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Development of a Staff Education Project on Managing Patients with Nonmalignant Pain

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
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Abstract

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MS, Walden University, 2015

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Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Nursing Practice

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Abstract

Opioids, once considered the cure-all for most pain ailments (acute or chronic), have developed into one of the current largest epidemics. Many contributing factors have led to the opioid crisis, but providers have played a significant role in creating this epidemic. Therefore, this project involved constructing a staff education program for providers to present evidence-based practices (EBPs) that are less addictive pharmacological and nonpharmacological methods for managing nonmalignant pain in an ambulatory clinic. The adult learning theory was used to facilitate the learning process, and logic models were used to guide the process. The topics in the education program included the background of the opioid epidemic, definition of pain, description of various types of pain, alternative nonpharmacological and pharmacological treatment for pain, and prevention methods. Three team members were recruited from 1 ambulatory clinic. Pretests were administered before the education program, and posttests were given after to assess the providers' knowledge of treating nonmalignant pain. After the tests were analyzed using Microsoft Excel, the results revealed that the providers were knowledgeable about using EBPs when treating nonmalignant pain, with all participants scoring 100%. Additionally, results from revealed improvements in other areas. Positive social change is possible as providers change their prescriptive habits for treating nonmalignant pain by reducing the number of prescriptions for opioids.

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Dedication

To the memory of my beloved and wonderful grandmother-Minnie L. McClain. Your unconditional love, guidance, discipline, and great cooking will forever be cherished. And, to Earnest Chism whom God used as my professional mentor.

To my children Alex, Jheri, Gerald II, Gerald III, and AJ. There are no words to express how much I love you all. To my grandchildren TreTre, Baby, and BigHam, I expect for you all to carry on the legacy.

To my mother Beatrice, and Aunt Virginia, Sister Sabrina, and Brother Arlando, thanks for your encouraging words.

And, to Almighty God Who kept me and Whom loved me with His unconditional love, thank you.

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I would like to thank all of my good friends for their support: Cotillion, Porsha, Dee, Crystal, Kimberly and the brothers of Omega Psi Phi Fraternity, Inc., Psi Mu Mu Chapter. I sincerely appreciate your support.

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Section 1: Nature of the Project

Introduction

Opioids have developed into a modern epidemic caused by many factors such as misrepresentation by pharmaceutical companies, over prescribing by providers, and misuse and abuse by the public. However, providers are the gatekeepers to opioids, so they have played a significant role in creating this epidemic. For example, some surgeons have routinely written discharge prescriptions for oxycodone of at least 30-60 tablets for patients who underwent laparoscopic surgery (Makary, Overton, & Wang, 2016). Though for more complicated or comparable surgeries, surgeons have been able to manage patients' pain with a prescription of approximately five oxycodone pills and less addictive medications (Makary et al., 2016). Thus, providers may help resolve the opioid epidemic by making simple changes in their prescriptive practices. The purpose of this evidence-based project was to develop a staff education program on some of the most current and best practices for managing nonmalignant pain.

Problem Statement

Opiates are overly prescribed by health care providers for nonmalignant pain. The abuse, misuse, and over prescribing of opiates for nonmalignant pain over the past couple of decades have led to the current opioid crisis in the United States. What was once considered to be the miracle drug introduced by pharmaceutical companies has significantly and negatively impacted lives, families, and the healthcare system. Opioid use for pain management has led to worse treatment outcomes, addition, and overdose (Woodard & Van Demark, 2017). According to the Centers for Disease and Prevention

(2016), deaths from drug overdose triples from 1999 to 2014 in the United States, with 60.9% of 47,055 deaths in 2014 caused by opioids. Further, the Centers for Disease Control and Prevention (2017) reported that over 1,000 people are treated in emergency departments for misusing prescription opioids every day. Additionally, they reported that in 2015, the highest rates of opioid overdoses were among people aged 25-54 years (Centers for Disease Control and Prevention, 2017).

The opioid epidemic has been getting significant attention in the news. As a result, government agencies and providers are pressed to develop solutions to the problem. Combating the opiate epidemic requires a collaboration of physicians, nurse practitioners, physician assistants, dentist, psychologists, pharmaceutical companies, law enforcement, clergy, and counselors. This project was focused on educating staff at the project site on practices for managing nonmalignant pain to address over-prescription of opioids.

Purpose

The purpose of this evidenced-based project was to develop a staff education program on some of the most current and best practices for managing nonmalignant pain. The staff education program presented both pharmacological and nonpharmacological methods for managing nonmalignant pain in ways that are less addictive. Pain is one of the most difficult ailments for providers to treat, as the signs and symptoms are subjective and vary from patient to patient. Besides using various pain scales, providers have not had a reliable means to quantify pain, making it difficult to treat. However, there have been initiatives such as one in the mid-90s to address pain as the sixth vital sign (Morone

& Weiner, 2013). The PICOT (patient/problem, intervention, comparison, outcome) question used for this project is: Will educating primary care providers in evidence-based pain management practice in a small rural ambulatory care clinic decrease the number of opioid prescriptions written for patients who have nonmalignant pain?

Practice-Focused Questions

1. Will staff participating in the project be more inclined to prescribe fewer addictive medications for acute or nonmalignant pain?
2. Will staff participating in the project be more inclined to check their local prescription drug monitoring system before prescribing opioids?
3. Will staff participating in the project be more inclined to make proper referrals to pain management as indicated?
4. Will staff participating in the project be more inclined to initiate a pain control contract and perform drug screening before and randomly when prescribing opioids?

