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**Decreasing Prescription Drug
Abuse in the Clinical Setting**

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Decreasing Prescription Drug Abuse in the Clinical Setting

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Abstract

Prescription drug abuse is classified as epidemic in the United States and is the fastest growing drug problem in the nation. Oklahoma is ranked first nationally in all categories for nonmedical consumption of pain relievers. A major health concern, abuse of prescription medications is linked to an increase in emergency room visits, overdoses, and unintentional deaths. Regardless of the source of prescriptive medications, whether from illegal purchase, family and friends, or through “doctor shopping,” the root of the problem rests with the healthcare provider. This epidemic could be greatly alleviated through diligent use of an online monitoring program for prescribed, controlled-substance prescriptions. An educational program was designed to assist healthcare providers in decreasing prescription drug abuse in Oklahoma. This program includes statistical data reflecting the epidemic of prescription drug abuse, understanding the characteristics of chemically dependent patients, utilization of a Prescription Drug Monitoring Program, and a critical pathway for healthcare providers to assist in detection and monitoring of prescription pain medication abuse. Presented to three family nurse practitioners with varying levels of experience and practice environments, Mack’s Educational Program was evaluated by survey using a four-point Likert Scale. Analysis of responses identified that successful implementation of an educational program has the potential to decrease prescription pain medication abuse in community-based practice environments.

Keywords:

Corresponding Author:

Background and Significance

Prescription drug abuse continues to escalate in the United States (US) and is contributing to an increase in emergency room visits, overdoses, and unintentional deaths. The Centers for Disease Control and Prevention (CDC) have classified prescription drug abuse as an epidemic and the fastest growing drug problem in the nation (*Prescription Drug Abuse*, 2011). The National Survey on Drug Use and Health (NSDUH) is considered to be the primary source of information on the use of illicit drugs, alcohol, and tobacco in the US, and in 2010 it surveyed 67,500 people over the age of 12. The survey identified that 33% of people who used drugs recreationally for the first time chose to begin by using prescription medication. Approximately 55% of the time these drugs were obtained from a friend or relative. Approximately 17% were received from a healthcare provider, 4% from a drug dealer or stranger, and 0.4% were purchased from the Internet (*NSDUH*, 2011). The survey also identified that approximately 5.1 million people used prescription pain relievers, 2.2 million used prescription tranquilizers, 1.1 million used prescription stimulants, and 374,000 used prescription sedatives for nonmedical purposes. It further identified that approximately 4% of youths, age 14 to 17, used prescription medications for nonmedical purposes. Young adults, ages 18 to 25, were identified as using prescription medication for nonmedical purposes more than any other age group (*NSDUH*, 2011). Males were identified as using these medications more than females. American Indians, Alaska Natives, and African Americans were found to use these medications more than other ethnicities. The survey also identified that people with some college education used prescription medication for nonmedical purposes more than people who did not complete high school. Additionally, unemployed people were identified to use these medications more than people who were employed (*NSDUH*, 2011).

Oklahoma ranks first in the nation in all categories for the nonmedical consumption of pain relievers. Approximately 8% of Oklahoma residents reported using prescription medications for nonmedical purposes compared to 4.8% nationally (*Oklahoma Drug Control Update*, 2011). Approximately 87,000 people in Oklahoma are addicted to prescription medications, and the number continues to increase each year (Oklahoma to Track Prescription Drug Abuse, 2006). Since 1999 opioid-related deaths in Oklahoma have increased 328%, which exceeds the national average by 123% (*2010 Oklahoma Epidemiological Profile*, 2010). Oklahoma's opioid overdose rate in 2010 was 14.4 deaths per 100,000 people, which is higher than the national average of 10.5 per 100,000. Approximately 83% of these deaths were directly related to prescription narcotics, while only 17% were related to street drugs (*Prescription Drug Abuse, Misuse, and Consequences*, 2011). In 2010, 579 people in Oklahoma died from prescription drug overdose, and hydrocodone accounted for 153 of these deaths. This epidemic is increasing healthcare costs each year. Oklahoma had 1.2 million emergency room visits in 2009 that were directly related to misusing or abusing prescription opioids, which is a 99%

increase over a five-year period. Around \$72.5 billion is spent annually on healthcare costs associated with prescription drug abuse (*Prescription Drug Abuse, Misuse, and Consequences*, 2011). Healthcare providers are prescribing more narcotics than ever before, and this has led to an increased number of people abusing prescription narcotics in Oklahoma (DuPont, 2010).

