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## Hospice Nurses- Attitudes and Knowledge about Pain Management

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Hospice Nurses - Attitudes and Knowledge about Pain Management

by

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A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Masters of Science in Nursing  
College of Nursing  
University of South Florida

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## **Dedication**

I dedicate this work and the cumulative work done over that past three years to my partner in life, Heather. The help and encouragement she gave me during this time went far beyond moral support; although there was much of that. She has helped raise three children during this time, each one with their special needs and demands. She has been the cook and baker, the shopper, the taxi cab driver, the tutor, the errand runner, the soccer mom, the classroom mom, the get up early to fix breakfast and lunch mom, and so many other roles I can only begin to name a few. She has been the glue that has held our home and family together.

She also gave me technical assistance that was patient and kind. Without that help I would have never been able to navigate the world of “formatting” a thesis. She has spent countless hours helping me make sure my formatting was right and when it wasn’t helping me fix the problems without annoyance or complaining.

I know in the beginning it was hard to swallow this “plan” to return to graduate school, but for someone who was unsure about it all in the beginning she kept the enthusiasm I had at the start and carried it on, long after it was gone for me. Every test, paper, and project she cheered me on; congratulating me when the results were good and holding my hand and supporting me when they were not. This journey we have been on has not been easy, in fact I often say that if I had known how hard it was going to be I may have never done this. In the times I felt like quitting, she would be the voice of

reason, reassuring me and reminding me that the days that were upsetting and overwhelming were not the days to make those choices. I would have never, ever, been able to do this without her.

For all of this I owe her a great debt of gratitude and hope one day I can do the same for her. Thank you Heather.

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## **Abstract**

It has been well established that many people will suffer with pain at the end of life, and untreated pain contributes to reduced quality of life. Many barriers contribute to this issue including a lack of knowledge in nurses who care for dying patients. Many nurses in general practice settings do not possess adequate knowledge about basic pain management principles; and the same may be true about hospice nurses despite the assumption that hospice nurses are more adept at pain management. Contributing to this problem may be the attitudes that nurses, including hospice nurses, have regarding pain and its management. This study sought to identify the knowledge levels of hospice nurses. Because attitudes may affect the delivery of effective pain management, the study also sought to determine attitudes of hospice nurses regarding pain and its management. Thirty-five hospice nurses completed two instruments: The Pain Management Principles Assessment Test measured levels of knowledge and the Nurses Pain Management Attitude Survey determined attitudes. Data was analyzed using means, standard deviations, frequencies and percentages. A correlation between knowledge level and attitude was also calculated, along with a correlation between knowledge level and certification status. The overall mean knowledge score for the nurses studied was 21.74 (72.3%), which falls below accepted standards. The mean attitude score found was 82.34, which demonstrates only slightly positive attitudes. These findings support the idea that

knowledge and attitude are not synonymous and that a nurse may have a positive attitude about the management of pain, without sufficient knowledge to effectively alleviate pain. It is often said that hospice nursing is a calling, and these are the nurses who are at the forefront of pain management. This study demonstrates that slightly more positive attitudes may indicate that this group of nurses is motivated to gain a better knowledge base. This should motivate hospices and other education institutions to incorporate more specific instruction regarding pain management into their curricula. Despite some common misconceptions pain does not have to be an unavoidable part of life, and with a better knowledge base hospice nurses could more effectively deliver compassionate, expert care.

## **Chapter I Introduction**

Primo Levi (1919-1987), an Auschwitz Concentration Camp Survivor, was once quoted as saying “If we know that pain and suffering can be alleviated, and we do nothing about it, then we ourselves become the tormentors” (Star Quotes, 2011).

Pain is among the most fearsome symptoms that people may face at the end-of-life, and untreated pain has many negative consequences. The World Health Organization (WHO) has identified that globally up to six million people die annually of cancer who have little or no access to pain medications (WHO, n.d.). When considering the four domains of quality of life, pain has considerable impact on physical, psychological, social and financial well-being. Argoff (2007) concluded that unrelieved pain interferes with sleep, increases levels of anxiety, depression, morbidity and mortality. Some individuals may expect that pain is an unavoidable part of life, especially when facing a life limiting illness. Still others may feel that pain is punishment for past evils they have committed. Pain is a highly subjective and deeply personal experience. Poorly managed pain can have other numerous deleterious effects such as difficulty concentrating, lack of energy, lost productivity, decreased quality of life and inability to complete everyday tasks (Long & Morgan, 2008).

Many barriers to effective pain management exist, including practitioner and patient based factors. Patient based barriers may contribute to nurses’ negative attitudes

toward pain management. The most notable barrier is the fear of addiction, which is held by both patients and practitioners. This is disconcerting and ill-founded as Hojsted and Sjogren (2007) found the prevalence of addiction in cancer patients with chronic pain to be 0%-0.7%. Paice, Toy and Shott (1998) found that patients who had little or no concerns about addiction and tolerance had lower pain scores. In addition, this research conducted in the 1990's shows that one-third of cancer patients believe pain interferes with daily activity. This research is supported by Deimling, Bowan and Wagner (2007) who found that cancer survivors who report more pain have difficulties with mobility, especially reaching, bending and walking. In addition, the patients reported that their pain caused psychosocial distress; namely anxiety and depression. Family members and caregivers can also be a barrier to effective pain management as they verbalize concerns regarding disabling side effects such as confusion and drowsiness (Potter, Wiseman, Dunn, & Boyle, 2003). Jacobsen, Liubarskiene, Moldrup, Christop, and Samsanaviciene (2009) found some patients reluctant to adhere to prescribed treatment regimens fearing disabling side effects. Even though misconceptions and concerns on the part of the patient and family contribute to unrelieved pain, there are many other barriers generated by health care institutions, federal and state regulations, insurance policies and most significantly clinicians (Potter, Wiseman, Dunn, & Boyle, 2003) (Sun, Borneman, Piper, Koczywas, & Ferrell, 2008). These issues deserve attention as the implications are far reaching. Health care providers are uniquely poised to tear down these barriers and misconceptions but only if they attain the best scientific knowledge and are able to avoid these misconceptions themselves.

Fink and Gates (2010) point out that lack of available scientific data is not a contributing factor in the mismanagement of pain; that providers have an inability to utilize three decades of scientifically generated pain management knowledge. Despite this abundance of knowledge, under-treated pain continues to be a significant issue as Deandrea, Montanari, Moja, and Apolone (2008) concluded that the prevalence of untreated cancer pain remains high with almost half of patients having their pain unrelieved. Patients have a right to effective pain management, and the American Pain Foundation has established these rights in their Pain Care Bill of Rights (2010). Until the attitudes and knowledge of health care providers' improve, pain will continue to be undertreated. Health care providers often fail to carefully assess, treat and quantify pain, and inexperienced clinicians often look for objective signs of pain and, when these signs are lacking, may disbelieve that the patient is in pain (Davis & Frandsen, 2005). Providers also have fears of toxicity, adverse effects and addiction (Davis & Frandsen, 2005). There needs to be a significant focus on education for health care professionals. Identifying and rectifying these issues should be at the forefront for those who work in any health care setting where pain is prevalent.

### **Statement of the Problem**

Despite more than twenty years of established pain management guidelines (Agency for Health Care Policy and Research 1992, American Pain Society 1991, World Health Organization 1990), clinicians continue to inadequately manage pain, and patients around the world suffer needlessly. One of two cancer patients will experience pain that is under-treated (Deandra et al., 2008), and the annual cost of unmanaged pain in the

United States reaches \$100 billion annually (Fishman, Vargas & Green, 2007). In a hospice and palliative setting, pain management is a focus with hospice nurses standing at the forefront of effective pain management. However, McMillan (1996) found that many hospice patients do not get effective pain relief as only 15% of patients studied had pain relief scores of 9-10 (1-no relief, 10-complete relief). Knowledge and attitudes about pain may affect the efficacy of pharmacologic and non-pharmacologic therapy delivered by the hospice nurse; therefore, it is important to determine these aspects in order to lessen the gap that may exist. This problem is easily researchable in a hospice setting as demonstrated by other similar studies (Wallace et al., 1995, McCaffery & Ferrell, 1995, Wolfert et al., 2010), and data can be collected via similar surveys. The purpose of this descriptive study is to determine knowledge levels and assess attitudes regarding pain management principles among hospice nurses delivering care to patients with advanced disease.