By implementing my project, providers can be conscious of their prescriptive habits as it relates to treating nonmalignant pain. Additionally, providers may be more inclined to use available resources and use less addictive nonpharmacological and pharmacological methods for managing pain. This project can also be applied in an ambulatory setting or larger health system, which will help deliver a continuum of care as it relates to managing nonmalignant pain.

Nature of the Doctoral Project

To implement this evidenced-based practice project, buy-in from all parties involved was important; hence, finding the window of opportunity was essential because some stakeholders might be inclined to make decisions without scientific research during this period (Andermann et al., 2016). The opioid epidemic has been getting news coverage due to the detrimental effects of opioid abuse. Subsequently, local and federal government agencies have begun to monitor and penalize providers who are overly prescribing opioids. As a result, providers a more likely to be inclined to use and be open to discussion of other EBPs for treating nonmalignant pain.

Significance

The success of an evidence-based project depends on identifying and obtaining support of key stakeholders; primary stakeholders identified for my project were the providers, as they are the gatekeepers to opioids. Furthermore, with the limited number of pain clinics and their discretion to accept specific insurances, some patients have to depend on their primary care provider for managing their pain. Additionally, due to the limited number of doctors and potential influx of these new patients presenting to the clinics for care, nurse practitioners are required to fill in the gap, which makes the nursing profession an important and viable solution to the opioid epidemic. Consequently, seeking these key stakeholders at the beginning and throughout the project was necessary to its success and longevity.

Over the past couple of decades, opioids have not only been used for treating pain, but it has been socially accepted and utilized as a cure-all for all sorts of illness.

Additionally, opiates have also been sold by some patients for supplemental income, which is estimated to be a 25-billion-dollar industry (Rigg, Kurtz, & Surrat, 2012). These practices have led to the current opioid epidemic. However, this project may help to change the prescribing practices of providers when treating acute or nonmalignant pain through staff education. This project was designed to encourage providers to explore other less addictive evidenced-based treatments for pain.

Summary

The opioid epidemic is one of the largest made-made epidemics in modern times, costing millions to rehabilitate and treat patients. It has also affected most Americans, directly or indirectly. Thus, this evidence-based project was geared toward changing the prescriptive habits of providers as it relates to treating nonmalignant pain. The purpose was to develop staff education on best practices for managing nonmalignant pain. Therefore, the PICOT question guiding this research was "Will educating primary care providers in evidence-based pain management practice in a small rural ambulatory care clinic decrease the number of opioid prescriptions written for patients who have nonmalignant pain?" Additional practice questions were also presented that assisted with guiding this project. This evidence-based project was conducted at a small primary practice in the southern United States.

Section 2: Background and Context

Introduction

The misappropriation of opioids has led to one of the worst health issues in modern America. Of the causes of this crisis, providers have had the most significant influence. But they also have the capability of resolving this issue, as they are the gatekeepers to these drugs. Because opiates are overly prescribed by health care providers for nonmalignant pain, the focus of my project was to develop a multidisciplinary staff education project on treating patients with acute or chronic nonmalignant pain. The objective was to educate staff on some of the most current practices for managing nonmalignant pain. The PICOT question used for this project was: Will educating primary care providers in evidence-based pain management practice in a small rural ambulatory care clinic decrease the number of opioid prescriptions written for patients who have nonmalignant pain? In Section 2, the concepts and theory used for this project will be discussed along with its relevance to nursing practice, local background and context, and the role of the Doctor of Nursing Practice (DNP) student and project team.

Concepts, Models, and Theories

The concepts, models, and theories applied and used to guide the DNP project were the adult learning theory and the logic model theory (also known as a logical framework). The adult learning theory was used to guide and facilitate the learning process. The adult learning theory was developed by Malcolm Knowles, who used the

term *andragogy* to describe adult education (Knowles, Holton, & Swanson, 2012). The adult learning theory includes five assumptions of an adult learner:

- self-concept: as a person transitions from childhood to adulthood they progress from being a dependent to an independent learner;
- adult learner experience: over the lifespan of an adult, experiences can enhance their ability of learning;
- readiness to learn: adults have the ability to learn in new information to thrive in their environment;
- orientation to learning: adults are task-centered; therefore, they are driven to learn information that will help them learn to resolve their problems;
- and motivation to learn: adults' motivation to learn becomes internal (i.e., returning to school for a higher degree for a better paying job; Knowles et al., 2012).

The adult learning theory assisted in assessing the learning environment and helped to determine various teaching modalities for implementation during the DNP project for a successful outcome. The adult learning theory has been used in many settings to assess children or adults' willing to learn whether in a classroom, business, or government environment (Knowles et al., 2012).

Additionally, the logic models allowed me to use visual depictions that demonstrated goals and plans and the intended methodologies to accomplish results. Visual logic models help explain the program to staff and stakeholders, select activities, and plan the evaluation of the program (Hodges & Videto, 2011). Logic models also

allowed me to evaluate and reevaluate the intended outcomes and make the necessary adjustments to ensure the success of the program.

Relevance to Nursing Practice

The opioid epidemic is relatively new and has been getting significant attention in the news, which has caused government agencies and providers to develop solutions to the problem. Additionally, research has supported the need for addressing the opioid crisis (see Woodard & Van Demark, 2017). The current state of nursing practice as it relates to the opioid epidemic has always been to provide the best possible care without causing any harm to the patient (Bonnie, Ford, & Phillips, 2017). However, nurses have not had a voice in deciding what patients should be prescribed for pain or determine the scheduling of the drugs. Their role has been limited, especially in an inpatient setting. But today, the nurse's role has extended to the nurse practitioner that has given them more autonomy to make decisions regarding their patients care, and more specifically, pain management. Therefore, educating staff on pain management that is less addictive can contribute to nursing practice.

