**Summary**

Based on poor pain management scores, a need was identified to change pain management practices for orthopedic patients. A hospital-wide pain protocol was implemented for orthopedic surgical patients based on the results of a unit-based pilot. The protocol includes the administration of multimodal analgesic agents preoperatively and postoperatively. Implementation of the protocol resulted in elevation of pain management HCAHPS scores and improved patient experience.

**Purpose:** To implement a hospital-wide pain management protocol for orthopedic patients with interventions focused on improving patient pain control and satisfaction while reducing total opioid consumption.

**Starting Point**

- 1st percentile for pain management in October 2012
- Physician specific medication orders
- Service repeatedly paged overnight for pain medications
- Decreased patient satisfaction scores
- Staff frustration

**Methods and Materials**

**Description:** Staff members and patients identified a need for increased pain control in orthopedic patients. This was evidenced by negative patient comments to the nursing staff, increased length of hospital stay due to pain control, high use of opioid analgesics, and number of post-discharge calls and visits for pain management. On the basis of this information, a team was created comprised of inpatient orthopedic nursing managers, pharmacy, and orthopedics. This team began work on the creation, development, and implementation of the orthopedic pain protocol project. It began with increasing awareness through education and departmental meetings. Through collaboration with pharmacy, a pain management protocol was developed. This protocol was designed to utilize proactive pain management instead of reactive pain management. It included the use of multimodal agents that target different mechanisms of post-operative pain and administration of analgesic agents before the patient has post-operative pain, taking advantage of proven synergistic activity of the medications when used in combination. This regimen includes a set of medications administered preoperatively as well as basal and breakthrough medications to be administered postoperatively.

**Pre-Operative Protocol**

All patients should receive (unless contraindicated):
- Acetaminophen 975 mg po x 1
- Pregabalin (Lyrica) 150 mg po x 1
- Celecoxib (Celebrex) 400mg po x 1
- Tramadol ER (Ryzolt) 200 mg po x 1

**Post-Operative Protocol**

All patients should receive (unless contraindicated):
- Celecoxib 400 mg po x 1 POD 1
- Tramadol ER 200 mg po x 1 POD 1
- Acetaminophen 975 mg po tid

Other “PRN” options may include:
- Hydromorphone PCA (to stop POD 1 in am)
- Hydromorphone 0.5mg IV q 2 hrs pm
- Oxycodone 5-10mg po q 4 hours pm

**Nursing Measures**

- Use of white boards in room
- Pre-medicate prior to PT/ambulation
- Counsel patients on what is available and when next dose is due
- Expectations of pain post op
- Use of distractions (TV or music)
- Pain control assessed on leadership rounds
- Use of revised Numeric/Pain scale tool (pre-op to discharge)

**Reassessment of Interventions**

The goals of the interventions are focused on reducing total opioid consumption while improving patient pain control and satisfaction:
- PROactive pain management instead of reactive pain management
- Using multimodal agents in synergy that target different mechanisms of post-operative pain
- Administering agents BEFORE the patient has post-operative pain
- Taking advantage of proven synergistic activity of the medications when used in combination

**Is Pain Still Uncontrolled?**

- Notify unit pharmacist or Ortho MD IF:
  - Medications NOT relieving pain
  - Receiving pain medications ATC
  - Upon reassessing, pain score is not decreased
  - Patient requesting pain medications more frequently than ordered

**Results**

- Increased patient quality measures
- Increased nursing satisfaction scores

**Continuing on the Path to Success: Maintaining Results**

- Unit-based pain committee as part of self-governance
- Continued focus on pain control during leadership and hourly rounding and bedside shift report
- Patient education – Goals and expectations
- Celebrate successes

**Conclusions**

Evaluation/Outcomes: The outcomes of this new pain protocol for orthopedic patients were measured by the same evidence used to identify the need for improved pain control. The project has demonstrated increasingly positive results. Following the implementation of this new protocol, evidence showed improved patient experience as evidenced by positive comments to the bedside nurse and manager, less use of medications for breakthrough pain, fewer post-discharge calls and visits for pain management, improved length of stay, and extraordinary improvement in patient satisfaction regarding pain management.