### **Research Questions**

The following questions guided the research:

1. What is the level of knowledge of hospice nurses regarding pain management principles for patients with cancer?
2. What are hospice nurses' attitudes regarding pain management?
3. Do hospice nurses who are certified in hospice and palliative care (CHPN) have significantly higher scores on the Pain Management Principles Assessment Test?
4. What is the relationship between the knowledge level of hospice nurses and their attitudes regarding pain management?

5. What is the relationship between the years of experience that the nurses have and their attitudes regarding pain management?

### **Definitions of Terms**

*Hospice Nurse:* Registered nurse currently working in a hospice or palliative care setting who delivers services and treatment aimed at enhancing comfort, improving quality of life and relieving pain and other distressing symptoms. (National Hospice and Palliative Care Organization, 2006).

*Pain:* Pain is subjective, and is “whatever the experiencing person says it is, existing whenever he says it does” (McCaffery, 1999 p.17). The Agency for Healthcare Research and Quality defines chronic pain as “persistent pain, which can be either continuous or recurrent and of sufficient duration and intensity to adversely affect a patient's well-being, level of function, and quality of life” (Guideline Summary, 2005).

*Knowledge:* Includes aspects of becoming familiar with the body of information, facts and principles gained by scientific development and gaining the understanding in the course of experience (Merriam Webster, 2011).

*Attitude:* Is described as a mental position that one stands on about a fact or state and feelings and emotion can be involved (Merriam Webster, 2011).

### **Significance to Nursing**

Nurses are an essential component of pain management across all health care settings, and because hospice nurses are continuously exposed to the practice of symptom management, one would expect hospice nurses to demonstrate high knowledge levels of pain management principles. The National Hospice and Palliative Care Organizations’

philosophy has the goal of enhancing comfort while improving the quality of life for patients and families facing a life limiting illness to achieve a peaceful and comfortable death (National Hospice and Palliative Care Organization, 2006). Studies have shown that from the start there is a lack of education on pain management in nursing academics and faculty need to develop a comprehensive plan to incorporate this into the curricula (Plaisance & Logan, 2006). Hospice nurses must be prepared with the correct knowledge, skill and attitude to help patients achieve the goal of a peaceful and comfortable death. Because of the significance of this issue, it is important to determine knowledge levels and attitudes of nurses practicing in a palliative setting, so that improvements in the delivery of this care can be made, if needed. Results of this study may shed light on the improvements needed in basic nursing curricula, knowledge base of hospice preceptors, hospice organization orientations and hospice continuing education programs.



## **Chapter II Review of Literature**

This review begins by examining the essential education needed by health care professionals to understand the principles of pain management. Gaining a firm knowledge base is the first step towards meeting the goals of more effective pain management for those suffering from cancer related pain. The following chapter explores various aspects of health care education related to pain and its management, including nursing and medical textbooks and time devoted to understanding and managing pain in nursing curricula. The Agency for Health Care Policy and Research (now The Agency for Health Care Quality) notes that health care professionals' inadequate levels of knowledge are considerable barriers to good pain management (Guideline Summary, 2005). The review of literature that follows examines practitioner's knowledge and attitudes that affect the delivery of effective pain relief including physicians and pharmacists, but more comprehensively nurses.

### **Nursing Education**

Though it is known that text books are not the sole source for instruction, they do provide a basis from which further education is provided. Ferrell, Virani, Grant, Vallerand, and McCaffery (2000) examined the amount of content related to pain and end-of-life care in nursing textbooks frequently used. The study sought information to

support a project that was funded by the Robert Wood Johnson Foundation titled “Strengthening Nursing Education in End-of-life Care”. One goal of the project was to improve the content of pain and end-of-life care in nursing textbooks. Fifty nursing and pharmacy textbooks were chosen for review for this descriptive study. Forty-six were nursing texts and four were pharmacology. The reviewers accomplished a thorough appraisal of the nursing textbooks that included reviewing the index, table of contents and all pages for content related to pain and end-of-life care. A total of 45,683 pages were reviewed. Pain content represented 0.5% of the total content and end-of-life included 902 pages or 2% of the content.

The study found varying definitions of pain, with a majority citing the definition by McCaffery’s as “Whatever the person says it is, existing whenever the person says it does” (1999, p. 17). Despite this, none of the textbooks instructed more specifically about pain at end of life and the unique facets that encompass this. Only two texts out of 50 discussed the differences between nociceptive and neuropathic pain. The study further analyzed the textbooks for content in specific areas; assessment, use of scales, pharmacological management, invasive techniques, principles of addiction, tolerance and physical dependence, equianalgesia, fear of opioids hastening death, side effects of opioids and non-drug interventions. This analysis found that the pages covering these topics ranged from 61 to just three and a half. There was a scant amount of information related to addiction, tolerance and physical dependence as terms that are frequently misunderstood and may lead to the under-treatment of pain. Interestingly, the reviewers found the pharmacology textbooks considerably weaker in the area of pain management,

lacking basic information about the use of long acting opioids for management and the use of short acting opioids for breakthrough pain (BTP). The reviewers overall found serious deficiencies regarding pain and end-of-life care in all the textbooks reviewed, and concluded authors, publishers and editors must take a greater responsibility to integrate new approaches to better instruct future generations of nurses (Ferrell et al., 2000).

Similarly, having an awareness of the attitudes and knowledge of nursing students is an important aspect to consider. Plaisance and Logan (2006) investigated this facet with a descriptive study of Louisiana nursing students. The purpose of the study was to explore nursing students' attitudes and knowledge about pain management by using a tool called Nurses' Knowledge and Attitude Survey Regarding Pain management (KNASRP), which is a self administered tool containing 37 items. More than half of the items on the survey relate directly to pharmacology. A total of 313 nursing students from both associate degree nursing (ADN) programs (103) and baccalaureate of science in nursing (BSN) programs (210) returned the survey. The mean score was 64% correct with the baccalaureate students scoring higher (65%) than the associate students (60.8%), although both groups had low scores. The pharmacology items scored lower: 54.7% for the BSN students and 49.5% for the ADN students, and only 30% of the students correctly identified the risk of addiction. The study further found that only 3.8% of the students scored more than 80%, a worrisome outcome as that typically is the standard for an acceptable score. It was concluded that most students in this study had insufficient knowledge to adequately manage pain. Some survey items were scenario based and answers given indicated that students may substitute their judgment for the patients'

report of pain. These findings have many implications for nursing educators, primarily improvement of nursing curricula regarding pain management. Perhaps the most important outcome of this study is the need for educators to review curricular content in the area of pain management, focus on the use of clinical guidelines and to seek the assistance of pain management experts in order to teach students to incorporate recognized standards such as the American Pain Society's Principles of Analgesic Use in the Treatment of Acute Pain and Cancer Pain (Plaisance & Logan, 2006).

Taking a further look into the knowledge and attitudes of students and faculty members deserved some attention. Goodrich (2006) surveyed baccalaureate nursing students and faculty members at a university in central Virginia. The purpose of this descriptive study was to determine the level of knowledge and attitude about the science of pain management of nursing students as they progress through their education and to determine the extent of pain content in the nursing curriculum and how it is incorporated into the program. A pain knowledge and attitude survey was given to a convenience sample of sophomore, junior and senior nursing students. This survey was given at the beginning and end of each semester for two years to the same group and the students were to answer the questions based on knowledge that they acquired in the classroom. The evaluator also administered the pain knowledge and attitude survey to 10 faculty members and asked open-ended questions related to the inclusion of pain content in the curriculum. The findings demonstrated that as the students progressed through the program their scores improved, with seniors achieving higher grades than juniors, and juniors achieving higher grades than sophomores. Very few students achieved an overall

acceptable score (80%), and serious gaps were identified in areas of understanding pain during sleep, believing patients self reports of pain, incidence of respiratory depression, equianalgesic conversions, ceiling effects of opioids, and the use of placebos. Students and faculty members also had misunderstandings of addiction, tolerance and physical dependence and were unable to differentiate between them. The faculty members, all who have advanced degrees, had strengths in assessment and drug therapy, but weaknesses in the understanding of addiction, tolerance, and physical dependence. Further discovery showed that there was inconsistent integration of pain management throughout the course work. This study demonstrates a need to develop objectives and employ the concepts of pain management into the academic plan; techniques for integrating these pain management concepts and a method for evaluation must be included. These strategies will boost students' confidence in managing pain (Goodrich, 2006).

