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Effects of alternate pain therapies with scheduled pain meds

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Evidence based change: Effects of Alternate therapy with pain management

NURS 5382

University of Texas at Tyler

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Contents

Executive Summary

Benchmark Project

1. Rationale for the Project
2. Literature Synthesis
3. Project Stakeholders
4. Implementation Plan
5. Timetable/Flowchart
6. Data Collection Methods
7. Cost/Benefit Discussion
8. Discussion of Results

Conclusions/Recommendations

References

Appendix

Executive Summary

Despite the high possibility of saving lives and improving general welfare, surgery can also lead to potential harm, including acute and long-term pain. Postoperative pain control is an essential step of the surgical care plan and is critical in improving the patient's outcome. Pain can be treated in several ways, but in the health care system the primary method used is through medication. There are approximately 300 million operations that are performed annually on a global scale (Meara et al., 2016). The United States alone reports close to 30 million surgeries annually performed within its healthcare system (Meara et al., 2016). According to the Commission on Global Surgery, about 30% of the total global burden is rooted from conditions that require surgical intervention, resulting in the use narcotics and anesthesia care to improve patient outcomes (Gan, 2017). More than 80% of the patients that undergo surgical procedures tend to experience operative pain and as opposed to acute pain, postoperative pain is hard to manage and can have a negative effect on patient's outcomes (Gan, 2017). Persistent postsurgical pain reportedly has a more than 40% incidence rate among those receiving surgery (Simanski et al., 2014). Alternative pain management interventions have been relied upon in the past and can be source of change in managing postoperative pain among patients.

According to Bruce & Quilan (2011), over 40% of patients who experience surgery tend to experience postoperative pain, with 50% reporting moderate to severe pain levels. The prevalence of pain after general surgery can be due to several factors such as demographics, sex and age (Bruce & Quilan, 2011). The prevalence and occurrence of pain among patients is also influenced by the analgesic technique used before, after, and during the surgical operation (Simanski et al., 2014). Despite significant advancements in the management of pain, the cornerstone of postoperative pain therapy is opioids (Simanski et al., 2014). Opioids and other

painkillers are critical in managing pain and reducing the negative outcomes associated with chronic or persistent pain. Opioids like morphine are sought because of their quick effect and other efficacy advantages (Simanski et al., 2014). However, just like most pain management pharmacological options, opioids can also lead to respiratory depression, leading to hypoxia and possible respiratory arrest. Pharmacological treatments are also associated with a growing increase of drug dependence and higher cost of care. The aim of this project is to use literature to explore the following picot question: In post-surgical patients (P) how the implementation of alternative pain control methods (I) paired with narcotics/opioids (C) compared to only using medications affect the patients pain management (O) during (T) hospital stay

Rationale

Pharmacological treatments focus on the nervous system and the general perception of the pain in the postoperative period, but alternative interventions have been known for the holistic approach towards pain management (Duncan et al., 2019). The alternative intervention focuses on the cognitive, emotional and psychological aspects of pain following surgery. Some of the common alternative interventions include cognitive behavioral therapy and physical therapy. There is a need for evidence-based practice that includes pharmacological and non-pharmacological interventions to manage pain among surgery patients, as a combination of both is recommended over the single use of each of the two options (Gan, 2017). Further research in this study could limit the number of narcotics and opioids given to patient's post-surgery which would have a positive effect on the patient's outcome. It also provides a method of education for the patient as they learn of several different therapies that will alleviate their pain. This education will allow patients and family members to better understand the patients pain and create a more productive pain regime that will improve the patient's overall outcome. Failure to seek this

evidence-based practice may undermine the proper management of increasing cases of postoperative pain due to the high costs of interventions and numerous cases of drug dependence (Gan, 2017).

Literature review

Many studies have been completed related to the use of pharmacological and alternative interventions in the management of postsurgical pain experiences. Komann et al. (2019), performed an observational study of the non-pharmacological interventions and their effectiveness in pain management and found that almost 44% of the patients in the research used the method, while those that did not use it had 55% less positive experiences with pain management. Similar findings were reported in another study, which has identified the effectiveness of massage therapy as one of the non-pharmacological methods of pain management (Backus et al., 2016). It also expressed the limitations with the research as there were clear outstanding variables that were not in their control such as the lack of control group or amount of pressure provided for each massage.