The purpose of this capstone project was to develop an educational program for healthcare staff, including a critical pathway for healthcare providers, to decrease prescription drug abuse in the clinical setting.

Problem Statement

Prescription drug abuse is a national epidemic and continues to increase in size and scope everyday. This problem doesn't discriminate but seeks out victims from all walks of life, races, and economic levels. Even worse, Oklahoma leads the nation in prescription drug abuse.

Literature Synthesis

A review of available literature about this epidemic was conducted and focused on the use of the prescription drug monitoring program, prescription drug abuse, healthcare provider use of the prescription drug monitoring program in the clinical setting, pain management, drug-seeking behavior, and overdose deaths. A computerized database was utilized to complete the review and included searching nursing, medical, and scientific journals, which included CINAHL Plus, PsycArticles (EBSCOhost), PsycINFO (EBSCOhost), Health Source: Consumer Edition, Health Source: Nursing/Academic Edition, MedLine, ERIC, and Academic Search Complete. There is fairly limited information regarding the use of the Prescription Drug Monitoring Program in the clinical setting and the impact that it can have on decreasing prescription drug abuse. A gap in the review of literature has been identified, and further research needs to be conducted to verify that this program, when used appropriately, can decrease the epidemic of prescription drug abuse in the clinical setting.

It is very important that healthcare providers avoid contributing to misuse of prescription drugs. To do so, providers should carefully monitor the behaviors of medication use and detail the rationale for a particular prescription in the patient's chart whenever a prescription is given. Refills for narcotics should not be given for the treatment of acute pain. Furthermore, the use of a pain contract is advantageous as a starting point for pain management. It not only tells the patient what is going to be expected of him during his treatment regimen, but also tells the patient what sort of drug-seeking behaviors will be watched for, and if identified, that random urine drug screens could be performed (Ziegler, Compton, & Goldenbaum, 2011). Additionally, providers

should follow specific algorithms for treating a patient's pain to avoid misuse and abuse (Becker et al., 2009).

Prescription Drug Monitoring Program

The Prescriptions Drug Monitoring Program is a tool that healthcare providers can use in the clinical setting when making decisions to prescribe narcotic medications to patients. It also assists healthcare providers in identifying patients that may be abusing or misusing narcotic medications. Although the program can be a useful tool in reducing prescription drug abuse, it is only effective when providers utilize it (*Oklahoma Bureau of Narcotics and Dangerous Drugs, 2011*). Many states have discovered that the PDMP is one of the best tools to fight misuse and diversion of prescription drugs at all levels (*Alliance of States with Prescription Monitoring Programs, 2011*). One study, *Maximizing the Value of Electronic Prescription Monitoring Programs*, discussed that the prescription drug monitoring program, when implemented, has the potential to create a collaborative regulatory environment for healthcare providers that will in turn reduce prescription drug abuse in the clinical setting (*Oklahoma Bureau of Narcotics and Dangerous Drugs, 2011*).

Many states have determined that healthcare providers should not only have access to a database, but should be required to use it. Beginning in 2013 both New York and Tennessee will require healthcare providers to check the PDMP before a pain medication is prescribed for the first time, and then periodically thereafter. This puts them in line with at least three other states that have the same requirements. The director of government affairs for the Tennessee Medical Association has stated his assertion that this law will definitely reduce doctor shopping and overprescribing (Dolan, 2012).

