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Screening for Opioid Misuse and Abuse in Chronic Pain Patients

Gloria Jean Farris
Walden University

Walden University

College of Health Sciences

This is to certify that the doctoral study by

Gloria Farris

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Review Committee
Dr. Catherine Garner, Committee Chairperson, Nursing Faculty
Dr. Francisca Farrar, Committee Member, Nursing Faculty
Dr. Janice Long, University Reviewer, Nursing Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2017

Abstract

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by

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MS, University of Alabama, 2005

BS, University of Alabama, 1999

Project Submitted in Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Nursing Practice

Walden University

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Abstract

In 2012, opioid prescriptions exceeded 250 million, which is equivalent to providing a prescription to every adult in the United States. Prescription opioids have contributed to over 100,000 deaths since the late 1990s with the greatest impact among adults 35 through 54 years of age. The purpose of this doctoral project was to introduce an evidence-based screening tool that will identify patients who are at risk of opioid misuse and aid in the development of the most effective treatment plan to manage chronic pain and avoid abuse. The Screener and Opioid Assessments for Patients with Pain (SOAPP), a screening tool, was given to 100 participants, both males and females between the ages of 25 and 65, in an outpatient pain clinic. The data collection method was a questionnaire consisting of 14 questions designed to predict behaviors of people using opioids for chronic pain. Participant questionnaire responses on the Likert-5-point scale of 0 (Never), 1 (Seldom), 2 (Sometimes), 3 (Often), and 4 (Very Often) were totaled with a score of 7 or above indicating a high risk for abuse. Once the SOAPP data were obtained scores were calculated and grouped into categories of low or high risk for opioid misuse or abuse. Results indicated that 25% of the participants scored at high risk for opioid misuse (22% were female and 27% male) implying that there was a need for additional monitoring by the physician and nurse practitioner. The mean age for high risk was 51 and for low risk 54. Pain management providers play a crucial role in the effectiveness and success of the patient's treatment. Positive social change may occur when assessment tools such as the SOAPP are used in the evaluation and management of patients with chronic pain and addiction.

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<div align="center">Dedication</div>

I would like to dedicate this to my son, Jermaine, whom I love dearly.

Love you, Son,

Mom

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     I would like to thank Dr. Cynthia Cook and Dr. Garner for all of their efforts and support that they provided in helping me meet my timelines and goals. Also, I would like to thank Dr. Lynette Green-Mack for her kindness, motivation, expertise and the opportunity to conduct my project at her practice. In addition, I would also like to thank, my sister, Sylvia Tucker, and colleagues Dr. Brooke Burks, Dianne Leach, Sharon Farris, Andrea Rashad, Sylvia Vinson, Nikia Belser, and Cora Hartwell, for their support in my journey while enduring this project.

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Section 1: Introduction

Introduction

Pain is one of the major causes of disability, work loss, and health care cost in the United States (Hayden, Cartwright, Riley, and Vantulder, 2012). Patients with chronic pain are often seen in clinical settings devoted to pain management. There has been an increase in abuse and misuse of opioids for chronic pain patients in the United States (Manworren & Gilson, 2015). According to the National Institute of Health (NIH), over 125 million people in the United States suffered with some type of pain (NIH, 2015). It is expected that 70% of those people treated their pain with opioids prescribed to a friend or family member (Arnstein, & St. Marie, 2010). Overprescribing of opioids for pain management has contributed to a noticeable increase in opioid addiction, death caused by overdose, and heroin use (American Academy of Orthopaedic Surgeons [AAOS], 2015).

The clinical dilemma is how to treat chronic pain while avoiding opioid abuse and misuse. Sullivan, Korff, Banta-Green, Merrill, and Saunders (2012) describe deviant patient drug-related behaviors such as obtaining prescriptions from multiple providers, forging prescriptions, and increasing opioid dosages. These behaviors could potentially indicate addictive characteristics or a possible manifestation of poor pain control. According to the Obama Administration, prescription drug abuse has had an agonizing impact on individuals, families, healthcare providers, and law enforcement in the United States, and it is imperative to take action against this epidemic (The White House, Office of the Press Secretary, 2015).

Overprescribed opioid medications are becoming the most frequently misused controlled substances nationally (Stayner & Copenhaver, 2012). According to the Benzon, Liu, Fishman, & Cohen, (2011), pain related laws have not kept current with advances in medical and scientific understanding. The legislative bodies have created laws that are broad and general, with the expectation that they will be interpreted by the regulatory agencies. However, this has not been the case, and implications of overprescribing practices with opioids remains a concern.

This practice improvement project will introduce the utilization of an evidencebased screening tool to assist providers in recognizing those at risk for opioid abuse or misuse and can also be used to help guide the development of the individualized plan of care for this patient population. This follows the recent work completed by the Choosing Wisely Campaign (2014) committee which recommends that healthcare providers not prescribe opioids until after discussing risks, such as addiction, with the client. Educating patients on risk factors increases their awareness of opioid abuse and allows the patient to become involved in their plan of care (American Society of Anesthesiologists [ASA],

2014). Ultimately, it is the healthcare provider's decision whether to prescribe opioids as well as the dosage when prescribed. Utilization of tools such as Screener and Opioid Assessments for Patients with Pain (SOAPP; Inflexxion, Inc., 2008) can assist in determining those who may be at risk of misuse and, subsequently, aid in the development of a treatment plan that will assist in the prevention of addictive behaviors that could promote misuse. This can contribute to the prevention and treatment of opioid abuse.

Problem Statement

In 2012, opioid prescriptions exceeded 250 million, which is equivalent to providing one prescription to every adult in the United States (The White House, 2015). According to Franklin (2014), prescription opioids have contributed to over 100,000 deaths since the late 1990s, with the greatest impact among adults 35 through 54 years of age. The shortage of physicians specializing in pain management has contributed to ineffective opioid prescribing practices (Harle, Bauer, Hosang, Cook, Hurley, and Fillingim, 2015). It is also noted that primary care doctors become distressed when trying to manage patients with chronic pain due to the worries about opioid abuse, misuse, and diversion (Harle et al., 2015). Primary care physicians have a limited amount of training in pain management (Jeffery, Butler, Stark, & Kane, 2011) and have time restraints when caring for patients with chronic pain (Abbo, Zhang, Zelder, and Huang, 2011), which plays a major role in effective pain management.

