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I would like to acknowledge Virginia LeBaron for helping me remain focused to complete this project. I am grateful for her dedication and understanding. Thank you.
DEDICATION

This is dedicated to my husband, unborn child and parents who have made me the nurse and person I am today. Your continuous support and patience will never be forgotten. I cannot thank you enough for putting up with me during such a stressful time; I know it was not easy.
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ABSTRACT

Research shows that pain, both acute and chronic, is greatly undertreated among elderly patients. Elderly patients who suffer from dementia pose an additional challenge to the treatment of pain due to communication barriers. Development of an appropriate assessment tool for the use in elderly patients with cognitive impairment has been the focus of several research studies. This project will take an assessment tool and develop a practitioner order set for pain treatment based on the level of pain assessed in the tool. The setting of focus will be in acute care, where many elderly dementia patients are experiencing both acute and chronic pain. The goal of this protocol is to promote comfort and enhance quality of life. Preliminary testing will need to be conducted.
CHAPTER 1

Introduction

Pain among the elderly in the United States (U.S.) is undertreated and severity of pain is underestimated by health care providers (Morrison & Siu, 2000). This disregard for the presence and management of pain is worse among elderly suffering from dementia (Morrison & Siu, 2000). Knowing this problem exists only makes the need for a solution stronger. Chapter 1 will introduce the topic of pain management and associated definitions, identify the problem with background statistics, discuss the significance to nursing including the role of the advanced practice nurse (APN), and provide a brief overview of current pain management strategies. The focus of Chapter 1 is to create the foundation, proving the need for the development and implementation of a pain management protocol in the acute care setting for patients who suffer from dementia. The protocol proposed by this project will incorporate an evidence based assessment tool into a newly developed order set for practitioners to utilize. This will be discussed further in Chapter 3.

Background

Advanced disease states, such as peripheral vascular disease, arthritis, cancer and other musculoskeletal diseases can cause debilitating pain. It is estimated that 50% of elderly living in the community and 80% of nursing home residences suffer from chronic pain (Horgas, McLennon & Floetke, 2003). Uncontrolled pain dramatically decreases the level of functioning, both mentally and physically, by causing depression, decreased activity, sleep cycle disturbance and poor quality of life (Horgas et al., 2003). Healthcare providers, both in primary care and
acute care settings, need to treat acute and chronic pain in order to promote function and wellness. This can be a great challenge when the elderly patient suffers from dementia and cannot clearly communicate. Recent research has acknowledged the challenge of assessing pain in the patient suffering from dementia (Hadjistavropoulos, Voyer, Sharpe, Verreault & Aubin, 2008). However recent research has not addressed specific treatment plans that provide optimal comfort to the elderly demented patient with the least amount of side effects.

Not only is pain a persistent problem among elderly, it is more challenging to treat due to the complex characteristics of the pain (Horgas, 2003). Multiple locations of pain, multiple conditions causing pain and multiple types of pain further complicate the treatment (Horgas, 2003). Elderly patients with dementia do not understand why they are having pain and will not participate in activities that could increase the painful sensations, including rehabilitation (Morrison & Siu, 2000). As a result, the patient becomes more debilitated and has a higher risk for increased severity of chronic pain (Morrison & Siu, 2000). This mismanagement of pain may even come at a time in the patient’s care when comfort is the optimal goal (Morrison & Siu, 2000). Treatment challenges arise because patients suffering from dementia are unable to express their pain adequately, ask for pain medicine, or safely use patient controlled analgesia (PCA) pumps for self medication (Morrison & Siu, 2000). The role of the health care provider in assessing and managing pain in the elderly is extremely important due to the high prevalence rates of pain and the multiple characteristics of the pain (Horgas et al., 2003).

Purpose

The purpose of this project is to develop a pain treatment protocol for elderly dementia patients in the acute care setting. It will encompass an effective assessment tool, aim to reduce
acute pain, and consider the presence of underlying chronic pain. Recent literature has proven that a proper assessment tool is needed to effectively manage pain in the elderly who cannot verbally communicate their pain (Warden, Hurley & Volicer, 2003). This tool can then be used to guide treatment with both pharmacological and non-pharmacological interventions and provide accurate reassessment to determine the effects of the treatment. The goal of this protocol is to increase quality of life, decrease anxiety and agitation associated to pain, and to promote the comfort of the patient. The protocol will be introduced as part of this project but pilot testing will still need to be conducted.

Significance to Nursing

Elderly, those aged 65 years and older, are the fastest growing age group in the U.S., use the most amount of the emergency department resources, have the highest hospital admission rates and the longest length of stay compared to other age groups. Elderly visits to the ED are from a number of reasons including exacerbation of chronic illnesses, acute illnesses, and trauma (Roberts, McKay, & Shaffer, 2008). Pain in the acute care setting can be associated with injuries from falls or motor vehicle crashes (broken bones), complications of chronic diseases (exacerbation of arthritis), or acute illness (angina associated to myocardial infarction) (Roberts et al., 2008). As society continues to age, there will be a continued increase in the amount of elderly people seen in the ED and hospital setting (Roberts et al., 2008). The population of people 65-74 years of age in the US is expected to reach 24.4 million in 2013, up from 18.3 million in 2003 (Roberts et al., 2008). In addition, the predicted increase in ED visits is from 6.4 million per year in 2003 to 11.7 million in 2013 (Roberts et al., 2008). The elderly is a large population in the acute care setting and practitioners need to be educated and trained to meet the
needs of this unique population. Due to the increased incidence of ED visits, hospital admission rates for the elderly are also going to rise from 2.1 million to 3.8 million per year (Roberts et al., 2008). This places great demand on APNs not only to provide direct care for the elderly, but to educate the community and develop protocols to optimize age specific care. Planning for the increased demands on nursing should be a priority now (Roberts et al., 2008) and development of management strategies for the elderly need to be addressed now. The protocol to be developed in this project is applicable now and will continue to be useful with the inpatient elderly clientele increasing.

Alzheimer’s disease accounts for 70% of all dementias (Alzheimer’s Association, 2009). Currently 5.3 million people in the U.S. suffer from Alzheimer’s disease; this is 1 in every 8 people over the age of 65 (Alzheimer’s Association, 2009). The prevalence of Alzheimer’s disease is only going to rise as the elderly population grows (Alzheimer’s Association, 2007). It is estimated that every 70 seconds another person will develop Alzheimer’s disease (Alzheimer’s Association, 2009). In 2008, 3.4 million people aged 71 years or older (14% of the total population of elderly over 71 years of age) suffered from dementia (Alzheimer’s Association, 2009). The prevalence is higher among elderly females due to a longer life expectancy than males (Alzheimer’s Association, 2009).

An estimated 50% of elderly persons living in the community suffer from pain (Horgas, 2003), and an estimated 80% of nursing home residence live with persistent undertreated pain (Weiner & Hanlon, 2001). When these patients present to the ED and are admitted to the hospital, they arrive with their pre-existing chronic illnesses as well as their chronic pain.
The role of the ACNP

“Advanced practice nursing is the application of an expanded range of practical, theoretical, and research-based competencies to phenomena experienced by patients within a specialized clinical area of the larger discipline of nursing” (Hamric, 2009, p. 78). Per this definition, the APN plays a key role in the management of pain. Every specialized clinical area that is involved with patient care has to incorporate pain management into practice. The APN must use knowledge gained through education, research and clinical experience to promote comfort among patients.