Local Background and Context

In the past decade, the use of prescription opioids to treat nonmalignant pain and its related deaths have increased dramatically. For instance, in 2012, more than 250 million prescriptions were written for opioids, and from 1999 to 2015, more than 183,000 people died from opioid overdoses (World Health Organization, 2017). There is a correspondence between the number of written prescriptions and the significant increase in the number of deaths or other opioid-related problems. This evidence-based project

focused on educating providers to use less addictive pharmacological and nonpharmacological treatments for managing nonmalignant pain, while using opioids only when other measures have been exhausted or when they are legitimately indicated.

Due to the dwindling number of pain clinics, implementation of new insurance models, and the reduction in the number of admission days for hospitalizations, patients are being diverted to their primary care providers for pain management. Unfortunately, many providers cannot appropriately manage this influx of patients, and some providers do not have adequate training to treat nonmalignant pain in the ambulatory setting (Bonnie, Ford, and Phillips, 2017). Hence, this evidence-based project will encourage providers to explore safer methods for treating nonmalignant pain that in turn will reduce prescriptions written for opioids. Consequently, this will decrease the number of overdoses and other health or crime related issues, thereby, resolving the opioid crises.

Definitions of Relevant Terms

Adult learning model: The art and science of adult learning (Knowles, Holton, & Swanson, 2012).

Evidenced-based practice (EBP): "is the amalgamation of research evidence, experience and expertise, and patient preferences in the process of clinical patient care. (Samonte & Vallente, 2016).

Logic model: "A conceptual approach to describing the activities of the project and the relationships among the activities, the theoretical foundations of the program, and the program's goals and objectives" (Hodges & Videto, 2011, p. 121).

Nonmalignant pain: "nonmalignant pain is pain unrelated to cancer that persists beyond the usual course of disease or injury. It may or may not be associated with a pathologic process" (Jackman, Purvis, &Mallet, 2006, p. 1155).

Pharmacological: "Relating to the branch of medicine concerned with the uses, effects, and modes of action of drugs" ("Pharmacological," n.d.).

Stakeholders: "are people or organizations that are invested in the program, are interested in the results of the evaluation, and have a stake in what will be done with the results of the evaluation" (Hodges & Video, 2011, p. 211).

Role of the DNP Student

I have been practicing in the nursing profession for over 13 years, ten years as a registered nurse and three years a family nurse practitioner. As a registered nurse, I have worked in various areas of nursing from medical-surgical, orthopedics, pulmonary, renal, neurology, outpatient surgery, cardiology, step-down units, and management. As a family nurse practitioner, I have worked in primary care servicing the Medicaid populous, and in an acute care clinic. Nonetheless, I noticed a common denominator in all the specialties in some respect. Providers were ineffectively managing patients' pain levels which inadvertently sparked my motivations to make a change. From the beginning of my career, I could also see how patients were able to abuse the system, especially in the hospital setting as prewritten protocols and standing orders were already established for patients that presented for pain or discomfort secondary to another illness. Although there were times that we deemed that patients pain or discomfort did not indicate opioids, we were told to administer it to the patient if it was prescribed.

As a new family nurse practitioner working in primary care with the Medicaid population, I experienced very similar circumstances. The company that I worked for was new in the area. Our patients were assigned to us by the insurance company, or they voluntarily chose us as their new primary care providers. As a result of the clinic being recently open, there were not many safety measures in place to prevent or stop potential opioid abuse. Patients knew that they could come to the clinic complaining of acute or chronic pain, and in some cases, they would receive at least a 30-day supply of opioids. Consequently, as a result of the massive influx of new patients presenting to the clinic daily, there was no adequate way to monitor patient prescriptive habits. After months of discussion, and provider turnover, the leadership team finally initiated protocols to prevent or reduce the opportunities for patients to abuse their pain medications.

The project site is a small ambulatory clinic located in a rural southern town that provides services to a diverse payer mix. As a DNP student, my role was to facilitate the project by educating staff with new or current methodologies for treating nonmalignant pain, assessing and reassessing my intended goals, and make adjustments as needed. Additionally, in the future, I plan to work with local and governmental officials to influence updates of policies regarding treating nonmalignant pain, and discuss way of making rehabilitative services more readily available for patients that have an opioid addiction.

Role of the Project Team

The project team included two physicians, one of which was the preceptor, a nurse practitioner, and the facilitator. The team members participated in taking pretests

and posttest, which assessed their knowledge levels of using various nonpharmacological and pharmacological treatments of nonmalignant pain. They also attended an educational session and gave their feedback after the educational session and one on one interviews.

Summary

The opioid epidemic has been termed one of the largest man-made epidemics of modern times, and many variables have been attributed to this crisis. This project was aimed at changing the prescriptive habits of providers as it relates to treating nonmalignant pain in ambulatory clinics. The purpose of this evidenced-based project is to develop a staff education on some of the most current and best-practices for managing nonmalignant pain.

Section 2 discussed concepts, models, and theories, such as the Adult Learning Theory, and the Logic Model that was used to guide this project. Also discussed was the local background and context, defined in relevant terms, and the roles of the DNP student and project team. Section 3 discussed EBPs for treating nonmalignant pain, and how educating providers with these methods will change their prescriptive habits which will ultimately help resolve the opioid epidemic.

