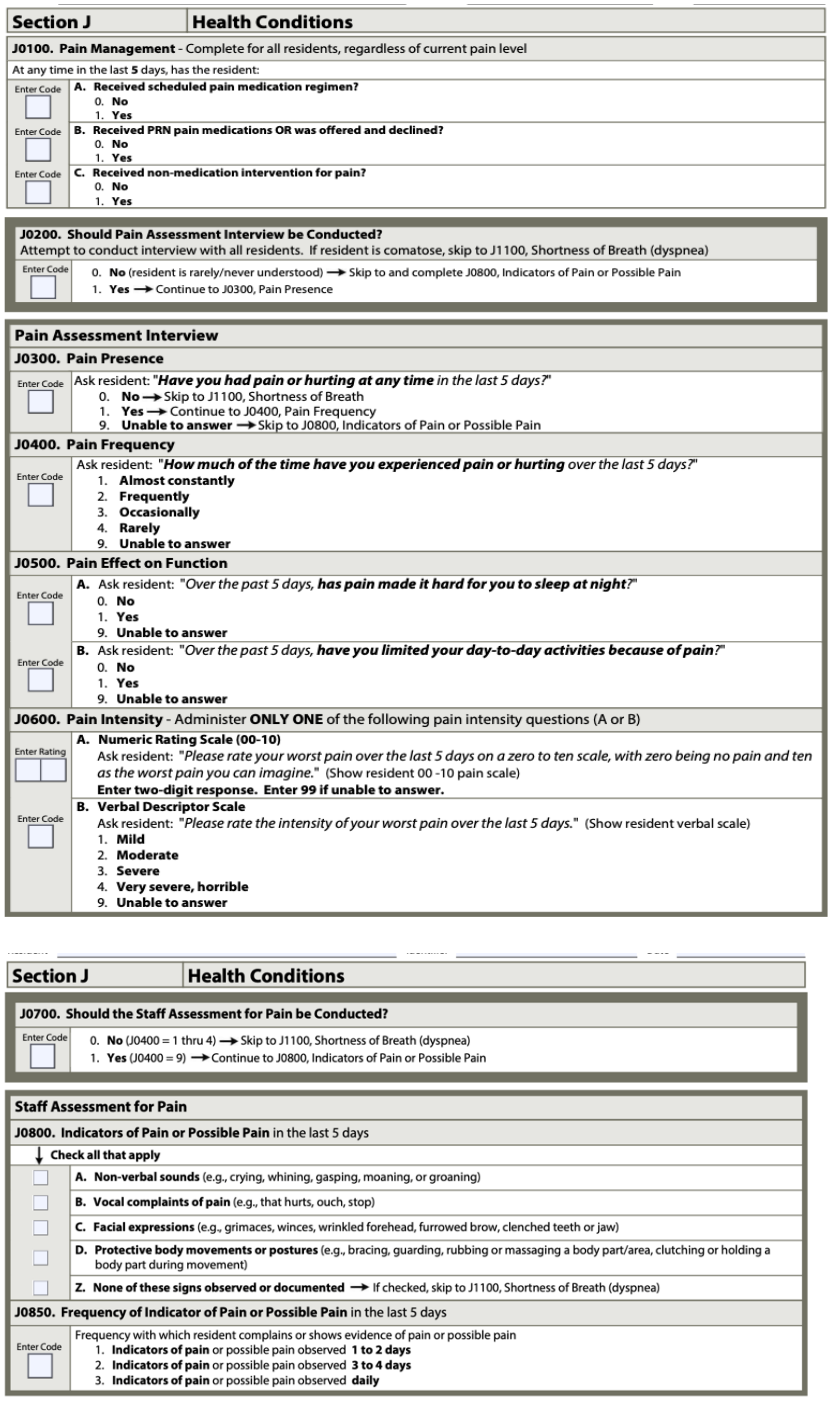
MDS 3.0 Short Stay Quality Measure Criteria for Pain

MEASURE DESCRIPTION	MEASURE SPECIFICATIONS	COVARIATES
CMS: N001.01 **NQF: 0676** **This measure captures the percent of short stay residents, with at least one episode of moderate/severe pain or horrible/excruciating pain of any frequency, in the last 5 days.**	***Numerator*** Short-stay residents with a selected target assessment where the target assessment meets ***either*** *or* ***both*** of the following two conditions: 1. Condition #1: resident reports daily pain with at least one episode of moderate/severe pain. ***Both*** of the following conditions must be met: 1.1. Almost constant or frequent pain (J0400=[1,2]) ***and*** 1.2. At least one episode of moderate to severe pain (J0600A = [05, 06, 07, 08, 09] ***or*** J0600B = [2, 3]). 2. Condition #2: resident reports very severe/horrible pain of any frequency (J0600A = [10] ***or*** J0600B = [4]). ***Denominator*** All short-stay residents with a selected target assessment, except those with exclusions. ***Exclusions*** If the resident is not included in the numerator (the resident did not meet the pain symptom conditions for the numerator) ***and any*** of the following conditions are true: 1. The pain assessment interview was not completed (J0200= [0, - , ^]). 2. The pain presence item was not completed (J0300 = [9, - , ^]). 3. For residents with pain or hurting at any time in the last 5 days (J0300 = [1]), ***any*** of the following are true: 3.1. The pain frequency item was not completed (J0400 = [9, - , ^]). 3.2. Neither of the pain intensity items was completed (J0600A = [99, - , ^] and J0600B= [9, - ,, ^]). 3.3. The numeric pain intensity item indicates no pain (J0600A = [00]).	Not applicable.

Note. This figure illustrates measure specifications for percent of residents who self-report moderate to severe pain. Reprinted from MDS 3.0 Quality Measures USER'S MANUAL, by RTI International, 2017, Retrieved from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Downloads/MDS-30-QM-Users-Manual-V11-Final.pdf

Figure 2

MDS 3.0 Pain Interview



Section J — Health Conditions

J0100. Pain Management - Complete for all residents, regardless of current pain level

At any time in the last **5** days, has the resident:

Enter Code — **A. Received scheduled pain medication regimen?**
0. **No**
1. **Yes**

Enter Code — **B. Received PRN pain medications OR was offered and declined?**
0. **No**
1. **Yes**

Enter Code — **C. Received non-medication intervention for pain?**
0. **No**
1. **Yes**

J0200. Should Pain Assessment Interview be Conducted?
Attempt to conduct interview with all residents. If resident is comatose, skip to J1100, Shortness of Breath (dyspnea)

Enter Code
0. **No** (resident is rarely/never understood) → Skip to and complete J0800, Indicators of Pain or Possible Pain
1. **Yes** → Continue to J0300, Pain Presence

Pain Assessment Interview

J0300. Pain Presence

Enter Code — Ask resident: "***Have you had pain or hurting at any time*** *in the last 5 days?*"
0. **No** → Skip to J1100, Shortness of Breath
1. **Yes** → Continue to J0400, Pain Frequency
9. **Unable to answer** → Skip to J0800, Indicators of Pain or Possible Pain

J0400. Pain Frequency

Enter Code — Ask resident: "***How much of the time have you experienced pain or hurting*** *over the last 5 days?*"
1. **Almost constantly**
2. **Frequently**
3. **Occasionally**
4. **Rarely**
9. **Unable to answer**

J0500. Pain Effect on Function

Enter Code — **A.** Ask resident: "*Over the past 5 days,* ***has pain made it hard for you to sleep at night****?*"
0. **No**
1. **Yes**
9. **Unable to answer**

Enter Code — **B.** Ask resident: "*Over the past 5 days,* ***have you limited your day-to-day activities because of pain****?*"
0. **No**
1. **Yes**
9. **Unable to answer**

J0600. Pain Intensity - Administer **ONLY ONE** of the following pain intensity questions (A or B)

Enter Rating — **A. Numeric Rating Scale (00-10)**
Ask resident: "*Please rate your worst pain over the last 5 days on a zero to ten scale, with zero being no pain and ten as the worst pain you can imagine.*" (Show resident 00 -10 pain scale)
Enter two-digit response. Enter 99 if unable to answer.

Enter Code — **B. Verbal Descriptor Scale**
Ask resident: "*Please rate the intensity of your worst pain over the last 5 days.*" (Show resident verbal scale)
1. **Mild**
2. **Moderate**
3. **Severe**
4. **Very severe, horrible**
9. **Unable to answer**

Section J — Health Conditions

J0700. Should the Staff Assessment for Pain be Conducted?

Enter Code
0. **No** (J0400 = 1 thru 4) → Skip to J1100, Shortness of Breath (dyspnea)
1. **Yes** (J0400 = 9) → Continue to J0800, Indicators of Pain or Possible Pain

Staff Assessment for Pain

J0800. Indicators of Pain or Possible Pain in the last 5 days

Check all that apply

- **A. Non-verbal sounds** (e.g., crying, whining, gasping, moaning, or groaning)
- **B. Vocal complaints of pain** (e.g., that hurts, ouch, stop)
- **C. Facial expressions** (e.g., grimaces, winces, wrinkled forehead, furrowed brow, clenched teeth or jaw)
- **D. Protective body movements or postures** (e.g., bracing, guarding, rubbing or massaging a body part/area, clutching or holding a body part during movement)
- **Z. None of these signs observed or documented** → If checked, skip to J1100, Shortness of Breath (dyspnea)

J0850. Frequency of Indicator of Pain or Possible Pain in the last 5 days

Enter Code — Frequency with which resident complains or shows evidence of pain or possible pain
1. **Indicators of pain** or possible pain observed **1 to 2 days**
2. **Indicators of pain** or possible pain observed **3 to 4 days**
3. **Indicators of pain** or possible pain observed **daily**

Note. This figure illustrates items MDS nurses will address with patients. Reprinted from MDS 3.0 Quality Measures USER'S MANUAL, by RTI International, 2017, Retrieved from https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/NursingHomeQualityInits/Downloads/MDS-30-QM-Users-Manual-V11-Final.pdf.

Data from the MDS 3.0 report were captured in quarters, and results were viewed each month; the results from the unit were compared against the health care system's geographical region average.

Overall, the providers used their judgement to treat and evaluate pain; they did not use any specific standing protocol. There was a disconnect with the current standard of assessing pain in the unit, which made it difficult for the clinicians to obtain an accurate assessment and consequentially, an effective treatment plan. The providers and staff nurses used a numeric rating scale and a faces pain scale card to evaluate pain; while the MDS nurses used only a numeric rating scale, which can be viewed in Figure 2. Due to the discrepancy between pain assessment tools used by the providers and MDS nurses, it was difficult to conclude if there was a true baseline value depicting the veteran's pain.

Providers and nurses were completely unaware that the MDS nurses visited the patient at various intervals throughout the month and assumed the MDS nurses evaluated for pain once in a while, as reported by the providers. Providers completed their initial pain assessment upon admission and nurses documented pain within their daily note in the electronic health record, but continued assessments and reassessments were not conducted. Providers did not complete standard documentation indicating follow up of pain for the patients on the unit or initiate a formal individualized pain treatment plan as per the VA guidelines.

MDS nurses were on their own schedule and saw patients at various times in the day without notifying the nurses or clinicians. Nurses were only required to assess for effectiveness of pain medication in the medication administration software, called Barcode Medication Administration (BCMA), when the medication was given on an as needed (PRN) basis, not when administering scheduled pain medications; meaning that scheduled medications were not being

evaluated for effectiveness. After conducting patient interviews, 57% of patients were pleased with their pain management while the other 43% felt their pain was not being addressed. Of the 43%, 25% of patients were unaware of the type of pain they had.

The results from the MDS report and needs assessment in combination with patient and staff interviews is what drove the development of this project. Lack of communication regarding patient pain needs was the root cause of the lack of appropriate pain management. Proper pain management should include adequate assessment, evaluation, and treatment of those individuals on the unit experiencing pain.

Needs Assessment

A comprehensive needs assessment was completed consisting of patient and staff interviews, data collection from the electronic health records, questionnaires, observations of interdisciplinary meetings and huddles, as well as completing The Practice Improvement Capacity Rating Scale. The Capacity Rating Scale gave insight into the unit's readiness for change by evaluating key elements required for system transformation. The Assistant Chief Nurse of Staffing, physician, and the CNL were interviewed and through this assessment, it was discovered that there was a designated person of contact to review and assure quality measures, but team leadership did not disseminate the data in a timely manner.