The United States Department of Justice Drug Enforcement Administration Office of Diversion Control lists several benefits of the PDMP. The PDMP ensures that patients who truly need medication can get it while reducing or preventing abuse and diversion. It helps healthcare providers identify people who are addicted to prescription drugs so that they can be treated. The system also aids in the education of individuals as well as public health initiatives about prescription drug abuse and diversion trends (*State prescription drug monitoring programs, 2011*).

In 2008 the Office of National Drug Control Policy stated that the PDMP is indeed effective in decreasing prescription drug misuse and diversion. Although their evidence suggests a possibility that use of the PDMP could lead to a higher use of therapeutic alternatives, they still found that the PDMP reduced the incident use of controlled prescription medication (Fornili & Simoni-Wastila, 2011).

A study by Simeone and Holland (2006) focused on Schedule II pain relievers and stimulants. Results from this study showed that the very presence of a statewide PDMP reduced the likelihood that prescription drugs would be abused by reducing the per capita supply of these drugs. Their findings showed a 10.1% drop in pain reliever abuse and a 4.1% drop in stimulant abuse over a six-year period.

A case study from the Prescription Monitoring Program Center of Excellence details the first-hand account of the medical director from Opioid Treatment Programs (OTP). The medical director accessed prescription history on the state's newly established PDMP for all patients at the treatment center. Approximately 23% of patients were receiving significant narcotic prescriptions about which OTP had been previously unaware. When patients were questioned about excessive prescriptions, most replied that they knew they weren't supposed to be getting them elsewhere, but didn't think anyone would find out. Some of the patients were taking the extra prescriptions themselves, while others indicated they had filled them, but weren't taking them (*Keeping Patients Safe*, 2011).

Prevention

In 2011 the United States Office of National Drug Control Policy developed a prevention plan to decrease prescription drug abuse. This plan focuses on four specific areas in order to decrease this abuse. The first focuses on educating parents, youths, and patients about the dangers of prescription drug abuse. It also requires prescribers to participate in educational programs that focus on the appropriate prescribing, safe use, proper storage, and proper disposal of prescription drugs (*Fighting prescription opioid abuse*, 2011; Finklea, Bagalman, & Sacco, 2012; *Office of National Drug Control*, 2011; *Prevention of Prescription Drug Overdose and Abuse*, 2012). Many people are not aware of the dangers of misusing and abusing prescription medications. The study recommends that stakeholders should work to develop and implement public education campaigns with support from the Office of National Drug Control Policy and the Office of the National Coordinator (*Fighting prescription opioid abuse*, 2011; Finklea, Bagalman, & Sacco, 2012; *Office of National Drug Control*, 2011; *Prevention of Prescription Drug Overdose and Abuse*, 2012). The healthcare provider education portion of the plan would require healthcare prescribers to complete a training course on opioid prescribing before applying to obtain a Drug Enforcement Agency (DEA) number. Boards of pharmacy, medicine, and health professional schools should also include information on the safe and appropriate use of opioids to treat pain (*Fighting prescription opioid abuse*, 2011; Finklea, Bagalman, & Sacco, 2012; *Office of National Drug Control*, 2011; *Prevention of Prescription Drug Overdose and Abuse*, 2012).

Implementing the PDMP

Implementing the Prescription Drug Monitoring Program (PDMP) in every state is the second area of focus. The National All Schedules Prescription Electronic Reporting Act is a federally funded program to assist states in the implementation of the Prescription Drug Monitoring Program. This program would assist in the reduction of doctor shopping and drug diversion. Another benefit of PDMP implementation in every state is the ability of interstate communication. Currently, very few states have that capability, which would allow providers to receive patient information from bordering states when

narcotic prescriptions have been dispensed from pharmacies (*Fighting prescription opioid abuse*, 2011; Finklea, Bagalman, & Sacco, 2012; *Office of National Drug Control*, 2011; *Prevention of Prescription Drug Overdose and Abuse*, 2012). The PDMP can also aid in identifying patients that need assistance due to misuse or abuse of prescription drugs. The prevention plan is exploring the feasibility of reimbursing healthcare providers who utilize the PDMP providing a further impetus for providers to utilize the program (*Fighting prescription opioid abuse*, 2011; Finklea, Bagalman, & Sacco, 2012; *Office of National Drug Control*, 2011; *Prevention of Prescription Drug Overdose and Abuse*, 2012).

