Implementation of a Preoperative Education Class for Total Joint Arthroplasty Patients Significantly Reduces Postoperative Narcotic Usage and Non-Home Discharge in an Underserved Patient Population

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INTRODUCTION: Using a multidisciplinary approach, we assembled a group of motivated individuals across all aspects of patient care encompassing total joint arthroplasty (TJA) to create a unique program designed to improve patient outcomes and educate patients and their family members on the preoperative, perioperative, and postoperative care at a tertiary referral academic medical center. These programs have been shown in the literature to decrease length of stay, overall cost, infection rate, readmission rate, and rate of non-home discharge. Implementing such a program at an academic center comes with a unique set of challenges due to the nature of its underserved patient population. Not only is Joints Camp vital to meeting the health needs of our patients but decreasing length of stay and readmission rates are critical factors affecting reimbursement rates as we navigate the world of bundled payments.

METHODS: A steering committee comprised of the above-mentioned team members was formed and met throughout the first half of 2021 to conceive the final vision for Joints Camp to be implemented at our academic medical center. The first Joints Camp was held in May 2021 and hosted all patients scheduled for TJA in the coming month. Each department contributed relevant PowerPoint slides with vital information for patients and family members as they prepare for their upcoming surgery. Representatives from each department are present for the monthly Joints Camp meeting to present their respective information and answer questions that patients or family members may have. Topics covered include getting around Ochsner LSU Health, total hip and knee replacement education, self-care and family training, nursing care and pain management, prevention of blood clots, postoperative therapy and precautions, and discharge planning. A full-time nurse navigator was hired to assist with hosting Joints Camp, scheduling patients to attend the meetings, and improve the patient experience by contacting patients before and after their surgery to ensure good outcomes. At the conclusion of each session, patients can schedule postoperative therapy appointments, submit required prior authorizations, sign up for MyChart, and receive durable medical equipment prior to their surgery.

We then retrospectively reviewed all patients who underwent TJA at our institution 6 months prior to (no Joints Camp, NJC) and 6 months after (Joints Camp, JC) the implementation of Joints Camp. Data collected included length of stay (LOS), 90-day readmissions and ER visits, discharge disposition, and average daily morphine milligram equivalents (MME) intake in the hospital setting. Data from patients in the NJC group was compared to data from those in the JC group. Statistical analysis was performed using the t-test for non-categorical variables and the chi-squared test for categorical variables.

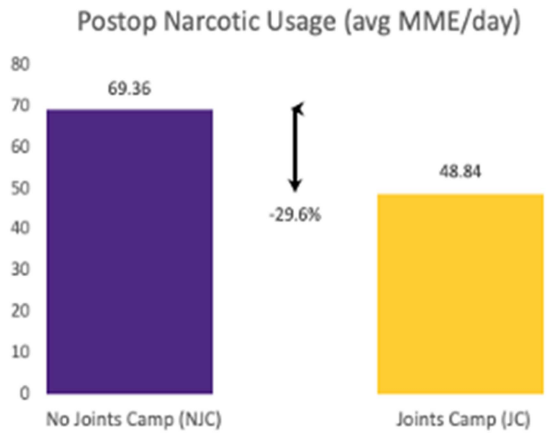
RESULTS:

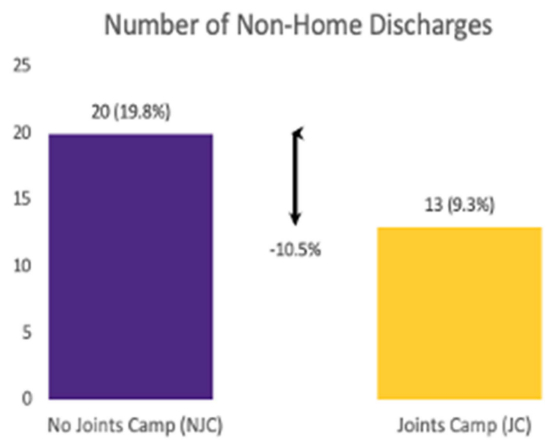
There were 241 total hip and knee arthroplasty procedures performed during the study period. One hundred one cases were performed in the 6 months prior to implanting Joints Camp (NJC) and one hundred forty cases were performed after its implementation (JC). One hundred thirty-two patients (54.8%) were listed as Medicaid payer status. There was a trend towards decreased LOS in the JC group with a 28.8% reduction, however this data point was not statistically significant (2.4 vs 1.7 days, $p=0.36$). Ninety-day readmissions and ER visits did not differ significantly between the two groups (18.8% vs 24.3%, $p>0.05$). There was a statistically significant decrease in the rate of non-home discharge in the JC group (19.8% vs 9.3%, $p=0.0191$). Postoperative in-hospital narcotic usage also decreased significantly in the JC group, with a 29.6% reduction in average daily MME intake (69.36 vs 48.84 average MME/day, $p=0.0015$).

DISCUSSION AND CONCLUSION:

Patient preoperative education classes for total joint arthroplasty have been shown to improve patient outcomes and contribute to hospital cost savings. Using a multidisciplinary approach, our team successfully implemented Joints Camp at our institution. We found a trend towards decreased LOS, which was likely underpowered to show a significant impact. We did, however, find a significant reduction in the rate of non-home discharge and postoperative narcotic usage. It is well documented in the literature that discharge home after TJA significantly reduces postoperative complications.

Implementing preoperative education classes for patients can be a difficult undertaking, especially at a tertiary referral academic medical center with an underserved patient population. We were able to accomplish this successfully with a patient population of which more than half were Medicaid payer status. Accomplishing such a task requires a multidisciplinary approach, determined steering committee members, and departmental and hospital buy-in.


Postop Narcotic Usage (avg MME/day)
80
70
60
50
40
30
20
10
0
69.36
-29.6%
48.84
No Joints Camp (NJC)
Joints Camp (JC)


Number of Non-Home Discharges
25
20
15
10
5
0
20 (19.8%)
-10.5%
13 (9.3%)
No Joints Camp (NJC)
Joints Camp (JC)