Opioids like morphine have been commonly used in the management of pain among patients and many studies have examined their effectiveness. For example, Martinez et al. (2017), looked at over 135 randomized trials that reported on the use of non-opioid analgesics in the management of pain. In their findings, the authors identified that acetaminophen combined with NSAID or with nefopam were more effective than morphine alone, thus reducing the consumption of morphine with this particular combination. However, the authors overall illustrated that alternatives to opioids were shown to be less effective in the management of pain when compared to the use of opioids. Other studies have made the conclusion that suggests that the use of non-opioids is more effective based on their study (Krebs et al., 2018) This particular

study was completed using the data from 12 different European hospitals. Of the 14,767 patients in the study, 44% used a least one non-pharmacological pain therapy while the other 55% did not (Krebs et al., 2018). The results concluded that the addition of alternative therapy should be considered based on the patient's individual need. The studies conducted by Xiao et al., (2019) and Lee, Huang, and Wong (2020) also suggest the use of non-opioid approaches to deal with pain in post-operation patients such as using extended release nalbuphine sebacate and Parecoxib for pain control. Gerbershagen et al. (2013), found that each with each procedure the pain level varies, and that postsurgical pain treatment needs to comply with existing procedure-specific pain-treatment recommendations to better treat the patient's pain. Cheung et al. (2017), found that oral oxycodone administered as part of a multimodal analgesic regimen along with alternate pain treatments of the patient's choice produced superior pain relief with fewer side effects and a reduced hospital stay. Phillip et al. (2002) found that opioids will likely remain an integral part of postoperative pain management, but side effects increase the costs of care. Thus, it is imperative to give these medications with caution as the side effects affect the patient outcome and increase cost for the hospital and patient. Poulsen and Coto (2019), found that evidence has indicated that the soothing nature of music can help reduce pain and anxiety as well as improve relaxation and is a therapeutic intervention can influence to help in the surgical recovery process. Tedesco et al. (2017) found that electrotherapy and acupuncture after total knee arthroplasty were associated with reduced and delayed opioid consumption in patients. Each of these studies concluded with an effective method of reducing the consumption of opioid use, thus reducing potential opioid addiction and improving patient outcomes. It is important to mention that there are different levels of available evidence from these studies.

Stakeholders

For efficiency and accurate health service provision, the following stakeholders are important for the completion and success of the project. The stakeholders include the patient, nurse, nursing leadership, pharmacist, physician, and family, members as they all have something to gain from the success of this evidence-based change. The patient is this biggest stakeholder as they have the most to lose and gain from the implementation of the project. Their outcome is directly related to the proper treatment of their pain. The nurse has the obligation to do what is evidence-based practice and effective for the patient. The nurse will drive the care of the patient and have a major impact on the outcome of the patient after surgery. All members of the provider group are important as they play a role in determining the correct pain medications that would best fit the patients need based on the information that is received to them by the nurse. The providers determine the medication regime for the patient, and effectiveness of this project will hopefully see a decline in use of opioids and narcotics given to patients. The family and patient will be educated on the proper uses of alternative methods with their pain medications, which makes them crucial pieces for the development of this project. It is also important to understand the potential barriers of that these stakeholders can create. Several barriers are expected to slow down the change process, such as resistance to increased role and responsibility, lack of employee involvement, lack of education and skills, operational changes, and physician approval. To overcome these potential challenges, solutions will include offering training and knowledge to necessary staff, mobilizing resources, and placing emphasis on the advantages affecting the organization's changes to help influence stakeholders positively (Shirley, 2012).

Planning/Implementation

The project was to be carried out in a public clinic facility that offers general surgery services to patients such as Baylor Medical Center in Dallas but due to covid I was unable to do so. During the month of January, the goal was to obtain approval of the project to the unit educator that oversees student projects. The next step was to create proper consent forms for patient that were willing to participate to sign. Within the same month I was to create a survey that reflected how effective the treatment was based on patient response. Next, I was to create a list of alternative therapies that the patient might choose from. This list was to be brief and present the patient with ideas of potential therapies. The next step would be to gather all of the necessary supplies needed to provide the therapies, which in this case they are all within the hospital supply room. The next on the agenda would be to gather nursing volunteers and teach them about how to offer alternate pain therapies along with their regular medications to the patient. After all this is completed, the next step would be the actual implementation of the project which should take several weeks. After implementation comes collection and recording of all the data gathered from the nurses and patients. This information was to be used to create a graph to better visualize the data. This could be done using excel or PowerPoint respectfully. The last step would be presenting the information to the approving educator and illustrating the results of the project.

Below is step by step layout of the plan

- Obtain approval from educator for implementation (1 day)
- Create consent forms (2 days)
- Create pain scale survey for pre and post alternate therapy for patients (2 days)
- Create list of potential alternate therapies for patients to choose from (2 days)
- Ensure adequate supplies are within the supply room (1 day)
- Gather nurses willing to participate (1 week)
- Train nurses to implement alternate therapy for pain along with their normal pain meds (1 week)
- Implementation of alternate pain therapies with pain medications (3 weeks)
- Collect data from post-surgical patients regarding pain after treatment (2 weeks)
- Create a graph of data and compare trends of those that did not get therapy from pts charts (1 week)
- Present information educator (3 days)

Flowchart

The project was to be implemented with the help of several nurses that volunteered to provide the services and hand out surveys in March, but due to every changing number of covid-19, I was unable to do so as our ICU would stay a containment unit. This flow chart was the guide that was to be used to assemble and start the project.

