The American Association of Hip and Knee Surgeons, Hip Society, Knee Society, and American Academy of Orthopaedic Surgeons Position Statement on Outpatient Joint Replacement

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Foreword

Over the past decade, there has been increasing interest in performing primary hip and knee replacement in the outpatient setting [1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13], [14], [15], [16], [17], [18], [19], [20], and rapid recovery protocols have created a natural evolution from the inpatient to outpatient setting [2], [3], [6], [10], [21], [22], [23]. The interest in outpatient arthroplasty also has been fueled by financial considerations including the ability to control costs within the episode of care, the potential for surgeon ownership in ambulatory surgery centers, and the ability of a surgeon to control his or her operating room and surgical

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care environment more easily in an ambulatory surgery center [1], [5], [8], [24]. Outpatient total joint arthroplasty has been successfully performed during the past decade by a select group of surgeons and institutions [4], [22], [25], [26], and success has been attributed to multidisciplinary care team coordination, standardized perioperative protocols, discharge planning, and careful patient selection [2], [3], [4], [7], [22], [25], [26].

In multiple meetings that happened over the past year between the American Association of Hip and Knee Surgeons and various industry partners, it was repeatedly stated that one of the most pressing and important issues in performing the hip and knee arthroplasty is ensuring the safe transition of a portion of these procedures into the outpatient environment. This position statement was developed systematically in a true collaboration with key stakeholders with interest in the safety and well-being of patients who undergo outpatient hip and knee arthroplasty and the surgeons who perform them. An initial draft was review and edited by the American Association of Hip and Knee Surgeons, the American Academy of Orthopaedic Surgeons, the Hip Society, and the Knee Society. The position statement was also reviewed and received support from AdvaMed who represents the collaboration with our industry partners. The final position statement in this manuscript represents the culmination of all reviews and edits performed by the aforementioned organizations.

Position Statement

Hospitals, surgeons, and payers have recognized the potential benefits to patients from decreasing the length of inpatient hospital stay after total hip and total knee arthroplasty and even the potential benefits associated with same-day discharge in the outpatient setting for select patients.

Furthermore, with the Centers for Medicare and Medicaid Services' recent decision to remove total knee arthroplasty from the Medicare inpatient-only list, future demand for same-day outpatient discharge for hip and knee arthroplasty is likely to increase. Therefore, we are composing this position statement regarding the recommendations for outpatient hip and knee arthroplasty procedures to guide hospitals, surgeons, and institutions in appropriate and safe patient care.

The peer-reviewed literature on outpatient arthroplasty is evolving. A number of case series have been reported from select institutions with selected patient populations which have been able to perform hip and knee arthroplasty in the outpatient setting with attendant same-day discharge. However, it remains uncertain whether this experience can be generalized to a broader population of patients and providers. Many of these early reports come from institutions that may have specific characteristics, including robust outpatient surgery programs with extensive experience, elements, and pathways that enable early discharge in the outpatient setting. This position statement is intended to clearly state our priority of preserving patient safety and to outline specific recommendations for surgeons and institutions considering discharge of hip and knee replacement patients on a same-day outpatient basis.

First, the surgeon and institution should have appropriate insight and accompanying data regarding their current performance and capability to perform early-discharge hip and knee arthroplasty. A robust system of measurement should be established to serve as the quality and performance guide. Gradual and thoughtful changes in practice should be performed after being informed of their observed impact on quality metrics, including length of stay, readmission rates, and complication rates. In addition, the nature of the patient population being served by the provider, including the socio-economic and general health status, must be known, and the

impacts of these factors must be understood. If the surgeon or institution currently has a typical length of stay of two days or more after hip and knee replacement, it may not be advisable that the surgeon or institution begin performing outpatient hip and knee replacement until they have gained experience in earlier discharge intervals such as the day after the surgery. Furthermore, it is recommended that the surgeon and/or institution understand their specific institutional data (mean and standard deviation) regarding surgical time, blood loss, length of hospital stay, early complication, and readmission rates before considering same-day outpatient hip or knee arthroplasty. If those metrics are not supportive of the same-day discharge, it is recommended that the surgeon or institution not begin until the relevant metrics are improved and refined to demonstrate the capability to optimize and maintain patient safety.

