



## The Pharmacist's Role in Care for Elective Total Hip Arthroplasty/ Total Knee Arthroplasty

by Chad Batey, PharmD

### BACKGROUND

Total hip arthroplasty (THA) and total knee arthroplasty (TKA), collectively known as total joint arthroplasty (TJA), are beneficial and cost-effective procedures for patients with symptomatic osteoarthritis. The elective surgery's goals include reduced pain upon ambulation, restoration of range of motion, and ability to return to a more active lifestyle. By 2030, the number of THAs performed in the United States annually is expected to increase by 174 percent to 527,000, and TKAs are expected to experience a seven-fold

increase to 3.5 million per year. Taking into consideration the demand and high price tag associated with the procedures, TJA is the single largest cost in Medicare, with reports showing a \$13.43 billion annual price tag for THAs, and a \$40.8 billion annual price tag for TKAs. Unplanned readmission rates for TJA place a significant economic burden on Medicare reported at \$17.5 billion in 2010. The Centers for Medicare and Medicaid Services (CMS) began including TJAs in the Hospital Readmission Reduction Program (HRRP) in 2015.

Recent systematic reviews and meta-analyses found that the most common cause of unplanned readmission at both 30 and 90 days post-THA were joint-specific reasons, including dislocation and joint malfunction. The second and third most common causes for unplanned readmission, again at both 30 and 90 days, were surgical sequelae and thromboembolic disease, followed by surgical site infection. For THA, 30-day and 90-day all-cause readmission rates were 5.6 percent and 7.7 percent, respectively. At both 30 and 90 days post TKA, the most common cause of unplanned readmission was surgical site infection. The second and third most common cause

**Editor's Note:** For information on references used in this article, contact Chris Linville at [cbris.linville@ncpanet.org](mailto:cbris.linville@ncpanet.org).

for unplanned readmission were joint-specific reasons and thromboembolic disease at 30 and 90 days. For TKA, 30 day and 90 day all-cause, unplanned readmission rates were 3.3 percent and 9.7 percent, respectively. Though some limitations apply to the systematic review and meta-analysis, Medicare reports a similar number for a national average rate of unplanned readmissions following a TJA at 4.8 percent. This national average is substantially lower than the overall readmission average, and the readmission averages for the other disease states included in the HRRP penalty evaluation.

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### **THE PHARMACIST'S ROLE IN PREVENTION OF READMISSION**

When considering elective total hip/knee replacement patients, the pharmacologic intervention directly related to the procedure post-surgery is often limited to pain management (most commonly opioid analgesics). Unlike chronic disease management, the effect of proper pain management tends to be more tangible to the patient. When non-adherent to the pain management regimen, the resulting symptoms tend to be incentive enough for the patient to become adherent until the operative pain is resolved permanently. Though when evaluated, pain was not a primary reason for readmission following THA or TKA.

Looking specifically at the principal reasons for THA and TKA unplanned readmissions, joint-specific reasons and surgical site infection were the most prevalent. Certainly, in regard to curbing joint-specific unplanned readmission, the opportunity for intervention mostly falls outside of the talents and practice of community pharmacy (community pharmacists will not be reopening a patient's knee). However, there are steps a community pharmacist can complete to help a patient recovering from a TJA that may also reduce readmissions or unnecessary follow-up care.

To reduce the risk of surgical site infection occurring outside of the surgery center, proper counseling for both patient and caregiver on hand washing, wound care, and adherence to post-surgery antibiotics can reinforce the message received from the surgeon and potentially improve outcomes. Stocking wound care products recommended by the surgery center is a good idea.

Another area where pharmacists can positively improve the readmission rate of TJA patient is in a pre-rehabilitation clinic. Optimization of a patient's medication therapy during this preoperative period can improve postoperative outcomes. If the patient will need a prescription on file for antibiotic prophylaxis prior to subsequent surgical intervention, this is a good time to go over that as well. Furthermore, encouraging patients to make and keep follow-up appointments with appropriate physicians and rehabilitation services increases success of the rehabilitation regimen.

Electronic health information exchange (HIE) makes the flow of discharge information from hospital to pharmacy seamless, though the absolute success of a transition of care model does not solely rely

on such technology. Technologies currently in the pharmacy, including phone, fax, and secure, encrypted messaging, can serve as the tools to receive discharge orders and can be a viable option for adequate flow of patient information during the transition of care.

Finally, the wide range of durable medical equipment most patients will require following a THA/TKA is often available at their community pharmacy. Offering patients and caregivers everything from walkers, crutches, canes, leg lifter straps, sock-aids, reachers/grabbers, raised toilet seats, commodes, and grab-bars can help reduce the risk of falls following surgery and promote successful rehabilitation.

### **CONCLUSION**

Of the areas of monitoring for the HRRP, the transition of care opportunity in the area of elective hip/knee replacement offers a more limited range of interventions for the community pharmacist. However, assisting with the proper management of a patient's pain and providing the equipment they will need to complete their rehabilitation and regain mobility can vastly improve a patient's quality of life during recovery. ■

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