### **Physician and Pharmacist Knowledge and Training**

Physicians remain central to the ability to help patients attain effective pain relief. Although the nursing component is critically important, physicians and mid-level providers are integrally involved in prescribing pain medications. Across the nation, hospice staff are mandated to function as an interdisciplinary team. These teams work collaboratively in developing a patient's plan of care (NHPCO, 2006), and likely draw on one another's experience and knowledge to deliver the care. Examining the knowledge level of physicians is important as they certainly could influence outcomes. Physicians can have considerable impact for improvement on this issue but they too suffer

misconceptions. Wolfert, Gilson, Dahl, and Clearly (2010) found that attitudes and knowledge of physicians were inadequate to treat pain, citing erroneous beliefs about prescribing, viewing addiction, tolerance and physical dependence as synonymous, and a lack of understanding of federal and state regulatory standards as the main causes for under treatment. Another recent study was conducted in the Netherlands to determine knowledge levels of Dutch physicians concerning the use of opioids at end-of-life for pain management. Four-hundred and six physicians were given a questionnaire that consisted of knowledge and attitude questions. There was a mix of physicians including elder care, general practitioners and clinical specialists. The majority of physicians in this survey (60%) found that they have good outcomes in their practice with pain management, but some of the findings were interesting in regard to the use of opioids at the end-of-life. Seventy-five percent of the elder care physicians felt pressure from family members to increase the dose of opioid with a desire to hasten death. Despite Dutch guidelines for euthanasia (barbiturates and neuromuscular relaxants), only one of ten physicians complied with the family's request. One surprising finding was that 16 to 33% of physicians believed that respiratory depression was a danger even when confronted with uncontrolled pain. In general, the majority of physicians answered 71% of the knowledge questions correctly and there was a positive relationship with the knowledge level of physicians who had more specific training in palliative care. (Rurup, Rhodius, Borgsteede, Boddaert, Keijser, Pasma, & Onwuteaka-Philipsen, 2011).

Another study looking specifically at 254 second-year hematology and oncology fellows, sought to determine the quality and quantity of palliative care education in their

fellowship training. These fellows were given a survey asking them to rate several areas ranging from education, quality and quantity of teaching, knowledge and attitudes to preparation regarding palliative care. Overall the fellows rated their palliative care education as inferior to the topics taught about general oncology and most (77%) could not perform an opioid conversion. Twenty-six respondents reported having a rotation in palliative care and 67.8% stated that they had some exposure; those having completed a rotation were able to report better education and knowledge on palliative care issues (Buss, Lessen, Sullivan, Von Roenn, Arnold, & Block, 2011).

Another important aspect to briefly consider is the knowledge base and attitude of pharmacists considering that a previous study found that 53% of physicians consult their pharmacist when they need advice on issues of pain management (Rurup et al., 2011). Borgsteede, Rhodius, De Smet, Pasman, Onwuteaka-Philipsen, and Rurup surveyed 182 pharmacists to determine levels of knowledge of pain management and the use of opioids at the end-of-life. Although knowledge in many areas was adequate, there were some areas where knowledge deficits occurred. Only one in nine pharmacists were aware that opioids could cause or worsen pain; this is a rare and newly identified effect which may explain why few of them knew about this. Other concerns that emerged from the pharmacist survey: 25% believed that life threatening respiratory depression was a real danger, 26% revealed inadequate knowledge with respect to morphine and renal dysfunction, 18% were unable to calculate conversions. One of three pharmacists in this study felt they did not have adequate knowledge on the subject of pain management to

give advice; considering that physicians frequently consult pharmacists, this is cause for concern (Borgsteede et al., 2011).

### **Patient Barriers**

Many patient barriers to effective pain relief exist and include fears of addiction and a misunderstanding of tolerance, the desire to be a good patient and not complain, and an avoidance of reporting pain (Lin & Ward, 1995). Other factors that could create potential barriers to effective pain management are patient's own attitudes and knowledge regarding the use of opioids for pain control. In a small study with 20 cancer patients Johnson, Lambert, Oxberry, Hulme, and Saharia (2007) administered the Barriers Questionnaire. They found nine patients had concerns about addiction and tolerance. A quarter of the patients feared the side effects and stated that they would rather have pain than the side effects. Three quarters of the patients did receive some form of written information regarding the use of opioids but only a quarter read this material. The researchers suggested that clinicians should spend time discussing and educating patients to ease fears and promote understanding. These findings are significant for nurses as this discipline is uniquely positioned to promote knowledge and understanding in a caring and compassionate manner.

### **Nurses' Attitudes and Knowledge**

Generally it has been established that a lack of knowledge about common pain management principles negatively impacts patients. In an early study, Wallace, Reed, Pasero, and Olsen (1995) suggested that nurses may be unaware of their own inadequacy with pain management and therefore do not seek to change either their knowledge or



attitudes concerning pain management. The nurses in this study reported the three most frequent problems faced were: 1) under medication of patients; 2) inadequate education of physicians; and 3) trouble working with pain management teams. In addition, a study conducted in 2000 found that nurses working at a Veterans hospital had deficits in their knowledge of pain physiology and pharmacology, resulting in the belief and negative attitude that any increased need for medication indicated the patient was becoming addicted (McMillan, Tittle, Hagan, Laughlin, & Tabler, 2000). Keene and Thompson (2008) found that less than 50% of nurses were able to accurately answer questions related to the appropriate analgesia therapy in patient scenarios presented. Chang, Yun, Park, Lee, Park, Ro, and Huh (2005) found that nurses who lack understanding of the pharmacological effects of opioids were more reluctant to maximize the dose needed for pain relief. Alternatively, they found nursing attitudes affected therapy because those who had little concern for addiction and tolerance were more likely to maximize opioid therapy when needed for effective cancer pain relief. McCaffery and Ferrell (1995) conducted an international survey seeking to determine levels of nurses' knowledge in cancer pain management to assist in determining educational needs, and found that there were misconceptions and a lack of knowledge about addiction, dosing regimens, preferred route of administration, and determination of pain intensity, thus leading to the under-treatment of pain. Nurses working in palliative settings should be completely prepared to deliver effective pain management. Hollen, Hollen and Stolte (2000) found that hospice nurses scored higher than oncology unit nurses in both areas of knowledge and attitude, although both groups had misunderstanding about physical dependence.

Nurses are expected to have the best interests of the patient in mind, but a knowledge deficit places patients at risk.

Knowledge deficits clearly affect the outcomes for patients, and this is significant in pain management as cancer pain is often under-treated (Deandrea et al., 2008).

Rushton, Eggett, and Sutherland (2003) conducted a descriptive study that compared the knowledge and attitudes about cancer pain management of oncology and non-oncology nurses. A total of 347 nurses in Utah were recruited to take Ferrell's Nurses' Knowledge and Attitude Survey Regarding Pain (NKASRP); 44 oncology nurses and 303 non-oncology nurses were included in this sample. Not surprisingly, the overall findings indicated oncology nurses possess more knowledge about cancer pain management than non-oncology nurses. Oncology nurses had difficulty with pharmacology and non-oncology nurses had difficulties with cancer pain control principles. Though this reflects positively on the oncology nurses, it is also a source of serious concern as the majority of nurses in the sample were non-oncology as may be reflective across the nation. Nurses treat pain in numerous non-oncology settings and this lack of knowledge is a serious concern.

