

Safely prescribing opioids for chronic pain in primary care using risk mitigation strategies

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Dedication

This work was created in loving memory of my parents. The love, support, and work ethic instilled throughout my youth have created a foundation that I can only hope my children inherit.

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Abstract

Background: Safely prescribing opioids in primary care for adults with chronic non-cancer related pain has become a cornerstone of fighting the current opioid epidemic. The statistics are alarming, with the Centers for Disease Control (CDC) reporting in 2018 that more than 40 people died daily from an overdose involving prescription opioids (Centers for Disease Control and Prevention [CDC], 2018). Health care providers wrote 249 million opioid prescriptions in 2013, making enough prescriptions for every adult American to have a bottle of pills (CDC, 2018). Risk mitigation strategies (RMS) provide lower risk prescribing practices, but providers need more significant education and engagement because of these strategies' low self-reported use.

Goal: Prescribers in primary care will use RMS when prescribing opioids to patients with chronic non-cancerous pain to reduce the risk associated with opioids and improve patient outcomes.

Methods: After performing a provider self-reported assessment, education provides RMS information with the most robust evidence backing. Once education on each RMS was performed, a provider follow-up assessment was completed to determine if the education was efficacious. Prospective and retrospective data was compiled to look for a statistically significant increase in RMS self-reported use.

Outcomes: Providing education for providers will improve the self-reported use of risk reduction strategies, will lower the overall morphine equivalent dose (MED) prescribed daily, and will reduce the overall number of opioid prescriptions written (Hudspeth, 2016).

Keywords: Opioids, Risk Mitigation Strategies, prescribing, chronic pain, non-cancer related pain

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Introduction

The current opioid epidemic calls for an urgent need for responsible prescribing in primary care. The continuous media reports in our neighborhoods across the nation of opioid overdose deaths are alarming. Prescribed opioids are often viewed as a gateway for abuse and addiction and often account for the first drug used by those who develop substance use disorders. Primary care providers are accountable for 50 to 70% of all prescription opioids dispensed each year. Because of this, there is an opportunity within their scope of practice to improve prescribing practices (Centers for Disease Control and Prevention [CDC], 2018)(Volkow & McLellan, 2016).

Historically, 1 in 4 people who receive opioids long-term struggle with opioid use disorder (OUD), and with more than 165,000 overdose deaths since 1999, this problem is now deemed an epidemic (Centers for Disease Control and Prevention [CDC], 2018). Multiple states and national organizations are working to develop strategies to battle these statistics. The use of RMS like urine drug screens (UDS), Prescription Drug Monitoring Programs (PDMP), risk assessment tools, and patient-provider agreements (PPA) minimize harm and risk by lowering the overall number of opioid prescriptions written and by reducing the overall daily MED prescribed. The literature has proven that there is low self-reported use of RMS by providers. Multiple guidelines and standards throughout the country, including the CDC and Food and Drug Administration, recommend using them to reduce harm (Chaudhary & Compton, 2017).

Furthermore, there is strong evidence that there is lack of provider preparedness when it comes to prescribing opioids. The training that physicians and advanced practice providers

receive often falls short, leaving them unprepared to safely and confidently prescribe opioids (Gaiennie & Dols, 2018).

Purpose

This project aims to provide information and education for prescribers on RMS that are frequently recommended in the literature. Providers should feel secure that they are providing adequate pain control for their patients in a way that minimizes harm without the skepticism that using RMS will take too long or be too difficult to integrate into their current practice.

Professional experience and observation have provided insight into prescribing opioids. With such grave risk and potential litigation, providers often avoid prescribing opioids. While this does reduce their potential for legal issues, one could argue that primary care providers cannot fully care for their patients if they cannot provide adequate pain control. Though it occurs less frequently than it used to, there is still the potential for just the opposite, and that is careless prescribing with an inefficient use of risk mitigation strategies.

As previously mentioned, formal training is often lacking. Thus, it is essential to engage primary care prescribers in practical and achievable RMS applications while prescribing opioids. Improving RMS knowledge by providing education for providers will improve their self-reported use, lower the overall MED prescribed daily, and reduce the overall number of opioid prescriptions written (Hudspeth, 2016).

Specific Aims

This project's most crucial specific aim is to overcome stigma and reduce harm from opioids prescribed for chronic pain. Stigma, a mark of shame or discredit, as Merriam-Webster dictionary states, often interferes consciously or subconsciously with care given when opioids are involved. Those who provide care to patients and prescribe opioids for chronic pain need to

be culturally competent to remain sensitive and open-minded. It is well known that opioids have the risk of causing harm and have the risk of abuse. Nevertheless, with the right tools, a prescriber should feel confident that they are safely prescribing opioids to patients who are benefiting and not abusing the treatment they are providing, improving their quality of life rather than harming them. Prescribers should understand that the majority of their patients just want pain relief and improved quality of life. Overcoming stigma and reducing harm will not be easy, but they can improve with further education and RMS use.

Theoretical Framework

The Stetler Model of evidenced-based practice is used by providers to determine if research findings and other relevant evidence is applicable to practice (Stetler, 2010). The Stetler Model allows one to determine how to use evidence to change an organization (Stetler, 2010). In this application, a plan to collect the evidence and subsequently provide a symbolic literature review was formulated. The literature was used to influence the thinking and behavior of providers regarding prescribing opioids and using RMS. Because it is clear that the use of evidence within the Stetler Model is based on provider attributes and practice environment, the project will focus on primary care providers and chronic non-cancer related pain management. Using the Stetler Model framework states that addressing an issue starts with validating the evidence (Stetler, 2010). It is then essential to evaluate current practice and determine how the evidence fits into practice and how feasible implementation will be (Stetler, 2010). This project includes steps from the Stetler Model to ensure it is carried out with validity and vigor. Using such a model will enable critical thinking, encourage the use of evidence in daily practice, and reduce human error (Stetler, 2010).

Literature Review

The literature review for this topic included keyword searches in the CINAHL database. Keywords searched include prescribing opioids, primary care, risk mitigation strategies, and chronic non-cancer related pain.

Critical Appraisal

The primary sources of evidence are the 2016 CDC guidelines for prescribing opioids and an article by Chaudhary & Compton (2017) about nurse practitioners' using risk mitigation strategies when prescribing opioids for chronic non-cancer related pain. These two sources give a plethora of information about which strategies are recommended and explains why prescribing opioids long-term is not recommended. The other documents reviewed solidify and build upon the primary evidence in these two writings. Both the CDC and Chaudhary & Compton strongly support the use of RMS. The CDC guideline's primary purpose is to improve communication between clinicians and patients, improve pain treatment's safety and effectiveness, and reduce the risks associated with long-term opioid therapy (Dowell, Haegerich, & Chou, 2016). The primary purpose of the article by Chaudhary & Compton (2017) is to describe providers' prescribing patterns and evaluate the extent to which family practice providers use specific RMS when treating non-cancer related pain. Bringing these two pieces of work together with the supporting literature provides a foundation for this paper. See Appendix A for the literature extraction table.