*See appendix A for flow chart

Data Collection/Evaluation

Evaluation will be based on a comparison between pre-implementation and post-implementation project periods using patient surveys. The survey would contain a couple questions that the patient will answer regarding their pain. The survey will be brief and effective for the benefit of the patient. The survey will have the patient rate their pain from 0-10 before the implementation for alternative pain therapy and then after. It will also allow the patient to explain which therapy they chose and why. This will allow for a better understanding of why a particular method was chosen. The survey will also have the patient describe if the therapy was effective for the patient. This survey was to be used to gather information and create some sort of visual aid but due to covid it was unable to complete due to lack of data.

*See appendix B for evaluation survey

Cost/benefits

One of the perks about this project is the low cost that the project requires. Due to the patients being in patient at the hospital most of the supplies needed for the patient are already within the hospital. The office items which are tools that will be needed to have items such as physical copies of surveys, word, excel, paper and other office supplies. The alternate therapies that will be used for the patients are for the most part stocked within the hospital. This is the

same for the medications that the patient receives. Depending on the hospital, the hospital is either charging the patient for the items they use or a lump sum charge for their stay. The method of transaction does not matter as for surgical patients that are ensured the insurance will cover the fee, creating a little cost but high benefit for this project. The patient will receive high quality treatment with no additional cost making this a great benefit for the patient.

Discussion/Results

Due to covid the results were limited but showed promise. I was unable to fully carry about the plans of my project due to several restrictions that was placed. The few patients that I was able to implement my project on showed effective relief of pain. Many of the studies within this essay support the use of other forms of pain medications to achieve adequate pain management. The use of alternative pain methods alongside the use of medications should be integrated more within our practice. Each study also explains how pain is subjective and different for everyone. This means that different therapies work for different people. Based on the studies reviewed the use of alternative pain methods have the potential to reduce pain can reduce the number of opioids/narcotics used during the hospital stay. The use of this therapy should be used more in inpatient settings and provider to nurse communications should be initiated more often to ensure the patients pain is well treated.

Conclusion/Recommendations

Despite major advancements in care, pain management is relatively challenging, especially in post-operative care. The use of morphine and other traditional medication has been associated with numerous subpar outcomes for patients. While alternative interventions may be not effective alone, there has been evidence of decreased opioid use and better pain management when paired with standard pharmacological medication. This evidence-based change project will

further explore the use of alternatives pain therapies paired with traditional pain medication to improve pain management

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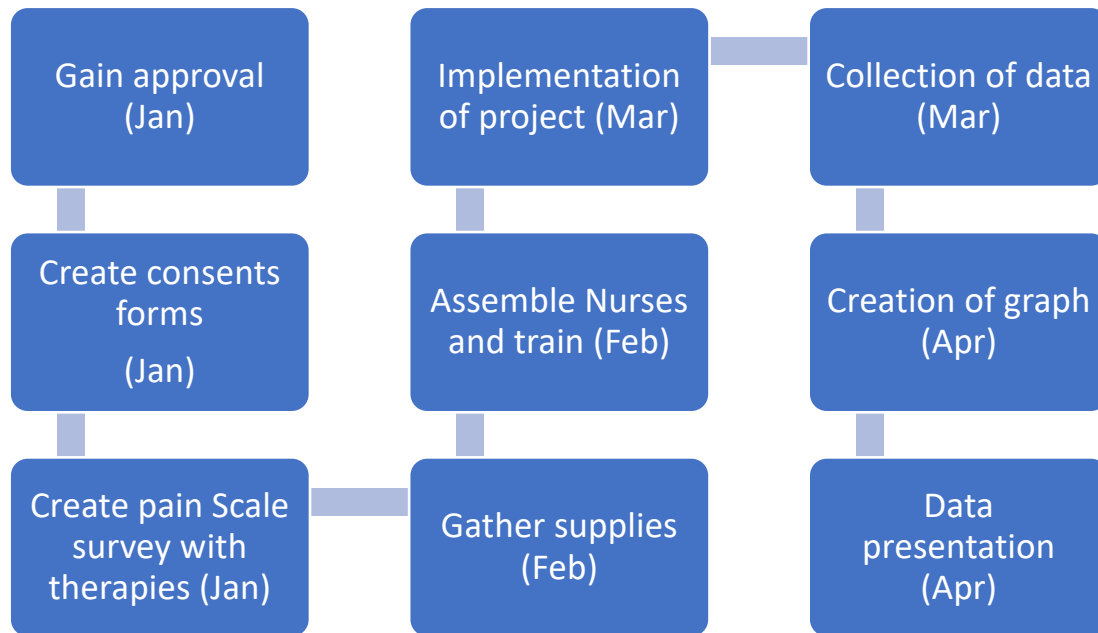
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Appendix A

Flowchart



Appendix B

Evaluation Survey

Pain Survey

Pre (Before alternative therapy)

Please rate your pain on a scale of 0-10

Please write alternative therapy used

Post (After alternative therapy)

Please rate your pain on a scale of 0-10

Please provide a brief description of why you choose this alternate therapy.

Did this alternate therapy help why or why not?