Medication Disposal

The third focus of the prevention plan is proper medication disposal. Each state should develop a convenient and environmentally responsible prescription drug disposal program. This assists by decreasing the amount of unused prescription medications in individual's homes, which can lead to a significant reduction in misuse and abuse of prescription drugs (*Fighting prescription opioid abuse*, 2011; Finklea, Bagalman, & Sacco, 2012; *Office of National Drug Control*, 2011; *Prevention of Prescription Drug Overdose and Abuse*, 2012). It is recommended that each state develop a detailed educational program for the public to increase awareness and provide education on safe and effective drug return and disposal (*Fighting prescription opioid abuse*, 2011; Finklea, Bagalman, & Sacco, 2012; *Office of National Drug Control*, 2011; *Prevention of Prescription Drug Overdose and Abuse*, 2012).

Enforcement

The final focus of the prevention plan is enforcement. It is recommended that every state provide law enforcement with the necessary means needed to eliminate improper prescribing by healthcare providers and to stop pill mills (*Fighting prescription opioid abuse*, 2011; Finklea, Bagalman, & Sacco, 2012; *Office of National Drug Control*, 2011; *Prevention of Prescription Drug Overdose and Abuse*, 2012).

Laws that regulate PDMPs differ among different states. Oklahoma law does not mandate healthcare providers to utilize the PDMP when a narcotic medication is prescribed, although it is highly encouraged by the Oklahoma Board of Narcotics and Dangerous Drugs and the Oklahoma Drug Enforcement Agency (Oklahoma Bureau of Narcotics and Dangerous Drugs, 2011). State law does mandate that pharmacist enter required information into the PDMP system within five minutes of the medication being dispensed (Oklahoma Bureau of Narcotics and Dangerous Drugs, 2011). Oklahoma law also prevents information entered into the PDMP from becoming a permanent part of the patient's medical record. This document can be viewed, printed, and discussed with the patient, but then must be shredded and not attached in anyway to the medical record (Oklahoma Bureau of Narcotics and Dangerous Drugs, 2011).

There is limited information available on the effects of the proper utilization of the Prescription Drug Monitoring Program and whether an education

program would effectively decrease this epidemic. Further research needs to be conducted to verify that an educational program, the use of the PDMP, proper medication disposal, and law enforcement efforts will decrease prescription drug abuse. The healthcare providers are at the root of the problem, and so the focus should be greater in this area, since this is where prescriptions originate (Mack, 2012).

Project Description

The purpose of this capstone project is to develop an educational program for healthcare staff, including a critical pathway (Figure 1. Mack's Critical Pathway) for healthcare providers, to decrease prescription drug abuse in the clinical setting (Mack, 2012). The educational program includes several components. The first component is the inclusion of statistical data reflecting the epidemic of prescription drug abuse on a national and state level. The second component is describing and understanding the characteristics of the chemically dependent patient. Next are the utilization of the Prescription Drug Monitoring Program (PDMP) and the analysis of the data. The fourth component is the selection and implementation of a pain management contract. Last is the introduction of the critical pathway, which needs to be used at every visit when a patient complains of pain or when a narcotic prescription will be written.

Project Objectives

The first objective for this project is to design an educational program that integrates a critical pathway for healthcare providers and focuses on the appropriate utilization of the PDMP. The second objective is to successfully implement the educational program in the clinical setting. The third objective is to evaluate the educational program's effectiveness of decreasing prescription drug abuse by conducting a survey of healthcare providers after successful implementation of the program.

Project Goal

The goal of this project is to develop an educational program for healthcare staff, including a critical pathway for healthcare providers, to decrease prescription drug abuse in the clinical setting (Mack, 2012).