Communication was another fault presented in the assessment, as there was minimal effort put toward disseminating information on the unit. However, meetings were not regular, and data discussed were not reinforced with visual aids or shared amongst all frontline staff. The unit scored a 275 out of 320, a good score, indicating their capability to engage in a quality improvement intervention.

Engaging with stakeholders played an integral role in the implementation of the project. The stakeholders of this project were those people who could affect or be affected by the interventions of this project. The stakeholders include the providers, patients, staff nurses, MDS nurses, RA's, CNA's, nurse managers, and the CNL. At the time of the assessment, the provider's perspective regarding the project was positive overall and hopeful; they understood that the measurements are largely, a direct reflection of their assessment and treatment, or lack thereof. The providers' stake in the project was high and input offered was well regarded as their efforts had a direct result on patient outcomes. The patients were optimistic, insightful, and encouraged by the idea of this project. The patients' stake in this project was high as the success of this project relied heavily on their response to the intervention. The nurses' perspectives regarding the project was unassuming and willing. The nurses were unaware of the measures; yet they held a high stake in the project as they were present with the patient much longer than any other staff and had the best insight to what the patient was experiencing.

RA/CNA's were willing and gave an overall positive feedback when informed of the measures and their importance. Although they had a moderate impact in the project, their efforts are relevant as they were hands-on with the patient, assisting them through ADLs, which means they had the ability to notice if a patient was experiencing discomfort and alert the nurse. Nurse managers on the unit were open to the change process and looked forward to the implementation; the project was well-received. The nurse managers had a moderate impact on the project as they did not perform patient care. Nurse managers must hold other stakeholders accountable and enforce implementations. Lastly, the CNL had a high stake in the project and accepted the project as relevant and needed. The CNL was in direct contact with all of the staff and ensured basic policies and standards of care were being followed.

Project Identification

The purpose of this project was to improve pain management through implementation of the VA pain management guidelines and improved interdisciplinary team communication regarding patient pain needs. Nurses, providers, and ancillary staff received training on pain, management of pain, and the importance of documenting pain assessments. Outcomes of this project included:

1. A 15% reduction in the number of patients reporting moderate to severe pain
2. Improved provider and staff knowledge of pain assessment & management (with 100% staff and provider attendance to training)
3. Maintenance of 95% or greater PRN medication effectiveness documentation
4. 80% compliance with individual pain implementation initiation and reassessment
5. 80% compliance with the reassessment of pain in weekly meetings

Summary and Strength of the Evidence

Pain Protocol in a Long-Term Care Facility

Pain prevalence in the long-term care setting is often times misrepresented and unrecognized because of inadequate documentation and lack of assessments; approximately 45-80% of long-term care (LTC) residents live with constant pain (Fine et al., 2014).

Hadjistavropoulos et al. (2016) outlines that although standard pain scales have achieved success in various settings, the current research on its relevance and presence in the LTC setting is limited and does not take into consideration feasibility for the LTC facilities (Hadjistavropoulos et al., 2016). Pain and public policy experts discovered the reasons LTC facilities were insufficiently performing pain management and assessments were due to fiscal and resource constraints (Liu & Lai, 2014).

In order to create a realistic and obtainable protocol for the residents, the authors in the study accounted for staffing and finances. The first part of the protocol was to assess all residents using an appropriate pain tool on admission (within 24 hr) residents must all be assessed at least once a week (Hadjistavropoulos et al., 2016). The second part of the protocol stated that for those residents who reported moderate pain, a treatment plan will be initiated, documented, and implemented within 24 hr (Hadjistavropoulos et al., 2016). The third part of the protocol included reassessing the patient within 24 hr after any treatment plan; side effects of treatment should also be documented in this section (Hadjistavropoulos et al., 2016). Lastly, all protocol parts included were evidence-based and found in the literature. Results of the protocol were sustained and included as quality improvement initiatives to improve patient outcomes (Hadjistavropoulos et al., 2011).

This research sought guidance from the implementation study outlined by Damschroder et al. (2009), who used the Consolidated Framework for Implementation Research (CFIR), a conceptual framework, used to guide transformative implementation. CFIR model is an excellent tool that recognizes stakeholders and identifies factors that may arise in a multilevel context (Keith et al., 2017). A systematic review conducted by Kirk and colleagues (2015) analyzed over 400 articles to explore the extent to which the research implemented the CFIR and met the goals outlined by Damschroder et al. (2009). Their study yielded that the CFIR is widely accepted and used across a variety of settings, designs, and methods, leading to the conclusion that this method is highly versatile and useful for implementation in a wide range of interventions (Kirk et al., 2015).

The CFIR consist of four domains: The intervention, the inner and outer settings, the individuals, and the individuals who are involved in the implementation. The intervention is the

modifiable factor that will be applied to the population, for this study the pain protocol was the intervention (Hadjistavropoulos et al., 2016). Next, the inner and outer setting are the context which the population exists and the structural features of the organization; the study considered all settings of the two LTC facilities (Hadjistavropoulos et al., 2016). The CFIR places emphasis on the individuals involved in the implementations and states that their actions have a direct effect on the implementation. The authors ensured administrative members of the team collaborated with the staff during the implementation of the protocol and encouraged staff input through focus groups (Hadjistavropoulos et al., 2016). Lastly, the process of accomplishing the implementation must be an active process; initiatives must be championed by individuals in both inner and outer setting; the authors selected a pain champion within both facilities (Hadjistavropoulos et al., 2016).

Many research studies have shown positive effects of educating staff on pain management; however, changes in practice is not widely observed because of their inability to be maintained (Gagnon et al., 2013). The study outlines that successful changes must be enforced and reinforced by management, who must take on the responsibility of obtaining support through the proper channels, when needed. (Gagnon et al., 2013).

All stakeholders were involved in the permanent success of this protocol implementation, which is largely why the initiatives were maintained. Every member of the facility played a role in ensuring the interventions were being completed and performed (Hadjistavropoulos et al., 2016). A nurse was chosen to be the pain champion and had access to the authors at any time, which was pivotal to the overall success of the project.

The facility was encouraged to use the most common standard pain assessment tool; however, the MDS 2.0 pain assessment tool was most widely used in the implementation along

with other measures (Hadjistavropoulos et al., 2016). Interviews were conducted and focus groups were created to go over perceptions and questions staff had about pain. Workshops were conducted to train the frontline staff about best practices regarding pain assessments, in addition to assessing patients once a week, or more if the patient experienced multiple episodes of pain (Hadjistavropoulos et al., 2016). Frontline staff and providers were taught to reassess and evaluate pain and treatment within 48 hr after starting treatment. Staff were also given written handouts to reinforce the verbal education provided.

Quality indicators were assessed at baseline prior to the completion of the workshop, 9 weeks after implementation of the intervention for 2 weeks, and 9 weeks after 4 months of implementation (Hadjistavropoulos et al., 2016). Qualitative measures were recorded to gain a better perspective on the quantitative data collected and act as a guide for questions during the interviews and focus groups (Hadjistavropoulos et al., 2016).

Following the protocol, 100% of all patients were assessed for pain on admission using a standardized pain tool, 84% of patients were assessed at least once a week, which was a significant increase from 17% at baseline. One hundred percent of all residents with suspected pain with pain treatment plans were documented within 24 hr each week at all three time points. One hundred percent of residents with moderate to severe pain with an active treatment plan initiated within 24 hr were reassessed within 24 hr to determine the effectiveness of treatment and side effects (Hadjistavropoulos et al., 2016).

Results showed that pain assessments conducted regularly benefit not only the patient but the staff as well (Hadjistavropoulos et al., 2016). Providing evidence-based education through staff training was of central importance. The workshop was interactive and allowed the staff a chance to work through the protocol in a live setting and gave insight as to what the expectations

and outcomes were. In the aftermath, pain was assessed more frequently, resulting in excellent adherence to protocol (Hadjistavropoulos et al., 2016). In order to implement change, buy-in at all levels was necessary; managers, whose role was critical for success, facilitated in the continuation of the protocol after post intervention data was obtained (Gagnon et al., 2013).

Nurse Practitioner Led Pain Team

Kaasalainen et al. (2016) sought to uncover if a nurse practitioner led pain management team could improve pain outcomes for residents in a LTC facility. The full intervention (NP-led Pain Team) included two parts; the first part included educational activities with the interprofessional (IP) team centered on pain management to include evidence-based pain assessment tools and protocols and the second tier encompassed the involvement of the NP at the organizational level where policies, interventions, and procedures were discussed. During this part of the intervention, “Train-the-Trainer" sessions were completed that consisted of staff educating the NP on tools previously evaluated. Next, an IP pain management team organized monthly or bimonthly meetings. Third, a workshop was held to review current literature regarding pain. Lastly, visual aids like posters were put up at the nurses' station (Kaasalainen et al., 2016).

The partial intervention group (NP only) included the NP conducting pain management as specifically outlined by the employee contract, without the involvement of an IP pain management team (Kaasalainen et al., 2016). The control group (no NP or IP pain management team) had no nurse practitioners or pain team and went about their regular day-to-day activities; this group also had no access to a NP or pain team (Kaasalainen et al., 2016).

Before the intervention, all three groups had an average reported pain of “mild” or “low” using all the pain scales mentioned in the study. The authors found that there was decreased pain

scores during activity and at rest for the partial and full intervention groups when compared to the control (Kaasalainen et al., 2016). The authors found no significant difference in agitation or depression among all three groups. However, there were statistically significant increases in function in both the partial and full intervention groups. The study showed that the implementation of NP interventions improved clinical practice to include: the development of a care plan, modified goals tailored to the resident, the use of a pain assessment tool, use of a pain tool on admission, and the cause of pain was identified (Kaasalainen et al., 2016).

Overall pain scores in all three intervention groups decreased from moderate to mild when comparing baseline to post intervention results. However, there were more significant trends in reduction of moderate to severe pain in the full and partial intervention groups when compared to the control group (Kaasalainen et al., 2016).

VA Guidelines

The Stepped Care Model

In 2009 the Veterans Health Administration (VHA) instituted the Stepped Care Model for Pain Management (SCM-PM) to address pain in military personnel and veterans. Pain is a national priority for the VHA, and they recognize that the population they serve has a complex and unique background that affects the way their pain should be managed. The SCM-PM are health interventions that promote screening, assessment, and management of health problems in a sequential way to ensure all appropriate interventions are being used according to the patient's presentation (Rosenberger et al., 2011).

The first step of the model employs a population-based approach by bringing together the Patient Aligned Care Team (PACT). The PACT are members of the health care team such as nurses, providers, occupational/physical therapists, dieticians, and social work. The PACT model

is an invaluable approach to optimizing veterans' health outcomes by implementing an interdisciplinary model so that each veteran has the ability to collaborate with a healthcare professional and utilize a holistic approach to their care (Yano et al., 2014).

Step one focuses on addressing pain through self-management and educating the patient and family on medication treatments and adverse effects (Rosenberger et al., 2011). The second step of the model serves to address those patients whose disease process and comorbidities are beyond that of which can be treated with step one approaches. The resources in step two revolve around providing the necessary consultations for pain management, rehabilitation, pain and behavioral pain medicine clinics, as well as substance abuse and mental health programs (Rosenberger et al., 2011). The last step includes a comprehensive medical and psychologic evaluation of the veteran with pain. Step three is targeted for those with complex conditions; evidence-based research is used to create a plan that focuses on family/caregiver involvement (Rosenberger et al., 2011).

Acute Pain Management

While many of the patients in this unit are post-surgical experiencing acute pain, some of them are admitted for wound care, debility, and other disorders unrelated to a surgery. The VA published *Acute Pain Management Meeting the Challenges*, an evidence-based tool for providers to use when treating acute pain. The guide takes the clinician step by step through a Stepwise approach that addresses the various ways pain can be managed successfully. According to the tool, the first step in managing acute pain is to use a nonpharmacologic multimodal approach which may include, ice/heat, acupuncture, physical/occupational therapy, elevation, massage, rest, tai chi, yoga, stretching and many other modalities (Peter et al., 2015).