The setting for this study is an outpatient pain clinic, which sees approximately 6,000 patients yearly, averaging about 500 patients per month. The patients have been diagnosed with chronic pain and a majority are currently receiving opioids for pain management. With the concern over the rising number of deaths, abuse, and misuse of opioids, the need for a specific assessment tool was identified by the physician who is the key stakeholder. The utilization of a screening tool could be helpful in identifying patients at risk for addictive behaviors which would alert clinicians to monitor patients more closely and provide specific education or different interventions. Based on the clinician's findings, they may recognize a need to alter their plan of care including dosage

adjustments, thereby producing better pain management results and a decrease in the potential misuse of opioids.

Background

The institutions referenced to address this problem are the Centers for Disease Control and Prevention (CDC) and Department of Health and Human Services (HHS). According to the CDC, there has been an increase in deaths due to opioid overdose. It has been estimated that 6 to 8 million Americans use opioids for noncancer pain (Baldini, Von Korff, & Lin, 2012). The CDC will invest $8.5 million on (a) the development of tools and resources to help inform providers about effective opioid prescribing; (b) track data on prescribing trends; (c) research, develop, and evaluate clinical quality improvement measurements and programs on opioids prescribing; and (d) improve public understanding of the risks and benefits of opioid use (The White House, 2015). The HHS will invest $100 million in Affordable Care Act funding to focus on the assurance of prescribing a product of suboxone and narcan for the treatment of opioid dependency. HHS plans to make these medications accessible to community health centers across the country (USG, 2015).

Opioid dependence continues to be a chronic problem not only in the United States, but in other countries as well. In 2010, statistics showed that there were 15.5 million opioid dependent people globally (Degenhardt et al., 2014). South Asia was identified as having the greatest number of opioid-dependent people (4 million), with East Asia, North Africa, and the Middle East, and Western Europe having 1.3 million each (Degenhardt et al., 2014). Studies have also indicated that people in higher income

countries continue to use opioids despite the significant impact it has on them socially, such as arrest and imprisonment for crimes related to theft of property and drugs, and the health problems that it causes, such as fatal and nonfatal opioid overdose (Degenhardt et al., 2014).

Opioid is a pain analgesic that is very powerful and highly addictive (Dixon & Peirson, 2017). Some of the prescription drug classifications of opioid pain medication include oxycodone, hydrocodone, methadone, and morphine, which are used to treat short and long term pain and have been linked to the increasing drug overdose deaths in the last ten years (HHS, 2015). The death rate for drug poisoning from opioid pain medication has quadrupled from 1999 to 2013 (HHS, 2015).

In the United States, addiction and abuse of opioid drugs continues to be a public health problem and a challenge. It affects approximately 5 million people and has led to nearly 17,000 deaths annually (Dixon & Peirson, 2017). The mortality rate from drug overdoses has continued to rise over the last twenty years and has been identified as the primary reason for injury mortality in the United States (HHS, 2015).

In addition to mortality, there have been other adverse medical events linked to prescription opioid abuse over the last several years. There has been an increase in emergency room visits which were associated with abuse and misuse of prescription drugs with over 1.4 million pharmaceutical events, 420,000 involving prescription opioids (HHS, 2015). The literature has shown that people who are at the highest risks for opioid overdose are Alaskan Natives, White and American Indian men, adults between the age of 45-54, people who live in rural areas who take daily high doses of opioid pain medication,

analgesics, and people who obtain several prescriptions for controlled substance from different providers (HHS, 2015).

The misuse of prescription drugs continues to have a significant impact on communities throughout the country (Bureau of Justice Assistance [BJA], 2015). According to the CDC, this fatal prescription analgesic epidemic affects communities in every state (CDC, 2013). Communities are being targeted for criminal behaviors that are associated with prescription drug abuse and misuse, including home and business burglaries and robberies of pharmacies, clinics, and doctors' offices. This has affected every community at the local, state, national and global levels necessitating interventions to help alleviate the drug dependency (BJA, 2015). It is clear that the impact of the misuse of opioids calls for immediate action. The significance of having a tool such as SOAPP, which helps identify potential opioid abusers, would provide useful knowledge for physicians to consider when developing a plan of care and treatment. Utilization of screening tools for opioids such as urine drug screen, opioid risk assessment screen, standardized pain scales, and prescription drug monitoring programs may assist in assessing those at risk of possible opioid abuse. Other barriers include time-constraints, lack of information, negative approaches toward prescribing opioids, and inadequate assessment skills (Harle et al., 2015). Pain management providers play a crucial role in the effectiveness and success of the patient's treatment, and the use of such tools can assist in effective program planning to meet both the pain and addiction issues of the patient.

Purpose

The purpose of this doctoral project was to introduce an evidence-based screening measure that will identify patients with the potential to abuse and misuse opioids into a pain management clinic practice for use with patients where it has been determined that the most effective treatment is the use of opioids to manage their chronic pain. This tool may assist clinicians in identifying patients who are at risk of addiction and alert the clinician to modify their treatment plan, if necessary. Identifying patients at risk for opioid abuse and/or dependence can alert the clinicians to provide education and intervention programs. The tool may further inform the provider of the need for alternative or modified pain management strategies. For patients who are identified as either abusing or misusing opioids, other strategies can be initiated, such as providerclient contracts, depression screenings, and monitoring of opioid use.

The screening measure used for the patients in the study was the SOAPP, which is found in Appendix A (Inflexxion, Inc., 2008). SOAPP is a tool the clinician used to assess the potential that a patient would likely abuse opioids. SOAPP has 14 questions designed to predict behaviors of people using opioids for chronic pain. This screening measure complements current risk assessment practices and the clinician's ability to assess patients risk for opioid misuse (Butler, Budman, Fernandez, Fanciullo, & Jamison, 2010). According to Butler et al. (2010), this tool is much more effective than other methods that are being used currently, and it gives the physicians an awareness that patients are at risks for deviant behaviors (Butler et al., 2010). The SOAPP should be used only with patients who have chronic pain and are being considered for long-standing opioid therapy. The use

of a broader base approach would not be applicable for all patients with chronic pain. This doctoral project has the potential to introduce a valid pain measurement tool to the healthcare community and add to the literature on evidencebased practice in pain management.