Long-term use of opioids, more than eight weeks, is associated with abuse, misuse, addiction, and overdose (Chaudhary & Compton, 2017) (Volkow & McLellan, 2016) (Philpot et al., 2017). Unfortunately, there is commonly a lack of expertise with opioid risk assessment tools and a lack of awareness and technique on avoiding opioid misuse. Therefore, overprescribing and inappropriate prescribing is common (Hudspeth, 2016). Further literature review emphasizes the need for consistent RMS use and a need for further education regarding them. A common

theme is that providers often feel doubtful about their ability to prescribe opioids safely and detect abuse or evolving addiction (Volkow & McLellan, 2016). There is additionally a lack of confidence in discussing opioid use with patients (Volkow & McLellan, 2016). Because of the lack of formal training in pain management and even less in addiction, providers need continuing education to improve their skills and to increase their use of RMS (Rager & Schwartz, 2017)(Volkow & McLellan, 2016)(Gaiennie & Dols, 2018)(Hudspeth, 2016). RMS application and documentation provides a source of evidence should adverse events or investigations occur (Ducharme & Moore, 2019) (Hudspeth, 2016). Multiple federal and state programs support the use of RMS. Often, each entity recommending different strategies. To stratify and prioritize, which strategies are the strongest and most supported, the literature on four main approaches were the focus of this review. The four strategies highlighted include UDS, PPA, risk assessment tools, and PDMP monitoring. Each strategy was reviewed individually to emphasize their strengths and weaknesses.

Patient-Provider Agreements

Patient-provider agreements have been shown by multiple sources to reduce misuse and diversion when opioids are prescribed (Rager & Schwartz, 2017). However, there is a suggestion that the PPA does not reduce opioid use disorder (Philpot et al., 2017). Many state and national programs recommend the PPA for risk mitigation. It is best to think of the PPA as a form of patient education and informed consent (Hudspeth, 2016). The PPA is a conversation starter and allows for the lines of communication to remain open. The CDC does not directly recommend a PPA, but they do recommend informed consent and patient education about the risks and benefits of the long-term use of opioids (Dowell et al., 2016). Most of which are often included

in a PPA. The recommendation is that a PPA is reviewed and signed by the patient and provider before prescribing opioids, with a change in opioid prescribed, and at least yearly.

Urine Drug Screens

Urine drug screens are strongly recommended by state and federal regulations to identify those who may have opioid use disorder and detect the use of non-prescribed drugs, drugs that co-prescribed with an opioid could be dangerous, and illicit substances (Kale, 2019). Despite the evidence and recommendations, many providers do not use them at all or often enough (Ducharme & Moore, 2019). The UDS literature is inconsistent and open for interpretation. The CDC recommends using UDS monitoring before prescribing opioids for the first time and then annually (Dowell et al., 2016).

Risk Assessment Tools

Guidelines strongly recommend using risk assessment tools before and while prescribing opioids (Ducharme & Moore, 2019). Subjective impressions of risk potential are often not accurate, and the evidence states that these types of screenings should be considered universal and routinely used (Ducharme & Moore, 2019). Using a standardized tool is much more useful than provider subjectivity (Ducharme & Moore, 2019). The most commonly recommended tools include the Current Opioid Misuse Measure (COMM), Opioid Risk Tool (ORT), Patient Medication Questionnaire (PMQ), and the Screener and Opioid Assessment for Patient with Pain – Revised (SOAPP-R). The CDC recommends discussing the risks of opioids with the patient but does not explicitly recommend using a risk assessment tool.

Prescription Drug Monitoring Program

Historically, the review of PDMPs as a tool to prevent drug diversion and opioid misuse when prescribing opioids for chronic pain has been used by providers about 57% of the time

(Rhodes, Wilson, Robinson, Hayden, & Asbridge, 2019). Less than 1 in 5 prescribers use it with each opioid prescription (Rhodes et al., 2019). Though there is mixed evidence on the effectiveness of PDMPs to reduce overprescribing by the provider and doctor shopping by the patient, it is still strongly recommended or required by most U.S. states and federal regulations (Winstanley et al., 2018). There has been some evidence that using a strongly prepared and monitored PDMP reduces the number of overall opioids dispensed per month (Winstanley et al., 2018). The CDC recommends reviewing the state's PDMP when opioid therapy starts and periodically, leaving frequency open to the provider's discretion (Dowell et al., 2016). The use could vary from every time a prescription is written to every three months (Dowell et al., 2016).

Method

This implementation model, with the Stetler Model as a guide, started with an evaluation of provider self-reported use of RMS at a health care system located in southeast Michigan and Northwest Ohio. Education was performed on the four RMS discussed, UDS, PDMP monitoring, risk assessment tools, and PPAs. After education on each RMS was completed, a second evaluation was performed to determine if there was a statistically or clinically significant improvement in the self-reported use of RMS among those providers. This method will evaluate the literature to determine if it is reproducible and if it can be generalized.

Recruitment of Participants

A questionnaire was emailed to all primary care physicians and advanced practice providers (380 total) in the chosen healthcare organization. The respondents were asked to self-report the following inclusion criteria: 1) whether they are a physician, physician assistant, or nurse practitioner; 2) whether they prescribe opioids; 3) whether they prescribe opioids for chronic non-cancer related pain. Along with the questionnaire was an educational presentation

on RMS. All respondents voluntarily completed the presentation for continuing education credit approved by the Michigan State Medical Society.

The entirety of this project received an exemption through the institutional review board of the ProMedica Health Organization. No monetary incentives were offered for the completion of the questionnaire.

Questionnaire

The questionnaire consists of questions that help determine if the self-reported use of RMS improves with education. There were two questionnaires, one before the education and one after the education. The answers to each questionnaire were anonymous. When replying, the expectation was that respondents would consider using RMS and prescribing opioids for patients with chronic non-cancer related pain. In particular, responses about their use of PPA, UDS, risk assessment tools, and state PDMP use when prescribing opioids for chronic pain were recorded. It was also asked how often these strategies were used. The post-education questionnaire was the same as the first except that it included a question asking participants if they had completed the pre-education questionnaire before completing the education. See Appendix B to view the pre and post-education questionnaire responses.

Educational Presentation

This implementation model's intervention was an educational presentation for nurse practitioners, physician assistants, and physicians. Completion was entirely voluntary. The education was a PowerPoint presentation. Objectives of the educational presentation were to discuss the current opioid epidemic and how providers in primary care play a vital role in the fight against opioid risks and harms, discuss the opportunity in primary care to reduce the number of opioid prescriptions written, and discuss the use of RMS and improve provider

knowledge and confidence about prescribing opioids for chronic non-cancer related pain. The presentation's goals were to describe the evidence-based best practices related to RMS, explain how to implement RMS into practice, and increase provider confidence around prescribing opioids. The literature and evidence on chronic pain and the opioid epidemic were provided. Problem statements were given and encompassed low self-reported use of risk mitigation strategies by providers, provider lack of confidence in safely prescribing opioids, detecting abuse, emerging use disorder, and discussing opioids with the patient, and a lack of formal training for providers in pain management and addiction. Following the opening information, all four RMS were discussed under the headings facts, primary goals, recommendations, and practice implementation. See Appendix C for access to the educational presentation.