Evaluation Plan

Mack's Educational Program and Critical Pathway were developed to decrease prescription drug abuse in the clinical setting and were evaluated using evidence-based measures. The program had four educational learning objectives that were evaluated by Mack's Educational Program Questionnaire, which contained five individual questions. The questions were answered by three participating family nurse practitioners with varying experience and practices. One nurse practitioner has a Post-Masters Certificate as a family nurse practitioner, has been practicing for seven years, practices in a rural and urban setting, and care is provided to patients across the lifespan. The second practitioner has a Post-Masters Certificate as a family nurse practitioner, has been practicing for four years, practices in a rural setting, and care is provided to patients across the lifespan. The third practitioner has a Masters of Science as a family nurse practitioner, has been practicing for thirty years, practices in a college health setting, and provides care to adult patients. After presentation of the educational program, the nurse practitioner's answers to the following questionnaire were then evaluated with the use of a four-point Likert Scale. The Likert Scale measures a person's attitude in response to a series of statements that are directly related to a specific topic (McLeod, 2008). The responses were assigned a point value that ranged from Not Applicable (0), Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4). In order to determine if the program is successful, all of the responses must achieve a minimum score of three.

Objectives 1 and 2

The first objective was the ability to access the Prescription Drug Monitoring Program (PDMP). The second objective was to increase data entry on initial use of the PDMP. The first evaluation used a step-by-step guide and was demonstrated to the participating nurse practitioners (NPs) in this study on accessing and gleaning relevant data from the PDMP. Return demonstration was used to evaluate this objective. The second evaluation used a four-point Likert scale to evaluate question three on the Educational Program Questionnaire in relation to objective one and two. The third question asked the three family nurse practitioners if they were able to discuss proper utilization and analysis of the Prescription Drug Monitoring Program.

Objectives 3 and 4

The third objective focused on the ease of application of the critical pathway in the clinical setting. The fourth objective was that the critical pathway facilitates pain management using evidence-based practice guidelines. These objectives were evaluated in two ways. Handouts of all the information discussed and reviewed in this presentation were given to the participants at the

beginning of the presentation. These handouts included the definition of prescription drug abuse, national and state prescription drug abuse statistics, characteristics of chemically dependent patients, an example of a pain management contract, and Mack's Critical Pathway. The first method of evaluation was the discussion and stating the understanding of the critical pathway, and the second method of evaluation was the use of a four-point Likert scale when aggregating the data from the Educational Program Questionnaire.

Four questions were asked in order to determine if the third and fourth objectives were successfully met. The first question asked the three nurse practitioners if they could define prescription drug abuse.

The second question asked the nurse practitioners if they could identify characteristics of a patient who may be chemically dependent.

The third question asked if the nurse practitioners could discuss the importance of using a pain-management contract in the clinical setting.

The fourth question the nurse practitioners answered was if they were able to demonstrate use of the critical pathway

Results

Objectives 1 and 2

The first objective in Mack's Educational Program to decrease prescription drug abuse was the ability of the healthcare provider to access the Prescription Drug Monitoring Program (PDMP). The second objective in Mack's Educational Program focused on the nurse practitioner having increased data-entry ability on initial use of the PDMP. These objectives were evaluated by a return demonstration completed by the nurse practitioners participating in this study. After discussing the step-by-step guide and demonstrating use of the PDMP, all three participating nurse practitioners were able to successfully access the PDMP.

A second evaluation method utilized a four-point Likert scale in determining the results of question number three on the Educational Program Questionnaire (McLeod, 2008). *Question 3:* Was the nurse practitioner able to discuss proper utilization and analysis of the data in the Prescription Drug Monitoring Program? All participants selected Agree or Strongly Agree. The mean score on a four-point Likert scale was 3.67 for this question. Program success was set at 3.0 or higher on a 4.0 Likert scale. Based on established criteria, this objective was successfully met.

