

Department Perioperative Policies on Chronic Buprenorphine and Fentanyl Patches

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Background:

Opioid therapy is the mainstay approach for the treatment of moderate to severe pain associated with cancer or other serious medical illnesses such as chronic pain. Approximately 13.5 million people are prescribed opioids for chronic pain including fentanyl patches and buprenorphine. These patients often present in the perioperative period for elective and non-elective surgeries. They can often present as a challenge for anesthesia providers regarding adequate pain control and safety profiles of the medications they are taking. Buprenorphine is a partial agonist at mu opioid receptors. Due to its high affinity, it acts as an antagonist in the presence of full opioid agonists. The duration of action depends on the route of administration. Buprenorphine can be prescribed as a transdermal patch or oral regimen. Suboxone, a buprenorphine and naloxone combination medication is used for patients with substance abuse. It is available as a sublingual tablet. The naloxone portion of the medication only exerts its antagonist effect if administered intravenously. This deters patients from abusing the medication and also protects against opioid overdose. Fentanyl works primarily as a mu opioid receptor agonist. The Duragesic (fentanyl) patch is dosed every 72 hours with a half-life of 20-27 hours.

Aim:

Our aim is to improve patient safety and pain control. A full opioid agonist given postoperatively to control a patient's acute pain will not displace buprenorphine from the mu-opioid receptor (MOR), leaving the patient susceptible to increased pain. Additionally, upon elimination of buprenorphine from the body, the new opioid will be able to occupy all available MORs, which greatly increases the frequency of side effects and risk of opioid-induced respiratory depression. Consequently, providers should have proper procedures in place for surgical patients receiving buprenorphine.

Measures:

Recommendations were made by reviewing PubMed articles and literature reviews from 2008-2018 of both buprenorphine and fentanyl patches. Hospital policies of major teaching institutions throughout the country and recommendations from other major associations such as the American Society of Anesthesiologists and the American Society of Regional Pain and Pain Medicine were reviewed and considered. We plan to implement our recommendations at University Medical Center by incorporating standard guidelines for anesthesiologists, nurse anesthetists, preoperative nurses, and PACU nurses. We will inform pre-admit testing for patients with a high likelihood or known uses of either buprenorphine or fentanyl patches. We will inform the preoperative check in nurses to notify anesthesiologists if these drugs are on the patient's home medication list when they are checked in. Considerations for the protocol will differ whether the surgery is elective or urgent/emergent. The anesthesiologists will implement the new protocol, which will then be carried out with by other anesthesia providers as well as nursing staff.

Change Recommendations - Buprenorphine:

Regarding patients taking chronic buprenorphine, our change recommendation starts with identifying patients when they present to the pre-operative anesthesia clinic for evaluation prior to surgical procedures. Patients presenting to this clinic have scheduled surgeries often within a week. By identifying these patients at the clinic appointment, we are able to formulate a plan of action in combination with anesthesiology staff, buprenorphine providers, as well as surgeons. These patients need to be categorized as having a procedure that will be either have minimal to no pain or a procedure that will likely lead to moderate or severe pain. After patients are categorized, an algorithm has been developed to determine the course of action of whether to continue buprenorphine in the peri-operative period or if patients need to be transitioned to a course of pure mu-agonist opioid medications. When plans are made regarding the patients therapy, we insist that buprenorphine providers be contacted and made aware of the patient having surgery and include their recommendations regarding the patients' medication regimen prior to surgery and how patients can be safely transitioned back to their original medication regimen. This will require anesthesia providers and surgeons to establish good communication with these physicians so that patients are safely transitioned throughout the perioperative period. There may be a certain instance that surgery may need to be cancelled if patient is still taking buprenorphine prior to surgery and is scheduled for a moderate to severe pain invoking procedure. This is clearly defined in the algorithm. A problem comes into play when patients present for emergent procedures and have not been seen in the pre-anesthesia clinic. In this instance, our algorithm gives suggestions on how to proceed. As with any clinical situation, treatment plans should be individualized to the patient. Anesthesiologists, surgeons, and other providers should be in agreement and close communication with the planned course of action.



Change Recommendations – Fentanyl Patch:

A separate policy is currently being devised for patients using fentanyl patches. Often these patients are chronic opioid users and have a very high tolerance for these medications. In some instances, it may be beneficial to continue the patients' fentanyl patch to ensure adequate pain control; however due to the fentanyl patch's long half-life, there is always a risk of opioid overdose. Fentanyl patches are also heat sensitive and can increase release of medication at higher body temperatures. For this situation in the perioperative period, anesthesia providers must be cognizant of fentanyl patch placement and the use of forced air warmers. In the situation that the fentanyl patch must be removed in the perioperative period, providers will be educated on safe handling to avoid contamination or further problems with improper disposal. The policy we are currently working on will clearly state how the patch is to be removed, disposed of properly, and how to ensure adequate documentation in the medical record.

Conclusion:

In conclusion, we aim to ensure the best quality care for patients in the perioperative period. With the institution of these policies, we are hopeful to ensure adequate pain control for these patients along with improved patient safety. Patients need to be educated and understand the planned course of action regarding their medications and whether they should be stopped or transitioned to a different course prior to surgery. Anesthesia providers and perioperative staff are expected to abide by policies as well as effectively communicate with patients and their team of physicians.