Nature of the Doctoral Project

This evidence-based practice project utilized the Rosswurm and Larrabee (1999) six stage model to facilitate a shift from traditional and intuition-driven practice to improvement with evidence-based changes into practice. The six stages of the model are as follows: (a) assess the need for a change in practice, (b) link the problem with interventions and outcomes, (c) synthesize the best evidence, (d) design a change in practice, (e) implement and evaluate the change in practice including processes and outcomes, and (f) integrate and maintain the change in practice using diffusion of innovation state strategies.

Assess the Need for Change in Practice

The physician and nurse practitioner manage a client load of approximately 1,226 patients per quarter with chronic pain in a clinic located in an urban area of Indiana. They requested scholarly assistance in improving care by introducing an evidence-based screening instrument into the practice.

This is a private practice setting primarily focused on musculoskeletal medicine and rehabilitation. The patient age range is from 30 to 80. The leading diagnoses are chronic low back pain, neck, hip and knee pain, fibromyalgia, and migraine. The majority of patients are treated with opioid medications to help aid in pain management. The

primary goal of the pain center is to restore maximum functioning lost through injury, illness or disabling conditions. The center treats numerous medical conditions and provides various treatment options, such as rehabilitation, pain management, alternative therapies, prolotherarpy, electrodiagnosis interventional procedures, and worker's compensation and disability evaluation. The physician director is committed to the common good by helping clients achieve optimum pain management by addressing pain issues/concerns, screening, treating the individual as a whole and providing education, and offering alternative treatment and rehabilitation to help achieve a better quality of life.

The primary aim of this study was to utilize assessment tools to identify clients who are at risk of opioid misuse or addiction and those who are currently misusing or abusing opioids and provide the most effective treatment plan to manage pain and avoid abuse. The misuse of opioids has been identified in the literature as one of the challenges of primary care practice (Harle et al., 2015).

Link the Problem with Interventions and Outcomes

Chronic pain and prescription opioid abuse continue to place a burden on society, patients, and doctors. (Sehgal, Manchikanti, & Smith, 2012). Over the last twenty years there has been a dramatic increase in chronic opioid use for treatment of noncancerous pain, which has resulted in a higher rate of abuse of prescribed opioids and unintentional overdose (Sehgal et al., 2012). A review of the literature suggests that using a validated screening tool can provide an additional method for managing patients on opioid therapy

and assist in addressing problematic issues as they occur. Recognizing and predicting risk could be of great benefit in reducing the risk of iatrogenic addiction (Sehgal, et al., 2012).

One tool that has been utilized in screening during opioid therapy is the SOAPP. This tool can help doctors monitor any abnormal characteristic behaviors of misuse and abuse that are related to patients receiving opioid therapy for long term use for noncancerous pain (PainEDU, n.d.). According to Akbik et al., (2006) the SOAPP screening tool reveals factors such as history of substance abuse, legal problems, craving medications, heavy smoking, and mood swings that may indicate probability to misuse or abuse opioid medications (Akbik et al., 2006). The SOAPP instrument is a questionnaire which is simple and easy to use. It was designed based on important concepts that are likely to predict which patients on chronic opioid therapy will require additional or lesser monitoring. The questionnaire contains 14 items with a 5-point grading scale and takes less than eight minutes to complete. The SOAPP score risk is identified by the "cutoff values": a score of 7 or greater identifies approximately 91% of those who are at high risk; a score less than 7 indicates a lower risk (Inflexxiion, 2008). Once the risk score is determined, the clinicians can identify which patients need more or less monitoring and can address concerns with the patients and update the plan of care with the appropriate interventions as indicated.

The Pain Management Center of Brigham and Women's Hospital tested the validity and reliability of the SOAPP tool using data collected from a group of chronic pain patients from five pain clinics across the country. The 24-item SOAPP tool, developed from the consensus of 26 pain and addiction experts, was administered to 175

patients who were taking opioids for chronic pain. Of the 24 items, 14 SOAPP items appeared to predict subsequent aberrant behaviors. Based on the reliability and predictive validity results, SOAPP was viewed as a promising screening risk potential tool for substance misuse among patients with chronic pain (PainEDU, 2016).

Synthesize the Best Evidence

According to PainEDU (2016), clinics often mention that they do not have an opioid risk assessment screening tool as part of their intake process. Due to the challenges with opioid abuse and misuse, clinics are finding that it is crucial to include an opioid risk assessment as part of their screening process. PainEDU has identified the SOAPP screening tool as an effective tool to incorporate as part of the intake process (PainEDU, 2016). The SOAPP tool was chosen to be used in this outpatient pain clinic due to the support in the literature and the significance of the design, which addresses the potential for opioid abuse or misuse. This tool helps clinicians improve their ability to assess patients' risk for opioid abuse and can assist with the management of their treatment modality and plan of care (Butler et al., 2010).

According to Butler et al. (2010), the sensitivity of a tool for screening may be more important than the specificity because those screened might have problems managing their medications. Butler et al. suggests that medical decisions not be made merely on basis of the SOAPP screening, however.

Design a Change in Practice

The SOAPP screening tool was used with new admissions and routine visits by established patients. The SOAPP questionnaire was given orally to 100 consecutive

patients in a private setting. The data was scored according to their answers in nominal ratio. The patients who were identified as high risk were recommended for close monitoring by the clinicians and a review of their plan of care.

Implement and Evaluate the Change in Practice Including Processes and Outcomes

For a period of two weeks, the investigator reviewed charts of patients on the appointment list for the following day. Those with a medical diagnosis of pain and currently taking opioids had the survey tool attached to their intake form. The patients were requested to complete the form prior to seeing the physician.