Stakeholders and Facilitators

The stakeholders involved with this implementation project include multiple levels of different health care experts and organizations. Health care organizational leadership in southeast Michigan and Northwest Ohio were involved because this is the organization that has approved the continuing education and the organization that gave IRB approval. While primary care providers are the primary focus of this program, any provider who prescribes opioids for chronic pain was included. Health care providers who participate will facilitate the project by giving feedback. The project chair will assist as he is a specialist in pain management. Patients will indirectly be stakeholders in that the real benefit and risk reduction is for those who receive long-term opioids for chronic non-cancer related pain. The local community was an additional stakeholder because the opioid epidemic affects entire populations of people.

Barriers

Time was the largest barrier. More time would likely have improved participation. Sending out a reminder email to the participants may have also increased participation rates. The participation rate and subsequent low sample size were also significant barriers. These also could have been improved with more time.

Outcome Measures and Evaluation Process

This implementation project's measurable outcomes include RMS self-reported use among participants who completed the continuing education and the post-education questionnaire. All sections of the questionnaire, including PPA, UDS, risk assessment tools, and PDMP use, were analyzed separately to determine if statistically significant gains were obtained from pre to post-education. Analysis of the data collected was translated using descriptive statistics. Quantitative results will be available as frequencies and percentages for each RMS evaluated.

Ethical and Legal Considerations

Ethical frameworks that emerge from safely prescribing opioids for chronic pain in primary care for non-cancer related pain include criticality and egalitarianism. Criticality is essential because this program is based on a significant opioid epidemic that kills people every day. The use of criticality allows one to focus on the greatest and severest risk (Issel & Wells, 2018). This ethicality also allows for a focus on groups with specific health problems like substance abuse and a mental health co-morbidity that often start their substance use with prescribed opioids (Issel & Wells, 2018). Egalitarianism ensures that everyone involved, even those not in the specific health group, have the same available opportunities and resources (Issel & Wells, 2018). If all providers implement risk mitigation strategies when prescribing opioids

for all patients who receive opioids for chronic pain, it will increase egalitarianism and become primary health prevention.

IRB review was complete and exempt status was approved. A consent form was given to all participants. Participants were identifiable if they completed the continuing education credit. Continuing education requires an evaluation form to be completed before participants can receive their continuing education credit. Those names have been kept in a secure file online and sent to the continuing education provider via encrypted email. There is no foreseeable harm or risk for participants.

Project Timeline

This project has transformed over one year, starting with literature reviews. Once the literature was compiled, and an implementation model was created, the pre and post questionnaires and educational presentation were designed. The first email submission to participants included the consent form, the pre-education questionnaire, and the educational presentation. Participants were given one month to complete those portions. After the initial email submission and one month had passed, a second email was sent out to those who completed the education with the post-education questionnaire included. Those respondents were then given two weeks to respond.

Results

Fifty participants began the pre-education questionnaire. Of those, 24 were excluded because they do not prescribe opioids for chronic pain. The majority of the excluded only prescribe opioids for acute pain. Of the 26 eligible providers, 25 of them completed six out of seven questions. Six did not answer the type of risk assessment tool used because they reported

not using risk assessment tools. Otherwise, all other questions were answered. Over half of the participants were nurse practitioners or physician assistants (68%), and 32% were physicians.

Twenty-one of the original 50 participants (42%) completed the provided education on risk mitigation strategies. Because participants received continuing education credit for completing the education, their names and emails were needed to send them their completion certificate. Those 21 participants were then re-contacted via email, and it was requested that they complete the post-education questionnaire. The post-education questionnaire was sent one month after the educational presentation was first released to give participants time to implement changes in their practice. Of those 21 participants, 10 of them began the post-education questionnaire. All of them but one (90%) completed the pre-education questionnaire and the education. There were three of those 10 participants who completed both questionnaires but do not prescribe opioids for chronic pain, and therefore their responses were not included in the target population. Qualifying factors in determining the sample population include completing the pre-education questionnaire, the education, and completion of the post-education questionnaire. These factors calculate out to be a sample size of six participants. The six post-questionnaire responses were analyzed to determine each outcome measure. Five of the six participants (83%) included in the sample population are nurse practitioners or physician assistants, with the other participant being a physician. Results of RMS self-reported use were distinguished as per guidelines/recommendations and any use. These results are documented in Tables 1 and 2.

PPA

Patient-Provider agreement use was assessed by asking how often a PPA is completed when prescribing opioids for chronic pain. Responses of yearly, every three months, every six months, when the respondent feels necessary, and never were available.

Before completing the RMS education, 72% of respondents reported completing a PPA yearly. Three out of 25 (12%) completed a PPA when they felt necessary. Those who reported completing a PPA every three months was at 8%. Additionally, before completing the RMS education, two participants reported never completing a PPA.

After completing the RMS education, 83% of respondents reported completing a PPA yearly, and 17% reported completing a PPA when they felt necessary. There were no other answers from respondents on the post-education questionnaire on PPA.

UDS

Urine drug screens were assessed by asking how often a UDS was performed while prescribing opioids for chronic pain. Responses of yearly, every six months, when the respondent feels necessary, never, and other were available.

Before completing the RMS education, 44% of respondents self-reported using UDS when they feel necessary. The next most often used response for the reported frequency of using UDS was yearly at 28%. Twelve percent of respondents reported that they complete a UDS every six months or never, each separately. The last respondent chose other.

After completing the RMS education, four of the six participants (67%) reported using UDS when prescribing opioids for chronic pain when they feel necessary. One respondent answered yearly, and one respondent answered other for how often they report using UDS.

Risk Assessment Tool

Risk assessment tools were assessed by asking if a tool is used to determine the risk of opioid abuse or addiction before prescribing opioids for chronic non-cancer related pain. The respondents could answer yes, sometimes, or no. It was then further assessed by asking which risk assessment tool is used most often. CAGE-AID, Opioid Risk Tool (ORT), Tobacco, Alcohol, Prescription medication, and other substance use Tool (TAPS), Screener and Opioid Assessment for Patient with Pain-Revised (SOAPP-R), and other were the available responses. Multiple choices could be selected.

Before completing the RMS education, ten respondents (40%) stated they do not use a risk assessment tool before prescribing opioids for chronic pain. Eight out of 25 (32%) report using a risk assessment tool, and 28% reported using a risk assessment tool sometimes. From the 15 participants who reported using risk assessment tools, the ORT is reportedly used the most (80%). CAGE-AID was the next most often used at three out of 15 (20%). SOAPP-R and other had one response each.

After the RMS education was performed of the six respondents, half reported not using a risk assessment tool before prescribing opioids for chronic pain. Two of them reported sometimes using them, and only one respondent reported use with a yes answer. Of the respondents who answered yes or sometimes, they reported using CAGE-AID the most at 33%, and the ORT and other were even at 17%.