Section 3: Collection and Analysis of Evidence

Introduction

The mismanagement of opioids for treating nonmalignant pain opiates by both providers and patients has led to the current human-made epidemic, causing millions of dollars in damage related to deaths, hospitalizations, rehabilitation, and institutionalizations. The combined cost for these opioid related issues has totaled over 70 billion dollars (Florence et al., 2016). New measures are currently being implemented, and current procedures are now being enforced to resolve this issue; however, providers play an intricate role in solving the opiate crisis as they are the gatekeepers of these medications. Accordingly, the purpose of this evidenced-based project was to develop a staff education on practices for managing nonmalignant pain for a project site locating in the southern United States.

Practice-Focused Question(s)

The premise for the project was guided by the following practice-focused question: Will educating primary care providers in evidence-based pain management practice in a small rural ambulatory care clinic decrease the number of opioid prescriptions written for patients who have nonmalignant pain?

Other questions that helped guide this study included:

1. Will staff participating in the project be more inclined to prescribe fewer addictive medications for acute or nonmalignant pain?
2. Will staff participating in the project be more inclined to check their local prescription drug monitoring system before prescribing opioids?

3. Will staff participating in the project be more inclined to make proper referrals to pain management as indicated?
4. Will staff participating in the project be more inclined to initiate a pain control contract and perform drug screening before and randomly when prescribing opioids?

Sources of Evidence

Primary articles published between a 5-year span of 2011-2017 were only considered for the most recent evidence-based project for educating providers regarding treating nonmalignant pain. The scientific databases utilized to conduct the project research were the Cumulative Index to Nursing and Allied Health Literature (CINAHL), Medline, Cochrane, and PubMed for peer-reviewed scholarly articles. Key terms that were used and their combinations for searching pertinent articles included the following: *opiates, opioids, opiate abuse, opioid abuse, treating nonmalignant pain, pain, pharmacological, nonpharmacological, treating acute pain,* and *educating providers*.

Analysis and Synthesis

To prepare for the educational session of the project, I reviewed current evidenced based research for nonpharmacological and pharmacological treatments for nonmalignant pain. Articles that were considered provided methods of treating pain that was cost-effective and feasible to implement for both provider and patient. After careful review of peer-reviewed articles, I examined the level of evidence using Melynk and Fineout's system for assigning levels of evidence (see Table 1), which primarily comprised level I articles.

Table 1

Literature Review Matrix

Citation	Framework	Main finding	Research method	Strengths	Weaknesses	Level of Evidence
Gover, C. A., McKeran, M. P., Close, and R. J. H. (2018).	Pilot Study	Patient reported significant relief with utilizing TENS for pain control.	Chart Reviews/ Surveys	Conducted in a small rural hospital.	A pilot study at a single hospital. Doctors did not prescribe TEN units to all patients. Not all patients and Ed doctors responded to surveys.	IV
Hay, E. M., Paterson, T. E., Dziedzic, K., and Croft, P.R. (2005).	Systematic reviews of randomized controlled trials	Physiotherapy and local steroid injections were of similar effectiveness for treating new episodes of unilateral shoulder pain.	Systematic review	Systematic review of several randomized studies. Overall, disability from shoulder problems in the physiotherapy group was similar to that in the injection group at both six weeks and six months.	Participants in several study had various levels of disability at recruitment. Results from several trials appear to yield different outcomes.	I
Sansone, R. A. and Sansone, L. A. (2008).	Literature Review	Antidepressants appear to be successful in the treatment of pain, with the exception of SSRIs	Literature Review	The authors reviewed research of studies that were conducted using various antidepressants to successfully treat pain.	The results were the authors' interpretation	I
Schnitzer, T. J., Tesser, J. R. P., Cooper, K. M., and Altman, R. D. (2009).	Randomized Study	APAP ER was noninferior to rofecoxib 12.5 mg for treating mild to moderate osteoarthritis knee pain.	Randomized double-blind study	Large sample size to conducted study (403) randomly selected for multiple site. .	Limitations of the present study include the lack of a placebo group, relatively short duration, lack of liver enzyme testing, and the exclusion of patients with active inflammation of the study joint after the washout period.	I
Vickers, A. J. and Linde, K. (2014).	Meta-analysis	Acupuncture is associated with reductions in chronic pain as compared to sham acupuncture and as compared to no acupuncture control.	Individual patient data meta-analysis	Large sample size.	Participants were not blinded to the comparison between acupuncture and no acupuncture control. The number of trials for shoulder pain was limited.	I

The project facilitator created a chart auditing tool (see Appendix A) to assess the long-term success of the project. One-on-one interviews were used to assess the providers' knowledge both pre- and post-project implementation. A tool (pretest and posttest (see Appendix B) was created that was comprised of five multiple choice questions that assessed the providers' practices of treating nonmalignant pain. I created a poster (see Appendix C) that reinforced information discussed during the educational session. Lastly, a checklist tool (see Appendix D) was created for providers to consider when treating patients with pain. The staff education project consisted of one 15-minute educational session and Lunch and Learn via PowerPoint (see Appendix E). The pretest and posttest comprised these five questions:

1. What is acute versus chronic pain?
2. In addition to opioid, what are some other nonpharmacological or pharmacological methods for treating nonmalignant pain?
3. When and how often should you check the prescription drug monitor database (PDMD)?
4. When and how often should a pain contract be initiated on patients that opioids are indicated?
5. When and how often should you perform a urine drug screening on patients that opioids are indicated?

The participants did not reveal any of their personal information on the tests. Once the pretests and posttests were completed, an analysis of the results was performed in Microsoft Excel for comparison and success of the project.