The outpatient program should start with an emphasis on improved quality and safety outcomes. The essential elements of an outpatient surgery program are multiple and focused around minimizing complications, maximizing patient safety, and discharging the patient to an appropriate and safe environment. These essential program elements involve all aspects of the perioperative care continuum, starting from the initial encounter with the patient considering hip or knee replacement all the way through the surgical procedure including the postoperative period until the patient has safely recovered.

The essential elements identified that require optimization are as follows:

• Patient selection (on medical grounds)

• Patient education and expectation management (eg, preoperative “joint school”)

• Social support and environmental factors (family or professional outpatient support)

• Clinical and surgical team expertise

• Institution facility or surgery center factors (history of successful team work and an environment conducive to optimizing surgical outcomes)

• Evidence-based protocols and pathways for pain management, blood conservation, wound management, mobilization, and VTE prophylaxis.

Special attention should be paid to proper patient selection when considering outpatient same-day discharge for total hip and knee arthroplasty. Medical comorbidities should be minimal, and patients should generally be relatively healthy, active, and at low risk for medical or surgical complications. Although there is no definitive medical risk–stratification system, there are some factors that have proven useful to guide the medical team and practitioners in assessing the number of medical comorbidities and the extent to which they are adequately controlled. Special attention should be paid to those complications that can occur in the first 24 hours after a procedure, such as oversedation, urinary retention, nausea, vomiting, dehydration, and hypotension that could adversely affect patient safety.

The next program element should be a robust and detailed patient and family education program outlining the expectations and the necessary environment for optimal patient recovery and safety once discharged from the hospital or ambulatory surgery center. The patient should have adequate physical and social support during the initial recovery period when at home and must have full access to the medical and surgical team members until sufficiently recovered.

An additional critical program element is a team of medical staff capable and experienced in performing hip and knee arthroplasty in the outpatient setting, whether in hospital or in ambulatory surgery center. The anesthesia team, surgical team, and recovery room staff should all be facile and experienced in outpatient early recovery and discharge modalities that include

adequate perioperative pain control, fluid resuscitation, early patient mobilization, and medical management. The facility in which the surgical procedure is performed and immediate recovery happens should also have adequate and sufficient equipment, staff, and facilities to ensure patient safety and a successful total hip or knee arthroplasty procedure. It is important that the outpatient program has either a physical therapist or an adequately trained staff competent in determining the safety of patients to discharge home with respect to their independence and mobility. If the patient is discharged home on the day of surgery, it is recommended patients be contacted by a member of the surgical or medical team soon after the surgery to assess the patient's safety.

It is our opinion that some total hip and knee replacements can be appropriately performed in the outpatient setting with safe discharge on the day of surgery if the abovementioned factors, elements, and sufficient practitioner and surgeon experience are maintained.

It is recommended that a full discussion with the patient and family regarding the risks and potential benefits of same-day discharge after hip and knee replacement be carried out. Furthermore, we recommend that any financial conflicts related to outpatient discharge, such as ownership in an ambulatory surgery center, physician-owned distributorship, or outpatient services, be transparently disclosed to the patient. If the surgical procedure is to be performed in a stand-alone ambulatory surgery center, it is paramount that protocols be established to effectuate an appropriate response to intraoperative or perioperative complications that may arise. The protocols must provide patients with timely access to medical and surgical care so that patient safety is always maintained and prioritized. If a patient is not fit for discharge home on the day of surgery, facilities and staff, such as those in an overnight care suite or hospital, must be available to ensure patient safety.

Finally, as institutions and surgeons decide that they are capable of instituting outpatient joint programs, it is recommended that they track and record the outcomes of these procedures and embrace quality assessment and improvement efforts. An analysis of readmissions and complications, as well as determinants of success, can help to confirm and improve the safety and efficacy of any same-day program.

Disclosures

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