PDMP

Prescription Drug Monitoring Program use was assessed by asking how often the prescribers state program (MAPS or OARRS) is monitored when prescribing opioids for chronic pain. Responses of yearly, every six months, with each opioid prescription refill, when the respondent feels necessary, and never were available.

Before completing the RMS education, 92% of the 25 respondents reported using a PDMP with every refill of an opioid prescription for chronic pain. The rest of the responses (8% or 2/25) were when I feel necessary. No other responses were given. The post-education responses were all 100% that PDMP was checked with each refill when prescribing opioids for chronic pain.

Table 1

Risk Mitigation Strategies Used Per Guidelines

	When Used	Pre Education	Post Education
PPA	Yearly	72%	83%
UDS	Yearly and every 6 months	40%	17%
Risk Assessment Tool	Use	60%	50%
PDMP	With every refill	92%	100%

Table 2

Risk Mitigation Strategies Any Use

	Any Use	Pre Education	Post Education
PPA		92%	100%
UDS		84%	84%
Risk Assessment Tool		60%	50%
PDMP		100%	100%

Discussion

It is essential to differentiate between RMS uses as the guidelines recommend versus only when the prescriber subjectively feels necessary. Table 1 and Table 2 show the comparison. The reports of any use are higher except for in the case of risk assessment tool use. Though it appears the use of RMS is high when looking at Table 2 realistically, Table 1 is more accurate.

There was an 11% increase in PPA's self-reported use when prescribing opioids in primary care for chronic pain after completing the education. This statistic includes only responses from those who answered yearly, as this is the frequency backed by the most evidence. Before education, 8% of participants reported that they completed a PPA every three months. Completing a PPA more often than yearly would be acceptable practice based on the evidence and current guidelines. Therefore, if those responses are considered, the pre-education and post-education responses are almost the same. There was a small improvement in yearly use and any use from before the education to after. Should have the respondents been given a year to implement changes recommended and discussed during the education, perhaps these numbers would show greater improvement. Overall, the self-reported use of using a PPA yearly or more often is high.

There was a decrease of 23% in those who reported using UDS yearly or more often after completing the education. The CDC recommendation for obtaining UDS is yearly and more often if felt necessary. Therefore, answers recorded when the respondent feels necessary were omitted because that could be interpreted as less than yearly. The decline in the percentage of those who reported using UDS went down most likely because of the sample size. Overall, results indicate that UDS recommended use is self-reported 40% of the time or less, and therefore further education and engagement from providers are needed in this area.

Risk assessment tool reported use was the same in use versus any use categories. The percentage of those who self-reported the use of risk assessment tools before prescribing opioids for chronic pain in primary care went down with the post-education questionnaire. Most likely because of the lack of participation and a small sample size. Overall, self-reported use is low, 60% pre-education, and 50% post-education, creating an opportunity to increase provider knowledge and buy-in to use risk assessment tools.

Checking a PDMP is a requirement in Michigan if prescribing more than a three-day supply of opioids. In Ohio, an administrative code states that the PDMP be checked with the start of any new prescription and then at least every 90 days. The information gathered from the questionnaires on the self-reported use of a PDMP was high pre and post-education. Pre-education, the self-reported use of checking a PDMP with every refill was 92%, and post-education was 100%. After education, a PDMP was reportedly used with every refill 100% of the time.

Self-reported responses are a limitation that potentially affect the results of this program. No chart reviews were done to confirm the data that was obtained. We can only assume that the respondents were truthful and accurate in their responses. A second constraint that should be reported is that a novel coronavirus pandemic began during the transformation of this program. This limitation affected participation rates. Because of the coronavirus pandemic, health care workers are navigating new territory. Completing questionnaires and education on anything but COVID-19 is not on their list of priorities.

In summary, because of the education and post-education questionnaire's low participation rates, it is impossible to get an accurate interpretation of the program's success. This program does however, further validate the evidence that some RMS are not used often

enough and that further education is needed for prescribers. There was critical data that showed risk assessment tools and UDS used least often of the four RMS discussed.

Significance for Nursing

Discipline

This implementation project focuses on nursing theory, research, and practice by highlighting what is currently known about prescribing opioids in primary care for chronic non-cancer related pain, performing a literature review, and applying evidence-based practices to improve patient outcomes. Nursing, the DNP in particular, is built on improving outcomes with a system or population focus, implementing sustainable plans, and providing clinically significant improvements (Chism, 2019). All building a foundation for a future of scholarship (Chism, 2019). The discipline of nursing needs more presence in advance practice, research, and scholarship. Projects built on a strong nursing foundation build appreciation for the profession.

Science

Evidence-based practice is the foundation for all of healthcare. Improving outcomes, lowering cost, and providing high-quality care are significant contributors to providing evidence-based care. Nurses who practice using evidence backed by science reduce care barriers and increase patient access to safe, high-quality care. Prescribing opioids for chronic pain by any prescriber without using RMS backed by the most evidence could be catastrophic and is highlighted in this project.

Profession

Completing a scholarly project such as this is a tool that allows nurses to increase their educational preparation and meet a complex healthcare system's needs (Chism, 2019). Nursing has become one of the most respected professions to date. Further building a nursing platform

with theory, research, and scholarship will allow for sustainability and continued nursing practice growth.

Implication for Practice

Practice implications when considering prescribing opioids safely in primary care include actively providing education about which mitigation strategies should most often be used and determining how the RMS can be implemented in a timely, practical way. The evidence is clear, prescribers do not use some RMS often enough and that there is inadequate training in chronic pain and prescribing opioids. Therefore, it is essential to continue education efforts so that practice changes can be made. Additionally, if it is time-consuming or challenging to use RMS, a provider will be much less likely to use them. In conclusion, this is likely why risk assessment tools and UDS are used the least of the four discussed. Using tools within the electronic health record and developing smart phrases or other short cuts are imperative to include in continuing education.

Conclusion

The results from this project confirm that the evidence is valid and that there are opportunities to improve the frequency of which RMS are used, specifically risk assessment tools and UDS. Also, it is confirmed that further education is needed for prescribers. Though the education provided within this program could not be thoroughly evaluated, it is clear that provider buy-in and engagement in this topic are needed. There is strong evidence that using a combination of RMS will provide safe opioid prescribing and reduce the risk for patients, prescribers, and communities.