Before the project implementation, each provider was assigned a unique identifier. The participants were asked not to share any information regarding their pretest, and they were assured that no punitive action would be taken as a result of their test scores. Once the pretests were completed, the participants were asked to place their tests in a secured lock box that was created by me. I collected the tests at the end of the shift and stored the lockbox in a secure location.

Protections

First, the institutional review board approval was obtained before the initiation of this project (approval no. 06-10-19-0408229). Second, to ensure the protection of the patients, I did not use any identifiable information. Third, no participants' personal information was used as each participant had their own unique identifiers, and their pretests and posttest were stored in a secured lockbox that was only accessible by me. Lastly, although each participant was excited and willing to participate in the project, the entire faculty involved understood their rights to remove themselves from the project at any time without penalty.

Summary

The DNP project identified various causes of the current opioid epidemic. Consequently, a staff education project was developed to assess the providers' knowledge pre- and post-project implementation. The primary objectives of the project were to

suggest literature reviewed EBPs, both nonpharmacological and pharmacologic methods for treating nonmalignant pain. Educational tools were created to assess whether I achieved the goals of educating the staff regarding the opioid epidemic and the use of available tools to help prevent overly prescribing opiates and patient abuse. The project also assessed whether the goals of making recommending nonpharmacological and pharmacological treatment for nonmalignant pain were achieved. In Section 4, I will discuss the findings and implications, recommendations, and the strength and limitations of the project.

Section 4: Findings and Recommendations

Introduction

The misappropriation of opioids for its intended purpose by pharmaceutical companies, providers, and the public has developed into an epidemic. However, there has been a gap in knowledge among providers on how to safely and effectively treat pain, especially patients with nonmalignant pain, which has helped foster the opioid epidemic. Most providers have limited knowledge about prescribing drugs to control pain such as side effects and doses (Bouri et al., 2018, p. 2).

The purpose of this evidenced-based project was to develop staff education on practices for managing nonmalignant pain with less addictive methods. Within the scope of this DNP project, the following practice-focused questions were addressed:

1. Will staff participating in this project be more inclined to prescribe fewer addictive medications for acute or nonmalignant pain?
2. Will staff participating in this project be more inclined to check their local prescription drug monitoring system before prescribing opioids?
3. Will staff participating in this project be more inclined to make proper referrals to pain management as indicated?
4. Will staff participating in this project be more inclined to initiate a pain control contract, and perform drug screening before and randomly when prescribing opioids?

The project was implemented over a 3-week period, which involved administering pretests to assess providers' knowledge of treating nonmalignant pain

before the implementation of this project. A Lunch and Learn educational session was performed to educate providers of the latest EBPs for treating nonmalignant pain. Finally, a posttest was given to the participants to evaluate whether there had been any improvements in their knowledge or changes in their prescriptive habits and treatment of nonmalignant pain.

Findings and Implications

I was allowed to use one of the provider's offices for privacy and to prevent disruption of patient care. The Lunch and Learn was conducted and facilitated in the employee breakroom. The participants included three providers—two physicians and one nurse practitioner. The providers were requested to allot 15 minutes of their time to participate in the pretest and informational session. The participants were given the pretest before engaging in the Lunch and Learn. They were initially separated and asked to place their unique identifier on their test. They were asked not to discuss the questions on the tests or their answers before the tests were administered. I remained present for the duration of the tests. After completing the test, which took approximately 2 to 5 minutes, each provider placed their test in a designated folder.

The education material was presented via PowerPoint presentation. The information included the background of the opioid epidemic, the definition of pain, description of various types of pain, alternative nonpharmacological and pharmacological treatment for pain, and prevention methods. After the presentation, the participants were allowed to ask questions and give their comments. However, no one had any additional questions or comments; therefore, they were reminded of the upcoming posttests and

were dismissed. After the participants left the room, the tests were collected and placed in a secure location.

After the pretest and educational segment, I placed flyers in an area frequented by providers with reminders of what was discussed. Additionally, the providers were asked to use the reminder tool when a patient presented for pain management. They were also asked to place their completed sheets in the designated secured area. The sheets were collected at the end of the project. During the week, I also performed random interviews with the providers to reiterate the project goals and educational material.

Participants and I selected the best day to allow time for participant participation. The participants presented to the employees' breakroom and were given the same instructions of using their unique identifiers, complete their test, and place them in the designated lockbox. Again, I remained present for the test. The participants completed the tests within 5 minutes, and they placed their completed tests in the designated folder as instructed. I collected the tests and placed them in a secure location. The data were entered in Micro Soft Excel for the tabulation of results. Finally, on the last day of the project, the results were shared with one of the participants (preceptor), as the rest of the team members were on vacation. This participant was pleased with the results and decided to continue to utilize the reminder tools post-project (see Appendices C & D).

At the conclusion of the DNP project, it was revealed that all providers that participated in the project were aware of other methods for treating nonmalignant pain. This was indicated by every participant scoring a 100% on both pretest and posttest (see Figure 1).