The APN holds core competencies which play a vital role in the management of pain and are as follows: expert coaching and guidance, consultation, collaboration, research, ethical decision making, and clinical/ professional/ systems leadership (Hamric, 2009). Each of the competencies is theoretically incorporated into the protocol developed in this project. The APN is an expert coach and provides guidance to the family, patient and other hospital staff. The role requires participation in ethical decision making to promote comfort among those suffering in pain. Collaboration with the bedside nurse and other providers will ensure consistent use of the protocol and treatment of pain. The APN is responsible for education regarding proper use of the protocol and proper assessment of pain, as well as educating the family and care providers of the patient. The APN has to know when consultation is needed with palliative care or hospice specialists for further pain management and finally, there is great involvement with research to determine the efficacy of the treatment and if adjustments to the protocol are needed.

The Acute Care Nurse Practitioner (ACNP) is a focused role of an APN, specifically involved with critically ill patients, most commonly in the hospital, or acute care, setting
Competencies include diagnosis and management of disease, and health promotion and disease prevention (Hravnak et al., 2009). Performing procedures, assessment and critical thinking are all key skills for the ACNP to be successful (Hravnak et al., 2009). The ACNP must be able to manage multiple co-morbidities and underlying illnesses that are commonly present in the elderly population. The role of the ACNP is patient-centered and the ACNP has a presence at the bedside, managing acute events in patient care (Hravnak et al., 2009). Communication with patients and their families in regards to many different issues in care is a priority in the daily agenda of the ACNP (Hravnack et al., 2009). The protocol proposed by this project, in combination with the relationship built between the ACNP and the patient, will enhance pain management and improve quality of life.

Description of the Problem

To best describe the problem, it is essential to define the key terms used in this project. This section will define the population targeted by the protocol, define pain in both the context of acute and chronic, and define comfort. Other more specific types of pain, such as cancer pain, will not be the focus of the project. The meaning of pain and comfort can be quite subjective, therefore the definitions provided are guidelines to aid in understanding the concept of the sensations and how those sensations can affect all aspects of the patient, including both physically and emotionally. The physiological aspects of pain will be briefly reviewed to enhance understanding of the dynamic process of pain management.

Definition of Target Population

The target population is elderly patients who suffer from dementia in the acute care setting. Elderly will be defined as an adult over the age of 65 years. This is the age to qualify for
Medicare supplementation (U.S. Department of Health & Human Services [HHS], 2009) and the basis of much of the statistical analysis provided in the background section of this project. There will not be gender or racial subgroups.

The definition of dementia is broad. It can be defined as “a loss of memory and other mental abilities severe enough to interfere with daily life. It is caused by physical changes in the brain” (Alzheimer’s Association, 2009, Related dementias). For the purpose of this project, dementia will be defined as a state of progressive, irreversible, cognitive decline that inhibits communication, interferes with activities of daily living, and is caused by a pathological process. Dementia differs from delirium in many ways. The onset of delirium is acute and it is usually reversible, lasting a few days to weeks (Alagiakrishnan & Blanchette, 2007). The patient’s level of consciousness may be altered in a delirious state, with attention and psychomotor changes (Alagiakrishnan & Blanchette, 2007). The course of delirium fluctuates compared to dementia which often is progressive (Alagiakrishnan & Blanchette, 2007). Delirium can be caused by many different pathologic processes including: metabolic disturbances (kidney or liver failure), drug intoxication or withdrawl, infection, fever, hypoxemia, hypercapnea and brain trauma (Alagiakrishnan & Blanchette, 2007). The characteristics for dementia include a gradual onset with a progressive course that lasts for years (Alagiakrishnan & Blanchette, 2007). There are several pathologic causes for dementia, these will not be differentiated or discussed in this project because the focus remains on pain control.

The presence of dementia will be assessed by clinical exam and may involve the use of the Mini-Mental State Exam (MMSE) (Appendix 1.1). The exam can be conducted while in the ED or at the time of admission to the hospital as part of the initial history and physical. The
MMSE may be chosen for use in situations where it is unclear if the patient has dementia. The MMSE is quick and easy to use, making the application feasible in the acute care setting (Shiroky, Schipper, Bergman & Chertkow, 2007). In addition, the MMSE provides measurements that can be recorded and followed as the dementia in the patient progresses (Shiroky et al., 2007). The MMSE is based on a total of 30 points. People may still suffer from dementia with a MMSE score of 30 (Shiroky et al., 2007), so this is only offered as an assessment aid for the practitioner. The pain management protocol developed by this project can be applied to any patient unable to verbalize the presence or quality of pain, not just those with a compromised MMSE. Scores vary based on age and education level; the normal score range declines as age increases and education level decreases (Crum, Basset & Folstein, 1993). Patients 80 years and older have a median normal score of 25 (Crum et al., 1993). The MMSE should not be used to make the diagnosis of dementia, but rather provides an additional clinical tool to assess and compare cognitive function of the patient to their age group and education level (Crum et al., 1993).

The protocol developed by this project is focused on the acute care setting, and for the purposes of this project is defined as any ED or inpatient hospital setting. This does not include clinics that see patients in the community or care homes who offer long term supportive care. Adaptation of the protocol to a long term care setting may be appropriate but will need to be researched further.

Definition of acute and chronic pain

Defining pain is challenging because the concept is quite abstract due to the subjectivity of the sensations of pain from the person experiencing the pain. The definition of pain adapted
by this project is from the International Association for the Study of Pain (IASP). Pain is “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage” (IASP, 2009, Pain section, ¶ 1). This definition is appropriate for the protocol because it considers the emotional and physical aspects of pain which can lead to a severe decrease in quality of life in the elderly.

It is important to differentiate between acute pain and chronic (or persistent) pain in order to plan treatment. Chronic pain is characterized by persistent pain past the expected time for healing, usually greater than 3 to 6 months (Schuler, Njoo, Hestermann, Oster & Hauer, 2004). Chronic pain can be constant or fluctuate as “episodes” over a 6 month period of time (Kean, Rainsford & Kean, 2008). The difference between acute and chronic pain is more than just the duration of time of the unpleasant sensations. Chronic pain can be associated to the advancement of disease, such as malignancy (Schuler et al., 2004). Acute pain is specific to tissue trauma and with healing the pain resolves (Baumann, 2005). This process is usually quick and with either healing of the injury, or removal of the painful stimulus, the pain resolves (Baumann, 2005). Acute pain causes a state of stress that if it is not properly treated can lead to emotional distress and chronic pain (Baumann, 2005). Chronic and acute pain can occur simultaneously, therefore, both acute and chronic pain management are considered with the development of this protocol.

Mechanism of pain

The sensation of pain is processed in 4 pathways: (1) stimulation, (2) transmission, (3) perception and (4) modulation (Appendix 1.2) (Baumann, 2005). Stimulation is the initial pathway in the sensation of pain (Baumann, 2005). A noxious stimulus stimulates nociceptors (Baumann, 2005). This activation of nociceptors causes the development of action potentials
Transmission is the movement of the action potentials from the site of noxious stimulus to the dorsal horn of the spinal cord and through the central nervous system (Baumann, 2005). Perception of pain is the cognitive process, or the conscious experience, of pain (Baumann, 2005). The challenge in perception is that it is influenced by past experiences of pain, cognitive function and behavior (Baumann, 2005). Relaxation techniques, for example, reduce pain by limiting the signals of pain through the pathway causing a decrease in the perception of pain (Baumann, 2005). The final process of the pain pathway is modulation. Modulation is the inhibitory pathway that descends from the brain to the periphery (Baumann, 2005). There is a release of norepinephrine, serotonin, and other substances that bind to and inhibit the nociceptors (Baumann, 2005). This limits the transmission of painful sensations (Baumann, 2005).