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Appendix A

Extraction table

Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
2018 Annual surveillance report of drug related risks and outcomes - United States	Centers for Disease Control/2018/US	NA	Annual report	Second annual surveillance report summarizing the latest information at the national level for prescribing patterns, drug use, and nonfatal and fatal overdose related to the current drug overdose epidemic in the United States.	NA	1. Opioid prescribing and high-dose prescribing continued to decrease through 2017. 2. A low percentage of those needing treatment for substance abuse can access it. Additional measures are needed to prevent illicit drug use and prescription drug misuse in a dynamic drug landscape in addition to expanding treatment options and access. 3. Drug overdose deaths in 2016 reached a new record high.	Data were extrapolated from four reports. Terminology and definitions were not standardized throughout the entire report, the most recent year of available data varied. In 2016, 15% of drug overdose deaths lacked information about which drugs were involved.	NA
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
Why guidelines for primary care providers?	Centers for Disease Control/2018/US	NA	Guideline	Describe primary care prescribers should use guidelines when prescribing opioids.	1) PDMP 2) Avoid concurrent prescribing	NA	NA	NA
Use of risk mitigation practices by family nurse practitioners prescribing opioids for the management of chronic nonmalignant pain.	S. Chaudhary, P. Compton/2017/US	856	Survey Monkey/Qu antitative	To describe FNP opioid prescription patterns and determine the extent to which FNPs implement specific RMPs when treating CNMP patients.	1) Patient/provider agreement 2) Risk assessment tools 3) UDS 4) PDMP 5) Abuse-deterrent formulations	FNPs are not consistently adhering to practice guidelines for using opioid therapy in the management of CNMP.	1) Survey completed by clinical preceptors and, therefore, difficult to compare to the general population of FNPs 2) No qualitative data used. Multiple choice questions only 3) Did not take into consideration educational training or background of respondents	More provider education
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
CDC Guideline for prescribing opioids for chronic pain - United States	Dowell, Haegerich, Chou/2016/US	NA	Guideline	Improve communication between clinicians and patients about the risks and benefits of opioid therapy for chronic pain, improve pain treatment's safety and effectiveness, and reduce the risks associated with long-term opioid therapy.	12 recommendations	NA	NA	Clinical scientific evidence informing the recommendations is low in quality. More research is necessary to fill in critical evidence gaps.
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research

					Studied			
Opioid use disorder assessment tools and drug screening	Ducharme, Moore/2019/US	NA	5th essay in Missouri Medicine series	Explore evidence-based approaches to risk-stratifying individual patient's current or future likelihood of developing an opioid use disorder.	1) Risk assessment tools 2)UDS	Risk assessment tool results are not infallible.	Risk assessment tool results should be used in combination with other risk mitigation strategies.	Determine if using the tool in combination with other risk mitigation strategies is superior to using the tool alone.
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
Implementing evidence-based opioid prescription practices in a primary care setting.	Gaiennie, Dols/2018/US	157	Retrospective medical record review. Intervention s: Information fair, training sessions, several quality meetings, and one-on-one information sessions with each staff member	The project goal was to improve clinicians' adherence to the 2016 CDC guidelines and reduce the number of opioid prescriptions written.	1) Risk assessment tools 2) UDS 3) PDMP 4) Patient/provider contract	Post-intervention, 7% of patients were referred to pain management, and 10% of opioid prescriptions were not written.	Conducted for ten weeks did not allow for a new initiative's learning curve. The racial breakdown of the patient population does not reflect that of society as a whole. 73% were white non-Hispanic.	Further investigation into resistance to access the PDMP needs to be explored.
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
Safe opioid prescribing for adults by nurse practitioners: Part 2. Implementing and managing treatment	R. Hudspeth/2016/USA	NA	Continuing education	Part 1: Focuses on techniques nurse practitioners should use during H&P gathering information to lead a decision as to whether or not to treat a patient with opioids. Part 2: Focuses on implementing treatment and managing ongoing care.	Risk assessment tool, urine drug test, informed consent, patient-provider agreement, PMDP, documentation each visit	Safe and effective treatment is based on thorough drug and pain H&P, using abuse risk assessment tools, urine drug screens, PDMP reviews, informed consent, and contracts. Using pain care standards and best practice principles provide safe opioid prescribing and thereby protect patients, the public, and the provider.	NA	NA
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
Safe opioid prescribing for adults by Nurse Practitioners: Part 1. Patient history and assessment standards and techniques	R. Hudspeth/2016/US	NA	Continuing Education	To provide CNPs with an overview of the current national pain management and opioid-prescribing standards. Present techniques and recommendations based on best practice so that CNPs can assimilate them into practice for safe opioid prescribing and protection of their practice.	1) Pain Scale tools 2) Pain history and assessment 3) Obtain past medical history and records 4) Risk-assessment tools 5) Urine drug screen 6) Physical exam	NA	NA	NA
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies	Findings	Limitations	Future Research

					Studied			
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
Urine drug tests: Ordering and interpretation	Kale/2019/US	NA	Education	To provide education so that family practice providers are familiar with screening and confirmatory drug tests' characteristics and capabilities.	1) UDS 2) PDMP 3) Risk assessment tools	NA	NA	NA
Managing chronic pain in cancer survivors prescribed long-term opioid therapy: A national survey of ambulatory palliative care providers	Merlin et al./2018/US	157	Recruitment of participants. Survey.	To explore palliative care providers' experiences with managing chronic pain in cancer survivors prescribed LTOT.	1) UDS 2) Patient/provider agreement 3) PDMP	Palliative care providers are comfortable with many aspects of managing chronic pain in cancer survivors.	Findings may be biased because most respondents were white and from academic medical centers. Unable to calculate an accurate response rate. Answers self-reported. The definition of chronic pain in the cancer survivor is difficult to define. Findings were only applicable to ambulatory palliative care.	High-quality research is needed to build an evidence base on how best to manage these complex patients with serious illness and chronic pain.
Controlled substance agreements for opioids in a primary care practice	Philpot et al./2017/US	1066	Retrospective cohort study	To analyze patients receiving opioids for chronic pain enrolled in a patient/provider agreement in a primary care practice.	1) Patient/provider agreements	Patient/provider agreements present an opportunity to engage patients taking higher doses of opioids to discuss opioid safety, appropriate dosing, and tapering.	Low prevalence of minority populations which limits the generalizability. Could not ascertain the precise reasons for contract discontinuation.	EHR registries could alert providers to higher doses of opioids, drug screens that were positive for illicit substances, and patients at high risk for opioid use disorder.
Defending opioid treatment agreements: Disclosure, not promises.	Rager, Schwartz/2017/US	NA	Education	Describe that patient/provider agreements' key role is not to help patients make informed choices about whether to accept the supervision but simply to disclose its requirements to patients.	1) Patient/provider agreements	There are criticisms of patient/provider agreements.	NA	NA
The effectiveness of prescription drug monitoring programs at reduction	Rhodes et al./2019/US	22 studies	Systemic review	To examine the effect of PDMP implementation (initial and overtime) on opioid-related harms and consequences.	1) PDMP	Support provided that the effectiveness of PDMPs decreases opioid-related hospitalizations.	Unable to perform a meta-analysis due to heterogeneity across study outcomes.	Effectiveness and outcomes of PDMP implementation.