A more recent study using the same survey (NKASRP) was conducted with 68 Turkish nurses to determine the knowledge level of pain management in this culture. This study revealed that the sample of nurses in Turkey have a significant knowledge deficit as the average correct response rate was 35%. A high percentage of nurses incorrectly answered questions relating to use of placebo, recommended routes of administration, the over-reporting of pain, addiction and an inability in making clinical judgments to

determine course of treatment. Only four items on the survey had a 70% correct answer response rate. This study points to a serious deficiency in the knowledge and attitudes concerning effective pain management strategies among Turkish nurses (Yildirim, Cicek, & Uyar, 2008).

The upward titration of opioids at end-of-life is important for effective management of symptoms, and often nurses in an acute care settings will be involved in these titration decisions. Nurses are also responsible for delivering these interventions, and for effective management they must have adequate knowledge and skill to feel comfortable increasing or decreasing doses in response to patients' conditions. Barnett, Mulvenon, Dalrymple, and Connelly (2010) conducted a study that sought to investigate current knowledge, attitudes and practice patterns related to opioid titration of 181 acute care nurses at three Midwestern medical centers. The survey tool used was developed by the investigators, who were considered experts in palliative care. The nurses surveyed worked in a variety of areas in the medical centers including intensive care, medical-surgical, oncology and telemetry units. Fifty-eight percent reported caring for patients at the end of life requiring opioid titration, but 72% had only done this one to five times in the previous year, which demonstrates a large number of nurses performing this high risk assignment infrequently. The study found that comfort and confidence levels increased the more often nurses cared for this population of patients. However, the nurses who cared for a higher number of dying patients also verbalized concerns for hastening death. Of the four knowledge questions on the survey only one was answered by the majority of nurses, which demonstrates a need for more education on this topic. When asked to share

other concerns, nurses reported that some physicians, nurses and family members have negative attitudes about upward titration of opioids with a fear of hastening death. In fact, 18.2% of nurses revealed that concerns of hastening death affected the dose of opioid they were willing to administer. Nurses also reported difficulty in documenting pain in non-verbal patients. This study implies that more evidence-based standards should be available to help guide practice and help dispel misconceptions.

### **Summary**

While pain at end-of-life is commonly feared, this fear is, in some respects, unfounded as a great many patients can obtain relief (Paice, 2010). Patients may in addition fear their pain will not be treated. This fear may be a realistic one for many patients owing to the many barriers from multiple sources that exist: inadequate information in nursing textbooks, and nursing students, nursing faculty, second year fellows, physicians, pharmacists and nurses all demonstrate inadequate knowledge and misguided attitudes in regard to effective pain management (Ferrell et al., 2000, Plaisance & Logan, 2006, Goodrich, 2006, Buss et al., 2011, Rurup et al., 2011, Borgsteede et al., 2011, Barnett, Mulvenon, Dalrymple, & Connelly, 2010 ). This is significant considering that one of two cancer patients has under-treated pain and the knowledge base and attitude of health care providers poses a significant barrier (Deandrea et al., 2008). Enskar, Ljusegren, Berglund, Eaton, Harding, Mokoena, Chauke, and Moleki, (2007) conducted a study that revealed that higher levels of knowledge correlated with more positive attitudes regarding pain management. This is significant as studies have shown that nursing education fails to incorporate essential information to adequately prepare the

knowledge base of new nurses in the treatment of pain and other end-of-life issues (Ferrell et al., 2000, Plaisance & Logan, 2006, Goodrich, 2006). In general physicians are seen as authorities by others including patients themselves. Even though physicians demonstrate adequate basic knowledge there were some areas in knowledge base that deficiencies occurred (Buss et al., 2011, Rurup et al., 2011). Patients' own attitudes (fear of addiction, tolerance and adverse side effects) and knowledge affect their willingness to follow a medication regimen indicated to treat pain (Johnson et al., 2007). Finally, multiple studies conducted in various settings have shown that inadequate knowledge and poor attitudes of nurses contribute to inadequately managed pain (Yildirim et al., 2008, Rushton et al., 2003, Barnett et al., 2010). These all have significant implications, especially for the nursing profession as this demonstrates a need for increased emphasis in nursing curricula and hospital/organization in-service programs. Nurses have a moral and ethical responsibility to recognize and treat pain appropriately. Suffering with pain causes more than physical distress; it affects the four domains relating to quality of life (physical, psychological, social and financial well-being). Therefore nurses must respond appropriately when faced with this challenge. If this issue is to be addressed adequately, nurses today must be empowered with knowledge of pain and its' appropriate treatment along with incorporating positive attitudes towards its management. This will serve to benefit patients and families facing end-of-life, having more positive outcomes.

## **Chapter III Methods**

It has been demonstrated that nurses' knowledge levels and attitudes can prove to be barriers to effective pain management. This chapter presents methods to study the knowledge and attitude levels of hospice nurses. To gain a better perspective about hospice nurses attitudes and knowledge, this study sought to identify knowledge and attitudes about pain management in a regional sample of hospice nurses in the Southeast. This study utilized a cross-sectional, descriptive design and concentrated on the collection of data using a survey type questionnaire, capturing information from a local group of nurses working in hospice and palliative care. The following section describes the sample, instrumentation, institutional review board (IRB) submission, consent, procedures and data analysis.

### **Sample**

The target population for this study was hospice nurses working in hospice and palliative settings. A convenience sample was used for this study. The sample was comprised of 35 registered nurses attending the West Shores Hospice and Palliative Nurses Association (HPNA) chapter meeting in Sarasota Florida. Nurses working outside of hospice and non-English speaking nurses were excluded.

## **Instruments**

Knowledge, attitudes and demographics were measured by three instruments in this study; one tool measured attitudes, one tool measured knowledge of pain management and the demographic tool was used to describe the sample. The independent variables that were studied were the attitudes and knowledge base regarding pain management.

**Nurses Pain Management Attitude Survey.** The instrument utilized was the Nurses Pain Management Attitude Survey, originally developed by Ferrell in 1990 and revised in 1992 by McMillan and Tittle (Appendix A). This survey tool was developed to assess nurses' attitudes about pain management. The Nurses Pain Management Attitude Survey contains 25 items and asks for responses that best describe the attitude that the nurses have regarding; the use of opioids, who is in control, and the use of non-pharmacological interventions. The responses were measured on a Likert-type (summated rating) scale with each item ranging from strongly disagree (SD), disagree (D), agree (A), to strongly agree (SA). The possible range for scores is 25 to 100, with higher scores reflecting more positive attitudes. Construct validity was evaluated by comparing scores of nurses from varying degrees of experience and expertise, resulting in differentiation in level of expertise between groups. Reliability was evaluated by using the test-retest method using a group of staff nurses, with the resulting correlation being high,  $r = 0.80$  (McMillan et al., 2000). The most commonly used method for evaluating internal

consistency is coefficient alpha (Pollit & Beck, 2010) also known as Cronbach's alpha ( $r = 0.70$ ), and this method was used for this study.

**The Pain Management Principles Assessment Test (PMPAT).** This instrument contained 30 multiple choice questions (Appendix B). The PMPAT sought to determine levels of knowledge related to physiology, pharmacology, characteristics of pain, addiction, dependence, tolerance, goals of management, and principles of pain management. Scoring of this tool was based on number of correctly answered items with a range of 0-100%. The reliability has been evaluated for this instrument by the test-retest method using a group of 28 undergraduate students with a one week delay ( $r = 0.84$ ,  $p < 0.00$ ). The validity was tested by comparing the scores of senior nursing students before and after pain management education. There was an increase in scores after the education that supported the validity ( $p < 0.00$ ). Validity was also ensured by building the test on pain management literature review (McMillan, 2000).

**Demographic data form.** An investigator-developed demographic tool was used to collect data to describe the sample (Appendix C). Data collected included age, gender, highest level of education, years of experience in nursing, years of experience in hospice, and certification in hospice and palliative nursing (CHPN).

