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A Consultation Phone Service for Patients With Total Joint Arthroplasty May Reduce Unnecessary Emergency Department Visits

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ABSTRACT

Background: Different measures for reducing costs after total joint arthroplasty (TJA) have gained attention lately. At our institution, a free-of-charge consultation phone service was initiated that targeted patients with TJA. This service aimed at reducing unnecessary emergency department (ED) visits and, thus, potentially improving the cost-effectiveness of TJAs. To our knowledge, a similar consultation service had not been described previously. We aimed at examining the rates and reasons for early postdischarge phone calls and evaluating the efficacy of this consultation service.

Methods: During a 2-month period, we gathered information on every call received by the consultation phone service from patients with TJAs within 90 days of the index TJA procedure. Patients were followed for 2 weeks after making a call to detect major complications and self-initiated ED visits. Data were collected from electronic medical charts regarding age, gender, type of surgery, date of discharge, and length of hospital stay.

Results: We analyzed 288 phone calls. Calls were mostly related to medication (41%), wound complications (17%), and mobilization issues (15%). Most calls were resolved in the phone consultation. Few patients (13%) required further evaluation in the ED. The consultation service failed to detect the need for an ED visit in 2 cases (0.7%) that required further care.

Conclusion: The consultation phone service clearly benefitted patients with TJAs. The service reduced the number of unnecessary ED visits and functioned well in detecting patients who required further care. Most postoperative concerns were related to prescribed medications, wound complications, and mobilization issues.

The demand for total joint arthroplasty (TJA) has increased substantially during the last few decades, and the number of TJA procedures is expected to increase in the future [1]. To counter rising healthcare costs, emphasis must be placed on managing unnecessary emergency department (ED) visits and hospital readmissions. In particular, ED visits that occur during the first months after primary discharge are targeted, because complications that occur during this time are thought to be the best reflection of the quality of care.

The average hospital length of stay after a TJA has been reduced [2]; the widely used fast-track setting allows patients with TJAs to be safely discharged on the second or third postoperative day [3,4]. This trend of shorter inpatient stays has accentuated the importance of patient education before discharge. A large proportion of ED visits are potentially unnecessary and may be prevented with better patient education and enhanced outpatient communication [5].

At our institution, a consultation phone service was initiated to target patients with TJAs, in an effort to reduce the amount of unnecessary postdischarge ED visits. Patients undergoing a TJA procedure are given both verbal and written instructions on how and when to contact this free-of-charge TJA consultation service. The phone service is believed to reduce the rate of unnecessary postdischarge hospital visits, but the real effects of this service remain unclear.

To our knowledge, no study has described or evaluated a similar phone service. Therefore, our primary purpose in the present study was to examine the rates and reasons for early postdischarge phone calls to our TJA consultation service. Our secondary aim was to evaluate the functionality of the consultation service, that is, to determine how well the phone service detected patients who required further care. We hypothesized that the consultation service would be contacted more frequently for some reasons than for other reasons. Thus,

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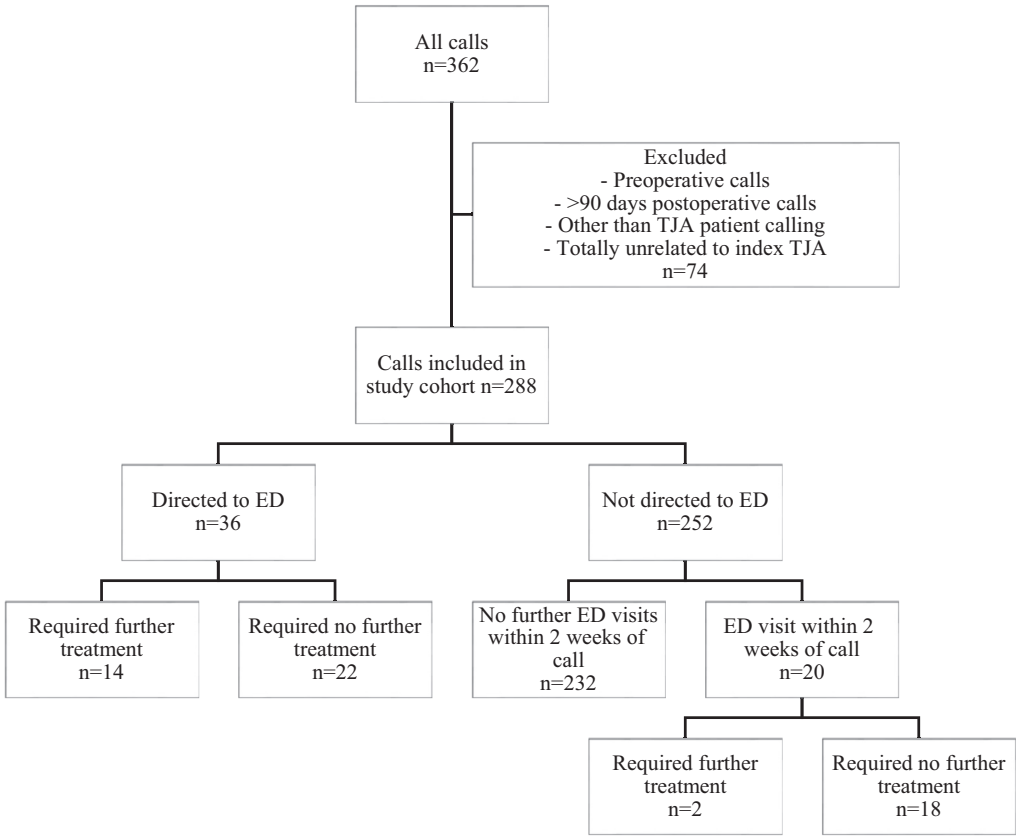