opioid-related harms and consequences : a systemic review								
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
Opioid abuse in chronic pain: Misconception and mitigation strategies	N. Volkow, A. T. McLellan/2016/New England	NA	Research review	Draw on recent research to address common misconceptions regarding the abuse-related risks of opioid analgesics and highlight strategies to minimize those risks	Screening tools, PDMP use, urine drug screen use, doctor-patient agreements	Recommend increased use of science-supported prescribing and management practices, increased medical school training on pain and addiction, especially those in primary care -they prescribe more than 70% of opioid analgesics,	NA	The transition of acute pain treatment to chronic. To identify potent non-opioid analgesics and other pain-treatment strategies, access to biomarkers of pain and analgesia takes advantage of neuroimaging or genetic analysis.
Title	Author/Year/Country	Sample Size	Study Design	Purpose	Mitigation Strategies Studied	Findings	Limitations	Future Research
Mandatory review of a prescription drug monitoring program and impact on opioid and benzodiazepine dispensing.	Winstanley et al./2018/US	Pre-intervention - November 1, 2014 to March 31, 2017 - 603,348	Secondary analysis of Ohio's PDMP data	To determine whether Ohio House Bill 341, which mandated the use of Ohio's Prescription Drug Monitoring Program (PDMP), was an effective regulatory strategy to reduce opioid and benzodiazepine dispensing.	1) PDMP	After HB341 became effective, there were 4.49 million opioids and 1.68 million benzodiazepines dispensed per month. Consistent with other studies showing that PDMP review mandating, combined with pain clinic legislation, produces an 8% decrease in the number of opioids dispensed.	There have been consistent declines in opioids dispensed in Ohio since 2006. HB341 only requires checking PDMP before writing a new prescription for opioid or benzodiazepine. The analysis was completed in only one state, and it is unknown the extent to which the results would generalize to other states.	Additional research is needed to determine whether these reductions are associated with less harm, including non-medical use of prescription opioids and addiction.

Appendix B

Pre-education Questionnaires

Participant Number	Submission Date	In your current practice, do you prescribe opioids for chronic non-cancer related pain?	Do you use Risk Mitigation Strategies when prescribing opioids for chronic non-cancer related pain?	How often do you complete a controlled substance contract with patients who are prescribed opioids for chronic non-cancer related pain?	Participant #	Submission Date	Before you prescribe opioids to a patient with chronic non-cancer related pain do you complete a screening tool to determine risk of opioid abuse or addiction?	What screening tool do you use most often?	How often do you perform urine drug screens on patients who are prescribed opioids for chronic non-cancer related pain?	Participant #	Submission Date	How often do you check a Prescription Drug Monitoring Program (NAPS/DARS) when prescribing opioids for chronic non-cancer related pain?	When prescribing opioids for chronic non-cancer related pain, at what daily morphine milligram equivalent (MME) do you begin to feel that the risk is greater than the benefit?	What is your title?
1	2000-09-09 12:00	No			1	2000-09-09 12:00				1	2000-09-09 12:00			NPPA
2	2000-09-09 09:43:45	No			2	2000-09-09 09:43:45				2	2000-09-09 09:43:45			NPPA
3	2000-09-09 08:33:17	No			3	2000-09-09 08:33:17				3	2000-09-09 08:33:17			NPPA
4	2000-09-07 8:47:36	Yes	Yes	When/feel necessary	4	2000-09-07 8:47:36	Sometimes	Opioid Risk Tool	When/feel necessary	4	2000-09-07 8:47:36	With each prescription refill	50 MME/day	NPPA
5	2000-09-01 02:06:03	Yes	Yes	Yearly	5	2000-09-01 02:06:03	No		When/feel necessary	5	2000-09-01 02:06:03	With each prescription refill	50 MME/day	NPPA
6	2000-09-01 8:59:52	Yes	What are Risk Mitigation Strategies?	Yearly	6	2000-09-01 8:59:52	Yes	Opioid Risk Tool	When/feel necessary	6	2000-09-01 8:59:52	With each prescription refill	25 MME/day	NPPA
7	2000-09-01 09:24:26	No			7	2000-09-01 09:24:26				7	2000-09-01 09:24:26			NPPA
8	2000-09-24 14:49:35	No			8	2000-09-24 14:49:35				8	2000-09-24 14:49:35			NPPA
9	2000-09-24 08:49:49	No			9	2000-09-24 08:49:49				9	2000-09-24 08:49:49			NPPA
10	2000-09-23 9:16:34	Yes	What are Risk Mitigation Strategies?	Yearly	10	2000-09-23 9:16:34	No		Other	10	2000-09-23 9:16:34	With each prescription refill	50 MME/day	MD/DO
11	2000-09-22 11:07:28	No			11	2000-09-22 11:07:28				11	2000-09-22 11:07:28			NPPA
12	2000-09-21 08:37:06	No			12	2000-09-21 08:37:06				12	2000-09-21 08:37:06			NPPA
13	2000-09-20 8:51:32	Yes	Yes	Yearly	13	2000-09-20 8:51:32	Yes	Opioid Risk Tool	Every 6 months	13	2000-09-20 8:51:32	With each prescription refill	50 MME/day	NPPA
14	2000-09-20 6:54:15	No			14	2000-09-20 6:54:15				14	2000-09-20 6:54:15			NPPA
15	2000-09-20 6:53:08	Yes	Yes	Yearly	15	2000-09-20 6:53:08	Yes	Opioid Risk Tool	Every 6 months	15	2000-09-20 6:53:08	With each prescription refill	50 MME/day	NPPA
16	2000-09-20 14:56:22	Yes	What are Risk Mitigation Strategies?	Yearly	16	2000-09-20 14:56:22	No		Never	16	2000-09-20 14:56:22	With each prescription refill		NPPA
17	2000-09-20 08:51:30	Yes	What are Risk Mitigation Strategies?	Yearly	17	2000-09-20 08:51:30		Opioid Risk Tool	When/feel necessary	17	2000-09-20 08:51:30	With each prescription refill	25 MME/day	NPPA
18	2000-09-16 2:25:23	Yes	No	Never	18	2000-09-16 2:25:23		Other	Never	18	2000-09-16 2:25:23	When/feel necessary	25 MME/day	NPPA
19	2000-09-16 11:24:43	Yes	What are Risk Mitigation Strategies?	Yearly	19	2000-09-16 11:24:43	Yes	Other	When/feel necessary	19	2000-09-16 11:24:43	With each prescription refill	50 MME/day	NPPA
20	2000-09-07 11:48:34	No			20	2000-09-07 11:48:34				20	2000-09-07 11:48:34			NPPA
21	2000-09-07 07:27:23	No			21	2000-09-07 07:27:23				21	2000-09-07 07:27:23			NPPA
22	2000-09-14 14:49:30	No			22	2000-09-14 14:49:30				22	2000-09-14 14:49:30			NPPA
23	2000-09-12 14:24:35	Yes	Yes	Yearly/Every 3 months	23	2000-09-12 14:24:35	Yes	Opioid Risk Tool	Yearly	23	2000-09-12 14:24:35	With each prescription refill	50 MME/day	MD/DO
24	2000-09-12 12:38:33	No			24	2000-09-12 12:38:33				24	2000-09-12 12:38:33			MD/DO
25	2000-09-12 09:42:05	Yes	Yes	Yearly	25	2000-09-12 09:42:05		Opioid Risk Tool	Yearly	25	2000-09-12 09:42:05	With each prescription refill	50 MME/day	NPPA
26	2000-09-12 03:47:07	Yes	Yes	Yearly	26	2000-09-12 03:47:07	Yes	Opioid Risk Tool	Yearly	26	2000-09-12 03:47:07	With each prescription refill	50 MME/day	MD/DO
27	2000-09-10 09:19:09	Yes	Yes	Yearly	27	2000-09-10 09:19:09		Opioid Risk Tool	When/feel necessary/Other	27	2000-09-10 09:19:09	With each prescription refill	100 MME/day	NPPA
28	2000-09-10 8:11:45	No			28	2000-09-10 8:11:45				28	2000-09-10 8:11:45			NPPA
29	2000-09-10 08:57:36	Yes	What are Risk Mitigation Strategies?	Yearly	29	2000-09-10 08:57:36	No	Other	When/feel necessary	29	2000-09-10 08:57:36	With each prescription refill	50 MME/day	NPPA
30	2000-09-09 10:16:37	No			30	2000-09-09 10:16:37				30	2000-09-09 10:16:37			NPPA
31	2000-09-08 8:16:07	Yes	No	Yearly	31	2000-09-08 8:16:07	No	Other	Yearly	31	2000-09-08 8:16:07	When/feel necessary	100 MME/day	MD/DO
32	2000-09-07 8:09:25	Yes	Yes	Yearly	32	2000-09-07 8:09:25	Yes	SOAP-PR	Every 6 months	32	2000-09-07 8:09:25		25 MME/day	MD/DO
33	2000-09-07 8:10:32	No	Yes	Never	33	2000-09-07 8:10:32		Other		33	2000-09-07 8:10:32	With each prescription refill		NPPA
34	2000-09-07 7:34:52	Yes	Yes	When/feel necessary/never	34	2000-09-07 7:34:52	Sometimes	CAGE-AID	When/feel necessary	34	2000-09-07 7:34:52	With each prescription refill	50 MME/day	NPPA
35	2000-09-07 6:16:57	No			35	2000-09-07 6:16:57				35	2000-09-07 6:16:57			MD/DO
36	2000-09-07 14:45:43	Yes	Yes	Yearly	36	2000-09-07 14:45:43	Sometimes	CAGE-AID	Yearly	36	2000-09-07 14:45:43	With each prescription refill	50 MME/day	NPPA
37	2000-09-07 08:02:51	Yes	What are Risk Mitigation Strategies?	When/feel necessary	37	2000-09-07 08:02:51	Sometimes	CAGE-AID/Opioid Risk Tool	When/feel necessary	37	2000-09-07 08:02:51	With each prescription refill	75 MME/day	NPPA
38	2000-09-04 08:57:04	Yes	What are Risk Mitigation Strategies?	Every 3 months	38	2000-09-04 08:57:04	No		Never	38	2000-09-04 08:57:04	With each prescription refill	25 MME/day	NPPA
39	2000-09-03 03:02:08	No			39	2000-09-03 03:02:08				39	2000-09-03 03:02:08			NPPA
40	2000-09-03 11:36:28	No			40	2000-09-03 11:36:28				40	2000-09-03 11:36:28			NPPA
41	2000-09-03 08:45:01	No			41	2000-09-03 08:45:01				41	2000-09-03 08:45:01			NPPA
42	2000-07-31 12:47:30	No			42	2000-07-31 12:47:30				42	2000-07-31 12:47:30			NPPA
43	2000-07-31 03:55:10	Yes	Yes	When/feel necessary	43	2000-07-31 03:55:10	Yes/Sometimes	Opioid Risk Tool	When/feel necessary	43	2000-07-31 03:55:10	With each prescription refill	50 MME/day	NPPA
44	2000-07-31 09:09:16	Yes	No	Yearly	44	2000-07-31 09:09:16	No		Yearly/When/feel necessary/Other	44	2000-07-31 09:09:16	With each prescription refill	75 MME/day	MD/DO
45	2000-07-31 08:55:55	Yes	Yes	Yearly	45	2000-07-31 08:55:55	Sometimes	Opioid Risk Tool	When/feel necessary	45	2000-07-31 08:55:55	With each prescription refill	50 MME/day	MD/DO
46	2000-07-31 08:43:07	No			46	2000-07-31 08:43:07				46	2000-07-31 08:43:07			NPPA
47	2000-07-31 05:21:06:21	No			47	2000-07-31 05:21:06:21				47	2000-07-31 05:21:06:21			NPPA
48	2016-10-26 11:34:15	YES	Yes	Yearly	48	2016-10-26 11:34:15	NO		Yearly	48	2016-10-26 11:34:15	With each prescription refill	100 MME	
49	2016-10-26 15:16:11	YES			49	2016-10-26 15:16:11				49	2016-10-26 15:16:11			