It's imperative for the clinician to understand that psychosocial factors play a direct role in the potential for acute pain to progress to chronic pain/disability. Depression, fear avoidance, and catastrophizing are the most common influential factors of an acute pain experience. The previously mentioned study by Murphy et al. (2016) outlined using a biophysical approach that included aqua therapy, recreational therapy, family interventions and educational groups in sessions to see the effect on pain, catastrophizing, and sleep. Catastrophizing was measured using the 6-item catastrophizing subscale from the revised 26-item Coping Strategies Questionnaire. The results showed an improvement in catastrophizing in both genders from admission to discharge and from discharge to follow-up (Murphy et al., 2016).

The second step includes non-pharmacologic therapies combined with non-opioid pain medications, which should only be used if non-pharmacologic pain methods were ineffective. The two types of non-opioid therapies include topical and oral medications, such as topical diclofenac and oral ibuprofen. A double-blind randomized study of patients with active osteoarthritis showed that using a 10cm ribbon of diclofenac gel four times' a day was just as effective as taking 400mg oral ibuprofen daily. The results of the study showed that pain at rest, pain on movement, morning stiffness, grip strength and quality of life all showed comparable improvements (Wadsworth et al., 2016). Topical medications should be considered only for those patients with regional pain and intact skin, while oral therapy is best for patients who cannot use topicals and have systemic pain (Wadsworth et al., 2016).

The third step is focused on managing severe pain, such as significant trauma or acute pain. The *VA/DoD Clinical Practice Guideline for the Opioid Therapy for Chronic Pain* states that opioid therapy has a role in postoperative and severe acute pain; however, that role is limited, and other pharmacologic measures should be used first (Department of Veterans Affairs,

2017). The guideline specifically recommends against prescribing long-acting opioids for acute pain, and initiation of long-term therapy; the guideline continues on to advise providers to not prescribe long-acting opioids on as needed basis (Department of Veterans Affairs, 2017).

Current literature shows that opioid therapy is only beneficial for 3 to 5 days when given following an invasive surgery or significant trauma and should only be used short term (Dowell et al., 2016). Opioids should be prescribed at the smallest dose necessary for pain relief and should only be considered if the patient does not respond to non-pharmacologic/non-opioid treatments. Opioids should be considered if the pain being experienced is known to not respond to non-pharmacologic/non-opioid treatments.

Opioids in Acute Care

The opioid crisis in America is an unfortunate consequence of over-prescribing and mistreating pain with opioids. Now, researchers and major corporations have joined forces to create clinical trials and procure data centered on understanding and creating alternative avenues for pain control. Current research outlines that opioid use is no better than non-opioid medications like ibuprofen. In a review of three randomized double-blinded clinical trials, researchers found that ibuprofen 400 mg was more effective than 5mg oxycodone in reducing pain. There was no statistically significant difference in pain reduction between taking ibuprofen alone and ibuprofen taken with oxycodone (Derry et al., 2013).

The primary concern when starting opioid therapy is its high potential for abuse. The article by Shah et al. (2017) explains the many factors that precipitate acute opioid therapy transitioning into long term opioid therapy. The authors found that starting on the 3rd consecutive day of opioid use, the likelihood of chronic opioid use increases, with the most notable increases after the 5th and 31st day every day (Shah et al., 2017). Providers must be aware of the factors

that increase one's potential for long-term opioid use including providing a second prescription or a refill, starting the patient on tramadol, initiating long-acting opioids, and prescribing opioids for long durations.

The acute pain management tool recommends tapering medication for providers who choose to initiate opioid therapy. In many cases, patients on opioid therapy can be tapered down from their current regimen without experiencing an increase in pain (Harden et al., 2015). A prospective study examined veterans in a VA medical center to see what changes would occur in morphine dosages, adjuvant pain medications, and pain over a 3, 6, and 12 month time period. In the 12-month time period, there was an overall reduction of almost 50% in prescribed opioid dosages, while the pain perception at the 3, 6, and 12 month marks were either decreased or no change in pain. Compared to baseline results, at the 12-month mark, 70% of patients saw no improvement in pain or less pain, while the remaining 30% reported more pain. Forty-seven of the 50 patients were successfully tapered without any change in opioid and with most of the patients receiving no change in adjuvant therapy (Harden et al., 2015).

This study builds on the evidence mentioned previously that non-opioid treatments are beneficial and critical in preventing long-term opioid use. Several patients on this unit were never on opioids prior to being admitted for rehabilitation, which enters them into a vulnerable category called opioid naïve. Patients who are opioid naïve are at an increased risk of chronic opioid use in the postoperative period. The article by Sun et al. (2016) states that patients who are male, over the age of 50, with a history of depression, alcohol abuse, or antidepressant use were associated with chronic opioid use (Sun et al., 2016). Although this study was not conducted in a veteran population, these risk factors apply to over 90% of U.S. veterans (Bialik, 2017).

Addressing Pain Management Using Continuing Medical Education

Fine et al. (2014) explores research conducted in various LTC facilities where residents' pain was managed using a pain toolkit and clinicians were given educational interventions. The study recruited volunteer LTC facilities and assigned pain champions to each facility that would oversee monitoring of clinicians and staff, data, charts and provide training to staff members during the three stages of the interventions (Fine et al., 2014).

Five performance measures were evaluated and included: Percentage of patients with documented pain assessment for pain using a standard tool on admission, amount of patients who were given a physical exam to assess for pain, percent of patients with documented cause of pain, documented care plan for acute or chronic pain, and lastly, patients with documentation assessing for effectiveness of pain management by a medical doctor (Fine et al., 2014).

The study included professional faculty who were experts in pain management or LTC settings; the first stage included the champions randomly selecting charts to review for pain management and submitting data through a portal. Goals for improvement were set in this stage (Fine et al., 2014). The second stage began with expert faculty reviewing charts to decide which measurements needed improvement. Next, a live 3-hr workshop was designed specifically for each LTC facility and administered by the champion. The first measure consisted of providing education to staff on pain history and symptoms, diagnostic testing to evaluate pain, and standardized pain scales (Fine et al., 2014). First line medications and non-pharmacologic therapy, like physical therapy was to be documented in the care plan (fourth measure). In the fifth measure, providers documented what actions were taken if the assessment showed unsatisfactory pain reduction; for example, if the medication dose was increased, second-line medications were added or other nonpharmacologic measures were taken. If the pain reduction

was satisfactory, documentation was still required to state whether medication/nonpharmacologic treatment was reduced, and when the next re-evaluation would be scheduled.

The third stage was built in for the providers to reflect on the impact from pre-intervention at baseline. The authors allowed 6 to 8 weeks for the action to take effect; goals were reset if needed (Fine et al., 2014). The overall goal of the study was to determine the impact interventions in stage 2 had on the five criteria that were being measured. The study showed an increase from 93.1% to 95.4% in documented assessment for pain using a standardized tool, and that physical exams to assess for causes of pain decreased from 94.9% to 90.1%. Documented causes of pain increased from 97.5% to 98%, documented care plans for acute or chronic pain increased from 85.6% to 92.8%, and lastly documented assessment of effectiveness of pain management by a provider increased from 11% in stage 1 to 14.4% in stage 3 (Fine et al., 2014). Although there was improvement from baseline, the intervention outcomes were not statistically significant.

Overall, the research addressing successful implementation of a pain management protocol is promising. The literature guided the project in choosing a widely researched and accepted implementation framework set forth by the CDC and VA guidelines, proven evidence-based educational training, beneficial staff communication techniques, and proven documentation criteria to hold staff accountable. These interventions aided in producing a sustainable and successful project focused on improving patient outcomes.

Measurement Methods

As mentioned previously, the measurement methods utilized for this project included CPRS, MDS, and BCMA. Health care providers within the medical facility use CPRS. This client–server interface is used to update the patient's medical records into the electronic health

care system. In 2016, Medscape conducted a report with data collected from over 15,000 physicians across 25 different specialties (Peckham, Kane & Rosensteel, 2016). Participants were asked to rate multiple EHRs, on a scale of 1 (poor) to 5 (excellent), on a variety of different criteria including ease of use, connectivity, usefulness and vendor support. EHR's used in small practices and hospitals were also included. For the year 2014 and 2016, CPRS received the overall top rating with a score of 3.9 and 3.7 respectively. It's important to note that although the CPRS platform is used by the project's healthcare system, the system is available to the public, although few private organizations have taken advantage of it (Peckham, Kane & Rosensteel, 2016).

CPRS outscored all other EHRs in connectivity and usefulness, while placing in the top three for ease of use and satisfaction (Peckham, Kane & Rosensteel, 2016). The Medscape report is referenced in various scholarly articles and journals concerning EHR's and is, in many ways used as a standard when comparing EHR's. The wide acceptance and use of this platform along with its documented success in the healthcare field solidify the reliability and validity of this system to be used as a method to collect measurements for this project.

As explained earlier, MDS is an assessment tool used in a variety of long-term care and non-critical hospital areas. This tool captures data on patients' comorbidities, psychological and psychosocial functioning. Treatments like hospice care, chemotherapy, oxygen therapy, dialysis and other therapies are also received. The Center for Medicaid and Medicare Services uses MDS quality measures to ensure implementation of standard assessments (Centers for Medicare & Medicaid Services, 2012). This federally mandated process is recognized and used in major health care organizations who collect the data and report it to the national database.

The results obtained by MDS are used as benchmarks for each participating organization to use and compare their measurements. As a federal agency within the U.S. Department of Health and Human Services, CMS, revises and puts forth standards required for MDS measurements (Centers for Medicare & Medicaid Services, 2012). The validity of this measurement tool is documented within the latest 2019 revision, where it explicitly states "The goals of the MDS 3.0 revisions are to introduce advances in assessment measures, increase the clinical relevance of items, and improve the accuracy and validity of the tool" (Centers for Medicare & Medicaid Services, p 1-11, n.d.). The reliability of this tool is heavily present among every quality measurement. The nurse performing the assessment is to ensure that reliability is maintained through active listening, accurate reporting, and meaningful engagements with the patient. For example, the revision states that to ensure the highest reliability for pain, self-reported measures must be obtained from the patient (Centers for Medicare & Medicaid Services, n.d.).This tool is not only reliable and valid, but extremely useful and relevant in the overall evaluation of the patient and the care they are receiving.

A study conducted by Johns Hopkins patient safety experts in May of 2016 found that over 250,000 deaths were related to medication errors annually (Makary & Daniel, 2016), which heavily surpasses the previously reported values of the CDC. BCMA attempts to fill the gaps leading up to medication errors by helping users comply with the five rights of medication administration (right patient, right dose, right route, right time, and right medication). Adoption of BCMA into medical facilities outside the VA has been slow. However, its slow adoption has no bearing on its reliability and validity. Agency for Healthcare Research and Quality (AHRQ) has provided funding to facilitate the advancement of implementing BCMA into more medical facilities.

The literature surrounding the usefulness, reliability, and validity of BCMA is encouraging. Research conducted by Staggers et al. (2015) found that BCMA reduced the rate of adverse drug events, eliminated transcription errors, and decreased non-timing errors. A systematic review sought out to find the relationship between BCMA and patient safety; the review found 37 articles that met criteria from a pool of 430. Results of the review showed that there was an overall decrease in timing of administration errors, complete elimination of transcription errors, and an overall decrease in all types of medication errors (Shah et al., 2016). Overall, the use of BCMA and its success is well documented and was a dependable tool to resource during the project.

Methods

To better understand the unit, a microsystem assessment was performed to include the overall layout and function of the unit, demographic information, current processes, and quality measures required of the unit. Introductions were performed between the student and staff, and the student and patients on the unit. During these interactions, input was welcomed from both patients and staff as to what their thoughts and concerns were about the unit. Interviews of the stakeholders were conducted to grasp a sense of the culture, concerns, and flow of the unit. Once all the data were collected, the quality improvement project was decided. After performing a root cause analysis, it was decided that the project would focus on improving pain management through improved team communication.

Setting and Population

The setting of the intervention took place in an inpatient long-term care unit housed within an acute care facility. The population included four providers, nineteen nurses, two nurse

managers, two MDS nurses, and the residents admitted on the unit between March and June of 2020.