The tool was reviewed by the investigator and a score placed on the chart to alert the clinician. Results were collected for a total of 100 patients in a table for descriptive statistics. Participants were not identified by name; rather, each was assigned a unique identifier for the data analysis. The clinician indicated on the summary tool whether the tool influenced the plan of care. This information was used to determine the impact on clinician behavior.

The descriptive data analysis included patients between the ages of 25 and 65 who were receiving opioid medication for noncancer pain. This analysis will be used for health planning purposes regarding the education and promotion of interventions for patients with the potential for opioid abuse (Friis & Sellers, 2014).

Integrate and Maintain the Change in Practice Using Diffusion of Innovation State Strategies

Once the data was obtained from the SOAPP questionnaire, the scores were calculated and analyzed as being a low or high risk for opioid misuse or abuse. The

physician or the nurse practitioner was notified in person. The results and identifiable

interventions and plan of care were addressed with staff identified as key stakeholders.

Significance

The potential implication for this project is to introduce the utilization of a reliable

tool to assess a patient's risk of potential abuse or misuse of opioids as part of the

development of pain measurement and an individualized plan of care for pain

management. Once this tool is implemented, the clinicians can review the medication and

adjust the plan of care accordingly. Positive social change will result from identifying at

risk patients, which may help reduce the potential for opioid misuse and abuse.

Summary

The lack of evidence-based pain measurement tools and the shortage of physicians

specializing in pain management has contributed to ineffective opioid prescribing

practices and to misuse and abuse of opioid medication (Harle, et al., 2015). The

incorporation of the SOAPP pain measurement tool into a chronic pain practice has the

potential to facilitate the providers' decision making and clinical management of chronic

pain patients. In Section 2 I will detail the concepts, theories, and the change model and

provide additional literature on the employment of the SOAPP tool with opioid use.

Section 2: Background and Context

Introduction

This evidence-based practice project introduced the use of the SOAPP questionnaire in identifying chronic pain patients who are either at risk of or currently abusing or misusing opioids. Pain is one of the major causes of disability, work loss, and health care costs in the United States (Hayden et al., 2012). The purpose of this project was to introduce a reliable pain measurement tool to facilitate providers in developing an individualized plan of care for pain management.

Published Outcomes and Research

The databases and search engines that were used in the literature search included the Cochrane Database, Ovid Nursing, CINANL, SAGE, MEDLINE, and Google Scholar. The key search terms used were *opioid abuse and misuse, pain management, SOAPP, overprescribing, prescription drugs, opioid screening tools, federal and state guidelines, nursing role in pain management, Roy Adaptation Model, the CDC website,* and *fact sheets from the National Institutes for Mental Health.*

The literature reviewed was published within the last five years, and the sources included *Journal of American Medical Association, American Academy of Pain Medicine, Pain Physician, Institute of Medicine, The Annual Review of Public Health, Nurse Practitioner Healthcare Foundation, Journal of Pain and Symptoms, PubMed Central, Journal of Addiction Medicine,* U.S. Government Fact Sheets, and the *American Journal of Nursing.* This search resulted in a comprehensive review of the literature to address the practice focus question.

Drug abuse and addiction is a major social and global health problem. One factor is the treatment of pain. In the United States, there are approximately 100 million Americans who suffer from chronic pain (Why do people get addicted to opioids?, 2016). The increase has occurred over a 25-year period from nearly 75 million in the 1990s to nearly 206 million in 2013 (Zimic & Jukic, 2012). Other factors contributing to this problem are family risk factors, childhood experiences, family boundaries, and social influence by peers, friends, schools, and surrounding environments (Georgas, Berry, van der Vijver, Kagitçibasi, & Poortinga, 2006).

Some professionals believe the prescription painkiller problem in the United States is the result of opioids being prescribed in combination with other medications, along with the influence of pharmaceutical advertisements. For some, drug abuse begins with a prescribed opioid for a valid medical reason and then feelings of relief lead to the enraptured effect of the drug (Why do people get addicted to opioids? 2016). The dangers of abuse can occur from the use of all forms, such as pills taken orally, snorting, injecting, or a combination of pills and alcohol with other drugs. Additionally, many people in the community are going from prescriptive opioid abuse to the use of heroin. Scientists believe the physical changes to the brain explain the neurotic and damaging behavior of individuals addicted to opioids. When tolerance to these drugs begins to function as a normal process, the body is unable to control the impulses needed to mitigate harsh consequences (Why do people get addicted to opioids? 2016).

With the ongoing trend of opioid abuse and misuse, it is essential that monitoring programs be put in place to help reduce the problem. According to Irvine et al. (2014)

prescription drug monitoring programs (PDMPs) are relatively new but are a helpful tool to aid in the management of prescribed controlled substances. There appears to be little known about the kinds of clinicians who make the most use of PDMPs, how they are integrated into the work process, or how clinicians and patients react to evidence. More inquiry is necessary to lessen prescription abuse of drugs and overdoses, which have become widespread in the United States, and to explore the potential for the implementation of PDMP to offset the epidemic (Irvine et al., 2014).

A statewide survey was conducted with approximately 1,000 providers, which consisted of clinicians from primary care and emergency rooms as well as pain and addiction specialists. The primary goal was to see how clinicians make use of the PDMPs, how the data is incorporated into the work place, and how the patients and clinicians respond to the information. This survey revealed that almost 90 percent of clinicians reported using the PDMP when they suspected a patient of diversion or abuse. However, less than half would check every new patient or when they prescribed a controlled substance. Approximately 50% of patients were referred to substance abuse and mental health clinics, and about 30% were discharged from the clinician's practice (Irvine et al., 2014). The survey also identified that clinicians reported a range of patient behaviors such as denial and anger, and almost three quarters of the patients did not come back. Some patients did ask for help with dependence and drug addiction. At least 61% of clinicians thought more training in PDMP would be useful in identifying abuse of substances and provide different ways to control medications, strategies for confrontation diffusion, and methods of chronic pain management (Irvine et al., 2014).

