Reducing post-operative opioid use after Total Joint Arthroplasty through EPIC order sets

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The goal of this project is to create a data-informed, post-operative pain order set to reduce the amount of opioid-containing medications prescribed by orthopaedic surgeons in the HealthPartners system, without compromising patient satisfaction.

**AIM Statement:**

We are trying to understand more about our patients’ experiences with pain after surgery. Your participation will help us improve care for the patients you refer. Thank you for taking the time to fill out this assessment.

**Introduction**

- Narcotic overdose is leading cause of death in ages < 50
- 80% of current opioid users are introduced through prescriptions
- Orthopaedic surgeons are the 3rd highest prescribers of opioid containing medications in the United States
- Narcotic use after joint arthroplasty is not well quantified
- Prescribing practices vary widely

**Methods**

- Included all patients undergoing primary or revision total knee (TKA) or hip arthroplasty (THA) as part of a quality measure
- Included inpatient and outpatient surgery centers
- Patients were asked to complete a questionnaire about pain control at 2, 4, and 6-week clinic appointment weeks post-operatively
- Assessments were identified with demographics and surgery details

**Results**

- 564 surveys were collected; 320 were included in the analysis
- 80% of current opioid users are introduced through prescriptions
- TKA patients reported a mean of 40.8 tablets over three weeks
- Median of 30 tablets over two weeks
- THA patients reported a mean of 21.7 over two weeks
- Median of 12 tablets over one week
- Patients less than 70 reported three times as many opioid pills
- Opioid naïve patients used less pills: 31.4 tablets vs 43.44 (p= 0.053)
- 9.7% of patients reported opioid use in previous two weeks
- No difference in duration of use or number of pills used based on sex

**Conclusions**

- Patients undergoing TKA used 2-3x as many opioid containing pills as compared to THA
- Patients older than 70 took statistically fewer pills
- Patients undergoing TKA used opioid pills for twice as long
- Narcotic use pre-op results in increased tablets post-op, but resulted in same duration of use
- Overall satisfaction average is 4/5 “satisfied”
- Large differences in mean and average highlighted skewed data

**Next Steps**

- Compare patient-reported use to amount prescribed
- Meet with surgeon stakeholders to report data and receive input on creation of EPIC order set
- Create a post-operative pain management order set
- Determine appropriate categories to influence number of tablets
- Implement order set with prescriber orientation
- Initiate post-intervention pain assessment collection

**References:**