Major Steps of the Project Intervention

After completing the needs assessment, it was evident that the lack of communication largely contributed to the providers' misunderstanding about the role of the MDS nurses and the assessment criteria for pain management. Also, of note was the lack of a standardized pain management protocol for the unit. These discoveries made the doctor of nursing practice (DNP) student realize that roles needed to be properly reintroduced and a new protocol developed. Staff training would be the highest priority to establish a clear baseline of organizational and ethical responsibilities to the patient. The training needed to clarify why pain management is important, how best to do it in this setting, and how its measure translates to improved patient outcomes and measures for the unit.

Through interviews and the needs assessment it was found that providers were not adequately reassessing the patient's pain, as evidenced by a lack of documentation, verbal confession, and patient statements. Because of their lack of reassessment, a pain template was created to hold the provider accountable and encourage them to assess, treat, and reassess the patient's pain. Implementing meetings accounted for a significant portion of the intervention and for it to be effective, they had to be meaningful and relevant.

The first phase of the intervention plan was to develop the template and work with the informatics and electronic health record technicians to have it placed into the computer system for easy access for providers. The next step included obtaining approval from the organization through the education department. Next, changes in the communication patterns within the unit were added to improve communication and pain management by adding the topic to various

interdisciplinary team meetings/huddles. Lastly, the DNP student organized and created educational training sessions to formally introduce the initiative and provide the staff with information about the project and interventions.

Project and Pain Management Aid Materials

Educational materials included a badge that was placed on the staff's ID badge/lanyard, with MDS pain assessment criteria to remind the staff of the measures being assessed by the MDS nurses. (See figure 3). Magnets were created and placed in the patient's room on their white board to remind them to interact with staff if their pain is not being managed or if they have any concerns/questions about their pain management (Figure 4). Brochures were created and placed in every patient's admission chart with pertinent information regarding common misperceptions about pain on the unit and how pain is managed on the unit (Figure 5). All educational materials had to be approved by the organization and the unit. Patient educational materials had to follow a fairly easy to standard scale using the Flesch reading ease scale.

Figure 3

ID Badge Given to Staff with MDS Criteria

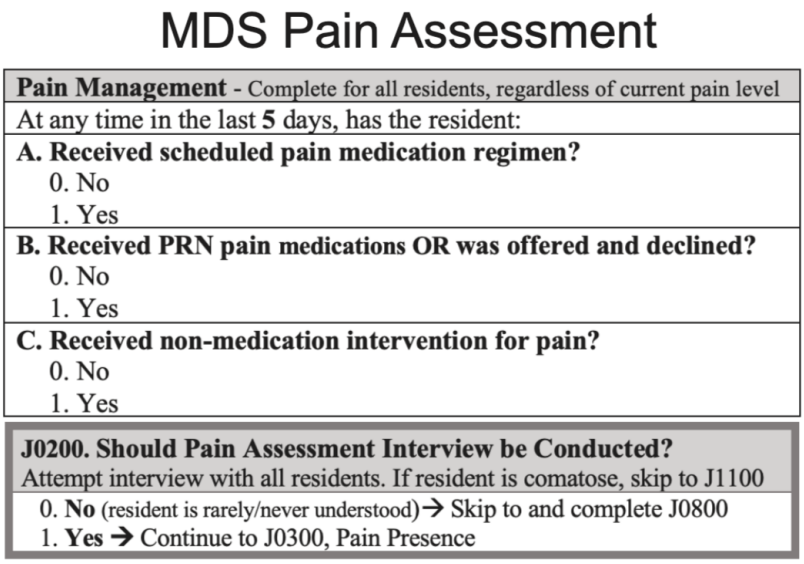


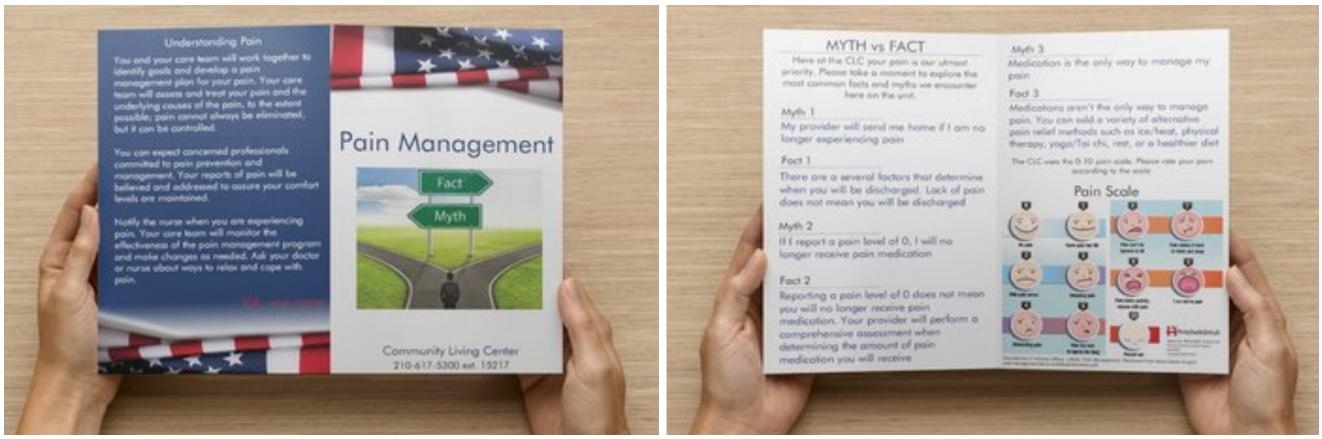
Figure 4

Pain Management Magnet Placed in Patients' Room

Note. Magnet placed in the patients' room on their white board, to help remind the patient about pain

Figure 5

Pain Management Brochures Given to the Residents



Note. Brochure that was given to patients upon admission (and request) with common misconceptions about pain and information as to how pain is managed on the unit.

Pain Management Template

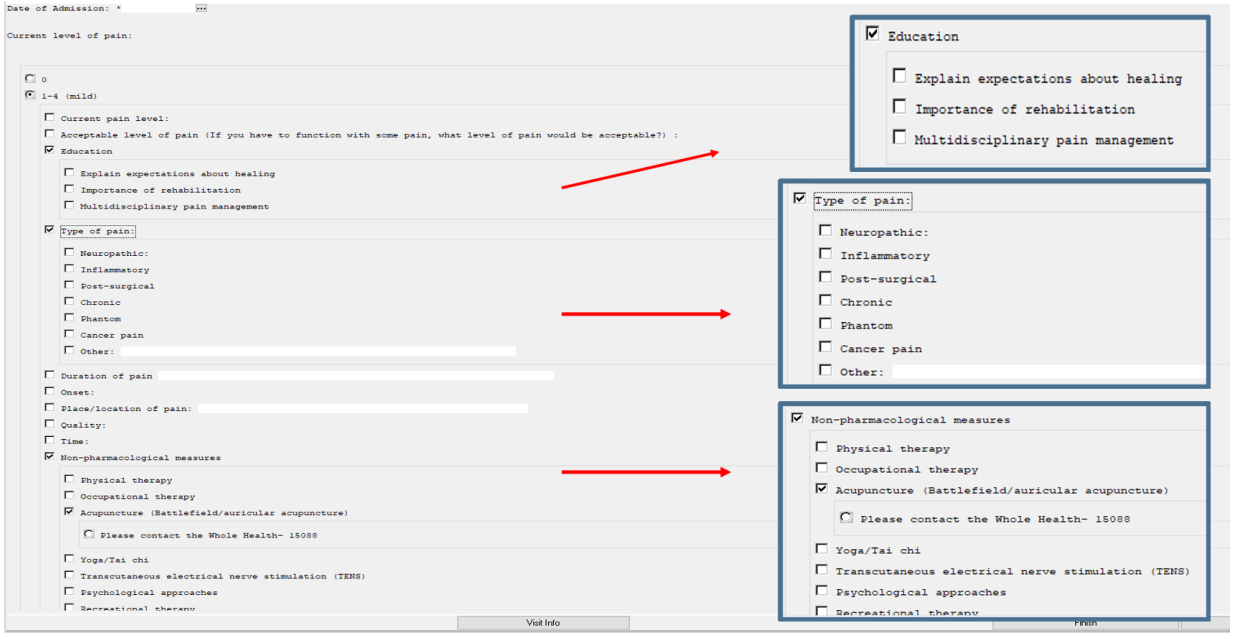
Similar to what was discussed in the literature, the pain management template was a tool that providers used to assess, treat, and manage the patient's pain. This template, similar to an algorithm was accessible through the EHR and consisted of a three-part protocol. The first part

of the protocol was: all patients coming onto the unit will have a pain treatment plan initiated by the provider within 48 hr of admission. The second part of the protocol continues on to say that: for those residents who reported moderate pain (equal to 4 out of 10) or higher, a treatment plan will be initiated, documented, and implemented within 24 hr by the provider. The third part of the protocol included the providers reassessing the patient for effectiveness within 5 to 7 days after any pain intervention.

The pain template shown in figure 6 shows the layout of the template, which begins by entering the date the patient was admitted and the patient's current level of pain; the pain template was initiated within 48 hr of admission. If the provider entered "0" indicating the patient was not in pain, an item with a check box next to it presented itself with a statement to reassess the patient between 5 and 7 days. At this point in time the template was completed, and the provider was able to sign the note, which concluded the pain template. If the patient reported a pain level of 1 to 4, the template prompted the provider to document the current and acceptable pain level, educate the patient, describe the type and duration of the pain, choose an onset time for the pain and then choose non-pharmacological measures to be performed. If treatment was initiated, the provider would reassess for effectiveness of treatment within 5 to 7 days.

Figure 6

Provider pain management template

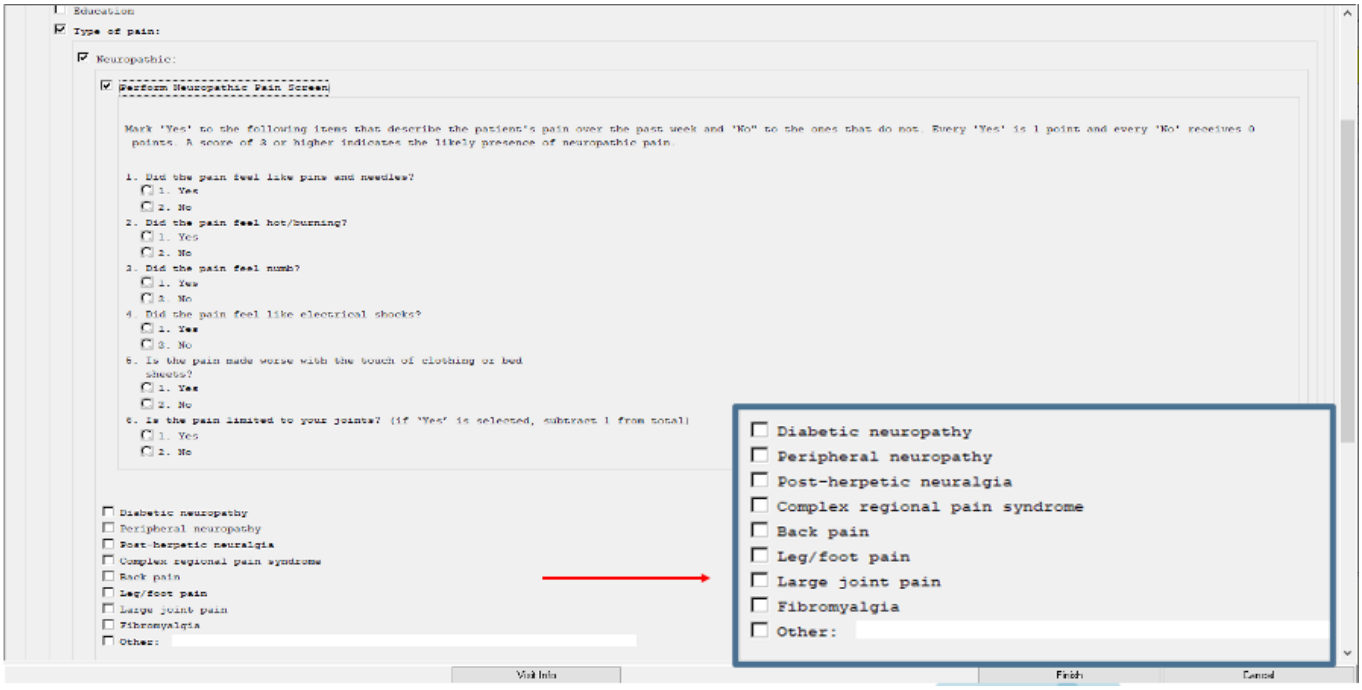


Note: Provider pain template initiated for every patient within 48 hr of admission, if necessary, treatment will be initiated within 24 hr. Treatment effectiveness will be reassessed within 5 to 7 days.