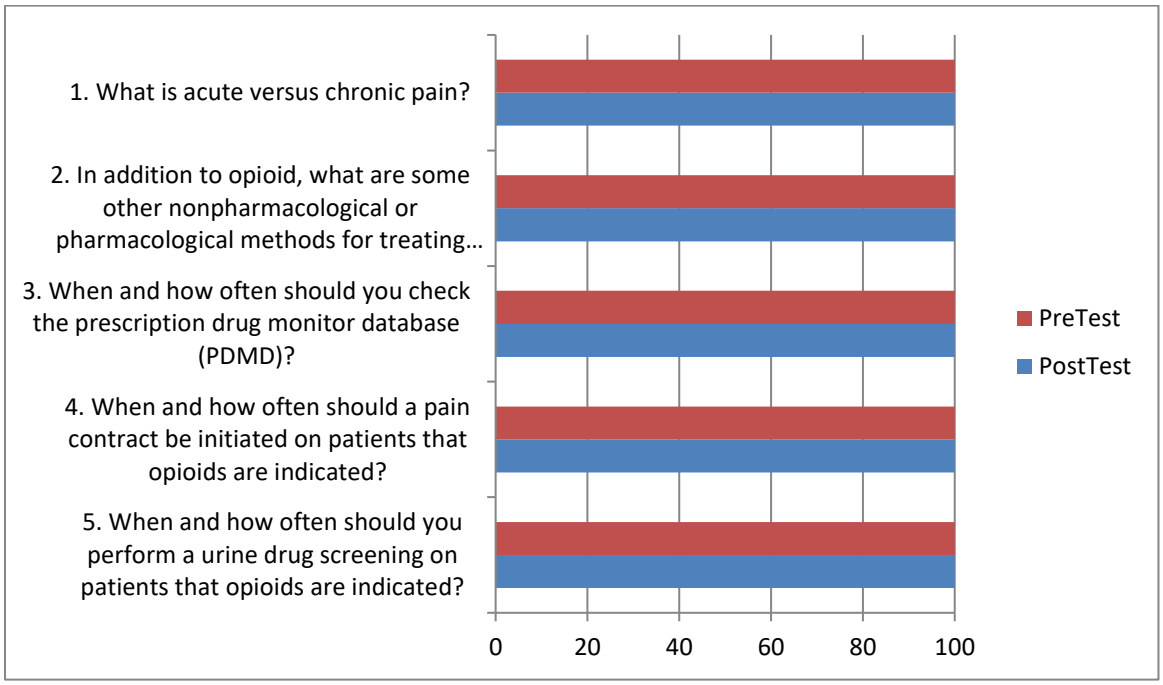

Figure 1. Pre- and post-test scores.

Evaluation of the DNP Project

The education program was constructed for medical doctors and nurse practitioners in an ambulatory setting where this project was implemented. Only providers were assessed for their practices of treating nonmalignant pain. Different evaluation processes allowed the project facilitator to collect information, assess outcomes, and make modifications as needed (Hodges & Videto, 2011). Therefore, one on one interviews, and pretests and posttests were used to gauge the providers' knowledge and compliance

Also, the project facilitator created a chart auditing tool (see Appendix A) that is to assess the long-term success of the project. The project facilitator recommends that these chart audits be performed every three months. The results should be used to measure compliance with utilizing safety measures (e.g., Pain contracts, urine drug

screening, and PDMS). Also, they can be used to monitor providers' prescriptive habits as it relates to treating nonmalignant pain with the intent of making recommendations of prescribing less additive pharmacological or nonpharmacological treatments. Additionally, in the unfortunate event that the clinic is ever audited by the Drug Enforcement Agency or another entity, the chart audits can be used to show that the clinic has been proactively implementing measures that will help resolve and circumvent the opioid epidemic.

Recommendations

The opioid epidemic has had a detrimental impact on society, whether, through the health care system, judicial system, or the U.S. economy. Providers have played a pivotal role in creating this epidemic; however, they also possess the power to change the current trajectory of this issue. Therefore, further training through continuing education is vital to keep providers abreast of current EBPs for treating nonmalignant pain. Although the results of the pretests and posttests revealed that participants possess adequate knowledge for treating nonmalignant pain, additional training could help providers to individualize patient treatment. Additionally, prompts and safety measures (see Appendix D) was shown to be beneficial as well to remind providers to utilize resources that will help prevent and recognize potential abuse by patients. Lastly, the program facilitator created a chart audit tool (see Appendix A) with the recommendation that chart audits should be performed at regular intervals in the future by the agency to assess provider's prescriptive habits for treating nonmalignant pain.

Contribution of the Doctoral Project Team

Collaboration with my project team allowed me to gather data and analyze both pretest and posttest to assess the success of the DNP project. They also participated in the educational segment of the project. Additionally, they were willing to utilize the developed chart audit tool in the future to assess provider practice patterns. The Project Team members offered suggestions and shared their input.

Strengths and Limitations of the Project

There were several strengths concluded from this project. First, there was a 100% participation from all the providers at the clinic during the initial, implementation, and evaluation phase of the project. Therefore, there was an even number of pretests and posttests for the tabulation of the result (see Figure 1). Another strength of the project is that it was cost effective to implement at a small ambulatory clinic which eliminated the need for many resources. Lastly, the tools used for the project could be utilized and referenced for years to come, such as the Don't Be a Pain checklist.

Nonetheless, there were limitations of the project as well, for an example; the project was conducted over a 2-week period, which is a relatively short time actually to know the longevity of the project success. However, it is recommended that charts audits are performed at regular interval to assess providers' prescriptive habits for treating nonmalignant pain. It was also concluded from the project that visual cues or reminders should be displayed around physicians' workstations as well as areas that are frequented by providers to bring awareness to the current opioid crisis. Also, education at regular interval should be conducted to keep providers informed with the latest EBPs.

Additionally, posters and flyers should be posted to remind providers to try other methods for treating nonmalignant pain, and to utilize available resources to hinder potential opioid abuse.