Appendix B continued

Post-education Questionnaires

Participant	Submission Date	Did you complete the risk mitigation strategy questionnaire prior to completing the CME - Safely Prescribing Opioids for Chronic Pain in Primary Care Using Risk Mitigation Strategies?	In your current practice, do you prescribe opioids for chronic non-cancer related pain?	Participant	Do you use Risk Mitigation Strategies when prescribing opioids for chronic non-cancer related pain?	Before you prescribe opioids to a patient with chronic non-cancer related pain do you complete a screening tool to determine risk of opioid abuse or addiction?	What screening tool do you use most often?	Participant	How often do you check a Prescription Drug Monitoring Program (MAPS/QARRS) when prescribing opioids for chronic non-cancer related pain?	What is your title?
1	2020-09-16 09:14:00	Yes, I completed both the pre-questionnaire and the CME	Yes	1	Yes	Sometimes	CAGE-AID	1	With each prescription refill	NP/PA
2	2020-09-15 07:48:18	Yes, I completed both the pre-questionnaire and the CME	Yes	2	Yes/What are Risk Mitigation Strategies?	No	Other	2	With each prescription refill	NP/PA
3	2020-09-14 08:07:26	No, I completed the CME but not the pre-questionnaire	Yes	3	What are Risk Mitigation Strategies?	No		3	With each prescription refill	MD/DO
4	2020-09-13 19:49:39	Yes, I completed both the pre-questionnaire and the CME	Yes	4	No	No		4	With each prescription refill	MD/DO
5	2020-09-13 16:56:21	Yes, I completed both the pre-questionnaire and the CME	No	5				5		NP/PA
6	2020-09-09 13:15:28	Yes, I completed both the pre-questionnaire and the CME	Yes	6	Yes	Yes	CAGE-AID/Opioid Risk Tool	6	With each prescription refill	NP/PA
7	2020-09-08 10:35:56	Yes, I completed both the pre-questionnaire and the CME	Yes	7	Yes	No	Other	7	With each prescription refill	NP/PA
8	2020-09-08 10:15:01	Yes, I completed both the pre-questionnaire and the CME	Yes	8	Yes	Sometimes	Other	8	With each prescription refill	NP/PA
9	2020-09-08 08:36:37	Yes, I completed both the pre-questionnaire and the CME	No	9				9		NP/PA
10	2020-09-04 07:13:24	Yes, I completed both the pre-questionnaire and the CME	No	10				10		NP/PA

Appendix C

Educational Presentation

Safely Prescribing Opioids in Primary Care for Chronic Pain Using Risk Mitigation Strategies (RMS)

