Abstract Title: Improved Situational Awareness Leads to a Reduction in Post-operative Opioid Use Among Total Shoulder Arthroplasty Patients: An Interdisciplinary Team Approach.

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Purpose and Rationale: Sixty-day post-operative telephone data demonstrated that 41% of Total Shoulder Arthroplasty (TSA) patients were still taking opioid medication to manage their pain. This was significantly higher than other total joint arthroplasty or spine patients. This data stimulated interest in determining factors that contribute to the opioid use and to develop an improvement strategy to promote wellness and patient safety.

Research Questions: Can a multimodal approach to pain management result in a reduction in post-operative opioid use for TSA patients?

Synthesis of Review of Literature: Prescription medication abuse is a major public health concern [1-2]. Effective pain management can impact a patient's expectation of recovery and quality of life [3]. In recent decades, the wide spread use of prescription opioids has resulted in an increase in abuse, dependence and overdose deaths [4]. Our hospital performs approximately 120 TSA surgeries annually. 2014 data revealed that TSA patients experience more pain and opioid medication use 60-days post-operative compared to other elective total joint and spine surgery patients. Acute pain management should incorporate a multidisciplinary, multimodal approach. Alternative therapies such as Music Therapy (MT) can promote relaxation [5-6]. Opioid sparing medications are beneficial in reducing the amount and duration of opioid use to manage post-operative pain [7]. Situational awareness is essential to the improvement of patient care and engages the clinical staff in problem solving [8].

Methods/Procedures: A 60-day post-operative telephone interview was conducted to assess patient's expectation of recovery, pain score (analog) and pain medication use. A multimodal intervention was implemented for TSA patients: 1. Communicate 60-day follow-up data with clinical staff; 2. Implement an opioid sparing pharmacologic protocol and modify opioid prescribing; 3. Introduce MT as a post-operative integrative therapy 30 minutes prior to the Occupational Therapy session and post-discharge; 4. Educate TSA patients about benefits of MT and opioid use reduction. Data was compared between 2014 and 2015.

Results: Comparing FY 2014 (n=58) to FY 2015 (n=40) 60-day opioid use decreased from 41% to 15%. Tolerable pain (0-4, Analog scale) improved from 68% to 80% while severe pain scores (7-10) decreased from 11% to 5%. Expectation of recovery improved from 77% to 87%. MT was used by 65% of patients before their in-patient OT appointment. 74% agreed to use music at home as part of their recovery. Patients who used MT at home had an average pain score 1.6 compared with 2.6 for those who did not use music.

Discussion/Application to Practice:
Improved situational awareness allowed for multidisciplinary planning and implementation of a successful performance improvement strategy. Bedside nurses incorporate this information in patient care planning and delivery, patient education and discharge planning. Further development of the music therapy program is underway.

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