**Definition of comfort**

Comfort is of great importance to nursing care (Malinowski & Stamler, 2002) and it is the goal of pain management. Just as pain is subjective, so is the concept of comfort. Malinowski and Stamler (2002) describe comfort as a basic human need which until met, can inhibit healing. For the purpose of this project, comfort will be defined as the state of physical and emotional relaxation with relief of negative sensations, not simply the absence of pain. Watson’s theory of human caring incorporates the concept of comfort. This will be discussed further in Chapter 2.

**Barriers to Pain Management**

Adequate treatment of pain is faced with many barriers from the patient, the health care provider, and the health care system. The protocol developed in this project aims to break down barriers to pain management by enhancing communication between the patient and the
practitioner, providing standard treatment plan to be implemented by the health care facility, and guiding appropriate researched-based treatment for the practitioner.

Elderly in general tend to think that pain is part of the “normal” aging process and it is not important to the health care practitioner (Horgas et al., 2003). They also have fears associated to the pain; they fear the pain is associated to advancement of illness, may lead to additional testing (Horgas et al., 2003), and treatment may cause addiction (Shega, Hougham, Stocking, Cox-Hayley & Sachs, 2006). Cognitive impairment is a barrier to pain management in itself due to inadequate self reporting (Horgas et al., 2003) and increased challenges of assessment (Davis & Srivastava, 2003). Family members of those with dementia may hold similar views to that of the cognitively intact elderly patient and be an additional barrier to pain management (Baumann, 2005).

Lack of knowledge is the greatest barrier to practitioners prescribing opioids (Davis & Srivastava, 2003). Practitioners underestimate pain levels in the elderly resulting in inadequate treatment regimens (Morrison & Siu, 2000). Lack of knowledge applies to both the pharmacologic and non-pharmacologic interventions (Davis & Srivastava, 2003). Many practitioners do not know about non-pharmacologic interventions that can be combined with pharmacologic regimens to enhance pain control and the prescriber is not informed about the mechanism of action of the pharmaceutical agent in the elderly (Davis & Srivastava, 2003). Fears from the practitioners regarding legal repercussions and adverse effects of medications inhibit the proper prescribing of analgesia (Davis & Srivastava, 2003). Practitioners fear the possibility for further cognitive impairment in the elderly from opioid therapy (Shega et al., 2006).
The health care system creates many barriers for both the patient and the practitioner. The National Institute of Health budgets less than 1% of resources to pain research (American Pain Foundation, 2009). Lack of research and policies causes regulatory agencies to scrutinize prescribers only enhancing fear among the practitioners (American Pain Foundation, 2009).

Overview of Current Pain Management Strategies

The American Geriatrics Society (AGS) has published pain management guidelines which provide recommendations to healthcare providers. There are several limitations to this guideline when thinking about the elderly demented population. The AGS guideline is targeted to persistent, or chronic, pain in the elderly. This guideline includes assessment techniques and recommends both pharmacologic and non-pharmacologic regimens for treatment (AGS, 2002). An assessment section is dedicated to the elderly who suffer from dementia however the information is quite vague and subjective. A literature review will be conducted in Chapter 2 to determine the most effective assessment tool for the cognitively impaired elderly patient. The AGS (2002) recommends that the practitioner incorporates family, or the primary care giver, into the planning and implementation of a treatment plan, that the practitioner observes behaviors that can indicate pain during daily activities of the patient, and that the practitioner should routinely reassess for the presence of pain. Treatment recommendations, though geared toward chronic pain, will be adapted into this protocol for initiating opioid therapy in Chapter 3.

Summary

There is great need for the development of an assessment and treatment protocol for elderly patients suffering from dementia. The elderly population is quickly increasing in size and complications from trauma and chronic illness require frequent medical management in the acute
care setting. The elderly patient who suffers from dementia offers an additional challenge in the treatment of pain. Pain assessment tools designed specifically for use in patients who are unable to verbalize their pain on a 0-10 scale have to be implemented into practice. Collaboration with the health care team and the patient’s family or primary care giver is also essential in effective pain management. In addition, implementation of the proposed protocol will decrease barriers to pain management from both the practitioners and the patient. All practitioners need to make pain management a priority in care, promoting comfort and improving quality of life. Acute care nurse practitioners have an incredible opportunity to implement this protocol in the hospital and emergency room setting, educating other providers and decreasing complications associated to uncontrolled acute and chronic pain.
CHAPTER 2

Introduction

Pain assessment and management is a multifaceted phenomenon. The theoretical framework for the protocol of pain assessment and management will be Jean Watson’s Caring Theory. Research has shown that the holistic perspective of Watson’s Caring Theory increases the quality of life and reduces blood pressure among patients diagnosed with hypertension (Erci, Sayan, Tortumluoglu, Kilic, Sahin & Gungormus, 2003). This framework will be applied to pain management with the intention of maximizing quality of life and comfort among the elderly with dementia. The principles and practices of Jean Watson’s Theory of Human Caring will be adapted into the protocol to maximize comfort and promote wellness.

This section contains a literature review of current, 2000 to present, research regarding alternatives to assessment of pain in elderly who are unable to verbalize and utilize pain scales. A literature review of recent treatment modalities for patients with dementia was quite limited. A couple of studies will be addressed. The problem of pain assessment arises when people who suffer from dementia lack the ability to self report pain accurately (Mahoney & Peters, 2008, p. 250). The research will provide a basis for the assessment aspect of protocol development.

Theoretical framework: Watson's Caring Theory

Jean Watson’s Theory of Caring will provide theoretical framework for the nursing role in the development and implementation of the protocol proposed by this project. The relationship between the nurse and the patient is of great emphasis in this theory as it is in optimizing pain management. This relationship is referred to as the transpersonal caring relationship and is the foundation of nursing (Watson, 2007). The transpersonal relationship is that of a spiritual
connection which allows for awareness of the other’s subjective world (Watson, 2007).

Recognition of the subjective being of the patient and the sensations of pain assist in proper assessment and management of pain, in turn, promoting comfort. The intention of identifying a theoretical framework is to provide a systematic broader view to nursing, creating organization and structure to chaos (Caruso, Cisar, & Pipe, 2008). The framework allows for recognition of meaning behind actions and behaviors (Caruso et al., 2008).

The key concepts of Watson’s Theory of Caring include transpersonal caring relationships, the caring moment, and core competencies known as the “caritas processes” (Caruso et al., 2008). Each will be discussed in further detail theoretically and how they are to be applied to assessment and management of pain in elderly patients suffering from dementia. The theory will be used as a guide for practitioners to assess, treat and reflect on the care of elders (Bernick, 2004) suffering from dementia.

Transpersonal Caring Relationship

The event of human caring (Appendix 2.1) is the dynamic process between the nurse and the patient resulting in the “restoration of harmony” and “promotion of healing” (Watson, 1988). The event occurs in the “phenomenon field” when the nurse and patient combine their self in the present moment (Watson, 1988). The person’s subjective world, referred to as “phenomenon field”, is described as the human experience specific to the one individual (Watson, 1988). Experiencing another’s phenomenon field can only be done through empathy; however a complete understanding of the other’s field can never be obtained (Watson, 1988). There is meaning in the experience for both the patient and the nurse, as the nurse aids the patient in regaining harmony (Watson, 1988). Dignity of the patient is the greatest concern for the nurse,
and should be maintained throughout the process (Watson, 1988). The nurse may use all her senses to be in the moment with the patient (Watson, 1988). Connection of subjective worlds is obtained through caring transactions of both participating in the experience (Watson, 1988). The experience can reach levels of the patient’s soul, empowering the patient and increasing harmony which enhances the healing process (Watson, 1988). Each transpersonal relationship is an opportunity for further growth and development (Caruso et al., 2008).