Section 5: Dissemination Plan

The primary goal of my project was to bring awareness to the opioid crisis and help resolve it by changing the prescriptive habits of providers when treating nonmalignant pain. The results of my project suggest that providers are competent in treating nonmalignant pain; however, in some cases, providers were not utilizing safety measures (i.e., urine drug screening, pain contracts, local drug monitoring system, etc.) consistently, which could have helped identify gaps in treatments and the abuse of opioids. When prompted to do so during this project, providers were more inclined to use these safety measures. As a result, this project may be successfully implemented in a small ambulatory clinic or large corporate health care setting. Therefore, I plan to disseminate the results of my project to local and state officials, small clinics, and large healthcare systems via hard or electronic copy. I plan to share my result during Lunch and Learns educational sessions via PowerPoint presentations, flyers, and poster board displays in ambulatory clinic settings. In addition to disseminating my result to throughout the healthcare system, I also plan to share my results to other venues such as local churches, city council meetings, schools, and the judicial system. Because the opioid epidemic has affected the entire community, it is going to take a community effort to resolve it.

Analysis of Self

As a nurse practitioner, this project has brought into fruition my purpose both professionally and personally. As a professional, I was able to apply the knowledge and skills that I have learned throughout my years as a nurse. This project has allowed me to

address an issue that I recognized as a new nurse over 15 years ago that was not only hurting individual patients but had a societal impact as well. I was able to collaborate with key stakeholders and address the opioid epidemic, presenting EBPs for treating nonmalignant pain. Lastly, I created and developed tools that can be utilized in small ambulatory clinics or large healthcare systems.

On a personal level, completing this project as well as the DNP program represents a significant milestone in my life, as I am a high school dropout. As a young adult, I always believed that I was a failure for doing so. Nevertheless, I always knew I had the potential to do great things, but my environment would dictate otherwise. However, I am now proud to tell everyone one that I have come from a GED to DNP, and I desire to be an inspiration to others that might have a humble or undesirable beginning.

Summary

In conclusion, the misuse and abuse of opioids have led current opioid epidemic. Although there are many contributing factors to this problem, providers have played a key role. But they can help resolve this crisis by changing their prescriptive habits for treating nonmalignant pain. The project results suggest that providers have the competence to treat nonmalignant pain, but providers were only more prone to use less addictive treatment measures and utilize safety measures (i.e., urine drug screening, pain contracts, local drug monitoring system, etc.) when prompted to do so. My project has demonstrated that collaboration with providers and other stakeholders is instrumental in resolving the opioid epidemic.

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Appendix A: Chart Audit Tool

Chart Audit Tool (Staff Education Program)

Week_____

		Opioids	NSAIDs	TENS Unit	Physical Therapy	Pain Clinic Referral	Other Treatment
Is the patient currently being treated for pain?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Has the patient been treated for more than 6 months for pain? Acute versus Chronic	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Was the prescription drug monitor database (PDMD) utilized prior to initiation of opioids?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Was there a urine drug screening perform before initiation and duration of treatment?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Was there a pain contact initiated prior to treatment?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Appendix B: Pretest and Posttest Format

Unique Identifier_____

1. What is acute versus chronic pain?
    a. Acute pain is pain that is produced sudden by an injury and can last for several weeks to several months. Chronic pain is pain that lasts for more than 3 months, can be debilitating, and not have an unidentifiable cause.
    b. Acute pain can always be managed without opioids, whereas chronic pain has to be managed with opioids.
    c. Chronic pain is pain that is produced sudden by an injury and can last for several weeks to several months. Acute pain is pain that lasts for more than 3 months, can be debilitating, and not have an unidentifiable cause.
    d. Acute pain can always be measured by objective measures (i.e. blood pressure, heart rate, respiratory rate, etc.). Patients with chronic pain do not exemplify abnormal objective measures only subjective.
2. In addition to opioid, what are some other nonpharmacological or pharmacological methods for treating nonmalignant pain?
    a. Physical Therapy
    b. Nonsteroidal Anti-inflammatory Drugs
    c. Transcutaneous Electrical Nerve Stimulation (TENS) unit
    d. acetaminophen
    e. a. b. c. d & e
3. When and how often should you check the prescription drug monitor database (PDMD)?
    a. Never, trust your patient.
    b. Before the initiation of pain medications, and refilling pain medications. Also, random checks should be performed as well.
    c. Before the initiation of pain medications only.
    d. Every six months because the most clinics are too busy!

4. When and how often should a pain contract be initiated on patients that opioids are indicated?
    a. Never, trust your patient.
    b. Once a year.
    c. Before the initiation of pain medications, and updated as needed.
    d. Medicaid, Medicare, and most private insurance companies prohibit contracts between providers and their patients.
5. When and how often should you perform a urine drug screening on patients that opioids are indicated?
    a. Never, trust your patient.
    b. Once a year. Reimbursement is nearly impossible for drug testing.
    c. Before the initiation of pain medications and Also, random screening should be performed as well. Providers should also consider a screening if suspicious activity is noted.
    d. Every 6 months because most clinics are too busy!

Appendix C: Don't Be a Pain Poster

Don't Be a Pain

Before you prescribe pain meds, did you……?

- ✓ Check your local PDMS
- ✓ Perform UDS
- ✓ Initiate a pain contract
- ✓ Perform a depression/mental screening
- ✓ Consider other non-opioid treatments for pain
- ✓ Consider making referral.