Because most of the patients had some sort of neuropathic pain, or so they thought, a neuropathic pain screen was embedded into the template so that the provider could assess for true neuropathic pain as seen in Figure 7. If the total score was 3 or greater the patient had true neuropathic pain. Additionally, under the neuropathic selection other common types of neuro-based pain such as diabetic neuropathy or fibromyalgia was included to better assist the provider in choosing the most appropriate treatment for that specific type of pain.

Figure 7

Neuropathic Pain Screen in Template

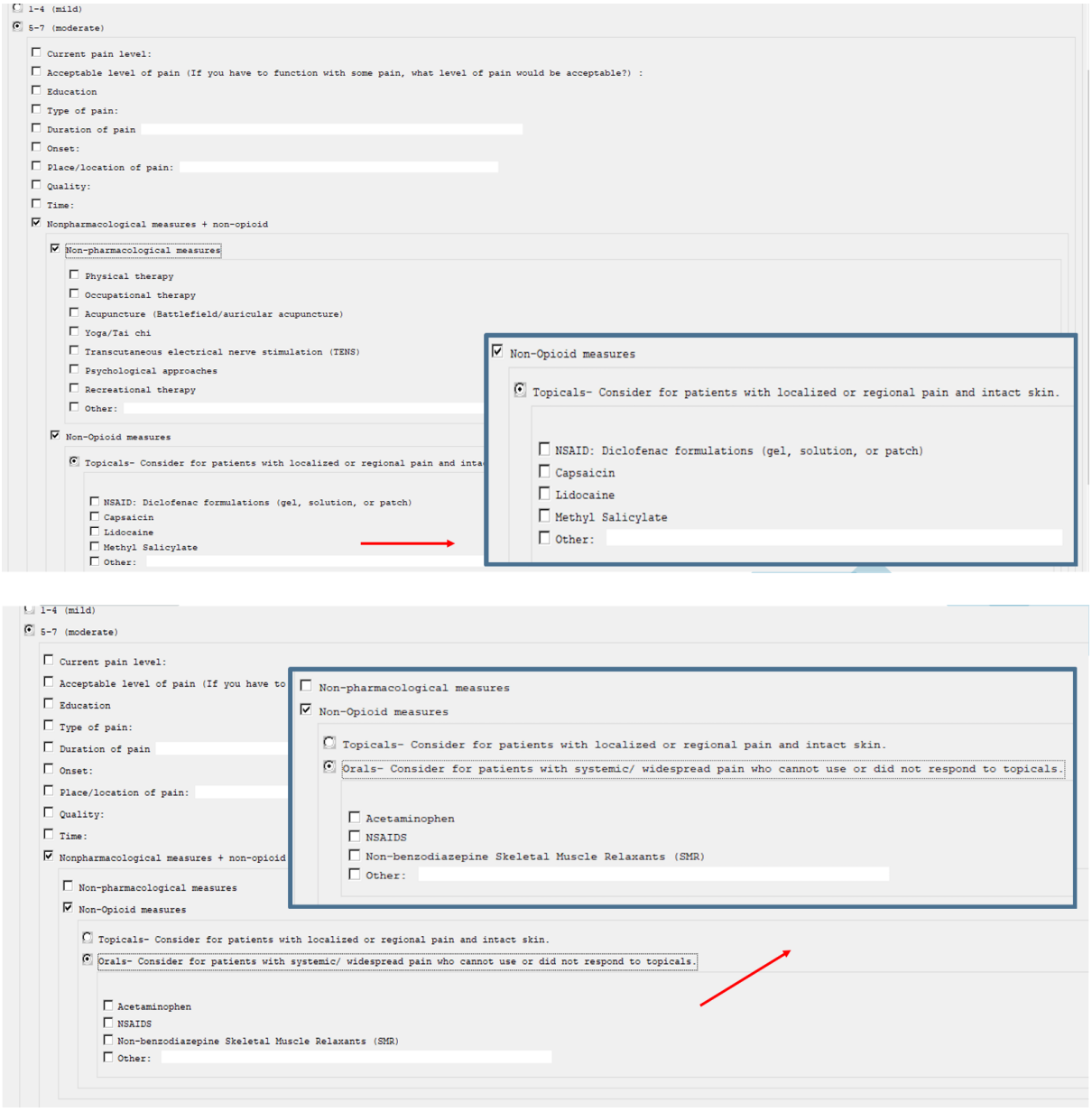


Note: *Neuropathic pain screen within pain management template*

The next part of the template was for those patients experiencing a pain level between 5 and 7. For these patients, nonpharmacological measures and a non-opioid therapy was considered, based on the patient's diagnosis and reason for admission. The provider had the option to choose a non-opioid medication. Figure 8 depicts the non-opioid pharmacological options.

Figure 8

Non-opioid Measures: Topicals and Orals



Note: Non-opioid measures for pain.

The last part of the pain template was for those patients experiencing severe pain between 8 and 10. Similar to the other pain measures, the provider will once again provide education to the patient and include the type and duration of the patient's pain. Next, a box saying "opioid therapy will be initiated" can be selected, a prompt directed at the provider questioning whether

nonpharmacological and non-opioid measures have been trialed will appear. If yes was selected, the provider was able to proceed and select the appropriate opioid therapy. Prior to the selection a box appeared for the provider to select that opioid therapy should be provided for no more than 3 to 5 days; extending to 7 days only if the condition will take longer to improve.

If the provider selects no, that both nonpharmacological and nonopioid measures have not been trialed, then two drop down boxes appeared where the provider can proceed to choose the appropriate treatment options and then reassess the patient between 5 and 7 days. The template will conclude with an area for the provider to enter any comments as deemed necessary. Figure 9 shows pharmacological opioid measure for pain.

Figure 9

Opioid Measures for Pain Management

Note: Opioid measures for pain.

All patients who received treatment for pain were reassessed for effectiveness 5 to 7 days along with the documentation of any side effects. For example, if the measures performed were

ineffective and the patient was still experiencing pain (whether it's before the 5 days or not) the provider was able to open the template to view what measures were performed.

Staff and Provider Education

The training was broken up into two classes, because of the distinct difference between providers and staff who provided patient care. Though training objectives coincided briefly at times, the overall key messages contrasted. The overall message in the provider training was that the management, evaluation, and treatment of pain was the responsibility of the provider. During the nurse and staff training, the message was that providers and patients rely on accurate, just, and thorough assessments so that their pain could be properly addressed and treated. It is the nurse's responsibility and duty to document and notify the provider appropriately so that each patient would receive the care they deserve.

A pre and post-test was created to assess the knowledge of the staff; testable items were gathered from the training session. A sign in sheet was obtained from the organization that included all the names of staff who attended the meeting; staff printed and signed their names signifying their attendance. The training consisted of two separate classes. One class focused on providers and the MDS nurses, while the other included staff nurses, CNAs, and RA's.

On the day of training, the sign in sheet was placed on the front table in the conference room and staff was instructed to sign in and pick up a pre-test as they entered the room; light refreshments were provided. The education session and formal introduction of the improvement project were presented to providers and MDS nurses in the conference room located on the unit.

The pain management template was introduced and explained to the providers and MDS nurses. The meeting between the MDS nurses and providers included pertinent information regarding new discoveries and information to be shared to the provider. Information in the

training session was delivered via PowerPoint, with training materials gathered from the VA pain management guidelines. Once training concluded, the DNP student answered all questions/concerns and administered a post-test to assess the comprehension of materials covered. Supplemental materials were introduced, handed out (badge cards) and placed on the unit (brochures, patient visual aids).

Next, a similar training was held for the staff nurses, CNA's, RA's, and nurse managers in the recreation room. A sign in sheet was placed on the front table in the recreation room and staff was instructed to sign in and pick up a pre-test as they enter the room; light refreshments were provided. Information was delivered via PowerPoint with training materials gathered from VA/MDS pain management guidelines. Information on documentation requirements and importance of accurate assessments was discussed. Current evidence-based information on the definition and types of pain according to MDS was presented. Information from the VA guidelines regarding pain was presented in combination with the DNP students' recommendations. The presentation included the importance of documenting and discussed when the staff should report pain to the providers. Once training was concluded, the student answered all questions/concerns and administered a post-test to assess the comprehension of material covered. Supplemental materials were introduced, explained, and disseminated.

Following the training, visual pain management aids were placed in every patient's room and the DNP student gave a brief explanation of what the educational materials were to the patient and informed the nurses to explain to the patient what the materials represented if the patient was not present in their room. Brochures were placed at the nurse's station and inside the patient chart, while the cards were added to the staff's ID badge.

Improving Communication

Communication was a significant factor in the lack of adequate pain control on this unit. To mitigate its occurrence, an intervention was set in place requiring all staff performing patient care to discuss pain management. The nurses and providers already performed a huddle every day at 2:30 p.m., but pain was not discussed purposefully. Pain became a consistent topic of discussion for each patient, the same way bowel movements and falls were mentioned. Interdisciplinary team meetings were held every Thursday at 9:00 a.m., patient concerns and progress were discussed at this time; pain was included as a topic of discussion for every patient. To improve sustainability, a pain champion was identified; a provider was chosen to ensure pain was a topic during each of the weekly meetings.

Pain management and PRN effectiveness were discussed twice a day, during the daily safety huddle meetings hosted by the nurse managers. During the huddles, managers asked the staff "how was everyone's patients' pain today?" and "was there any new pain episodes?" Those nurses who reported a new pain experienced by the patient or pain that was uncontrolled were instructed to notify the provider verbally or through adding them as an additional author on the documentation note.

Planned Outcomes

Following execution of the intervention, this project includes the following outcomes:

- Outcome 1: A 15% reduction in the number of patients reporting moderate to severe pain on the MDS report
- Outcome 2: Improved provider/staff knowledge of pain assessment & management (100% staff and provider attendance to training)
- Outcome 3: Maintenance of 95% or greater PRN effectiveness documentation

- Outcome 4: 80% compliance with individual pain management template initiation and reassessment
- Outcome 5: 80% compliance with reassessment of pain in weekly meeting

Evaluation Plan

The new pain management template for providers included all potential nonpharmacological and pharmacologic measures specific to the needs of the patient. Successful completion of provider documentation was evaluated by the percent of completed pain templates initiated within 48 hr of admission, initiating a treatment plan, and reassessment of the patients' pain. Data were retrieved using the Computerized Patient Record System (CPRS). MDS reports on the percent of patients who reported moderate to severe pain MDS were collected from the MDS nurses. BCMA was used to find the percent of PRN effectiveness being cleared (assessed) for each patient and the medication history for each patient. Additional staff meetings and education sessions were held as needed. Nurse managers were informed of all the above interventions and were held responsible for ensuring nurses and providers are completing documentation as required.

Outcome 1 was measured using data provided by the MDS nurses and collected by the student during the 1st week of each month (January, February, March, April, May, and June), until the end of the intervention. The percentage was documented and recorded over the course of 5 months and the results were evaluated with a goal to see a 15% reduction in the overall average percentage of patients reporting moderate to severe pain. About 30 min were needed to sit down with the MDS nurse and go over the results for the previous month.

Outcome 2 was evaluated using a pre and post-test during the educational training session. Prior to the educational training a pre-test was given regarding pain and the current VA

and evidence-based guidelines. Once the training was concluded, a post test was administered to assess the comprehension of the materials that were covered in the training; staff was given 5 minutes to answer 10 questions; a sign in sheet was used to verify attendance.