Pain management, especially in the patient suffering from dementia requires use of transpersonal relationships. The practitioner must be with the patient at the present moment to grasp an insight to the patient’s subjective world and the effects of that world from pain. This is not limited to the patient. The practitioner can also share a transpersonal relationship with family members. Many patients suffering from severe dementia have a primary care giver; this care giver may benefit more from the transpersonal relationship than the patient. In patients with severe dementia, communication is compromised. Care giver stress and fatigue can be common. The transpersonal relationship between the practitioner and the primary care giver may enhance healing and empower the care giver.

Caring Moment

The actual caring occasion (Appendix 2.1), or caring moment, describes the event when the nurse and patient engage in a human transaction at a given point in time (Watson, 2008). This is the time when the nurse and patient are sharing experiences, views and thoughts resulting in a great caring moment beyond the transaction itself (Watson, 2008). The patient and nurse have to come together mutually and allow for spiritual connection, beyond the level of the human to human interaction (Watson, 2008). This caring connection creates new opportunities for the
future (represented by the sun symbol in Appendix 2.1) for both the patient and the nurse (Watson, 2008). The dynamic process which allows the practitioner to view the subjective world of the patient and vice versa is known as the intersubjectivity, further defining self and being human (Watson, 2008). The purpose of intersubjectivity is to reinforce and promote humanity, avoiding viewing each other as objects (Watson, 1988).

*Caritas Processes*

The structure of the theory was initially based on 10 core carative factors (Appendix 2.2) (Watson, 2007). Further development over time has transitioned them to into “caritas processes” (Appendix 2.3) (Watson, 2007). The redefined core structure of the theory now has greater theoretical implications. The transition was influenced by the growth from nursing science to caring science, expanding the idea of caring into a broader view (Watson, 2008). This broadening incorporated additional concepts, such as love, and has further developed the concept of nursing (Watson, 2008) allowing for guidance in education, practice and research (Watson, 2007).

The caritas processes provide the theoretical basis for this project. There is great respect placed on the patient’s subjective world as it applies to the protocol, more specifically the patient’s world disrupted by pain. The caritas provide a basis for the development of therapeutic relationships (Caruso et al., 2008), enhance communication between the patient and the practitioner (Watson, 2008) and allow for optimal pain management.

Utilizing Watson’s Theory of Caring allows for a greater world view of the phenomenon associated to pain in the elderly demented patient population. The barriers (as previously discussed), including the patient-practitioner relationship, create challenges when attempting to
appropriately manage pain and promote comfort. The goal for use of Watson’s theory is beyond that of enhancing communication. It is about reaching a spiritual connection, human to human. The importance is placed on caring for the patient, as it should be with each and every patient.

Literature Review

Ovid Medline was the main search engine used with key terms including “pain”, “aged”, “dementia”, “assessment”, “treatment”, “hospital” and “opioids”. Search results were further limited by the terms “acute care” and “pain management”. There were over 46,000 results from the medical subject heading of “pain”. This was then further limited this by the term “aged” and over 9,000 articles resulted. The results needed to be further narrowed to the projects focus, so the term “dementia” was added and the results were limited to the English language. This resulted 138 articles. Further research involved the terms “opioids”, “hospital” and “treatment”. The articles chosen were based on year of publication, relevance this project’s purpose and validity compared to other materials. The literature review was intended to search acute pain management in the dementia patient, however several limitations presented as the research became more focused. Recent published research dealt primarily with assessment of pain in the demented patient rather than treatment options. Though it is important to accurately assess the presence of pain, there appears to be a gap in knowledge when researching the general management of pain. Another limitation of the research was the narrow focus of the participants. The majority of studies reviewed nursing home residence suffering from chronic pain.

Development of an assessment tool that is feasible, reliable and accurate is the first step in addressing pain and determining the appropriate treatment as well as determining the effects of the treatment provided (Warden et al., 2003). This literature review was most useful in
identifying the most accurate and easy to use assessment tool for the acute care setting. The tool chosen will then be used as part of the project’s protocol to manage and treat pain.

Warden et al. (2003) developed the Pain Assessment in Advanced Dementia (PAINAD) scale as a means to assess pain in the elderly dementia patient. Five categories are evaluated with associated points based on behavior and physical exam: breathing, negative vocalization, facial expression, body language and consolability (Warden et al., 2003). They found that this tool is effective in measuring pain when the patient is unable to accurately vocalize their pain level by comparing scores in times of comfort and times of pain (Warden et al., 2003). Another benefit of this scale is its applicability. Extensive training is not required to utilize the scale in practice (Warden et al., 2003). Effectiveness of the tool was evident by the reduction in PAINAD score after the treatment of pain (Warden et al., 2003). The research was conducted in an inpatient setting however it was limited to a small sample size of males (Warden et al., 2003). Though validity was shown among this population, it still needs to be tested among larger populations that include both females and minorities (Warden et al., 2003). This assessment tool could be adapted into the acute care setting because it can be used quickly and results have initially been shown to be consistent among all members of the health care team, including both the bedside nurse and the APN (Warden et al., 2003).

Mahoney and Peters (2008) developed the Mahoney Pain Scale (MPS) which intends to differentiate pain from agitation and allow for in depth assessment of pain, more than its mere presence. The MPS consists of the identification and the quantification of pain (Mahoney & Peters, 2008). The tool is most effective when utilized by a caregiver who is in close relation to the patient (Mahoney & Peters, 2008). This, however, may not prove to be the best tool to utilize
in the acute care setting due to the frequent absence of the primary care giver. The MPS is beneficial in evaluating the severity of pain, the location of pain, and differentiating between pain and agitation by use of the patient’s baseline behavior and medical diagnoses as comparison for painful behavior and expected pain experience (Mahoney & Peters, 2008). To test the reliability of the scale, Mahoney and Peters (2008) compared scores among patients during rest and painful situations. Though the nurses reported that the scale was easy to use and improved communication between nurses (Mahoney & Peters, 2008), the MPS seems a bit complex for consistent use in the acute care setting. The MPS may require significant amount of time to accurately assess the level of pain. In addition, the MPS does not follow the standard 0-10 scale that is commonly known and used in the acute care setting. This may cause discrepancy with practitioner prescribing treatment. Interpretation of the assessed score is included as part of the assessment tool (Mahoney & Peters, 2008), however the practitioners will need to know how those values fall on the scale of severity. This may cause confusion among hospital staff and increase the barrier between practitioner and patient.

Edvardsson, Katz and Nay (2008) developed an Aged Care Pain Chart (APC) which includes numeric pain rating, body mapping for pain locating and activity assessment. Though initial evaluation was in a nursing home, Edvardsson et al. (2008) discuss that the tool is also designed for acute pain management. Activities outlined in the assessment chart include those most common to the acute care setting, where pain may be severe and require treatment (Edvardsson et al., 2008). The benefit of this pain chart compared to that of the MPS or PAINAD, is that the treatment, both pharmacologic and nonpharmacologic, for the pain is
incorporated on the pain assessment chart. Unfortunately, pilot research has only been done so there is limited data regarding validity, reliability and applicability (Edvardsson et al., 2008).