Facilitators that made this objective achievable included the willingness of the nurse practitioners to participate, the step-by-step guide to using the PDMP, Internet availability, and the use of return demonstration. No barriers were encountered during the achievement of this objective, and prior research supports the findings of this objective.

Objectives 3 and 4

The third objective in the program identified if the participating NPs find the critical pathway in Mack's Educational Program easy to apply in the clinical setting. The fourth objective in the program evaluated if participating NPs find the critical pathway facilitates pain management using evidence-based practice guidelines. Handouts discussing the definition of prescription drug abuse, national and state prescription drug abuse statistics, characteristics of chemically dependent patients, an example of a pain-management contract, and Mack's Critical Pathway were distributed as part of the educational program. Evaluation of these objectives included discussion and verbalizing an understanding of the critical pathway.

Additionally, a four-point Likert scale to assess knowledge acquisition was employed to answer questions one, two, four, and five on the Educational Program Questionnaire related to objective three and questions four and five related to objective four. *Question One:* Are you able to define prescription drug abuse? All participants selected Agree or Strongly Agree. The mean score on a four-point Likert scale was 3.33 for this question.

Question Two: Can you identify characteristics of a patient who may be chemically dependent? All participants selected Agree or Strongly Agree. The mean score on a four-point Likert scale was 3.33 for this question.

Question Four: Can you discuss the importance of using a pain-management contract in the clinical setting? All participants selected Agree or Strongly Agree. The mean score on a four-point Likert scale was 3.67 for this question.

Question Five: Are you able to demonstrate understanding of the critical pathway? All participants selected Agree or Strongly Agree. The mean score on a four-point Likert scale was 3.67 for this question.

Facilitators that made this objective achievable included the willingness of the nurse practitioners to participate, the use of the handouts, and the use of return demonstration. No barriers were encountered while achieving this objective, and prior research supports the findings of this objective. No unintended consequences were encountered throughout the study.

The nurse practitioners were also given the option to provide additional comments on the Educational Program Questionnaire. Some of the comments given are below.

'I think this is a great start for providers to use to help monitor controlled substances. It certainly is useable and user friendly.'

'I really think a lot more about using the PDMP website and how important it is to practice and prescribing narcotics.'

'I am a strong believer that the process is simple and has a great impact on clinical decision making, patient care, and safety.'

Recommendations

Mack's Educational Program to decrease prescription drug abuse was evaluated by three family nurse practitioners who work in a compendium of diverse clinical settings.

Based on the data obtained from the review of literature and the results from the program questionnaire, Mack's Educational Program should be implemented and expanded in a variety of clinical settings. The United States Department of Justice Drug Enforcement Administration Office supports the recommendation for the PDMP to be utilized by healthcare providers to assist in the identification of patients who are addicted to prescription drugs and to identify drug diversion (*State prescription drug monitoring programs*, 2011). According to Ziegler, Compton, and Goldenbaum, healthcare providers should also utilize a pain-management contract when treating chronic pain in the clinical setting, which supports the recommendation of the integration of this component into Mack's Educational Program (2011). The recommendation for this educational program is supported by the United States Office of National Drug Control Policy, which focuses on the education of healthcare providers and patients (*Prescription Drug Abuse*, 2011).

This program will educate healthcare providers on the dangers of prescription drug abuse, identifying chemically dependent patient behaviors, the use of the PDMP, and the analysis of the data contained in the PDMP report, which is all supported by the data contained in the review of literature. Ongoing evaluation should continue to gather feedback from a variety of healthcare providers in multiple clinical settings. The Questionnaire could be modified or expanded to gather data specific to each setting. This ongoing evaluation could provide information on the effectiveness of the program to decrease prescription drug abuse in a variety of clinical settings.

This project could be implemented into a variety of clinical settings. It could be used in family practice, orthopedics, pediatrics, and any other settings that treat patients with acute or chronic pain. The project is not limited by a patient's age, insurance, or health status. It only requires the healthcare provider to follow a set guideline to direct and provide the safest patient care possible while providing comprehensive healthcare and adequate pain relief.

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