Outcome 3 was evaluated during the 1st week of every month, with a goal of maintaining 95% or greater of nurses assessing medication effectiveness. About 30 minutes was needed to back-date the medication administration data and view which patients' pain was not evaluated for effectiveness. The total number of patients were recorded, and the percentage was calculated by dividing the number of patients who were not assessed by the total number of patients on the unit for that time period then multiplying the total by 100. Time was allotted to notify the nurse responsible for clearing the effectiveness. Data on which patients triggered for moderate to severe pain were collected monthly (January, February, March, April, May), until the end of the intervention.

Outcome 4 hoped to see providers complying with initiating the pain management template and reassessing the patient. Next, for each patient on a pain medication and reporting moderate pain (greater than 5 out of 10) a pain management template was initiated, documented, and implemented within 48 hr of the initial assessment/admission. The patient was reassessed within 5 to 7 days after any treatment initiation; side effects of treatment was documented, in addition to provider goals and comments. The goal of this outcome is to see 80% compliance implementation and reassessment using the pain management template. Outcomes were evaluated by first logging into BCMA to see which patients are currently on pain medications and reporting moderate pain or greater. The number of patients who have a documented pain template were divided by the total amount of patients on pain medications. These data were

collected weekly and averages were tallied monthly (February, March, April, May, June) until the end of the intervention.

Lastly, outcome 5 hoped to see an 80% compliance with reassessment of pain in the weekly interdisciplinary team meetings. A patient roster was used to go over every patient that had a pain of greater than or equal to 5 out of 10 in the last 5 days so that the provider had a chance to intervene; this was done every week.

Organizational Barriers

This project sought to achieve a change in culture to increase accountability and responsibility from both the providers and the nurses. The project required changes to documentation and report for the nurses; so, there is some increased burden on them even if it's minimal and without their buy-in this will not work. During the project two of the lead providers left, which caused delays in initiation. Reeducation of the new providers occurred, and time was allowed for the new providers to acclimate to their new role. During this time the two previous providers increased their workload leading to increased stress on the unit. Once the project started and data were underway, tracking the completed/incomplete templates became cumbersome and time consuming; the student realized without physical intervention there was no true accountability present to cue the providers to initiate the pain template in a timely manner and reassess the patient for treatment. The clinical application coordinator assisted in creating a reminder within the history and physical note, so that the providers would not forget to initiate the pain management note.

Because this organization is an entity of the federal government, there were strict guidelines on what interactions took place between the DNP student and the staff/patient. Those stipulations forbid the DNP student to hand any survey to the staff or patient directly, which

meant the student had to interact with each person of interest individually and record their responses. Other barriers included using the proper verbiage; the word “survey” was not allowed to be used, rather, the word “questionnaire” was the correct substitution.

The inability of the nursing staff to comply with the regular documentation of pain assessments was a barrier early in the project. The entire project was susceptible to false reports of pain by the veterans. Through interviews the students found out that patients at times reported false pain levels in fear of being discharged early or not receiving pain medications. Most of the fears surrounding discharge were due to living arrangements and the comfortability that came with the ample assistance provided while on the unit; providers and MDS nurses estimate this occurrence to be about 20% of the time. Patients also believed that if low pain ratings were provided to staff, they would no longer receive pain medications; providers estimate this occurrence to occur in about 25% of the patients. As mentioned before, pain is subjective and regardless of what the MDS nurse, staff nurse, or provider may think the patient is experiencing, the patients self-reported measurements must be documented accordingly. This barrier means that there is no way to know the number of patients who are untruthful about their pain. Lastly, this project hopes to impact patient pain management, staff attitude, and toxic behaviors. Obtaining buy-in from all stakeholders was a challenge. The climate and attitude on the unit influences the likelihood of the project being sustained, because the problem stems from a lack of communication, the relationships and interactions on the unit must be conducive to an environment focused on improving patient pain outcomes.

Organizational Facilitators

Though unforeseen barriers were unfortunate, there were facilitators which led to the success of this project. This project was a priority for both providers and administration because

it's tied to regulation with MDS benchmarks; it was also a low-cost intervention. The IT department easily incorporated the necessary changes to the EHR. Nursing staff were interested and supportive, and it didn't add lot to their burden. Lastly, both providers and nurses were willing to serve as champions on the project.

Other than the few barriers mentioned above, the organization was welcoming and forthcoming with all data and insight needed for the implementation of the project. The clinical nurse leader and MDS nurse were exceptional facilitators and played an integral role in the creation and direction of this project. Any supplemental materials given to the staff, patients, and unit had to be approved by the CNL prior to dissemination.

Ethical Considerations

Prior to project implementation approvals were obtained from both the university and the organization where the intervention is taking place. The first step in obtaining approval from the university was submitting a questionnaire with specifics about the direction and purpose of the quality improvement project. After submission, non-regulated research approval was granted stating that the project was not research and could begin as planned.

Similar to the university's requirement, the medical center had its own approval process, which required forms to be filled out with information about the title and purpose of the project. The medical center also wanted information regarding the university's faculty contact as well as the employee contact (mentor) for the project. Once submitted, the head of nursing education reviewed all submitted documentation and submitted the required forms to the nursing education department head, who gave verbal and signed approval of the student performing the project on the unit.

Protecting the confidentiality of every patient was a priority of this project; information on patient diagnosis, living situation, current medication and many more private/personal data were used in the development of this project. Respecting the dignity of all the patients were prioritized, and no patient identifiers were included in this project. All patient identifiers were never stored on the student or any electronic device. Any paperwork with patient or organization identifiers was properly disposed of in a HIPAA bin located on the unit.

Confidentiality of the organization was another ethical consideration addressed. Staff names and organizational identifiers were omitted to protect the integrity of all those included in the project. This project also ensured that all information collected was relevant to the project and used purposefully.

Results

Demographic Data and Graphs

The average age of participants included in the project was 69 years old, and most of the patients were males at 91%. The most common diagnoses were osteomyelitis, gastrointestinal and respiratory conditions. The average length of stay was 19 days; because this unit is considered an acute care rehab unit, the census varied between 11 and 19 patients at any given time.

Outcomes

- Outcome 1: A 15% reduction in the number of patients reporting moderate to severe pain on the MDS report. This outcome was not met, the project saw a 6.8% decrease in the reporting of pain.

- Outcome 2: Improved provider/staff knowledge of pain assessment & management (100% staff and provider attendance to training). This outcome was met with 100% as the result.
- Outcome 3: Maintenance of 95% or greater PRN effectiveness documentation; this outcome was met with 99.94%.
- Outcome 4: 80% compliance with individual pain management template initiation and reassessment; this outcome was met with an average of 81% compliance and 100% compliance consistently after week 8.
- Outcome 5: 80% compliance with reassessment of pain in weekly meeting; this outcome was met with 100% compliance.

Discussion

Educational Training

The educational training was a great opportunity to see how the staff interacted with each other. The training gave the student a chance to view the reactions of the staff toward new information. The observations would be key in developing the interventions tailored to the natural flow of their personalities and professional relationships with one another. The open environment of the training allowed the student to experience the organic rationales and thoughts offered by the staff when presented with current statistics and facts about pain.

The providers acknowledged that prior to the interventions, the VA guidelines were not the primary guideline/evidence used for pain management. During the training the student found out that the reason providers were not using the VA guidelines was simply that they were unaware of its existence. The providers on the unit were unaware of the VA guidelines for acute pain or any documents put forth by the VA to manage acute pain. The providers shared openly

that although they were unaware of the guidelines, they trusted their judgement and many years of expertise to lead them in the assessment and management of the patient's pain.

Nursing Staff

The nursing staff on the unit were more than willing to contribute and participate in the project. When areas in need of improvement, such as medication effectiveness documentation, were brought to their attention, they kindly acknowledged them and corrected the issue in a timely manner. The nurses on the floor seamlessly introduced the educational materials (brochure and magnet) during admission and upon request to the patients liking. The introduction of pain management education upon admission facilitated the success of the project. Soon after the patient went over the pain management brochure, the provider initiated and completed the pain assessment. The patients educating themselves on common myths and facts through the brochure set the stage for the provider to discuss pain with the patient. The patients' newly acquired education about pain prior to the provider pain assessment led to a more stimulating and beneficial provider and patient interaction. The patients were able to reference the brochure during the assessment, feel less intimidated by the providers' presence, and feel a sense of involvement and motivation about the pain management process. The nurse's role in ensuring the patients received and comprehended the education played a key role in the outcomes of this project.

The Providers

The providers' response to the interventions were positive and they felt an overall sense of accountability, organization, and stability due to the interventions. The providers' overall attitude and initiation of the interventions were nothing short of amazing. The providers took it upon themselves to create ongoing dialogue between the interdisciplinary team and the patient.

The pain template discussion during the weekly team meetings added to the credibility and success of the outcomes. The providers took it upon themselves to divide the patients among themselves and decide who was responsible for completing which template. The providers ensured that each patient was being followed up appropriately and accurately.

The prescribing patterns of the providers took a noticeable change without any outside interventions performed by the student. There was an overall decrease in opioid prescribing and an increase in topical analgesic prescribing. Prior to the initiation of the project interventions, 15% of patients were on topical analgesic medications and 50% were on some sort of an opioid medication. After the completed interventions, 36% of patients were on topical analgesic medications and 32% of patients were on an opioid. These numbers represent the providers' adherence to the initiation of the pain template and appropriate application of the information provided in the template. The continued use of the non-opioid analgesics and non-pharmacological measures through each week indicate that the interventions were effective.

MDS Nurses

The MDS nurses, case managers, social workers and therapists found the information provided by the template invaluable and extremely helpful to the overall picture of the patient. The MDS nurses took the lead during the weekly team meetings and used the pain template as a compass in directing and following up on patient outcomes. The MDS nurses found the patients to be much more involved in the dialogue surrounding their pain when conducting the interviews, which would later be uploaded to the MDS report. Information provided in the pain template was copied and used in the MDS nursing notes and shared with the interdisciplinary team.

Case Managers and Social Workers

Case managers and social workers utilized the pain template and acknowledged that pain management was a top priority when it came to patient discharge and placement. The template allowed them to gain a better understanding of what type of pain the patient was experiencing without having to go directly to the provider or nurse for information. The case managers and social workers shared that information previously obtained from the providers and nurses was not as comprehensive as the current template encouraged. The information provided by the template allowed the case managers and social workers to be more efficient, timely, and confident in their plans and goals for the patient.

Therapists

Therapists involved in patient care were an essential piece to the overall success of the patient during their time on the unit. Occupational and physical therapists were able to read the pain notes prior to their initial assessment, to gain a better understanding of the patient. The pain reassessment templates allowed the therapists to read follow-ups and notes documented by the providers. Because the providers have rotating schedules, the therapists found it extremely helpful to have a continued dialogue even in the absence of the providers.

Nurses, Residential Aids, and Certified Nurses Assistants

The nurses, RA's, CNA's and other staff provided an abundance of insight and information valuable to the template and the needs assessment. Communication with the providers went better than planned; the providers were open to criticism, change, and doing whatever was necessary to ensure the success of the project. The providers were present at impromptu meetings, responded to messages, and communicated concerns and input in a timely manner.

Healthcare Informatics Team

The informatics department played an integral role in the completion of the template. The ease of access to the clinical application coordinator and the entire health informatics team was seamless. Any edits or questions were answered in a timely manner; the health informatics team and the student were able to collaborate and come up with a personalized template that fit the unit and patients' needs. The adaptability, kindness, and supportive nature of the staff on the unit brought life to the project and allowed an organic process to take place.

Project Barriers, Facilitators, and Sustainability

Days before the project was set to start, two of the lead providers unexpectedly quit. The start time of the project was delayed due to reeducation, reassigning of duties, and lack of adequate providers to complete the notes.

In the initial phase of the project, the student oversaw and printed out weekly reports for the providers that showed which patients did not have pain notes documented or which ones needed to be reassessed. Health informatics was contacted, and the student collaborated on multiple occasions with the clinical application coordinator and the providers to come up with a way to remind the providers to complete the initial pain template through the electronic health record system. The reminder needed to be practical and not cumbersome to the providers. Eventually a solution was agreed upon and the pain management note ended up being integrated into the History and Physical (H&P) note, which is the note every provider must complete and have on record for each patient within the EHR system.