According to Irvin et al., (2014) physicians who used PDMP for any reason found that through interviews, the tool served as a means of communication between patient and providers. This enhanced the opportunity for dialogue regarding topics of education, compulsion, dependence, and ways and approaches to improve pain management. In one physician's summation, this tool has a ways to go in terms of helping to find out what is the best way to make decisions and combining them into a process (Irvin et al., 2014).

Concepts, Models, and Theories

Rosswurm and Larrabee's (1999) model of change represents a shift from the traditional way nurses practice to implementing the new paradigm of evidence-based practice in the clinical setting. Evidence-based practice is a model which guides practitioners through research literature and theory. According to Institute of Medicine (IOM) the way nurses were taught in the 20th century is no longer adequate for the health care in the 21st century (IOM, 2010). The patients have become more complex and require a higher standard of care. Nurses' roles will expand to managing information systems and mastering technological tools while coordinating and collaborating care across teams of health providers. The nurse must achieve higher levels of education that is research and evidence-based and develop competence in leadership, health policy, system improvement, and collaboration (IOM, 2010).

This model of care integrates the process of change through assessment of needs and adoption of new protocols that are evidence-based to minimize the discomfort clinicians and patients experience when it comes to questions, data, preferences, and new

research (Rosswurm & Larrabee, 1999). These identifiable changes can help stakeholders become aware of potential changes that are needed to achieve the best outcome

(Rosswurm & Larrabee, 1999).

There have been significant changes in today's health care systems' focus on integrating evidence-based practice into health care to help improve patient safety, care, and cost containment while providing a better outcome. Also, research has identified that with the diversity of patient's needs, it is critical that nurses be prepared to function as a leader and advance science that benefits patients and improves the capacity of the health professional to deliver safe, effective, and patient-center care (IOM, 2011).

Relevance to Nursing Practice

Over the past 20 years the prevalence of chronic pain and the rising costs of healthcare have contributed to an opioid epidemic with serious consequences to morbidity, mortality, and crime levels (Manchikanti et al., 2012). There are more deaths from opioid analgesics than from motor car crashes, suicides, and heroin and cocaine combined (Manchikanti et al., 2012). There is a significant relationship between the sale of opioid pain relievers and the rise in deaths. However, deaths are almost 60% in patients with prescriptions based on guidelines by medical boards and nearly 40% in the form of numerous prescriptions, doctor swapping, and drug diversion (Manchikanti, et al., 2012). Obstacles to preventing opioid deaths include insufficient knowledge, safety perceptions, and incorrect beliefs regarding handling of pain by clinicians.

According to the AAOS (2015), opioid overdose is now the leading cause of accidental death in young adults and contributes to a greater risk of postoperative

expiration. The AAOS suggests that surgeon and members of the team should explain to extended families and patients, that opioid protocols cannot be violated and that there should be better control established.

However, the diversion tactics of opioids from friends and family members who have appropriate prescriptions are a major part of the abuse of prescribed opioids (AJN, 2015). Nurses are considered trusted and influential in educating the family to help decrease the occurrence and possibilities of deadly consequences of prescription opioids.

The advanced nurse practitioner and clinic nurses have a role in reducing opioid diversion through patient monitoring, screening, education and alternative medications (AJN, 2015). There are large gaps in knowing how much opioid medication is needed to help manage a patient's pain. Nurses are at the forefront and have the opportunity to provide clients with strategies that involve patient education on the dangers of diverting medication to other areas, securing, disposing and monitoring efforts to help reduce their availability of opioid medications (AJN, 2015).

The practice improvement project introduces an opioid screening tool, the Screener and Opioid Assessment for Patients with Pain (SOAPP). The clinic population where this tool was used is representative of the many patients seeking treatment for pain in the musculoskeletal area of the body and restoration of functions lost due to injury, sickness, or debilitating conditions. For these patients treated with opioid medications, the SOAPP screening will help focus on identifying the patients who could be misusing or becoming addicted to opioids.

According to Moore, Jones, Browder, Daffron and Passik, (2009), substance abuse has a negative impact on society and does affect millions of people in the United States. Prescriptive opioids are critical to managing pain, therein lies a fear that aberrant drug associated behavior, addiction and abuse are reasons why under treatment of some cancer patients is prevalent (Moore et al., 2009).

A survey by Moore et.al, (2009) used a sample of patients 18 years and older in the study of females and males using a risk assessment by completing a questionnaire, with the SOAPP, Opioid Risk tool (ORT), the Diagnosis, Intractability Risk, and Inventory (DIRE), and a team psychologist. Several pain management centers measure risk by using only one of the evidence-based tools to predict and conclude probable risk of abuse when recommending opioids for pain (Moore et al., 2009).

According to Butler (2009), the SOAPP assessment tool helps provide information on how much monitoring is needed or required based on the cut-off score predictor. The SOAPP value proposition is that there is sensitivity in the test. In subsequent studies, the SOAPP is better at the identification of high risk patients rather than the identification of who is at low risk (Butler, 2009). Moore et al. (2009) noted that the cut-off score which measured participants" greater than 6 on the SOAPP, or less than 14 on the DIRE, were considered high risk, whereas, scoring from 4-7 or greater than 7 on the ORT were considered medium and high risk, respectively" (Moore et al., 2009).

Moore et al. (2009) compared three tools of assessment for predicting aberrant behaviors and whether validation can result in opioid medications suspension. The SOAPP was rated the best of the screening tools with its specifics of behavior, length, and

opacity and the high sensitivity and values of these measures. This tool was noted to be very useful when it came to time of completion and management of a large volume in the clinical site, which can help with patient and staff load (Moore, 2009). The authors did note that the study was small and more research is needed to make a knowledgeable choice over another when determining specific treatment approaches and medical techniques to help with treatment (Moore al et., 2009).

Summary

There is a need to include reliable pain measurement tools to facilitate providers in developing an individualized plan of care for management. Opioid abuse crosses all ages, ethnic groups, economic situations, and education levels. Evidence-based practices and protocols require adherence to reach the ultimate goal and foster a plan to eradicate the social, psychological, health and economic hardship of opioid abuse.