Frequently patients with dementia suffer from delirium when in the acute care setting. This can complicate the assessment and treatment of pain due to provider’s fear of drug side effects and worsening delirium (Hadjistavropoulos et al., 2008). Hadjistavropoulos et al. (2008) acknowledge the added challenge of treating pain in the dementia patient who also suffers from delirium or depression. With the use of the Doloplus-II scale, they evaluated the potential for pain assessment in the demented patient to be altered by the severity of the dementia, and the presence of delirium and/or depression (Hadjistavropoulos et al., 2008). Again, this was limited to examination of the assessment tool rather than of the treatment plan for pain control. The recommendation is to consider comorbidities which have the potential to cause pain and focus on behaviors that could indicate pain as opposed to behaviors associated to delirium and depression (Hadjistavropoulos et al., 2008). It is concluded that pain assessment tools should not relay on social behaviors, such as sleep disturbance or signs of depression, to assess pain because these categories can cause a falsely elevated pain score (Hadjistavropoulos et al., 2008). This is contradictory to the fact that that uncontrolled pain in the demented patient can cause depression and delirium-like behaviors (Warden et al., 2003).

The importance of a clear, easy to use and accurate pain assessment tool has been established. However, which tool proves to be most successful? Cohen-Mansfield (2008) recognized the need to compare the many different assessment tools to best identify the most reliable. Cohen-Mansfield (2008) used self reporting, observation, and rating by nursing staff or informant to evaluate the pain assessment tools. Self reporting included the use of verbal/written
assessment tools such as the Functional Pain Scale, Presents of Pain Intensity, Verbal Discriptor Scale and Global Pain Assessment (Cohen-Mansfield, 2008). The Pain Assessment for the Dementing Elderly (PADE) and the Pain Assessment in the Noncommunicative Elderly (PAINE) were evaluated as part of the informant ratings (Cohen-Mansfield, 2008). Finally, the PAINAD, the Checklist of Nonverbal Pain Indicators (CNPI) and the Observational Pain Behavior Assessment Instrument (OPBAI) were used as observational assessments (Cohen-Mansfield, 2008). For purposes of this project, focus is placed on the observational assessment tools. They found that the PAINAD assessment tool had the greatest interrater reliability compared to the CNPI and OPBAI and the PAINAD scores decreased after medical intervention for pain (Cohen-Mansfield, 2008).

The PAINAD assessment tool will be adapted into the protocol proposed by this project for the following reasons: (1) the tool is easy to use (Warden et al., 2003), (2) it has consistent results among different assessors (Cohen-Mansfield, 2008), and (3) it is based on the conventional 0-10 scale which will reduce practitioner confusion in prescribing treatment.

Chapter 3 will further discuss the use of the PAINAD scale.

After examining research that suggests alternative tools to assess for the presence of pain in the cognitively impaired elderly patient, the question remains: how do we, as practitioners, medically manage that pain? Limited research was available regarding the best pharmacological management. Morrison & Siu (2000) compared two groups of elderly patients suffering from hip fracture and surgical repair, one group with dementia and the other who is cognitively intact. They found that the cognitively intact group received three times more opioid pain medication than the dementia group however pain was still not adequately managed in the cognitively intact
group (Morrison & Siu, 2000). Assessment of pain in the cognitively intact group was conducted during activities that were similar to those of the dementia group, mostly at times of inactivity (Morrison & Siu, 2000). This was intended to prevent higher reports of pain during activities that the dementia group did not experience (Morrison & Siu, 2000). This article provided direct evidence that post operative pain is not properly treated in the elderly population, especially in those suffering from dementia.

Mann, Pouzeratte and Eledjam (2003) compared the patient controlled analgesia (PCA) to patient controlled epidural analgesia (PCEA) in the elderly patient. The purpose was to determine which provided the best pain relief with the least amount of adverse effects (Mann et al., 2003). The cognitively impaired elderly patient was excluded due to inability to use either the PCA or PCEA pump (Mann et al., 2003). PCA/PCEAs are contraindicated for the use with any patient who is cognitive impaired therefore, it is not an option for the elderly patient with dementia (Macintyre, 2001).

Summary

Assessment of pain is the first step in the treatment and control of both acute and chronic pain. The PAINAD model for assessment of the elderly patient with dementia or severe cognitive impairment will be used to base further recommendations and treatment for pain control. The protocol developed will use this assessment tool as a standard for all patients and allow for consistent treatment among health care providers. The PAINAD assessment tool has been shown to have consistency among observers (Cohen-Mansfield, 2008), is easy and quick to use (Warden et al., 2003), and the scoring is a 0-10 scale that health care providers are already familiar. Theoretical framework will be based on Watson’s Theory of Human Caring which
provides a holistic perspective to maximize comfort and quality of life for elderly patients with dementia while in the acute care setting.
CHAPTER 3

Introduction

The development of a standard pain assessment and management protocol for use in the demented elderly patient is intended to reduce the barriers associated with pharmacologic treatment of pain, introduce and utilize a standardized assessment tool, decrease morbidity and increase comfort among those suffering. This project develops an order set protocol, entitled Pain to Comfort, for use in the acute care setting. The PAINAD scale is adapted as the assessment tool. Treatment recommendations are provided in the order set based on the severity of the pain score. The recommendations are for initiating opioid therapy in the elderly dementia patient in the acute care setting. Research is limited regarding effective treatment modalities for the dementia patient, so this protocol serves as a basic introduction to pain management for this population. This protocol is not yet in practice. Testing of efficacy for the protocol will still need to be completed through pilot trials.

PAINAD

Warden et al. (2003) developed the Pain Assessment in Advanced Dementia (PAINAD) scale to improve pain assessment in patients with moderate to advanced dementia who are unable to understand the concept of a scale or are unable to verbally communicate. In the acute care setting, the assessment tool needs to be easy to use, have consistency among assessors, and quantify the pain score for proper treatment (Warden et al., 2003). The PAINAD assessment tool has shown to do just that (Cohen-Mansfield, 2008). The goal of the PAINAD scale is to improve pain assessment by providing a simple, accurate tool that applies the common 0-10 scale to non-communicative patients (Warden et al., 2003). PAINAD was developed from several current
assessment tools, including the Face, Legs, Activity, Cry, Consolability Scale (FLACC) and the Discomfort Scale for Dementia of the Alzheimer Type (DS-DAT) (Warden et al., 2003). The PAINAD scale is the assessment tool adapted by this protocol for the assessment of pain in the elderly with dementia (Illustration 3.2).

The PAINAD score is based on examination of five factors: breathing, vocalization, facial expression, body language and consolability. Warden et al. (2003) provide definitions for each concept used in the PAINAD tool to clarify unfamiliar terms (Appendix 3.3). These terms are not included in the actual tool, but are separated for reference to keep the tool easy to read and clear to follow. Knowing the definition of concepts enhances consistency among those observing for pain. Each section is scored with a 0, 1, or 2. The total score is the pain score and the score is linked with severity (the higher the score, the more severe the pain) (Warden et al., 2003). This is consistent with the current numeric 0-10 scale used in patients who are able to verbalize severity of pain. Pain management interventions proposed by this project are provided as an order set for the practitioner to initiate. Based on the total score, from either the verbalized number or the PAINAD scale, the registered nurse has the guidance to properly treat the patient’s pain both pharmacologically and non-pharmacologically.