Fig. 1. Flowchart of study patients. TJA, total joint arthroplasty; ED, emergency department.

our analysis might provide information on ways to improve standardized healthcare procedures in fast-track TJA.

Materials and Methods

All TJAs at our high-volume tertiary care center are performed according to a standardized fast-track protocol. Patients are mobilized on the day of surgery and are discharged when they meet discharge criteria, usually on postoperative day 2. In 2015, there were 996 total knee arthroplasties (TKAs; 894 primaries and 102 revisions) and 1144 total hip arthroplasties (THAs; 874 primaries and 270 revisions) performed at our institution. The procedures were performed by a total of 14 senior orthopedic surgeons specialized in hip and knee arthroplasty.

Before the surgery, every patient visited both a physiotherapist and a nurse experienced in total arthroplasty care. Both verbal and written instructions were given on how to prepare for the surgery and how the rehabilitation should be performed. Together with a nurse, the patients completed a preoperative form with questions about prior surgeries, current medications, comorbidities, and conditions at home. After the surgery, the patients were mobilized as soon as possible, typically on the day of surgery, and they received physiotherapy daily during the hospital stay. The patients were discharged on the second or third postoperative day, when they reached independent functional status (ie, they could walk a short distance, dress independently, and go to the toilet without assistance) and their pain level was controlled. At discharge, the patients were given both verbal and written instructions on how and when to contact the consultation phone service. Every patient also received a 30-page guide with rehabilitation exercises and instructions regarding wound care, pain medication use, prevention of deep vein thromboses, and treatment of swelling and hematomas. These issues were also covered verbally before discharge, as part of the standard discharge protocol.

At our institution, both THA and TKA patients receive similar instructions regarding use of pain medication. Patients are instructed to reduce pain medication gradually as the pain subsides, and that pain should not prevent mobilization or disturb sleep. Similarly, both THA and TKA receive rehabilitation instructions that only differ regarding the specific joint.

For this study, we prospectively gathered information about all phone calls received by our TJA consultation phone service between March 30, 2016, and May 31, 2016. The phone service was open every weekday, from noon to 1 PM, and it was operated by trained nurses. The nurses who answered the phone were instructed to complete a detailed form after every call during the 2-month study period. The information collected on this form included name, date of call, main reasons for contact, and actions taken to resolve the patient's concerns. The data collection form was completed by selecting predetermined response categories. The following alternatives were provided for the main reason for the call: pain medication, wound complication, sick leave issues and other paperwork, edema, extensive bruising or hematoma, deep vein thrombosis suspicion, constipation, or mobilization- or coping-related issues. The following alternatives were provided regarding the actions taken to resolve the concern: instructions given by phone, consultation with a nurse specialized in pain medication, consultation with the attending physician, patient instructed to visit the ED, patient instructed to visit a primary care institution, or other action. If the nurse was unable to address the concerns raised by the patient, for pain medication-related issues, she would consult a nurse specialized in pain management, otherwise the treating surgeon. The nurse only instructed the patient to visit the ED after consulting the treating surgeon. In