## **Procedures**

Institutional Review Board approval was received from the IRB at the University of South Florida (Appendix D). Permission was also obtained (Appendix E) from the President of the West Shores Chapter of HPNA to approach the nurses at the local HPNA chapter meeting. Following these approvals, the researcher approached the nurses and



distributed the three data collection instruments, along with the consent form (Appendix F), during the regularly scheduled meeting. Data collected in this manner was easy to quantify, and researcher intrusiveness was minimal. The investigator attempted to have a non-judgmental attitude while working towards putting the participants at ease and asked the participants to answer truthfully. Information was provided to the study participants about how the information would be used, how long the survey would take, and who would have access to this information. Anonymity was assured and the nurses were told that information collected about nurse specific scoring would remain with the investigator and not be shared with nursing administrators. The investigator instructed the participants not to place their names on the tools, and that by completing the forms, they implied consent. The investigator distributed and collected the tools upon completion. This survey method could be easily replicated by others as similar methods have been used in the past.

### **Data Analysis**

Data analysis consisted of descriptive statistics using means, standard deviations, frequencies and percentages. A correlation between levels of knowledge and attitudes was determined using Pearson's correlation, to determine if level of knowledge is related to attitude. Pearson's correlation was also used to determine if a relationship exists between years of nursing experience and attitude. An independent t-test was utilized to determine if hospice nurses who were certified in Hospice and Palliative care (CHPN) had higher knowledge levels.

## Chapter IV Results, Discussion, and Conclusions

This chapter presents the results of data gathered at the local HPNA Chapter in Sarasota Florida on February 21<sup>st</sup> 2012. Following presentation of results, these results are discussed and conclusions presented with implications for education, nursing practice and further study.

### Results

**Sample.** A total of 38 nurses from the local Hospice and Palliative Nurses Association from Sarasota Florida agreed to participate in this study and 35 returned usable surveys. All but one of the nurses currently works in hospice and palliative care; that one indicated that she was retired. Nineteen (54.3%) nurses surveyed were certified in hospice and palliative care, and most nurses were female 34 (97.1%) (Table 1).

Table 1. Frequencies and Percentages of Subjects by Work Setting, Certification, and Gender.

Variable	Frequency	Percent
Work in Hospice		
Yes	34	97.1
No	1	2.9
Certified		
Yes	19	54.3
No	16	45.7
Gender		
Male	1	2.9
Female	34	97.1

Of the 35 nurses surveyed, equal amounts (14 each) were graduates from a Diploma/A.D. nursing program and a Baccalaureate program. There were fewer Master's and Ph.D. graduates (Table 2).

Table 2. Frequencies and Percentages of nurses by level of education.

Education level	Frequency	Percent
Diploma/A.D.	14	41.2
Baccalaureate	14	41.2
Masters	5	14.7
Ph.D.	1	2.9

The nurses surveyed ranged in age from 44 to 71 years. The mean age was 58.2 (SD=6.96). The mean years of experience in nursing was 24.35 (SD=10.45) with a range of 9 to 44 years. The mean years of experience in hospice was 8.87 (SD= 6.71) with a range of one to 32 years (Table 3).

Table 3. Range, Mean, and Standard Deviation by Age, Years of Experience in Nursing and Years of Experience in Hospice

Variable	Range	Mean	Standard deviation
Age	44-71	58.2	6.96
Years experience in nursing	9-45	24.4	10.45
Years experience in hospice	1-32	8.9	6.71

**Knowledge: Pain Management Principles Assessment Test.** The research question addressed was: *What is the level of knowledge of hospice nurses regarding pain management principles for patients with cancer?* The raw knowledge scores ranged from 16 (53.3%) to 26 (86.6%) on a scale with possible scores of 0 to 30, with a mean of 21.74 (SD=2.5) (72.3%). When looking at specific content areas, four questions were related to the physiology of pain. These questions were answered incorrectly by many of the nurses

(Table 4). Only one nurse out of the 35 correctly answered the question relating to C-fibers and their responsibility for dull and aching pain sensations. Seven questions directly related to pharmacology. These questions were answered correctly by the nurses most of the time (Table 4). The most problematic question relating to pharmacology was about to the action of naloxone. This question was answered correctly only 54% of the time. The question “A nursing decision to administer pain medication should be based on all of the following EXCEPT:” and the correct answer was- the nurse’s objective assessment of the intensity of the pain was only answered correctly 34% of the time.

**Attitude: Nurses Pain Management Attitude Survey.** Research question two was: *What are hospice nurses’ attitudes regarding pain management?* The possible ranges of attitudes were from 25 (most negative attitude) to 100 (most positive attitude). The nurses surveyed ranged from 70 to 93, with a mean of 82.34 (SD=6.49). This indicated only slightly positive attitudes.

**Certification and Knowledge level.** The third research question addressed was: *Do hospice nurses who are certified in hospice and palliative nursing (CHPN) have significantly higher scores on the Pain Management Principles Assessment Test?* The study found that nurses who were certified in hospice and palliative care (CHPN) did not necessarily score higher on the knowledge test than nurses who are not certified. An independent t-test was conducted and the result was not significant  $t=1.214$  ( $p=.233$ ) (Table 5).

Table # 4. Frequency and Percent of Items Answered Correctly: Content on Knowledge Test.

Content	Frequency	Answered Correctly Percent
Pharmacology		
• Side effects of meperidine	33	94
• Preferred route of administration	33	94
• Duration of action-morphine	31	89
• Steady state analgesia- primary benefit	29	83
• Duration of action-methadone	29	83
• Steady state analgesia- method of administration	20	57
• Action of naloxone	19	54
Physiology		
• Pain modulation	27	77
• Action on CNS	25	71
• Gate Control Theory	20	57
• C-Fibers responsible for dull/aching pain	1	3
Patient best judge of pain	35	100
Non-pharmacological interventions	35	100
Nursing actions	34	97
Patient control of pain management	34	97
Definition of tolerance	34	97
Symptoms of acute pain	15	43
Nurses' inability to judge patients' pain	12	34
Goals of therapy	8	23
Steady-state analgesia- timing	4	11
N=35		

**Relationships among variables.** Research question four addressed: *What is the relationship between the knowledge level of hospice nurses and their attitudes regarding pain management?* Research question five addressed: *What is the relationship between the years of experience that nurses have and their attitudes regarding pain management?* A Pearson’s correlation was conducted between knowledge levels and attitude scores, and a weak but significant correlation was found (0.391) ( $p= 0.02$ ). In addition, a Pearson’s correlation was conducted between years of nursing experience and attitude, and no relationship was found (-0.058) ( $p=.741$ ) (Table 6).

Table 5. Independent t-Test Comparison of Pain Management Knowledge Scores by Certification Status.

Certification Status	n	Mean	Percentage	t	P
Certified					
Yes	19	22.21	74	1.214	.233
No	16	21.18	71		

Table 6. Pearson’s Correlation between Knowledge and Attitude and Years Nursing Experience and Attitude.

Variable	Knowledge	Attitude	P
Knowledge		0.391	0.020
Attitude	0.391		0.020
Years Experience in Nursing		-0.058	.741

## Discussion

**Sample.** The sample for this study included 38 Registered nurses, who returned 35 usable surveys. The sample included nurses with a variety of education levels, with the majority of nurses having a diploma, ADN, or BSN degree (82.4%) which is similar

to what other studies have demonstrated. Rushton and colleagues (2003) found that 86% of the nurses they studied had ADN/BSN degrees. So this may be reflective of the overall educational levels of the majority of nurses working, providing bedside care in a hospice and palliative care setting. The small sample size is a clear limitation. This sample came from only those nurses who belong or attended the HPNA chapter meeting, which is a limitation, as it may not be truly representative; many hospice nurses choose not to become members of their specialty organization. One may speculate that the nurses who are motivated to be members and participate in their specialty organization may also be more motivated to obtain better knowledge base and have better attitudes, but it is unknown whether this affected the study. Another limitation is that this sample came from one geographic area of south west Florida and therefore results may not be relevant to the remainder of the state of Florida or the nation. The sample was also limited in that it only had one male participant. In addition to this, the mean age of the sample was 58.2 which may not be reflective of the actual mean age of nurses working in hospice care.

