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## The Development of a Pain Medication Management Protocol

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## **Executive Summary**

### **Introduction of the Problem**

For individuals under the age of 50, accidental drug overdose is the leading cause of death in the United States (Paulozzi, Strickler, Kreiner, & Koris, 2013). Prescription overuse, misuse, and abuse are significant contributing factors in the opioid epidemic. The US Department of Health and Human Services officially declared the opioid crisis a public health emergency. Opioids may not be the appropriate medication choice for many patients. However, providers continue to prescribe opioids even if they are unnecessary. Health care providers are faced with the pressure of adequately controlling pain and improving quality of life, while continuing to prevent the misuse of narcotics. Information on this issue, current facts, and overall awareness needs to be addressed and discussed among clinicians. Healthcare providers and healthcare organizations need to develop and adhere to opioid prescribing guidelines. Unclear guidelines and management of patients' acute, non-operative pain at a Midwest healthcare facility have been associated with inadequate patient care and satisfaction, the inability to treat patients using best practices, and have resulted in poor patient outcomes. An organization-wide pain management policy will incorporate a team-approach that will lead to improvement of patient outcomes. The development of a pain medication protocol will provide clinicians with guidelines of when opioids are appropriate. Implementing these guidelines will limit the abuse of opioids, and in turn, will decrease the number of drug overdoses nationwide. An orthopedic pain management clinic was selected for this project that targets patients with acute, non-operative pain. A pain medication management algorithm was presented to health care providers.

## **Literature Review**

The increased availability of prescription opioids has led to health care providers prescribing these medications when they are not appropriate or necessary. Healthcare providers are key players in the opioid epidemic. The number of opioid prescriptions dispensed in the United States has tripled from 76 million in 1991 to 207 million in 2013 (Dart, 2015). Among the 70,237 fatal drug overdoses in 2017, prescription opioids were involved in 17,029 deaths (García et al., 2019). These deaths are much larger in number than deaths from heroin and cocaine overdoses combined (Saini et al., 2018). Even though the death rates related to the opioid epidemic are increasing across the United States, health care providers are lacking guidelines and protocols to follow when prescribing pain medications.

Many health care providers prescribe narcotics even though there are other medications or interventions that can adequately control pain. Orthopedic surgeons are the third highest opioid prescribers among physicians (Saini et al., 2018). Orthopedic surgery can cause significant pain for the patient. Opioids have the ability to control pain short-term and are not appropriate for controlling long-term pain. Opioids prescribed to patients experiencing chronic pain can lead to abuse of the medication. The misuse and abuse of opioids is an issue in primary care as well. Factors in primary care that contribute to the abuse of opioids include lack of knowledge related to interpretation and assessment of pain levels, inefficient prescribing, and decreased oversight and regulation from government agents (Jukiewicz et al., 2017). Even though there are current prescriptive guidelines for practitioners at both the federal and state levels, the oversight and regulations at each level are inconsistent and lacking (Jukiewicz et al., 2017). There is a need for more organization-wide pain management policies in order to decrease unnecessary prescription of opioids and to improve the quality of patient care.

## **Project Methods**

The goal of this project was to identify provider barriers attributing to the inappropriate management of pain medication and eliminate those barriers. This was completed by creating a clear and concise department wide guideline that promoted more consistent and appropriate pain medication management for non-surgical orthopedic patients. This quality improvement project obtained exempt Institutional Review Board (IRB) status from Southern Illinois University of Edwardsville on April 17, 2019.

The setting for this project was a Midwest orthopedic outpatient clinic. The clinic consists of a multidisciplinary team of physicians, nurse practitioners, physician assistants, and physical and occupational therapists. The providers treat chronic orthopedic diseases and acute orthopedic injuries by way of scheduled appointments or same day walk-in appointments. Providers received education on the current guidelines using two educational tools that consisted of a power point presentation and a pamphlet. The proposed guidelines were structured in an algorithm and distributed to providers via an education pamphlet. The pamphlet contained pertinent information outlining the best practice for prescribing and treating acute pain in the orthopedic walk-in clinic. The providers followed the algorithm while treating patients' acute pain. Pre-implementation surveys were conducted prior to the educational power point presentation and distribution of the pamphlet. The survey collected information about providers' current views regarding their facility guidelines and opioid prescribing practices. The post-implementation surveys were collected following implementation to evaluate the effectiveness of the proposed guidelines.