Within 4 weeks of the two providers leaving, a nurse practitioner and physician were brought in to replace the workload left by the previous providers. Education was given to both providers and comprehension was reassessed using the pre/posttest assessments. Sustainability

was not affected by the departure of the two providers, nor the realization that the providers were too dependent upon the student for reminders about the pain template. Because the unit must comply by the standards put forth by the MDS, this project is extremely likely to be sustained. The nursing staff and providers want to exceed their standards and provide exceptional care to the veterans. Ultimately, the providers were held accountable, so they took it seriously.

Further Discussion

Outcome 1: A 15% Reduction in the Number of Patients Reporting Moderate to Severe Pain

Conducting patient interviews and sitting in on admissions shed light on how the patients were responding to the pain template and the interventions that came from the project. The results of the template intervention were successful largely in part because the providers went back to communicate and reassess the patient's pain. The gap between the time of the initial admission and the MDS nurses coming in to ask about pain was filled with the mandatory pain management reassessment 5 to 7 days following the initiation of a treatment plan. Involving the providers during every step was extremely beneficial to the project. The transparent and open platform of the project allowed for input from every provider to be considered, which in turn gave them a sense of pride and accomplishment.

Outcome 2: Improved Provider/Staff Knowledge of Pain Assessment

Every staff member involved in the project was present for the educational training. Although everyone was in attendance, it would had been beneficial to break up the large amount of people into smaller groups to allow more time for questions and discussion. The large audience format was convenient, but after the presentation several staff members still had questions/comments they were uncomfortable disclosing in the open format. Smaller groups

would have provided the intimacy and comfortability needed to fully address all the discussion brought on by the training session.

Outcome 3: Maintenance of 95% or Greater PRN Effectiveness Documentation

The unit was already doing a good job of completing the medication effectiveness documentation, performed by the nurses. There were only a few times that outside intervention was needed to remind the nurse to go back into the electronic system and reassess the effectiveness for the pain medication given. This outcome was successful because there was an increase in accountability. The nurses printed off the report at the end of each shift that showed which patients were not reassessed with a numeric rating scale after a pain medication was given. If there was a patient who showed up on the printed report sheet, the nurse responsible for that patient had to initial their name on the sheet and be sure to evaluate the patient before the end of the shift. That paper was then filed into the administrative binder to keep account for which staff member was not meeting the project standard. This requirement was not punitive, and the staff responded positively to the intervention; seeing the patient's name and requiring an initial increased accountability and brought the weight of the importance to life for the staff.

Outcome 4: 80% Compliance with Individual Pain Management Template Initiation and Reassessment

The providers' approval and willingness to complete the template was the driving force behind its success. However, there were actions that could have been done to ensure a smooth transition to the new process. Understanding the thought process and work mentality of the providers is imperative to creating a process that not only works for the patients, but also for the providers. A personality test could have been performed or a questionnaire handed to the providers outlining which leadership styles they preferred and practiced. Because all the

providers worked separate schedules, early on, it would had been helpful to establish a way for quick and efficient communication so that everyone received the information and was clear on what the current state of the project was.

Outcome 5: 80% Compliance with Reassessment of Pain in Weekly Meeting

Pain was discussed in the weekly interdisciplinary team meetings and became a recurrent topic of discussion. The successful compliance of reassessing pain during the weekly meetings had much to do with the pain template initiation. The template allowed the provider and multidisciplinary team to gain a better understanding of the pain the veteran was experiencing in addition to understanding how the treatment options were affecting his/her pain levels. What went great with this intervention was that the MDS nurses were committed and led the discussion in the meetings. As a reminder, the MDS nurses were solely responsible for performing patient interviews included in the MDS 3.0 quality measures.

This project focused on the number of patients reporting moderate to severe pain. The leadership shown by the MDS nurses during these weekly interdisciplinary meetings, in regard to discussing pain, was impressive. The providers and the MDS nurses were able to effectively communicate using the template as rationale for decisions made about pain management. The MDS nurses, as care coordinators, were able to use information from the template and follow up with the appropriate service, as was necessary. Surprisingly enough, other disciplines like physical therapy, dietary, psychology and others used the pain template as a reference when discussing their treatment goals.

Strengths and Weaknesses

Strengths of the project ran parallel with the facilitators previously mentioned above and included: the unit's willingness to adapt and change, stakeholders making the project a top

priority, patients' attitude toward the project, access to all patient information, accessibility of the health informatics team. Unexpected strengths included the flexibility and adaptability of the providers, the depth the health informatics team took to assist in creating a template suited for the providers on the unit, and the interest the nurses had in pain management and figuring out other innovative ways to account for pain documentation.

The project was successful, but unexpected weaknesses did occur to include the inability for the EHR system to send the providers a notification when the initial/reassessment note would be due. The creation of a notification system in the electronic health record was beyond the scope of the student and the clinical application coordinator; a new EHR will be used in the near future that will allow such functions to be performed. The current EHR system simply did not have the appropriate function. Another weakness included the lack of clarity for gaining approval by the medical facilities nursing board. The entire process for obtaining approval required multiple forms and an informal "verbal blessing" by the nursing director of the medical facility.

Results and the Evidence

A 15% Reduction in the Number of Patients Reporting Moderate to Severe Pain

In February the pain measure reported by MDS data was 37.2%; indicating that 37.2% of the residents triggered for reporting moderate to severe pain; in May, the measure was 30.4%. There was an overall decrease of 6.8% from before the intervention took place in February, to when the intervention ended in June. The MDS results from the unit are compared against the average results from every facility within the Veterans Integrated Service Network. The facility aims to be consistently below the average, signifying their compliance with the Minimum Data Set's standard of care.

Although this outcome was unmet by 8.2 %, there was still an overall decrease in the reporting of pain, which is still relevant to the goals of this quality improvement project. True and significant change takes time, quality improvement must go through cycles of planning, doing, studying, and acting. The plan, do, study, act (PDSA) cycle is a four-stage problem solving model used when one is attempting to implant a change or improvement process. This model is a constant cycle that seeks to address and mitigate issues as they arise through recruiting, brainstorming, and constant meaningful analyzations. This project went through its first round of the cycle; barriers (mentioned later) were present which contributed to the inability for the facility to achieve the first outcome. In order for this goal to be met and maintained in the future, a PDSA model should be initiated and followed.

Kaasalainen et al. (2016) found that there was a statistically significant decrease in pain reporting by the residents. The finding in this study differed from that of the projects. Prior to the interventions, the average reported pain level was reported as "mild," and after the intervention the average reported pain level was low. Similar to this article the interventions that took place on the rehab unit also resulted in a decrease in the amount of pain reported for the residents. These findings in the evidence were reflected in the project results because ultimately the unit must comply with standards put forth by the MDS. Holding the providers accountable for completing pain templates and keeping pain as a topic of discussion during the weekly team meetings facilitated the reduction of residents who reported moderate to severe pain.

Improved Provider/Staff Knowledge of Pain Assessment and Management (with 100% Staff/Provider Attendance to Training)

The articles by Fine et al. (2014), Hadjistavropoulos et al. (2016), and Kaasalainen et al. (2016) outlined the importance of performing an educational training session or workshop prior

to the implementation of a pain protocol. The literature utilized to create the pain protocol and communication guidelines did not conduct pre/post-test to assess for knowledge; however, they did mandate attendance to the training by the staff. Of the three major studies, research conducted by Fine et al. (2014) and Kaasalainen et al. (2016) had 100% attendance to all educational trainings. Hadjistavropoulos (2016) did not state what percent of staff attended the training. Similar to the evidence, this project had 100% staff/provider attendance to all education training sessions.

The success of this outcome was due to consistently using a roster created by the student to account for every staff member performing patient care. Not all staff were able to participate in the trainings on the designated days. Individual training sessions were held to go over all materials covered during the formal education training sessions. Prior to the educational training session, the four providers had a mean pretest score of 87.5%, while the nurses had an average score of 86.3%. After the educational training was provided, the providers had a mean score of 100%, while the nurses had a mean score of 98.4%. Following the post test, the student had the opportunity to go over all the answers, specifically the ones that were missed on both the pre and posttests. Staff were able to ask questions and meaningful dialogue was had regarding all criteria surrounding the interventions and pain management.

Maintenance of 95% or Greater PRN Effectiveness Documentation

The as needed (PRN) medication effectiveness documentation was not an outcome sought in most of the literature. In order for the provider to understand whether the medications being prescribed were successful, PRN effectiveness needed to be documented. The article by Fine et al. (2014) saw an increase of 3.4% in the assessment of the medication effectiveness

documentation. The unit saw an increase of 17% from baseline when analyzing the PRN effectiveness documentation.

The unit was already doing a good job with assessing medication effectiveness; however, there was room for improvement. The baseline value of 83% was being achieved by assigning a nurse to look up the report. This project capitalized on that assignment by encouraging the staff to print out the report for the current shift. The report had the patient's name, nurse's name, medication, and time the medication was given. Next, the nurse was informed to find the staff member responsible for clearing the medication effectiveness and initial their name on the printed-out paper. The paper was then stored in folder by the charge nurses' desk; weekly reports were then handed to management for review. The increase in accountability encouraged by the sign off sheet, led to a 99% maintenance of PRN effectiveness documentation.

80% Compliance with Individual Pain Template Initiation

The study conducted by Hadjistavropoulos et al. (2016) outlined that upon admission, 100% of all patients were assessed for pain. The study also found that 84% of patients were assessed at least once a week. Similar to the Hadjistavropoulos article, the research conducted by Fine et al. (2014) discussed the increase in pain documentation from 93.1% to 95.4%. The final results on the acute care rehab unit showed that the providers had an 81% adherence to the initiations of the pain template an increase from 0%.

Although 80% was the goal set forth in the outcomes, unforeseen events took place prior to the start of the interventions. Two of the main providers suddenly left the facility and the unit did not hire on another provider until the project had already begun. The remaining provider not only had to increase her workload, but also take on new job duties. As a fairly new employee, still learning the flow of the unit, this stark transition was overwhelming and at times difficult for

the nurse practitioner. After the loss of the providers, it took a few weeks to find and educate the new provider. New project and job duties had to be assigned and redistributed. Due to the unforeseen events, there was a delay in the initiation of the templates, which in turn affected the consistency of the completed pain templates. Once the providers had full comprehension of their newly altered job duties, the project took off and they were able to consistently complete the templates.

The evidence provided by Hadjistavropoulos et al. (2016) did not give insight as to how the providers were able to maintain 100% adherence to the template. Was there some sort of document with a compiled list of who needed to be assessed? Did the providers initial or check it off? or were they able to just remember to complete it every single time? Understanding how the providers in the study were able to remember to assess patients would had been beneficial, especially since the providers experienced so many outside factors and unforeseen events.

80% Compliance with the Reassessment of Pain in Weekly Meetings

This quality improvement project did not have a specific pain management team, like the evidence discussed in the Kaasalainen study (2016). However, the interdisciplinary team met on a weekly basis and the patient's pain was discussed 100% of the time. In the article, the nurse practitioner led the interprofessional team each month or every other month over the course of a 12-month commitment. The nurse practitioner ensured each patient's pain was mentioned at every meeting (Kaasalainen et al., 2016). After discussing the summary and pain status of the patient, the MDS nurse addressed every interdisciplinary team member in the room or in a conference call for input. The incorporation of all members created a safe and comprehensive climate for the providers and other healthcare staff to speak openly and freely. The pain template

was used as a guide during discussions, and the provider was able to reference specific details that would had otherwise been forgotten or not mentioned.

Limitations

Following the conclusion of this project, there was found to be a minimal amount of limitations as the unit was receptive and open to the project. However, a limitation that arose was the inability for all of the providers to agree on how to incorporate the pain template in the CPRS. A majority of the providers wanted to include the template into the mandatory history and physical (H&P) note which is completed upon admission. One provider insisted on not including the pain template into the H&P note, due to the lengthy nature of the note. Aside from the H&P note already being long, the provider was concerned about disrupting the "paper trail" the provider pain management note would lead.