Pain to Comfort Protocol

Protocol Purpose and Limitations

The protocol is designed to offer practitioners a guide for initiating as needed opioid therapy in the elderly patient suffering from dementia. It is applicable to the acute care setting, specifically the intensive care population, because medications can be easily titrated for optimal effect and the patient can be closely monitored for side effects and adverse events. The acute
care setting also limits the types of pharmacologic interventions to those where onset is rapid and efficacy can be evaluated quickly. This is simply a suggested starting point and does not intend to limit the pharmacological interventions required to adequately control pain. Adjunct therapy and scheduled dosing are not included in this protocol though they may be needed among this population. It is also not to be used exclusively for end of life comfort. This is a tool to standardize pain assessment and initiate opioid therapy while the patient is in the acute care setting. The protocol is limited by the lack of available research. The Pain to Comfort protocol is offered to all practitioners within the hospital and ED.

Protocol Description

Pain to Comfort protocol (Illustration 3.1) is based on a 0-10 scale. The protocol can be applied to both verbal and non-verbal dementia patients in the acute care setting. The initial step for the protocol is to assess the patient’s pain level using the PAINAD scale. The registered nurse at the bedside may be the first to assess for pain however all practitioners should conduct a pain assessment as part of their daily examinations. The registered nurse can then inform the practitioner that the patient is in pain, prompting the practitioner to initiate the protocol. The number from the scale correlates with the intervention for pain. The practitioner simply checks the line in front of the intervention to activate the order. The practitioner must initiate the orders and specify which treatments are to be offered. There is an option to write in alternative orders if the patient has allergies, is on current home regimens, does not tolerate what is provided, or the suggested dosages are ineffective.

The order set is based on the principle of the World Health Organization’s analgesic ladder for the treatment of cancer pain. The WHO (2009) provides guidelines for the types of
treatment modalities for each level of pain, starting with the lowest and building up. It is recommended that level 1 of 3 be treated with non-opioid medication +/- adjunct therapy (WHO, 2009). If pain persists to a level 2 (mild-moderate), then pain should be treated with an opioid +/- non-opioid +/- adjunct therapy (WHO, 2009). Finally if pain persists to the top of the ladder, or a level 3 (moderate to severe), then treatment also should include an opioid +/- non-opioid +/- adjunct therapy (WHO, 2009). This concept can be applied to non-cancer pain and has shown to be effective means of treating other forms of chronic pain, including low back pain and neuralgia (Gardner-Nix, 2003). Pain treatment should begin when the patient is experiencing little pain in hopes to prevent the development of severe pain. The dosing in the protocol is set low to avoid or minimize severe adverse effects which would discourage further use of the protocol, however, there is freedom for the practitioner to order additional therapies of choice. When prescribing opioids in the elderly population, the practitioner must consider the presence of co-morbidities such as liver failure and renal insufficiency, potential interactions with other medications (Davis & Srivastava, 2003), and the possible adverse events associated with use of the opioid (Cavalieri, 2002). A clear discussion between the practitioner and the patient/family needs to address the goal of therapy and desires regarding end of life care before this protocol is initiated. There is potential for discouragement of use of the protocol by the practitioners if the protocol dosing is set too low and the patient’s pain is not controlled, however the same would apply if the dosing was too high causing severe adverse events. Adjustments in doses may need to be made after pilot testing.

To optimize pain management and functional level, it is important to incorporate both non-pharmacologic and pharmacologic interventions (Horgas et al., 2003). The effect of
combination therapy is improved comfort with decreased adverse effects of medications (Horgas et al., 2003). Little pain (score of 1-2) is best treated with nonpharmacological interventions and can be incorporated into home care by the family or primary care giver. These interventions include positioning, prayer, massage, heat/cold therapy, relaxation through guided imagery, distraction, and mild exercise (such as a walk around the unit) (Horgas et al., 2003). The use of nonpharmacologic therapies can decrease the amount of opioids needed to control pain, therefore decreasing the potential for adverse effects of pharmacologic therapies (Horgas et al., 2003).

The treatment of mild pain (score of 3-4) will include the use of Tylenol and low-doses of Morphine and Fentanyl. Tylenol is an ideal treatment option for mild pain in the elderly because it rarely causes gastrointestinal or renal complications (Davis & Srivastava, 2003). Nonsteroidal anti-inflammatory drugs will be avoided in the elderly because of the potential to cause peptic ulcer disease and gastrointestinal bleeding, cause hypertension and worsen heart failure, and cause renal insufficiency (Davis & Srivastava, 2003). The consequence of gastrointestinal bleeding associated to NSAID use can be life threatening and is too great of a risk to take in the frail elderly patient (AGS, 2002). Cyclo-oxygnease-2 inhibitors (COX-2) are a relatively new type of NSAID that do not have the adverse GI effects as the other types of NSAIDs (Bansal, Joshi & Bansal, 2007). Research thus far has shown concerning cardiovascular adverse effects (Bansal et al., 2007) therefore they too are not recommended for the treatment of pain in this protocol. In the acute care setting, the oral route for medication administration may not be feasible, or Tylenol may be ineffective or contraindicated, the better choice then becomes low dose opioid therapy. Morphine 1-2 milligrams (mg) intravenously (IV) every 4 hours as needed or Fentanyl 12.5 micrograms (mcg) IV every 4 hours as needed may be used. Research is limited for
determining dosing, especially among such a fragile population. Opioid use in the elderly is safe and effective when prescribed appropriately (Weiner & Hanlon, 2001). Initial dosing of opioids for the elderly should be 25-50% less than that of the adult to avoid adverse events (Horgas et al., 2003). Morphine and Fentanyl were chosen because of the short half-life and the side effects are well known among the elderly (Weiner & Hanlon, 2001).

Moderate pain (score of 4-6) in the elderly should be treated with combination opioids and acetaminophen or larger doses of opioids (Baumann, 2005). The protocol will recommend higher doses of either Morphine or Fentanyl, again to be chosen by the practitioner, or the use of combination acetaminophen-oxycodone. The idea is to try a higher dose of what was used to treat the mild pain. If Tylenol was given, then the acetaminophen-oxycodone combination should be used, if Morphine was used, then a stronger dose of Morphine should be given. The same applies to Fentanyl. A benefit to the use of opioids is the lack of a ceiling effect (Weiner & Hanlon, 2001). Morphine 15-30 mg PO is recommended for moderate to severe pain in the elderly (Horgas et al., 2003). Using the 3:1 (oral to IV) conversion ratio, 15 mg of oral Morphine converts to 5 mg IV morphine. The dose recommended for Morphine has been increased to 2-4 mg IV every 4 hours as needed and Fentanyl has been increased to 25-50 mcg IV (Horags et al., 2003) every 4 hours as needed. The dosing frequency must also be considered when prescribing for the elderly patient due to the possibility for altered renal function and medication clearance (Davis & Srivastava, 2003).

Severe pain is treated by increasing the dose of opioid used in the treatment of moderate pain (Hasenau, Roop & Vallerand, 2007). Morphine 4-6mg IV every 4 hours as needed and Fentanyl 50-75 mcg IV every 4 hours as needed is now recommended. The protocol
recommends initiating opioids with the mild level dosing and titrate dosage up to desired effect, optimizing the patient’s comfort and functional status. If the patient’s pain persists after treatment with these recommended doses, the registered nurse is urged to call the practitioner for further adjustments to treatment. Range doses are given because each patient responds to opioids differently due to pain severity and past opioid exposure (Hasenau et al., 2007). The ideal dose is that which relieves pain (Hasenau et al., 2007).

Patient Controlled Analgesia (PCA) pumps are not recommended for the use in demented patients because they are unable to properly administer the dose by pushing the button due to poor memory and cognitive function (Mann, et al., 2003). PCAs have not been included as part of the protocol due to risk of error in use and potential lack of appropriate and consistent assessment for pain.