**Knowledge: Pain Management Principles Assessment Test.** The knowledge test consisted of 30 questions testing the knowledge of pain management. For the whole, the group of participants had a mean score of 21.74 correct answers, which translates into 72.3%. By most standards a score of 80% or higher is considered an acceptable score for general knowledge on a test (Brown, Bowman & Eason, 1999). Considering this, the group's mean score of 72.4% falls below the acceptable level, which is cause for concern considering these nurses are at the forefront of delivering comfort care. Previous studies have demonstrated that low scores on pain management knowledge surveys are common.

For example, Rushton and colleagues (2003) found that non-oncology nurses scored an average of 66% and McMillan and colleagues (2000) found that nurses working with cancer patients in a Veterans hospital scored 61% on similar knowledge surveys.

Comparatively speaking, one could say that this group of hospice nurses scored better than the nurses in other studies; however, their knowledge could use some improvement.

When looking into specific content areas, the nurses surveyed generally had more difficulty with questions relating to the physiology of pain. Four questions on the instrument directly related to the physiology of pain, and half of these were answered incorrectly by the majority of the nurses. A question that was particularly problematic related to C-fibers and how they are responsible for dull and aching pain sensations; only one nurse out of 35 answered this correctly. Physiology concepts can be difficult to comprehend, so it is not surprising that this was a challenge for some the nurses. Overall the nurses scored slightly better on pharmacology related questions. Seven questions directly related to pharmacology, and the majority were answered correctly by the nurses most of the time. The most problematic question was one relating to the action of naloxone; only 19 nurses answered this correctly. Perhaps nurses are more familiar with the brand name of this drug, Narcan. There may have also been a misunderstanding of basic terminology, confusing the meanings of antagonist and agonist.

A question about nursing actions, which was neither a pharmacology nor physiology question was answered incorrectly 66% of the time. The question read “A nursing decision to administer pain medication should be based on all of the following EXCEPT:” and the correct answer was- “the nurse’s objective assessment of the intensity



of the pain.” Only 34% of the nurses answered this correctly, and this is problematic because as experts in comfort care these nurses should recognize that nurses cannot objectively recognize pain, making the other choices more correct. On the other hand the question is somewhat tricky, and one must read the answers carefully. Nurses do want to make objective assessments of pain such as vital signs, facial grimacing, moaning and guarding, however there is no way to make an objective assessment of intensity of a pain rating; the rating is what the patient tells you. So the correct answer may have been easily misinterpreted by the 66% of the nurses who missed it.

The overall mean age of the study participants (58.2 years) and the mean years of nursing experience (24.35 years) may be limitations in this study. One might surmise that older, more experienced nurses may base clinical decisions on either outdated knowledge base or from their own clinical experiences, as opposed to current evidenced based knowledge.

Another limitation of the study may be the PMPAT, which was developed and validated in the 1990’s. It might be that scores of hospice nurses would improve if the PMPAT were revised in some way.

**Attitude- Nurses Pain Management Attitude Survey.** The overall score on the attitude survey for this group of nurses was 82.34, on a scale of 25 to 100, demonstrating somewhat positive attitudes regarding pain management. This study suggests that an overall low knowledge score (72.3%) may not necessarily be related low attitude score; therefore knowledge is not the same things as attitude. Again, the weak correlation between knowledge and attitude demonstrates that these two concepts are different.

Nurses may want to manage pain appropriately, but may not have the knowledge to do so.

**Certification and Knowledge level.** Another aspect of the study that is of concern is that the nurses who were certified in hospice and palliative care (CHPN) did not have significantly higher knowledge scores than those nurses who were not certified; in fact the scores were remarkably similar. This may be explained by the fact that there are a total of seven domains tested on the CHPN certification exam and only 24% of the exam tests knowledge related to pain management. The remaining six domains test knowledge on other symptom management, life-limiting conditions, care of the patient and family, education and advocacy, interdisciplinary/collaborative practice and professional issues (NBCHPN, 2012).

**Relationships among variables.** The Pearson's correlation between knowledge level and attitude demonstrated that there is a weak correlation (0.391;  $p=0.020$ ) thus identifying that knowledge is not the same as attitude. Nurses may not have a plethora of knowledge regarding pain management, but if their attitudes regarding pain management are good, it is likely they will be motivated to deliver effective pain management. Also, this group of nurses has many years of experience in nursing with a mean of 24.35 years. A Pearson's correlation demonstrated that there was no significant correlation (-0.058) between years of experience in nursing and attitude. This suggest that older, more experienced nurses who have considerable exposure to experiences, do not necessarily have worse attitudes than younger, less experienced nurses. This may imply that both professional and personal experiences gained through the span of a nursing career that

could potentially promote negative attitudes about patients and their pain management, in fact, do not. Again, this sample of nurses is seasoned, with levels of experience ranging from nine to 45 years (mean 24.35). The levels of actual hospice experience are less with a range of one to 32 years (mean 8.87), both of which may be limitations in this study. Further study is indicated to fully determine this.

The findings of this study reveal, especially considering the limitations, that more research about pain management knowledge base is needed specifically in the arena of hospice and palliative care nursing. These results suggest that knowledge gaps exist even among nurses who should have the best knowledge base. There may be several possible explanations for this lack of knowledge. Hospice services have grown rapidly in this community leading the hospice to need a large number of nurses quickly. It is possible that some proportion of the nurses working in the hospice are not, at heart, hospice nurses, but are simply nurses who needed a job. This might guide the hospice to screen applicants well, to ensure alignment with the philosophy. Also, education for nurses entering hospice care is lacking and should be more formal and structured during nursing school and at the onset of employment in a hospice setting. A case could also be made for more rigorous pain management education for hospice preceptors; as they are at the helm when guiding new hospice nurses. This study also suggests that ongoing education for all hospice nurses is deficient. Of course, nurses working in hospice care are not the only ones dealing with pain and its management; therefore it appears that in general overall education is scarce. Finally, if this group of hospice nurses does not have sufficient

knowledge base to properly treat and manage pain, it is likely that hospice patients are not receiving adequate pain management.

## **Conclusions**

The implications for nursing related to this study are many and these findings should increase efforts to educate new hospice nurses, which will result in greater knowledge and should encourage hospices to develop more in-depth pain management knowledge programs at the time of orientation. Structured plans following most current evidence-based pain management guidelines and references should be utilized in patient care. Moreover, nurses must be educated continuously and hospices should hold on-going educational sessions with a focus on knowledge of current pain management principles. These programs should be offered in a variety of forums to encourage busy hospice nurses to participate. In addition, other disciplines influence nurses and their ability to deliver effective pain management; therefore, other healthcare providers including physicians and pharmacists may also need more education about interdisciplinary pain management. Hospices should also place a higher level of importance on ensuring that their nurses are adequately prepared to care for this population of patients, utilizing competency evaluations. To better understand needs of hospice nurses around the world, further research is needed in the area specific to hospice nursing, utilizing larger sample sizes and including hospice nurses from different geographic regions. As demonstrated by this study, hospice nurses want to manage pain effectively; they just need the appropriate foundation of knowledge to do so. Advancing the knowledge base of hospice

nurses regarding pain management will improve outcomes for patients and will ultimately result in better end of life care.

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## **Appendices**

## Appendix A

### NURSES PAIN MANAGEMENT ATTITUDE SURVEY

**Directions:** Circle the response that best describes your attitude toward the following statements. We are interested in **your** current beliefs.