According to American Association of Colleges of Nursing (AACN) Essentials, the advanced nurse practitioner must utilize evidence based knowledge to the highest standard of practice to facilitate change effectively to benefit patients' daily needs and provide for a better outcome (ACCN, 2006). The role of the DNP encompasses the role of practitioner, educator, and activist for the purpose of implementing change in the community. Section two will provide additional detail on the implementation and data analysis plan.

Section 3: Collection and Analysis of Evidence

Introduction

There has been an increase in abuse and misuse of prescription drugs for chronic pain patients in the Untied States (Manworren & Gilson, 2015). Overprescribing of opioids for pain management has contributed to a noticeable increase in opioid addiction and death caused by overdose and heroin use (Kolodny et al., 2015). According to Reuben et al. (2015), over 100 million people in the United States suffer from chronic pain. A suspected 70% of those individuals treated their pain with opioids prescribed to a friend or family member (Arnstein &St. Marie, 2010). The shortage of physicians specializing in pain management has contributed to ineffective opioid prescribing practices and either misuse or abuse (Harle et al., 2015). The purpose of this project was to implement an evidence-based screening measure for opioid abuse and misuse for chronic pain patients who take opioids to manage their pain.

Practice-Focused Question

The practice focused question was: Does the utilization of an evidence-based screening tool assist the clinician in an out-patient pain management setting in identifying chronic pain patients who are either at-risk of or who are abusing or misusing opioids, and does it result in a modification of routine therapy?

Sources of Evidence

The collection and analysis of evidence from the SOAPP screening tool scores patients who are at risk for opioid misuse, thus alerting the clinician to monitor patients more closely. According to Butler et al., (2010), a cross-validation study was conducted

and showed that the SOAPP tool was a reliable and valid screening tool to use for the risk of aberrant drug-related behavior among patients with chronic pain (Butler et al., 2010). SOAPP was developed with a grant from the National Institutes of Health and an educational grant from Endo Pharmaceuticals (Inflexxion, 2008). It was designed based on an expert consensus model to help clinicians identify those patients that may require more or less monitoring while on opioid therapy. The SOAPP is a self-report measure that consists of 24 items, but only 14 are used for scoring. The scoring is based on a Likert 5-point scale of 0 (Never), 1 (Seldom), 2 (Sometimes), 3 (Often), 4 (Very Often). The cut-off value is 7; the score of 7 or above indicates a high risk for abuse and the need for additional monitoring for treatment for opioid therapy (Akibik et al., 2006). A study conducted with 48 participants in Tennessee by Moore, Jones, Browder, Daffron, and Passik, (2009) compared three common risk tools for predicting at-risk aberrant drugrelated behavior; the ORT, DIRE, and SOAPP. The study concluded that the SOAPP was more sensitive in identifying high-risk aberrant behavior, required less time to complete, and took only one minute to score, making it a very practical screening tool to use, even for large clinical settings.

Evidence Generated for the Doctoral Project Study Design

The study was a quantitative descriptive study using a convenience sample population which included all new and established patients who were prescribed opioid medications for noncancer pain. The patients who were prescribed opioid medication were screened to see if the opioid risk assessment tool was effective in identifying an atrisk population for opioid abuse and misuse and provided useful

information for the clinician's management plan in this outpatient pain management clinic. The exclusion criteria was anyone under the age of 18, those with an altered mental status, anyone having the inability to speak English, and those who were not currently taking opioid medications.

Setting and Sample

The setting was an outpatient pain clinic with designated private rooms for providing the questionnaire. The questionnaire was given to the patients prior to the clinicians entering the room. The participants were selected from an established outpatient pain clinic; therefore, all patients were taking opioid medications. The sample size consisted of 20% of the monthly population of 500, which resulted in a sample size of $n =$ 100. The sample included both males and females between the ages of 25 and 65 who met the requirement of short- and long-term opioid use for noncancerous pain.

Data Collection

The data collection method was a SOAPP questionnaire that consisted of 14 questions. The questionnaire addresses history of alcohol or drug abuse, craving of medication, mood swings, legal problems, and smoking (Akbik et al., 2006).

Procedures

I took the day's scheduled appointments and performed a medical chart review on adult patients between the ages of 30 and 65 who were currently prescribed opioid medications. Charts were flagged so the intake staff knew to alert me to do a screening interview with the patient using the SOAPP questionnaire. The score and results were put into the patient chart for the physician to review. There was a separate card that the

physician completed noting the score of the SOAPP and whether this information actually modified the plan of care, either through alternative prescribing, detailed education, or a monitoring plan.

Protections

While study participants were identified by their name in the chart, this was held in strict confidence. All questionnaires were conducted in the exam room to ensure confidentiality, and the data was limited to the physician and nurse practitioner. The data form from the physician noting the score and whether they modified the plan of care did contain identifying information. I used this information to construct a database for analysis using descriptive statistics. This practice improvement project is adding to the normal assessment of patients in this particular practice for use by the physician and therefore did not require the patient's consent. This proposal was submitted to the IRB for approval (approval # 01-13-17-0533125).

Analysis and Synthesis

The analysis and synthesis of evidence addressed the practice focused question of whether the use of the SOAPP screening was helpful for clinicians in identifying patients who were at risk for aberrant behavior associated with receiving opioids to manage their pain. The system used to record the data that was obtained from the SOAPP questionnaire was the eClinicalWorks 10. The eClinicalWorks 10 is an electronic medical record that is used in this practice for daily operations. This system allows data to be stored in a safe and secure place and only accessible by individuals with a secure user ID and password.

The data was scored using the Likert Scale of 0 = Never, 1= Seldom, 2 = Sometimes, 3 = Often, 4 = Very Often, to determine if the patients were at low or high risk for opioid misuse or abuse. Once the summary of the score was obtained, the results were placed in eClinicaWorks 10 secure notes for review or modification of their plan of care. The secure notes are only accessible to the physician and the nurse practitioner who are currently managing their pain. The questionnaire was given orally and scored by me to help minimize errors and missing data.

Summary

The main focus of this study was to explore the use of evidence-based practice tools to address the process of solving the problem of opioid abuse and misuse by patients. The study may provide additional information in the identification of risks for those who are receiving prescribed medication from a physician or nursing practitioner. Opioid abuse is not only a patient problem but a problem for all of society due of the extreme nature of events that have occurred from overprescribing of opioids and the toll it has taken on families and within communities. Section 4 will detail the findings and recommendations.

