Orthopedic Surgery Opioid Stewardship

Straub Medical Center
Honolulu, Hawaii

2018 Finalist

An integrated team-based approach leads to meaningful reductions in opioid use with positive outcomes on pain management and patient satisfaction.

Overview of organization

Straub Medical Center is a fully integrated not-for-profit medical center with a 159-bed hospital in Honolulu, a network of neighborhood clinics, and a visiting specialist program that reaches throughout the state of Hawai’i. Straub Medical Center is one of four facilities that comprise Hawai’i Pacific Health, one of the state’s largest health care systems.

Interprofessional Team


Project Summary

Straub Medical Center achieved meaningful reductions in perioperative and postoperative opioid use by integrating a pharmacist into their perioperative surgical home to optimize pain management and implement opioid stewardship in all patients undergoing elective joint replacement surgery.

Importance

From 1999-2016 more than 350,000 people died nationally from an overdose involving any opioid (including prescription and illicit opioids). Between 2006-2014, Hawai’i’s overdose rate increased 83% - double the national average (37%) during that time period. Long term opioid use often begins with treatment of acute pain and many patients get their first trial of opioids following surgery. With the ongoing opioid epidemic, there is an increased emphasis on appropriately managing acute pain without
contributing to unnecessary and excessive opioid prescribing. New guidelines and recommendations have been established by various agencies to describe best practices for opioid prescribing.

Background

Baseline prescribing practices at Straub Medical Center had the potential to increase the risk of chronic opioid use, dependency, and adverse effects.

- Patients were standardly prescribed oxycodone (irrespective of prior opioid use, tolerance, and effectiveness, or other baseline patient characteristics).
- Discharge quantities were determined without consideration for hospital opioid usage.
- Retrospective data showed that 80.37% of patients were prescribed oxycodone on discharge with an average discharge oral morphine equivalent (OME) of 547.82 mg.
- Average discharge quantity of 60 tablets.
  Data also showed that intravenous opioids were used frontline for pain relief with 16.78% of patients receiving 42 doses.
- Long-acting opioids were also being used in the management of acute pain and 8.41% of patients were prescribed long-acting opioids upon discharge (excluding patients who were prescribed long-acting opioids prior to admission).

Actions

Straub Medical Center’s opioid stewardship initiative involved three key components: development and implementation of standardized guidelines, thorough perioperative patient assessment, and patient and staff education. Clinical pharmacists developed standardized opioid guidelines for selection of initial short-acting opioid for post-operative pain control and to assist with determination of discharge opioid quantities based on inpatient opioid usage. These standardized guidelines were approved by various medical staff committees’ and were implemented in an effort to decrease inter-provider variability and provide direction for individualization of pain management. Thorough perioperative patient assessment was completed by the perioperative surgical home pharmacist; medication reconciliation was completed, prescription drug monitoring program (PDMP) was reviewed, and patient interviews were done to assess opioid needs and develop a patient centric postoperative pain management plan. Finally, patient and staff education was completed utilizing education handouts and presentations to the interdisciplinary team that were created by pharmacists. Patient education handouts and staff education were completed to increase consistency of pain management messaging throughout the surgical experience.

Objectives

- Impact opioid use during hospitalization and upon discharge without adversely affecting patient’s pain management
- Manage perioperative and postoperative pain, appropriately and efficiently, in orthopedic surgical patients.
## Results

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<thead>
<tr>
<th>Decreased Opioid Use</th>
<th>Enhanced Patient Care &amp; Outcomes</th>
<th>Positive Organizational Outcomes</th>
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<tbody>
<tr>
<td>• Average total hospital OME decreased from 94.2 mg to 51.09 mg.</td>
<td>• Patient reports of pain were not affected by reduced opioid use.</td>
<td>• Average length of stay decreased from 2 days to 1.67 days.</td>
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<td>• Number of intravenous opioid doses decreased from 42 to 0%</td>
<td>• Percentage of patients requesting opioid refills within 30 days of discharge was not significantly different.</td>
<td>• Percentage of patients with same day discharge increased from 4.9% to 19.7%</td>
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<td>• Percentage of patients prescribed a long acting opioid on discharge decreased from 8.41% to 0%</td>
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<td>• Improved HCAHPS for communication about medications.</td>
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<td>• Average total discharge OME decreased from 547.82 mg to 289.2 mg</td>
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## Initiative Continuation

The orthopedic surgery opioid stewardship initiative demonstrated an innovative use of a pharmacist in the perioperative surgical home to develop and implement a well-designed interdisciplinary perioperative opioid stewardship program with measurable improvements in patient safety and overall outcomes. The initiative is being sustained with continued presence of the pharmacist in the perioperative surgical home and there are plans to expand opioid stewardship measures and other pharmacy services to a wider variety of surgical patients.

## About the Award for Excellence in Medication Safety

The Award for Excellence in Medication Safety is a nationally acclaimed awards program that recognizes outstanding pharmacist leadership, teamwork, innovation and patient outcomes that demonstrate improvements in patient safety within a medication-use system in acute and ambulatory care settings. For over a decade, the award has been a collaboration between the ASHP Foundation and the Cardinal Health Foundation, to showcase the critical value and importance of pharmacist leadership in impacting the effective and safe use of medications on patient care and outcomes.