<b>CODES:</b>	<b>SD = Strongly Disagree</b>	<b>D = Disagree</b>	<b>A = Agree</b>	<b>SA = Strongly Agree</b>	
1.	Giving opioids on a regular schedule is preferred over a prn schedule for continuous pain.	SD	D	A	SA
2.	A patient should experience discomfort prior to getting the next dose of pain medication.	SD	D	A	SA
3.	Continuous assessment of pain and medication effectiveness is necessary for good pain management.	SD	D	A	SA
4.	Patients (and/or family members) have a right to expect total pain relief as a goal of treatment.	SD	D	A	SA
5.	Patients (and/or family members) may be hesitant to ask for pain medications due to their fears about the use of opioids.	SD	D	A	SA
6.	Patients receiving opioids on a prn basis are more likely to develop clock-watching behaviors.	SD	D	A	SA
7.	Estimation of pain by a MD or RN is a more valid measure of pain than patient self report.	SD	D	A	SA
8.	Patients in pain can tolerate high doses of opioids without sedation or respiratory depression.	SD	D	A	SA
9.	Patients can be maintained in a pain free state.	SD	D	A	SA
10.	If a patient (and/or family member) reports pain relief and euphoria, the patient should be given a lower dose of the analgesic.	SD	D	A	SA

11.	Patients with chronic pain should receive pain meds at regular intervals with or without the presence of discomfort.	SD	D	A	SA
12.	Patients receiving around the clock opioids are at risk for sedation and respiratory depression.	SD	D	A	SA
13.	Patients having severe chronic pain need higher dosages of pain meds compared to acute pain.	SD	D	A	SA
14.	Patients should be maintained in a pain-free state.	SD	D	A	SA
15.	Lack of pain expression does not necessarily mean lack of pain.	SD	D	A	SA
16.	Cancer pain can be relieved with appropriate treatment with anti-cancer drugs, radiation therapy and/or pain relieving drugs.	SD	D	A	SA
17.	If a patient continues to have pain after receiving pain relieving medication(s), the nurse should contact the physician.	SD	D	A	SA
18.	Patients receiving opioids around the clock for cancer pain are likely to become addicted.	SD	D	A	SA
19.	Distraction and diversion of patient's attention (use of music, relaxation) can decrease the perception of pain.	SD	D	A	SA
20.	A constant level of analgesic should be maintained in the blood to control pain effectively.	SD	D	A	SA
21.	Increasing analgesic requirements and physical symptoms are signs that the patient is becoming addicted to the narcotic.	SD	D	A	SA
22.	The cancer patient and family should have more control over the schedule for analgesics than the health professional.	SD	D	A	SA
23.	The nurse can make a more accurate assessment of the patient's pain than the patient/family can.	SD	D	A	SA

24. Cutaneous stimulation (e.g. heat, massage, ice) are only effective for mild pain. SD D A SA

Circle the response that you most agree with.

25. When a patient in pain due to cancer is receiving analgesic medication on a **PRN** basis, at what level of discomfort would it first be appropriate for the patient to request additional pain medication?
1. Before pain returns
  2. When pain is mild
  3. When pain is moderate
  4. When pain is severe

## Appendix B

### PAIN MANAGEMENT PRINCIPLES ASSESSMENT TEST

**DIRECTIONS:** Circle the letter in front of the one best answer.

You may write **ON THE TEST**.

1. What percentage of cancer patients suffer pain at some point during their illness?
  - a. 10%
  - b. 30%
  - c. 60%
  - d. 90%
  
2. What percentage of cancer patients suffer pain for longer than one month?
  - a. 20-30%
  - b. 40-50%
  - c. 70-80%
  - d. 100%
  
3. If the patient continues to have pain after receiving the maximum ordered dose of analgesics, what should the nurse **ALWAYS** do?
  - a. Increase the dose, slightly.
  - b. Explain the risks of high doses of narcotics to the patient/family.
  - c. Reassure the patient that the medication will work.
  - d. Call the physician.
  
4. The preferred route of administration of narcotic analgesics for cancer patients is which of the following?
  - a. Intravenous
  - b. Intramuscular
  - c. Subcutaneous
  - d. Oral
  - e. Rectal
  
5. When a patient having pain due to cancer is receiving analgesic medication on a PRN basis, at what level of discomfort would it first be appropriate for the patient to request additional pain medication?
  - a. Before the pain returns
  - b. When pain is mild
  - c. When pain is moderate
  - d. When pain is severe
  - e. When the pain is intolerable

6. The most accurate and reliable judge of the intensity of the cancer patient's pain is which of the following?
  - a. The treating physician
  - b. The patient's primary nurse
  - c. The patient
  - d. The pharmacist
  - e. The patient's spouse or family
  
7. What percentage of patients receiving opiate analgesics around the clock become addicted?
  - a. Less than 1%
  - b. 5-10%
  - c. 25%
  - d. More than 25%
  
8. Which of the following statements accurately describe the mechanism of action of analgesics?
  - a. Opiates act in the CNS to decrease the transmission/perception of pain.
  - b. Narcotics act at the periphery to decrease the transmission of pain.
  - c. Non-narcotics act in the CNS to decrease the transmission/perception of pain.
  - d. Narcotics work by the Gate Control mechanism.
  
9. Which kind of pain can be treated with cutaneous stimulation?
  - a. Mild pain only
  - b. Moderate pain only
  - c. Severe pain only
  - d. Any intensity of pain
  
10. Which of the following statements accurately reflects principles underlying analgesic administration for persons with pain due to advanced cancer?
  - a. Prolonged administration leads to tolerance which requires escalating amounts of analgesic to control pain.
  - b. Prolonged administration often result in addiction, so drug amounts must be carefully limited in the early stages of the disease.
  - c. Narcotics should be offered on an "as needed" basis to prevent drug dependence.
  - d. Around the clock administration of narcotics (rather than PRN) results in clock-watching in patients and families.



11. Which group of symptoms are more related to chronic pain?
  - a. Decreased appetite, decreased energy, sleep disturbances, apathy, decreased blood pressure.
  - b. Grimacing, fast heart rate, fast respiratory rate, elevated blood pressure, sweating.
  - c. Thrashing, grimacing, elevated heart rate, cold and clammy extremities.
  - d. Groaning, elevated blood pressure, irritability, sweating
  
12. Which of the following drugs have the longest duration of action?
  - a. Codeine
  - b. Methadone
  - c. Meperidine
  - d. Morphine
  
13. Acute pain is frequently accompanied by which of the following?
  - a. Increased caloric requirements, increased temperature
  - b. Increased oxygen requirements, decreased temperature
  - c. Decreased caloric requirements, decreased temperature
  - d. Increased caloric requirements, decreased temperature
  
14. Dull and aching pain sensations are the responsibility of which of the following?
  - a. A-delta fibers
  - b. C fibers
  - c. Opiate receptors
  - d. Small myelinated fibers
  
15. According to the Gate Control Theory, the location in the nervous system that is responsible for “gating” is located in:
  - a. The substantia gelatinosa in the spinal cord
  - b. The nociceptors in the skin
  - c. Deep nociceptors in the muscles
  - d. White matter in the brain
  
16. Pain is modulated by which of the following:
  - a. Opiate receptors mu, gamma, and kappa
  - b. A-delta fibers
  - c. C-fibers

17. Mrs. Colton, a 160 pound female is 24 hours post-op following abdominal hysterectomy. She received a dose of morphine sulfate 8 mg IM at 4:00 pm. It is now 6:30 pm and she is complaining of pain and requesting another injection. Her pain is most likely related to which of the following:
- Physical dependence on the analgesic
  - Tolerance to the prescribed dose of analgesic
  - A decrease in the blood level of the analgesic
  - Early onset of addiction to the analgesic
18. Following an abdominal hysterectomy, your pain management goal for Mrs. Colton should be which of the following:
- Enough pain relief to allow her to cooperate in post-op care
  - To provide enough pain relief to keep Mrs. Colton from crying out
  - To relieve her pain to a level that she can tolerate
  - To provide her complete pain relief
19. Mr. West has prostatic cancer that has spread to the bones. In planning for his care, the primary factor to consider is:
- The likelihood that he will need higher doses later on
  - The probability that he will become addicted to narcotics
  - His overall quality of life
  - The wishes of his family regarding pain relief
20. In assessing the patient's pain, the nurse should take into account which of the following variables which may affect the expression of pain:
- Environment and social consequences of expressions of pain
  - Cultural diversity in the ways patients express their discomfort
  - The observable measurable actions of the patient
  - a and b
  - a, b, c
21. The action of naloxone is:
- To enhance the effect of narcotic analgesics
  - To act as a opiate antagonist
  - To act as a narcotic agonist
  - To act as a respiratory stimulant
22. Research suggests that:
- Physicians underprescribe and nurses undermedicate for pain
  - Physicians prescribe appropriately and nurses undermedicate
  - Physicians underprescribe and nurses give optimal doses based on those orders
  - Physicians prescribe appropriately and nurses medicate appropriately in the majority of cases