Section 4: Findings and Recommendation

Introduction

There has been an increase in abuse and misuse of opioid prescriptions by chronic pain patients in the Unied States (Manworren & Gilson, 2015). Overprescribing of opioids for pain management has contributed to a noticeable increase in opioid addiction and death caused by overdose and heroin use (Kolodny et al., 2015). The shortage of physicians specializing in pain management has contributed to ineffective opioid prescribing practices and either misuse or abuse (Harle et al., 2015). The practice focused question for this study was: Does the utilization of an evidence-based screening tool assist the clinician in an out-patient pain management setting in identifying chronic pain patients who are either at-risk of or who are abusing or misusing opioids, and does it result in a modification of routine therapy? The purpose of this project involved the need to implement evidence-based screening measures for opioid abuse and misuse for chronic pain patients who take opioids to manage their pain.

The data collection method was the SOAPP questionnaire that consists of 14 questions. The questionnaire addresses history of alcohol or drug abuse, craving of medication, mood swings, legal problems, and smoking, (Akbik et al., 2006). The scoring is based on a Likert-5-point scale of 0 (Never), 1 (Seldom), 2 (Sometimes), 3 (Often), 4 (Very Often). The cut-off value is 7; the score of 7 or above indicates a high risk for abuse and the need for additional monitoring for treatment for opioid therapy (Akibik et al., 2006).

SOAPP was developed with a grant from the National Institutes of Health and an educational grant from Endo Pharmaceuticals (Inflexxion, 2008). It was designed based on an expert consensus model to help clinicians identify those patients who may require monitoring while on opioid therapy.

One hundred consecutive patients who presented at the medical practice were adult patients between the ages of 25 and 65 who were currently prescribed opioid medications. The SOAPP questionnaire was orally presented to the patients by this author at the time of their scheduled appointment and prior to the clinicians entering the room. The results were scored using a Likert 5-point scale of 0 (Never), 1 (Seldom), 2 (Sometimes), 3 (Often), 4 (Very Often). The cut-off value is 7; anything below 7 is considered low risk and the score of 7 or above indicates a high risk for abuse and does require additional monitoring for treatment for opioid.

Finding and Implications

The data collected from the SOAPP screening assessment tool found that 25% of the interviewed participants scored at high risk (over the 7 cut-off value) for opioid misuse and may require additional monitoring by the physician and nurse practitioner. The patients identified as high risk were recommended for close monitoring by the clinician and the results were used to aid in the development of a treatment plan that would avoid the use of addictive interventions that could promote misuse. Findings were consistent with Butler (2010) in regards to the SOAPP tool being an effective tool in identifying patients at risk for abuse and providing awareness so problems can be addressed.

The descriptive analysis includes both males and females between the ages of 25 and 65. The mean age for high risk was 51 and for low risk 54. Twenty two percent (22%) of females and 27% of males scored at high risk. When divided into age groups, risk appeared to increase with age in males and females, although the low number of participants by age group is not statistically significant. This is consistent with the HHS (2015) statistics noting that those aged 45-54 were at highest risk for opioid abuse.

Table 1

Patients Scoring Over 7 by Age and Sex

Categories	Number of persons in this category	Number scoring 7 and above	Percentage scoring 7 and above
Male <35	7	1	14%
Male 36-49	17	5	29%
Male >50	31	9	29%
Female <35	2	2	100%
Female 36-49	13	2	15%
Female >50	30	6	20%

A review of individual questions showed that the most significant questions that pointed to risk factors were related to addictive behaviors, family history, and drug screening. Table 2 provides information on those ranking at risk by question.

Table 2

*Percentage Scoring 7 (*n *= 25) and Above by Individual Question*

Questions	Percentage Average Response 7 and above
1. How often do you have mood swings?	88%
2. How often do you smoke a cigarette within an hour after you wake up?	84%
3. How often have any of your family members, including parents and grandparents, had a problem with alcohol or drugs?	56%
4. How often have any of your close friends had a problem with alcohol or drugs?	40%
5. How often have others suggested that you have a drug or alcohol problem?	16%
6. How often have you attended an AA or NA meeting?	32%
7. How often have you taken medications other than the way that it was prescribed?	16%
8. How often have you been treated for an alcohol or drug problem?	24%
9. How often have your medications been lost or stolen?	2%

Question	%
10. How often have others expressed concern over your use of medication?	12%
11. How often have you felt a craving for medication?	12%
12. How often have you been asked to give a urine screen for substance abuse?	60%
13. How often have you used illegal drugs (for example, marijuana, cocaine, etc.) in the past five years?	32%
14. How often, in your lifetime, have you had legal problems or been arrested?	52%

A more detailed analysis of the four top questions in Table 3 revealed these

questions were more strongly associated with both males and females over 50. Further

study is needed on other factors such as longevity of opioid use and the acuity of chronic

pain in older adults.

Table 3

Percent at Risk by Question, Sex, and Age

Question	Males <35	Males 36-49	Males >50	Females <35	Females 3649	Females 50>
Mood Swings	4%	20%	24%	8%	8%	24%
Cigarette within an hour of waking up	4%	20%	32%	8%	8%	12%

Family Members with substance abuse issues	4%	4%	20%	4%	4%	20%
Urine drug screen	4%	12%	20%	8%	4%	12%

Patient Response

I found that the patients were receptive to the score outcome whether it was high or low. Many patients agree with the score and were not really surprised with their results. However, the MD was surprised at some of the results. The implication for this practice is that the introduction of a reliable tool to assess a patient's risk of potential abuse or misuse of opioids can aid in the development of an individualized plan of care for pain management. The findings increased the awareness of potential risk to the nurse practitioner (NP) and MD, resulting in their altering the plan of care of all those who scored high risk. Modifications included more frequent visits, medication logs, and intermittent urine testing.