## **Evaluation**

The evaluation of the project was completed through the pre-implementation and post-implementation survey data. The project consisted of three phases used to compile providers' perceptions about the current pain medication guidelines, educate providers about current evidence-based practice guidelines, and evaluate providers' opinions regarding the newly implemented guidelines.

In phase one, a ten-question pre-implementation survey was distributed to all providers in order to quantify providers' satisfaction level with current guidelines and identify barriers to appropriate pain medication management. In phase two, providers participated in an educational presentation outlining the most recent evidence-based practice guidelines for acute pain medication management. Prescribers were also provided with a pamphlet summarizing the information as well as an algorithm tool to assist in pain medication management. In the final phase, providers were asked to participate in a post-implementation survey assessing the effectiveness of the new guidelines. The providers' responses were evaluated to determine providers' satisfaction and effectiveness of the current practice guidelines and proposed guidelines.

A total of four providers participated in the pre-implementation survey and five providers participated in the post-implementation survey. The results revealed 75 % of prescribing surveyed do not have personal barriers regarding the current pain medication policy preventing them from prescribing narcotics, while 25% responded somewhat. Eighty percent of participating prescribers reported fewer personal barriers when prescribing pain medications under the new guidelines, and the remaining 20% were neutral. Sixty percent of the providers surveyed said they would definitely benefit from the proposed guidelines, while 20% of

participants responded not at all, 20% were neutral, and 60% responded definitely. Further work is needed to evaluate if long term implementation would be successful at this site. The limitations of the project included the success of the project being dependent upon providers' participation in the surveys. In addition, the staff was hesitant to this change in current practice.

### **Impact on Practice**

The immediate impact of this quality improvement project was the perceived usefulness of the guideline and the perceived benefit to the providers. The providers now have a resource to which they can refer that promotes safe pain medication prescribing practices. Healthcare providers who follow the most current evidence-based practices for managing pain will likely improve patient outcomes.

The predicted long-term impact of the initiation of the pain medication management protocol involving acute care injuries at this healthcare organization is the potential for reduction in opioid prescribing and improved patient safety. The pain management protocol provides a safe guideline for providers to effectively prescribe pain medications and allows the provider to supply the patient with the necessary tools to regulate their pain level. This project resulted in positive feedback from providers, which may lead to sustainability at this practice site. The operations manager is a key stakeholder in this project and will encourage the staff to continue to use the materials we provided when treating acute injuries.

Alterations or changes that we suggested regarding ongoing implementation of this project would be to include the suggestions provided by the participants of the clinic when they were given the opportunity to address ways we could improve the pain medication management protocol. One of the providers' suggested the creation of another facility for patients to go if they are already being treated for chronic pain and on chronic narcotic medications. Another provider

suggested that we develop a stepwise approach to specific pain medications (i.e. If tramadol produces minimal to no benefit, try T3) in our pain medication management protocol.

## **Conclusion**

A standardized pain medication protocol for patients in an outpatient orthopedic setting is necessary and could lead to improved patient outcomes. One of the most prominent symptoms of patients presenting to this healthcare organization is pain and the successful management of pain in an outpatient orthopedic walk-in setting is a priority. The results of this quality improvement project identified that the use of a pain medication protocol would benefit providers' prescribing practices. The use of a pain medication-prescribing algorithm has a positive impact on patient safety. Through education and utilization of the pain medication management protocol, the physicians and nurse practitioners are provided with the knowledge and tools to successfully follow current recommendations and guidelines for opioid treatment. Future recommendations would include opportunities to expand this project by implementing a pain medication management protocol to not only include patients with acute care injuries, but also to patients suffering from chronic pain.

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