23. One significant disadvantage of meperidine is:
- It is more expensive than morphine
  - It has more CNS toxicity than morphine
  - It is more addicting than morphine
  - It is more difficult to administer than morphine
24. Which of the following methods of narcotic administration provides steady state analgesia?
- Patient controlled analgesia using a pump
  - Intravenous drip of opiates
  - Intravenous bolus administration of narcotics
  - Intramuscular injections every two hours
25. The primary benefit of providing steady state analgesia is which of the following?
- It is cost effective because it uses less nursing time
  - The patient receives less narcotic overall
  - Respiratory depression is less likely to occur
  - The patient is more comfortable
26. A nursing decision to administer pain medication should be based on all of the following EXCEPT:
- The patient's description of the quality of his/her pain
  - The family's request to keep the patient comfortable
  - The nurse's objective assessment of the intensity of the pain
  - The patient's subjective report of the intensity of her/his pain
  - The nurse's knowledge of the action of narcotic analgesics
27. Who should have the most control over the patient's pain management regimen?
- The patient
  - The family
  - The nurse
  - The physician
  - The pharmacist
28. **DEFINITION:** After repeated administration of an opiate, a given dose will begin to lose its effectiveness, resulting in the need for larger and larger doses. This begins with decreased duration of analgesia and then progresses to decreased analgesia.  
The above is a definition of which of the following?
- Addiction
  - Physical dependence
  - Tolerance
  - Addictive personality

29. Mrs. Easton has metastatic breast cancer with painful lesions in her spine. She is reluctant to take her morphine as often as needed because she is afraid of drugs. You offer her a backrub and leave her with a heating pad on her back .This is an example of:
- a. Cutaneous stimulation
  - b. Distraction
  - c. Diversion
  - d. TLC (tender loving care)
30. Another approach you might have tried with Mrs. Easton involves concentrating on a task such as needlepoint or a crossword puzzle or reading a favorite book. This is an example of:
- a. Cutaneous stimulation
  - b. Avoidance
  - c. Distraction
  - d. TLC (tender loving care)

## Appendix C

### General Demographic Information

Do you work in Hospice and Palliative Care?       Yes       No

Are you certified in Hospice and Palliative Care (CHPN)?       Yes       No

If no, please indicate your area of work:

\_\_\_\_\_

Gender:       male       female

Age: \_\_\_\_\_

Highest level of education:       Diploma/AD       Bachelors       Masters       Doctorate

Years of experience in Nursing: \_\_\_\_\_

Years of experience in Hospice: \_\_\_\_\_

## Appendix D



DIVISION OF RESEARCH INTEGRITY AND COMPLIANCE  
Institutional Review Boards, FWA No. 00001669  
12901 Bruce B. Downs Blvd., #120031 • Tampa, FL 33613-4799  
(813) 974-3631 • FAX (813) 974-3611

January 23, 2012

Amie Miller  
College of Nursing

RE: **Exempt Certification** for IRB#: Pro00006162  
Title: Hospice Nurses- Attitudes and Knowledge about Pain Management

Dear Amie Miller:

On 1/21/2012, the Institutional Review Board (IRB) determined that your research meets USF requirements and Federal Exemption criteria as outlined in the federal regulations at 45CFR46.101(b):

(2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless:  
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

As the principal investigator for this study, it is your responsibility to ensure that this research is conducted as outlined in your application and consistent with the ethical principles outlined in the Belmont Report and with USF IRB policies and procedures. Please note that changes to this protocol may disqualify it from exempt status. Please note that you are responsible for notifying the IRB prior to implementing any changes to the currently approved protocol.

The Institutional Review Board will maintain your exemption application for a period of five years from the date of this letter or for three years after a Final Progress Report is received, whichever is longer. If you wish to continue this protocol beyond five years, you will need to submit a continuing review application at least 60 days prior to the exemption expiration date. Should you complete this study prior to the end of the five-year period, you must submit a request to close the study.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,



John Schinka, PhD, Chairperson  
USF Institutional Review Board

Cc: Various Menzel, CCRP, USF IRB Professional Staff

## Appendix E

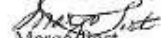
# *Florida West Shores Chapter*

Margo Post- President Florida West Shores Chapter  
6310 Capitol Dr. Suite 100  
Bradenton Florida 34202  
(941) 552-5900

Dear Ms. Miller,

Thank you for your interest in conducting research with the local HPNA chapter- Florida West Shores Chapter. Our chapter would be happy to assist in your endeavor and inquiry about Hospice Nurses' knowledge and attitudes regarding pain management. I grant you permission to come to one of our future monthly meetings to conduct your research.

Thank you for your interest in conducting this study.



Margo Post

President Florida West Shores Chapter



## Appendix F



### **Informed Consent to Participate in Research Information to Consider Before Taking Part in this Research Study** eIRB Study # \_\_\_\_\_

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You are being asked to take part in a research study. Research studies include only people who choose to take part. This document is called an informed consent form. Please read this information carefully and take your time making your decision. Ask the researcher to discuss this consent form with you, please ask her to explain any words or information you do not clearly understand. The nature of the study, risks, inconveniences, discomforts, and other important information about the study are listed below.

We are asking you to take part in a research study called:

- Hospice Nurses- Attitudes and Knowledge about Pain Management

The person who is in charge of this research study is Amie Miller. This person is called the Principal Investigator. However, other research staff may be involved and can act on behalf of the person in charge. Dr. Susan McMillan is guiding her in this research.

The research will be conducted at the meetings of the Sarasota, Florida chapters of the Hospice and Palliative Nurses Association (HPNA).

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#### **Purpose of the study**

The purpose of this study is to:

- The purpose of this research is to evaluate hospice nurses knowledge and attitudes about pain management.
- A graduate student, for the purpose of her thesis, is conducting this study.

#### **Study Procedures**

If you take part in this study, you will be asked to:

- Complete the surveys attached and a demographic questionnaire.

**Total Number of Participants:** About 30 individuals will take part in this study at this location.

**Benefits:** You will not directly benefit from participating in this study.

**Risks or Discomfort:** There are no known risks to those who take part in this study.

**Alternatives:** You do not have to participate in this research study.

**Compensation:** You will receive no payment or other compensation for taking part in this study.

**Cost:** There will be no costs to you as a result of being in this study.

### **Privacy and Confidentiality**

We will keep your study records private and confidential. Certain people may need to see your study records. By law, anyone who looks at your records must keep them completely confidential. The only people who will be allowed to see these records are:

- The research team, including the Principal Investigator, study coordinator, research nurses, and all other research staff.
- Certain university people who need to know more about the study. For example, individuals who provide oversight on this study may need to look at your records. This is done to make sure that we are doing the study in the right way. They also need to make sure that we are protecting your rights and your safety.
- The USF Institutional Review Board (IRB) and its related staff who have oversight responsibilities for this study, staff in the USF Office of Research and Innovation, USF Division of Research Integrity and Compliance, and other USF offices who oversee this research.

We may publish what we learn from this study. If we do, we will not include your name. We will not publish anything that would let people know who you are.

### **Voluntary Participation / Withdrawal**

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

### **You can get the answers to your questions, concerns, or complaints**

If you have any questions, concerns or complaints about this study, or experience an adverse event or unanticipated problem, call Susan McMillan at (813) 974- 9188. If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the USF IRB at (813) 974-5638.

### **Consent to Take Part in this Research Study**

It is up to you to decide whether you want to take part in this study. If you decide to participate, please complete the attached surveys. Your return of this survey is implied consent.