Mindy Howard, MSN, DNP(c), CNP
 Lourdes University
 Physicians and nurses may use *AMA PRA Category 1 Credit™*

Objectives

- Discuss the current opioid epidemic and how providers in primary care play a key role in the fight against opioid risks and harms
- Discuss the opportunity in primary care to reduce number of opioid prescriptions written
- Review and discuss the use of RMS
- Improve provider knowledge and confidence about prescribing opioids for chronic non-cancer related pain

Goals

- Describe the evidence based best practices related to RMS
- Explain how to implement RMS into practice
- Increase provider confidence around prescribing opioids

Chronic Pain

- Persistent pain that lasts > 3 months
- Low back pain, headaches, osteoarthritis, and fibromyalgia
- Chronic pain costs society more than \$560 billion annually in lost wages, health care costs, and lost productivity
- Nearly 25.3 million Americans or around 11% suffer from chronic pain daily
- Chronic pain affects more Americans than cancer, diabetes, and heart disease combined

Opioid Epidemic

- Primary care providers produce 50 - 70 % of all opioid prescriptions
- Enough opioid prescriptions were written in 2012 for every adult American to have a bottle of pills - 259 million prescriptions
- According to the Centers for Disease Control in 2016, 44 Americans were dying daily from prescription opioid overdose which is down from 78 daily deaths in 2014
- 1 in 4 people who receive opioids long-term struggle with opioid use disorder
- In 2017, drug overdoses were the leading cause of injury-related deaths in the United States with 1/3 of those deaths due to opioids
- More people die from prescription opioid overdoses than from heroin, cocaine, and benzodiazepines combined

Problems

- Low self-reported use of risk mitigation strategies by providers
- Providers report lack of confidence in
 - Safely prescribing opioids
 - Detecting abuse and emerging addiction
 - Discussing opioids with the patient
- Lack of formal training for providers in prescribing opioids and about addiction

Before Prescribing Opioids

- Opioids are not recommended for chronic non-cancer related pain
- Exhaust all possible alternatives
- Do your research on the patient
- Understand clinical guidelines improve prescribing practices and patient outcomes
- Use a combination of RMS every time

Risk Mitigation Strategies

Patient-Provider Agreements (PPA), Prescription Drug Monitoring Programs (PDMP), Urine Drug Screens (UDS), Risk Assessment Tools

Patient-Provider Agreement (PPA)

Appendix C continued

Educational Presentation

Patient-Provider Agreement
Facts

- Reduce misuse and diversion [11]
- Do not reduce risk of developing opioid use disorder [10]
- Ethical dilemma [11]
- CDC guideline does not specify that a PPA should be used but there is emphasis on informed consent and discussion about risk/benefits.
- Michigan Department of Health does recommend that a treatment agreement be used



Patient-Provider Agreement
Primary Goals

- Altering behavior should **not** be primary goal [11]
- Educate
- Provide informed consent
- Conversation starter



Patient-Provider Agreement
Requirement Recommendations

- Risks associated with long-term opioid use
- Responsibility of each (patient and provider)
- Use only one pain medication prescriber
- Use only one pharmacy
- Safeguard medications
- Don't share medications
- Comply with ongoing monitoring
- Notify provider if they receive treatment by other providers for pain-related issues



Patient-Provider Agreement
Practice Implementation

- Reviewed and signed by patient/provider
- Before starting/prescribing opioids
 - With change in opioid prescribed
 - At least yearly
- DOCUMENT



Prescription Drug
Monitoring Program
(PDMP)



Prescription Drug Monitoring Program
Facts

- Reduce the number of prescription opioids dispensed [16]
- Reduce overdose deaths [9]
- Prevent doctor shopping [16]
- Prevent inappropriate or over-prescribing [16]
- Only 57% of health care providers use PDMPs when prescribing opioids [12]
- Less than 1 in 5 providers use with each prescription [12]
- Patients with four or more prescribers, 4 or more pharmacies, or dosages greater than 100 daily morphine equivalents, accounted for 55% of all opioid overdose deaths [13]



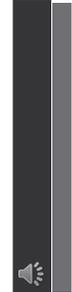
Prescription Drug Monitoring Program
Primary Goals

- Identify patients who are receiving opioids from multiple providers [1]
- Calculate average daily morphine equivalent [1]
- Identify patients being prescribed other medications that increase risk of opioid use (benzodiazepines) [1]
- Help health care providers and public safety officials reduce misuse of prescription drugs [9]



Prescription Drug Monitoring Program
Practice Implementation

- Review
- At least every 3 months
 - Considering reviewing with every opioid prescription written
- DOCUMENT



Urine Drug Screening
(UDS)



Appendix C continued

Educational Presentation

Urine Drug Screen
Facts

- Strong recommendation [1]
- Not used often enough [4]
- Inexpensive
- Easy to obtain
- False negatives/positives
- Can be tampered with



Urine Drug Screening
Primary Goals

- Identify opioid use disorder
- Detect use of non-prescribed/illicit substance use



Urine Drug Screening
Practice Implementation

- Screen
- Before starting opioids
 - At least yearly
- DOCUMENT



Risk Assessment
Tools



Risk Assessment Tools
Facts

- Guidelines strongly recommend screening for risk before and while prescribing opioids
 - Subjective impressions are poorly validated and standardized tool use is superior
 - Should assume all patients prescribed opioids are at risk for use disorder
- Commonly recommended:
- Current Opioid Misuse Measure (COMM)
 - Opioid Risk Tool (ORT)
 - Patient Medication Questionnaire (PMQ)
 - Screener and Opioid Assessment for Patients with Pain- Revised (SOAPP-R)



Risk Assessment Tools
Primary Goals

- Assess for risk of substance abuse, misuse, and addiction
- Quantify and identify patients likely to suffer from or develop opioid use disorder



Risk Assessment Tools
Practice Implementation

- BEFORE prescribing opioids
- ORT
 - Assess the risk of opioid abuse or aberrant drug related behaviors
 - Sensitivity 18%-75% Specificity 54%-88%
 - SOAPP-R
 - Predicts possible aberrant drug related behaviors
 - Sensitivity 41%-81% Specificity 50%-71%
- DOCUMENT



Risk Assessment Tools
Practice Implementation

- WHILE prescribing opioids
- COMM
 - Identifies aberrant drug related behaviors
 - Sensitivity 77% Specificity 66%
 - PMQ
 - Assess for aberrant drug related behaviors
 - Sensitivity 96%-74% Specificity 78%-93%
- DOCUMENT



Other RMS

- CDC Guideline
- Alternative therapies first
- Establish goals
 - Discuss risks and benefits
 - Use immediate-release opioids vs. extended-release/long-acting opioids
 - Implement dosing thresholds (50-90 MED)
 - Evaluate for benefits/harms frequently
 - Avoid co-prescribing opioids with benzodiazepines
 - Offer opioid use disorder treatment



Appendix C continued
Educational Presentation

Conclusion

- Risk Mitigation Strategies = Universal Precaution
- Work best in combination
- Practice integration is possible
- Document, document, document
- If there is a problem
 - Wean off
 - Refer

Questions

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Reminder – Evaluation

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