The results from the screening tool can be used to educate the patient on risk factors of opioid abuse and allow the patient to become more involved in their plan of care. Patient involvement provides an opportunity for them to contribute to the effectiveness and success of their pain management treatment plan. This office will continue to utilize this tool in their practice.

The significance of using a simple screening tool such as SOAPP can have a positive impact on social change by reducing opioid abuse and, in the long run, prevent aberrant drug associated behavior. The misuse of prescription drugs continues to have a significant impact on communities throughout the country (BJA, 2015). Communities are

being targeted for criminal behaviors that are associated with prescription drug abuse and misuse, including home and business burglaries and robberies of pharmacies, clinics, and doctors' offices. This has affected every community on the local, state, national, and global level, necessitating interventions to help alleviate the drug dependency (BJA, 2015).

The implications for nursing practice include the utilization of screening tools by the nurse practitioner who sees patients with chronic pain and the inclusion of patients into the discussion of risk and the plan of care. Nurses need to be informed about the risks of opioid use and addiction potential. The goal is to provide optimal pain management while addressing the issues that may lead to addiction.

Recommendations

Several pain management centers measure risk by using only one of the evidencebased tools to predict and assess probable risk of abuse when recommending opioids for pain (Moore et al., 2009). It is recommended that risk assessment screening tools be used on a regular basis in combination with cross-validation. For example, the SOAPP results indicating a patient is at high risk of abusing opioids can be compared with the patient's urine results to validate the patient is currently misusing or abusing opioids. This author recommends that the patients be included in the discussion of the results to make them aware of their potential risk of opioid abuse or misuse and involve them in their plan of care.

Strength and Limitations of the Project

The major strength of this project is that the SOAPP instrument is a questionnaire which is simple, free and easy to use and takes less than eight minutes to complete and only one minute to score. This makes it a very practical screening tool to use, even for large clinical settings. It is voluntary and non-invasive. The truthfulness and honesty of the patient's responses has an impact on the validity of the findings and is a limitation to using this screening tool alone. This study did not allow for comparison of the SOAPP tool results with urine screenings, or other screening methods which would have strengthened the findings. The SOAPP screening tool should not only be used with patients who are being considered for long-standing opioid therapy for chronic pain. It could be used in other settings such as hospitals or primary care physician offices. It can be used for other prescribed addictive medications. Additional research utilizing the took with cross validation measures is needed.

Section 5: Dissemination Plan

The dissemination plan for this private practice pain management clinic is that I will give an oral presentation to the nurse practitioner and physician. Any high-risk patients will have their treatment and plan of care monitored more closely to help avoid the potential for misuse or abuse. The SOAPP questionnaire that was used in this project to identify low or high risk patients will be scanned into a secure file for storage. I plan to submit my abstract to National Institute on Drug Abuse regional meeting.

Analysis of Self

As a nurse practitioner, I have learned to be a strong advocate for change. And, as an advocate and implementing change, I can have a significant impact on our society. I can increase the chances of a patient having a better quality of life by incorporating evidence-based research, recommendations, and guidelines that have been scientifically proven to be beneficial. As a scholar, I have learned that a holistic approach to everyday practice should be used to monitor and treat patients based on individual need assessments.

This practical experience has given me a wealth of knowledge as a researcher, but it has also had an impact on my personal and professional growth. It has allowed me insight on a first-hand basis into situations that have been experienced by people in real life. This has enlightened and refocused my long-term professional goals of opening a much-needed rehabilitation center in a rural setting for people who are unable to afford the help they desperately need due to cost and availability.

As with most projects, there are challenges such as finances, transportation, honesty, manipulation, noncompliance, and education. People in the healthcare profession must face the challenges with integrity, knowledge, and available resources, and try to treat everyone with dignity and respect. Although I may not have traveled the roads others have traveled or encountered their struggles, as a professional, I promise to be a strong leader, advocate, educator, resource, therapist, and nurse practitioner who is willing to make a difference through change, caring, and hope.

Summary

With the ongoing trend of opioid abuse and misuse, it is essential that monitoring programs be put in place to help reduce the problem. These monitoring programs can help physicians and nurse practitioners become more aware of patients who may have difficulty controlling their own medical use of opioids and who may require more monitoring and management to avoid the potential for abuse or misuse of opioids today.

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Appendix A: Screener and Opioid Assessments for Patients with Pain (SOAPP)

SOAPP VERSION 1.0-14Q

Name: _____ Date: _____

The following are some questions given to all patients at the Pain Management Center who are on or being considered for opioids for their pain. Please answer each question as honestly as possible. This information is for our records and will remain confidential. Your answers alone will not determine your treatment. Thank you.

Please answer the questions below using the following scale:

0 = Never, 1 = Seldom, 2 = Sometimes, 3 = Often, 4 = Very Often

1. How often do you have mood swings?   0 1 2 3 4

2. How often do you smoke a cigarette within an hour after
    you wake up?   0 1 2 3 4

3. How often have any of your family members, including parents
    and grandparents, had a problem with alcohol or drugs?   0 1 2 3 4

4. How often have any of your close friends had a problem with
    alcohol or drugs?   0 1 2 3 4

5. How often have others suggested that you have a drug or
    alcohol problem?   0 1 2 3 4

6. How often have you attended an AA or NA meeting?   0 1 2 3 4

7. How often have you taken medication other than the way that it
    was prescribed?   0 1 2 3 4

0 = Never, 1 = Seldom, 2 = Sometimes, 3 = Often, 4= Very Often

8. How often have you been treated for an alcohol or drug problem?   0 1 2 3 4

9. How often have your medications been lost or stolen?   0 1 2 3 4

10. How often have others expressed concern over your use
    of medication?   0 1 2 3 4

11. How often have you felt a craving for medication?   0 1 2 3 4

12. How often have you been asked to give a urine screen
    for substance abuse?   0 1 2 3 4

13. How often have you used illegal drugs (for example, marijuana, cocaine, etc.) in the
    past five years?   0 1 2 3 4

14. How often, in your lifetime, have you had legal problems or
    been arrested?   0 1 2 3 4

Please include any additional information you wish about the above answers. Thank you.

(Inflexxion, 2008).

Appendix B: Copyright