Reassessment of pain should be done shortly after administration of medication depending on the route utilized. If oral medication is given, reassess the pain in 30-60 minutes. Reassessment of pain should occur 15-30 minutes after IV medication administration. This will ensure proper pain control as well as monitor for adverse effects of the medications given. The PAINAD scale will be used for reassessment as it was for initial assessment. This will develop consistency among assessments and assessors.

The fear of prescribing opioids in the elderly is based mostly on the fear of adverse events and addiction (Horgas et al., 2003). Constipation, nausea, sedation, delirium and respiratory depression are the most common (Davis & Srivastava, 2003). Addiction is most common among patients who receive scheduled doses (Weiner & Hanlon, 2001) and the risk for addiction is minimal, less than 1% (Weiner & Hanlon, 2001). In the elderly dementia patient,
addiction or physical dependence should not be a reason for avoidance of opioid therapy. Constipation is the only adverse effect that is not transient and does not improve as tolerance to the opioid develops (Weiner & Hanlon, 2001). Bowel care will be initiated as part of the protocol to enhance patient comfort and reduce risk of bowel impaction. This should be initiated with the start of opioid therapy and the dose should be adjusted to desired effect (Davis & Srivastava, 2003). The protocol recommends the use of Senokot –S, a combination stool softener (docusate) and laxative (senna) in one pill (Wells, DiPiro, Schwinghammer & Hamilton, 2006).

Nausea usually resolves within a few days of opioid therapy (Davis & Srivastava, 2003). Treatment is indicated when symptoms are present (Davis & Srivastava, 2003). The protocol will recommend Prochlorperazine (Davis & Srivastava, 2003) 5 mg IV every 4 hours as needed. Sedation and delirium are also transient and usually resolve in a few days after initiation of opioid therapy (Davis & Srivastava, 2003).

If delirium develops, the practitioner needs to examine for possible interactions with adjunct therapy, decrease opioid dosage if pain is controlled, and possibly change either medication or route (Davis & Srivastava, 2003). Inadequate pain control can too be responsible for mental status decline and should be assessed (Davis & Srivastava, 2003).

Respiratory depression can be avoided by initiating therapy at a low dosage, and gradually increasing to optimize pain control (Davis & Srivastava, 2003). Narcan will be part of the protocol as a safety measure for clinically relevant respiratory depression (respiratory rate less than 5 with decreasing oxygen saturation levels less than 90%) or sedation from opioid overuse. The risk for respiratory depression associated to opioid use decreases quickly as tolerance builds and should not be a common adverse effect if opioids are titrated appropriately
(Weiner & Hanlon, 2001). The practitioner must order Narcan in the protocol because it may not be indicated depending on end of life goals. If Narcan is administered, the practitioner must be called immediately.

Protocol Implementation

Pain to Comfort protocol can be adapted into any acute care setting. Most commonly, the protocol will be used for pain management for elderly patient with dementia in the inpatient hospital setting rather than the emergency department. Pilot testing will be conducted in an intensive care unit were there is hemodynamic monitoring, staff is available for frequent pain assessments and adjustments to medication can be done easily to maximize patient comfort. The protocol is easily adapted by the hospital because the steps are simple, the medications are inexpensive and readily available, and training for proper pain assessment is easily conducted. A ten to fifteen minute in-service will be offered to all members of the health care team including, registered nurses, APNs and physicians. The protocol will be available in either paper or electronic form based on the facility.

The challenge in implementation will be making providers aware of the protocol and encouraging them to utilize it rather than prescribing medications independently. To increase awareness of the protocol, all physicians will receive an email with basic instructions and a copy of the protocol. In addition, it will be posted in the physicians lounge, bathrooms and patient care areas. Data collected from the pilot studies will also be made available to show the efficacy of the treatment plan. Order sheets will be available at all physician work areas (or on the computer).
Protocol Evaluation

The effectiveness of the protocol will need to be evaluated. Pilot trials are needed to assess accuracy of the PAINAD scale as well as the treatment medications and doses. Evaluation of the protocol can be conducted through chart audits, noting how many additional orders are needed to achieve adequate pain control, monitoring PAINAD score trends among patients and interviewing patients and family members regarding pain control. The evaluation process may be difficult because the patient may not be able to communicate verbally and participate in an interview. Evaluation may need to include observation of patient behavior, and involvement of the primary care giver/family to determine if activity levels have increased or if the patient appears more restful and comfortable. In addition, evaluation of the patient’s functional status after pain treatment will indicate if comfort is achieved.

Summary

Pain treatment is a dynamic process that is best tackled with a holistic approach, incorporating both pharmacological and nonpharmacological interventions. The elderly patient suffering from dementia requires a specialized assessment technique because of the loss of cognitive function and inability to utilize scales or verbalize pain. The use of the PAIDAD scale is recommended by this protocol because it is specific to the cognitively impaired and is easy to use. The goal of the protocol is to promote wellness as defined by each patient/family, enhance comfort of the patient, and increase the quality of life among patients suffering from dementia.
Illustration 3.1 Pain to Comfort: Pain management protocol for patients with dementia

Date:   Time:    Allergies:   Patient Label

---

**Practitioner Order Set:**

**Pain management Protocol for Patient with Dementia**

*(Check as applicable)*

<table>
<thead>
<tr>
<th>Pain Score*</th>
<th>Intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>___ No intervention indicated. Continue to assess for pain every 2 hours or with any change in activity.</td>
</tr>
</tbody>
</table>

**I. Little Pain**

1-2  ___ Non-pharmacologic Interventions: Reposition patient. Offer water/food as appropriate. Bowel/bladder care. Encourage interaction with family members as appropriate, including family member massage or therapeutic touch. Provide natural daylight/ dim lights at night. Relaxation with music. Check temperature of room, avoid heat/cold.


**II. Mild Pain**

3-4  Non-pharmacologic Interventions (as described in I.) **plus**

___ Acetaminophen 325-650 mg PO/PR q 6 hours PRN (DO NOT exceed 4g/24 hours)  - OR -

___ Morphine 1-2 mg IV q 4 hours PRN  - OR -

___ Fentanyl 12.5-25 mcg IV q 4 hours PRN  - OR -

___ Other: ________________________________

Reassess in 15 minutes if IV medication given, or 30 minutes if PO medication given. Then continue to treat accordingly.

**III. Moderate Pain**

4-6  Non-pharmacologic Interventions (as described in I.) **plus**
___ Oxycodone + acetaminophen 5/325 1-2 tabs PO q 6 hours PRN

  (monitor Tylenol intake) - OR -

___ Morphine 2-4 mg IV q 4 hours PRN - OR -

___ Fentanyl 25-50 mcg IV q 4 hours PRN - OR -

___ Other __________________________________________

Reassess in 15 minutes if IV medication given, or 30 minutes if PO medication given. Then continue to treat accordingly.

**IV. Severe Pain**

6-10  Non-pharmacologic Interventions (as described in I.) **plus**

___ Morphine 4-6 mg IV q 4 hours PRN - OR -

___ Fentanyl 50-75 mcg IV q 4 hours PRN - OR -

___ Other __________________________________________

Reassess in 15 minutes if IV medication given, or 30 minutes if PO medication given. Call if pain still 6-10 with reassessment after one dose of medication from this category.