Appendix D: Checklist

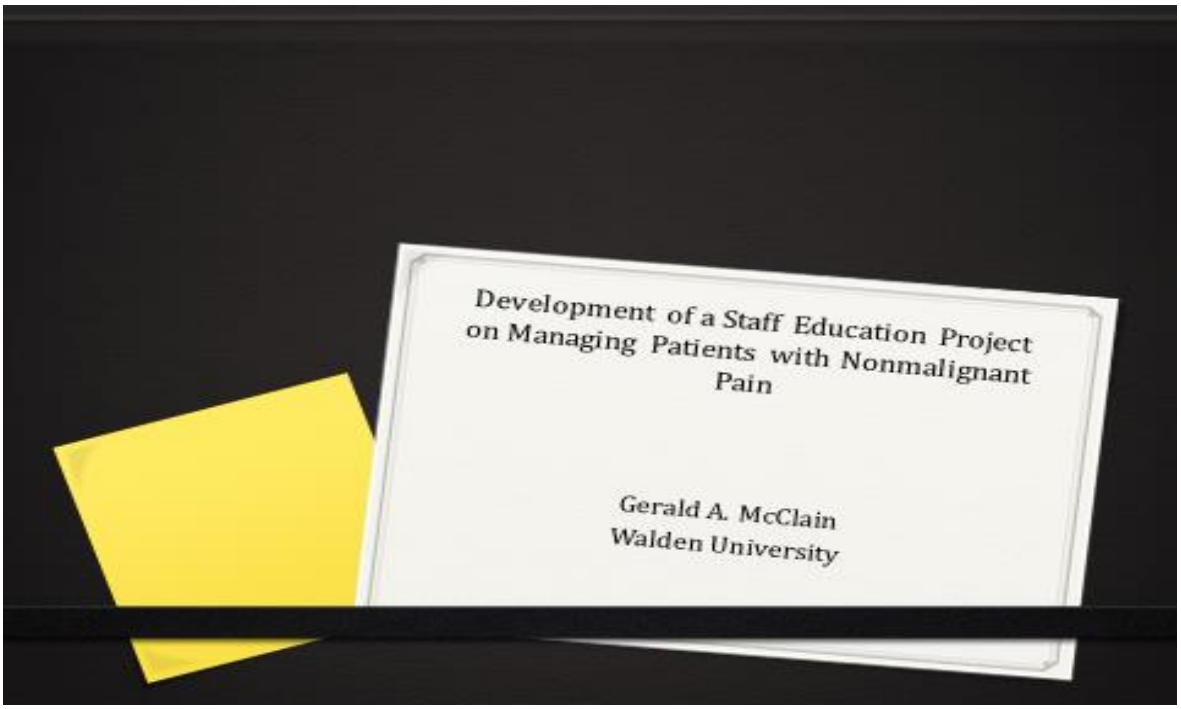
Before you prescribe pain meds, did you……?

___ Check your local PDMS
___ Perform UDS
___ Initiate a pain contract
___ Perform a depression/mental screening
___ Consider other non-opioid treatments for pain
___ Consider making referral.

First _____Last _____

Provider's I. D. _____

Appendix E: Education Program



Objectives

- Background *(Opioid Epidemic)*
- Define Pain
- Describe types of a pain
- Discuss alternative nonpharmacological and pharmacological treatment for pain.
- Prevention
- Question and answer session

Background:

The misappropriation of opioids has led to one of the deadliest man-made health issues in modern America.

Causes:

- Misrepresentation of opiates by pharmaceutical companies
- Overly prescribing by providers
- Misuse and abuse of the medications by society

Providers can play a significant role in resolving this issue as they are the gatekeepers to these drugs.

Definition:

What is Pain?

"An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage" (IASP, 2017)

Types of Pain:

- *Allodynia*
  Pain due to a stimulus that does not normally provoke pain.
- *Neuralgia*
  Pain in the distribution of a nerve or nerves.
- *Neuropathic pain*
  Pain caused by a lesion or disease of the somatosensory nervous system.
- *Nociceptive pain*
  Pain that arises from actual or threatened damage to non-neural tissue and is due to the activation of nociceptors.
- *Paresthesia*
  An abnormal sensation, whether spontaneous or evoked.

(IASP, 2017)

Type of Pain continued.....

Acute vs Chronic Pain

- ***Acute pain:***

Disease specific or injury
Useful biologic purpose
Skeletal muscle or sympathetic nervous system activation
self-limited.

- ***Chronic pain:***

Considered a disease state
Outlasts normal time of healing
Associated with a disease or injury.
Chronic pain may arise
No recognizable end-point.
Might be malignant or nonmalignant (Benign)

(IASP, 2017)

Alternative Treatments for Nonmalignant Pain

Pharmacological Treatments

Nonsteroidal anti-inflammatory drugs (NSAIDs)
Acetaminophen
Tricyclic antidepressants
Steroids

Nonpharmacological Treatments

Physical Therapy
Physical therapy (PT) Transcutaneous electric nerve stimulation (TENS) units
Acupuncture

Learning Objective of the Project & Summary

Encourage providers to...

- Use opioids only when indicated
- Use alternative method for treating nonmalignant pain when indicated.
- Consult Pain Management as soon as possible.
- Utilize resources such as, PDMS, pain contracts, UDS, etc. prior to prescribing opioids.

Prevention

- Prescribe opioids only when indicates as a last resort.
- Utilize alternative nonpharmacological and pharmacological treatments
- Check Prescription Drug Monitoring System (PDMS).
- Initiate pain contract.
- Preform urine drug screening
- Perform Depression Screening, when indicated

Learning Objective of the Project & Summary

Encourage providers to…

- Use opioids only when indicated
- Use alternative method for treating nonmalignant pain when indicated.
- Consult Pain Management as soon as possible.
- Utilize resources such as, PDMS, pain contracts, UDS, etc. prior to prescribing opioids.

Questions?????

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