As mentioned earlier, once the original provider note was completed the reassessment note was added to the initial pain management note. The concern was that if the initial note was installed into the H&P note, then the subsequent reassessments notes would be attached to the H&P note making it difficult to track and keep organized. The inability for a consensus to be reached regarding placement of the template delayed the ability for the project to run on its own without outside intervention from the student.

The Minimum Data Set 3.0 results played an integral role in assessing patient outcomes, specifically the number of patients reporting moderate to severe pain. The MDS 3.0 results for any given month were available 4 to 6 weeks after that month. The results taking a month and sometimes longer to be viewed caused undue stress to the project as there was no official way to view the results, and thus make changes as needed. Because of this, the project had to conclude prior to the anticipated date.

Recommendations

A possible reason pain templates were not initiated within 48 hr of admission was due to the absence of a system outlining which patients needed to be assessed. The student, early on, failed to realize that consistently reminding providers and printing out weekly sheets was counterproductive. If this project is to be replicated providers should be encouraged, prior to start of the project, to create a way to trigger the initial pain assessment.

Another recommendation one should consider would be the early involvement of the health informatics team. Prior to replicating this project, one should consider including the health informatics team early in the assessment and analyzation phase. Understanding the limitations of the EHR, in addition to any near future advancements to the system would serve beneficial for the project. The project administrator must understand the proper constraints of the system to mitigate any barriers surrounding the notification of the pain template

As mentioned earlier, this project showed an overall decrease in the use of opioids and an increase in the use of topical analgesics. In terms of financial recommendations, it's important to note that, as a federally funded facility, cost was not a factor when selecting medications to treat the veterans pain. However, if the project was to be replicated, cost would most definitely be a considerable factor especially in the private setting. The provider should be mindful about the patients' insurance status before prescribing pain medications which can be costly, especially the pain patches

Lastly, the project administer should be aware if possible, of any pending plans for separation from the facility. Understanding who may or may not be leaving the facility would be beneficial and allow the administrator to prepare and adjust the project interventions as needed.

Implications for Practice

Although this project was performed on a long-term care unit in the veteran population, it has the potential to be utilized in a variety of settings where pain management is needed for greater than a few days. For example, providers could utilize this pain template when providing care for patients dealing with chronic issues who need to be monitored on a weekly basis. This template could facilitate addressing the patients' pain over a longer period of time.

Guidelines, evidence-based practice, and beneficence serve as the foundation of the nurse practitioners' scope of practice. While the Doctor of Nursing Practice (DNP) degree emphasizes quality improvement, systems leadership, and evidence-based research, as a leader in nursing, the DNP clinical practitioner possesses a specific set of tools to effectively bridge together the multidisciplinary team and influence healthcare outcomes to create treatment plans beyond that of traditional therapies. This project utilized the DNP to improve communication and collaboration amongst the multidisciplinary team. This project needed the DNP prepared clinical nurse leader, nursing staff, providers, informatics team, pharmacists, therapists and may more to carry out the interventions.

Adhering to practice recommendations, like the pain management guidelines developed by the Veterans Affairs, ensures that processes are not only streamlined, but predictable and of the highest quality. The complexity and multifaceted nature of the veteran population is all the more reason to adhere to a reliable and applicable set of recommendations.

The VA guidelines clearly state that pain management is the responsibility of the multidisciplinary team with the primary care provider as the coordinating central link. Because the provider was responsible for completing the template, a nurse practitioner was chosen to ensure the templates were being completed and discussed. Another measure taken to ensure

sustainability was to include the pain template as an item on a provider checklist that was used upon patient admission.

The template was not only useful for the providers and patients, but other members of the multidisciplinary team as well. Case managers, therapists, and many other professionals were able to utilize the template and incorporate it into their own notes, care plans, and discussions. Clinical outcomes were positively affected across the many disciplines and created a more comprehensive picture for the staff on the unit. The various health professionals who facilitated and coordinated patient care benefited tremendously from this template because it improved communication between the disciplines, clarified treatment plans, assured treatment follow-up, and encouraged patient and staff involvement in pain management.

The guidelines and evidence clearly state it’s the provider’s responsibility to manage and consistently document the patient's pain along with the multidisciplinary team, but, as leaders in health care, it’s in our moral compass to do the right thing and ensure the veterans are receiving care that is evidence based and patient centered.

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Appendix

Action Plan

Table 1

Action Plan for Project Intervention

Task	Materials	Space	Finance / Budget	Time Frame	Personnel
Obtain approval from VA organization through the education department	Complete Employee Trainee Appointment form and provide details of project to include NRR approval (stating the project is not research), title and summary of the project	Nursing education office	No associated cost	Began 2 months prior to implementation and will take 4 months to complete	Education nursing staff in VA hospital
Obtain approval from the nurse managers to complete project on the unit	N/A-communication with management	Nursing office	No associated cost	5-minute conversation explaining to the manager purpose of training and obtaining approval. Item already completed	Manager and DNP student
Obtain buy-in and input of staff regarding QI measure. Introductions between the patient and staff and the DNP students	Obtain buy-in and input of staff regarding QI measure	On the unit	No associated cost	Communication with staff regarding project; 15 minutes. Item already completed	DNP student and staff
Arrange and create an education session/meeting	N/A—inform staff of the upcoming meeting	Off the unit	No associated cost	5 minutes Item already completed	DNP Student

to introduce pain measure to staff					
Reserve time to speak with staff	N/A- verbally informed nurse managers	On the unit	No associated cost	15 minutes discussing with Dr. Haupt what time is best. Feb 19, 2020/ 0800 &1500	DNP student and Bonnie
Reserve a room for providers	N/A- online portal	On the unit	No associated costs	15 minutes discussing with Dr. Haupt what time is best. Feb. 11, 2020 /1300-1400	MD, NP, MDS nurses
Create badge cards with MDS materials on them	Use online badge site to create card with MDS criteria on card	Off the unit	50 lanyard cards Estimated cost: $75	Create: Jan. 2020 8 hours for completion	DNP student
Create visuals and brochures for patient rooms	Use Microsoft template to create visual aid, then laminate papers	Off the unit	60 prints Estimated cost: $100	Create: Jan. 2020 10 hours for completion	DNP student
Create board to place in medication room	Use stationery and media tools to create	Off the unit	1 board Estimated cost: $20	Create: Feb. 2020 12 hours for completion	DNP student
Create pre and post-test for education session	Create test from information provided from presentation	Off the unit	50 prints No associated costs	Create: Feb 2020 2 hours for completion	DNP student
Education Session & formal introduction of QI project to providers	PowerPoint with training materials gathered from VA/MDS pain management guidelines.	CLC conference room	light refreshments (est. cost) -$30 Provide supplemental materials - lanyard cards - brochures (to view)	30-min education session before initiating QI project	MD, NP, and MDS nurses

			- visual aids (to view)		
Education Session & formal introduction of QI project to staff	PowerPoint with training materials gathered from VA/MDS pain management guidelines.	CLC recreation room during staff meeting	Snacks (est. cost) -$30 Provide supplemental materials - lanyard cards - brochures (to view) - visual aids (to view)	30-min education session before initiating QI project	RA, CNA, staff nurses, nurse managers
Place visual pain management aids in every patient room	Visual aid	On the unit	No associated costs	30- minutes with brief education to patient	DNP student
Hang up pain management poster	Pain management poster	Medication room on unit	No associated costs	5 minutes	DNP student
Provider & MDS nurse training					
Place copies of sign in sheet at the front desk for staff check-in	Checklist	Front table	No associated costs	Before initiating QI meeting/training; 1 min Feb. 11, 2020/1300-1400	Place copies of sign in sheet at the front desk for staff check-in
Place pre-test on all desks before staff arrives	Test	CLC conference room	No associated costs	Before training session begins; 2 minutes to administer	DNP student
Begin training session: Introduce QI project and explain MDS evaluation	PowerPoint and verbal explanation	CLC conference room and CLC recreation room during staff meeting	No associated costs	First 5 minutes of training	DNP student, providers and MDS nurses
Give education on VA guidelines and the need for	PowerPoint and verbal explanation	CLC conference room and	No associated costs	Second 5 minutes of training	DNP student, providers

weekly meetings with MDS nurses to discuss patients who "triggered" or any newfound information					and MDS nurses
Provider enters room; assesses patient	Assessment tools and skills	Patient room	No associated costs	During patient's admission 20 mins	Provider
Initiate pain management template	Template found in CPRS	Patient room or in providers office	No associated costs	Within 24 hours of admission	Providers
Initiate pain management treatment plan (if warranted)	Template found in CPRS; attach addendum	Patient room or in providers office	No associated costs	Within 24 hours of initiating pain management plan	Provider
Reassess for treatment effectiveness	Template found in CPRS; attach addendum	Patient room or in providers office	No associated costs	Within 48 hours of treatment initiation	Provider
Wrap up with questions and administer post test	Post test	CLC conference room	No associated costs	Following training	Provider, MDS nurses
Nurses, RA's and CNA training					
Place copies of sign in sheet at the front desk for staff check-in	Checklist	Front table	No associated costs	Before initiating QI meeting/training; 1 min Feb. 19, 2020/ 1300-1400	Place copies of sign in sheet at the front desk for staff check-in
Place Pre-test on all desks before staff arrives	Test	CLC recreation room	No associated costs	Before training session begins; 2 minutes to administer	DNP student
Begin training session: Introduce QI project and explain MDS evaluations	PowerPoint and verbal explanation	CLC recreation room	No associated costs	First 5 minutes of training	DNP student, nurses, RA's, CNA

Explain types of pain, importance of documenting, VA guidelines, and non-pharmacological therapeutic approaches to managing pain	PowerPoint and verbal explanation	CLC recreation room	No associated costs	Last 15 minutes	DNP student
Close with questions and administer post test	Post test	CLC recreation room	No associated costs	After training	DNP student, nurses, RA's, CNA
Explain the purpose of all supplemental materials (badge, brochure, poster, patient visual) and administer badges to everyone	PowerPoint and verbal explanation	CLC recreation room	No associated costs	After training	DNP student, nurses, RA's, CNA
Meetings					
Ensure pain is being incorporated into weekly huddles	N/A	Medication room	N/A	Ensure pain is being incorporated into weekly huddles	N/A
Ensure MDS nurses and providers are meeting	N/A	On the unit	N/A	Every week	Providers and MDS nurses
Ensure pain is being mentioned for every patient during the interdisciplinary meeting	N/A	CLC conference room	N/A	Every Thursday from 0900-1100	Interdisciplinary team
Ensure pain management and clearing of PRN effectiveness by nurses is reinforced by management	N/A	Nurses station	N/A	Everyday 0730 and 1530	All staff on unit

Data Collection					
Obtain MDS reports on the percent of patients who reported moderate to severe pain	MDS report sheets	MDS nurse office	N/A	Obtain MDS reports on the percent of patients who reported moderate to severe pain Collection will occur during the first week of each month	MDS report sheets
Evaluate percent of PRN effectiveness being cleared (assessed)	Use BCMA to pull monthly PRN effectiveness	On unit (at desk)	N/A	Collection will occur during the first week of every month 20 minutes to review the patient and the nurse responsible for clearing the effectiveness	DNP student
Record percent of providers complying with initiating a pain template	Use CPRS to view provider documentation	On unit (at desk)	N/A	Collection of data will occur during the first week of every month 30 minutes to review the patient and the nurse responsible for clearing the effectiveness	DNP student
Record percent of providers complying with reassessing patients' pain within pain management template	Use CPRS to view provider documentation	On unit (at desk)	N/A	Collection of data will occur during the first week of every month 30 minutes to review the patient and the nurse responsible for	DNP student

				clearing the effectiveness	
Choose a patient to track and record pain scale ratings through the entirety of the projects	Use CPRS to view provider documentation	On unit (at desk)	N/A	Collection of data (via a scatter plot chart) will occur weekly; data will be averaged to show trend at the beginning middle and end of the project	DNP student
Additional staff meetings and education sessions	Results of the QI measure	Nurses station, IDT meetings	TBD will purchase educational materials as needed	A meeting will be scheduled at the half-way point of the QI project Additional meetings may be scheduled if there are any issues, questions, or concerns	DNP student; all staff members