**Bowel Care of Choice** (to be started with the use of ANY opioid medications) Hold for diarrhea.

___ Senokot – S 2 tabs PO daily

___ Other __________________________________________

**Nausea/Vomiting**

___ Compazine 5 mg IV q 4 hours PRN

___ Other __________________________________________

For severe respiratory depression (respiratory rate < 5 or pulse oxygenation level less than 90%) or severe sedation (unable to arouse patient with physical and loud stimulation) give Narcan and **call practitioner STAT**

___ Narcan 0.4mg IV

Sign: ____________________________________________
* Pain score based on either verbalization of pain score and/or PAINAD assessment flow sheet.

Illustration 3.2 PAINAD (Warden, 2003, p.14)

<table>
<thead>
<tr>
<th>Breathing, Independent of Vocalization:</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negative Vocalization:</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>Occasional moan or groan. Low-level speech with a negative or disapproving quality.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facial Expression:</th>
<th>Score</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Body Language:</th>
<th>Score</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Consolability:</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>No need to console</td>
<td>Distracted or reassured by voice or touch.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total:</th>
<th>Score</th>
</tr>
</thead>
</table>
APPENDIX 1.1
Appendix 1.1: Mini Mental State Exam (Kurlowiez & Wallace, 1999, http://www.chcr.brown.edu/MMSE.PDF.)

The Mini-Mental State Exam

Patient ______________________ Examiner ______________________ Date ____________

Max. Score Pt. Score

**Orientation**

5 ( ) What is the (year) (season) (date) (day) (month)?
5 ( ) Where are we (state) (country) (town) (hospital) (floor)?

**Registration**

3 ( ) Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer.
Then repeat them until he/she learns all 3. Count trials and record.
Trials ____________

**Attention and Calculation**

5 ( ) Serial 7’s. 1 point for each correct answer. Stop after 5 answers. Alternatively spell “world” backward (Give one point for each correct letter).

**Recall**

3 ( ) Ask for the 3 objects repeated above. Give 1 point for each correct answer.

**Language**

2 ( ) Name a pencil and watch.
1 ( ) Repeat the following “No ifs, ands, or buts”
3 ( ) Follow a 3-stage command: “Take a paper in your hand, fold it in half, and put it on the floor.”
1 ( ) Read and obey the following: CLOSE YOUR EYES
1 ( ) Write a sentence.
1 ( ) Copy the design shown.

_____ Total Score

Assess level of consciousness along a continuum ____________ Alert Drowsy Stupor Coma
APPENDIX 1.2

1. Stimulation
2. Transmission
3. Perception
4. Modulation
Appendix 2.1: Dynamic of Human Caring Process (Watson, 2008, p. 6)

Phenomenon field is the area in the center of the diagram consisting of self and present moment (Watson, 2008). The phenomenon field for the nurse is represented by the circle. The phenomenon field for the patient is the circle of triangles. The event of caring exists when the phenomenon field of the nurse and patient combine, labeled “Actual Caring Occasion” (Watson, 2008). This event allows for new future opportunities (Watson, 2008), represented by the suns. (Graphics have been modified from original diagram for computer compatibility. The sun symbol represents the dashed and wave line combination in the original work).
APPENDIX 2.2
Appendix 2.2: Watson’s Carative Factors (Watson, 2008, p.31)

Carative Factors: 1979

1. Human-altruistic values
2. Instilling/enabling faith and hope
3. Cultivating sensitivity to oneself and other
4. Developing a helping-trusting, human caring relationship
5. Promoting and accepting expression of positive/negative feelings
6. Systemic use of scientific problem-solving caring process
7. Promoting transpersonal teaching-learning
8. Providing for a supportive, protective, and/or corrective mental, social, spiritual environment
9. Assisting with gratification of human needs
10. Allowing for existential phenomenological dimensions
APPENDIX 2.3
Appendix 2.3: Watson’s Caritas Processes (Watson, 2008, p.31)


1. Practicing loving-kindness and equanimity for self and other
2. Being authentically present; enabling/sustaining/honoring deep belief system and subjective world of self/other
3. Cultivating one’s own spiritual practices, deepening self-awareness, going beyond ego-self
4. Developing and sustaining a helping-trusting, authentic caring relationship
5. Being present to, and supportive of, the expression of positive and negative feelings as a connection with deeper spirit of self and the one being cared for
6. Creative use of self and all ways of knowing/being/doing as part of the caring process
7. Engaging in genuine teaching-learning experiences within contest of caring relationship-attend to the whole person and subjective meaning; attempt to stay within other’s frame of reference (coaching role)
8. Creating a healing environment at all levels physical, nonphysical, subtle environment of energy and consciousness whereby wholeness, beauty, comfort, dignity, and peace are potentiated
9. Reverently and respectfully assisting with basic needs; holding an intentional, caring consciousness of touching and working with the embodied spirit of another, honoring unity of Being; allowing for spirit-filled connection
10. Opening and attending to spiritual, mysterious, unknown existing dimensions of life-death-suffering

Breathing

1. *Normal breathing*: effortless, quiet, rhythmic respirations.
2. *Occasional labored breathing*: bursts of harsh, difficult or wearing respirations.
3. *Short period of hyperventilation*: intervals of rapid, deep breaths lasting a short period of time.
4. *Noisy labored breathing*: negative sound respirations, loud, gurgling, wheezing, strenuous or wearing.
5. *Long period of hyperventilation*: excessive rate and depth of respirations lasting considerable time.
6. *Cheyne-Stokes respirations*: rhythmic waxing and waning of breathing from very deep to shallow with periods of apnea.

Negative Vocalization

1. *None*: neutral or pleasant speech/vocalization.
2. *Occasional moan/groan*: mournful or murmuring sounds, wails, laments. Groaning is louder than usual involuntary sounds with abrupt beginning and ending.
3. *Low level speech with a negative or disapproving quality*: muttering, mumbling, whining, grumbling, or swearing in low volume, complaining, sarcastic, or caustic tone.
4. *Repeated troubled calling out*: phrases or words used over and over again in a tone that suggest anxiety, uneasiness, or distress.
5. *Loud moaning or groaning*: louder and more frequent than occasional moan/groan.
6. *Crying*: utterance of emotion with tears, sobbing or quiet weeping.

Facial Expression

1. *Smiling or inexpressive*: upward turn of corners of the mouth, pleasure or contentment, neutral, at ease, relaxed, blank look.
2. *Sad*: unhappy, lonesome, sorrowful, dejected. May have tears in eyes.
4. *Frown*: downward turn of corners of the mouth, facial wrinkling around mouth and forehead.
5. *Facial grimacing*: distorted, distressed look, eyes squeezed shut, increased wrinkling around mouth and forehead.
Body Language

3. *Distressed Pacing*: activity that seem unsettled. Fearful, worried, or disturbed element. Rate may be faster or slower.
4. *Fidgeting*: restless, squirming, wiggling. May be hitching a chair across the room. Repetitive touching, tugging, rubbing body parts.
5. *Rigid*: stiffening of the body, arms/legs tight and inflexible, trunk straight & unyielding (exclude contractures).
6. *Knees pulled up*: flexing of the legs and drawing knees to chest, overall troubled appearance (exclude contractures).
7. *Striking out*: hitting, kicking, grabbing, punching, biting, or personal assault.

Consolability

1. *No need to console*: sense of well being. Contentment.
2. *Distracted or reassured by voice or touch*: the behavior stops during the period of interaction with no indication of distress.
3. *Unable to console, distract, or reassure*: inability to sooth the person or stop behavior with words or actions. No amount of comforting, verbal or physical will alleviate behavior.
REFERENCES


http://www.who.int/cancer/palliative/painladder/en/