

## Does Total Joint Replacement Surgery Have Staying Power in Outpatient Settings?

By Brad D. Kirkes FACHE, MBA, MHA, OTR/L, CHT

### The Difference Between an HOPD and an ASC

HOPDs (Hospital Outpatient Departments) and ASCs (Ambulatory Surgery Centers) are distinct healthcare facilities that differ in their scope of services and organizational structures<sup>8</sup>. Both ASCs and HOPDs have specific advantages for different types of procedures and cost-saving mechanisms. Refer to the Table below for the specific differences between the two settings of care.

**Differences between HOPD and an ASC**

Differences	HOPD	ASC
<b>Location and System</b>	Part of a hospital system	Often freestanding and can be an independent facility (can be affiliated with hospitals or physician-owned)
<b>Services Provided</b>	Wide range of services including diagnostic tests, surgeries, treatments, and consultations. Equipped to handle more complex and advanced procedures, often involving specialized equipment and technologies.	Focused on providing surgical services, such as endoscopies, cataract surgeries, plastic surgeries, spine, orthopedic surgery, and more recently cardiac procedures. The complexity of cases approved for this setting continues to increase.
<b>Cost to Consumer and Pricing System</b>	The cost is significantly higher. Pricing is based on the hospital's market which is a fixed weight of index costs.	Cost is significantly lower, up to ~53% lower. Pricing is based on the consumer price index, in which the cost of all goods is rising, but at a slower rate than the cost of medical care alone.

### The Total Joint Shift:

While some orthopedic surgeons were performing same-day total joint replacement surgeries on select patients in outpatient surgical settings prior to 2020, Medicare did not begin reimbursing for these procedures until January 2020. CMS removed total knee replacement from the "inpatient only" list in 2018<sup>1</sup>, spurring visionary orthopedic surgeons to begin working with hospital leadership and privately owned Ambulatory Surgery Centers (ASCs) to develop a total joint outpatient/same day surgery strategy. This provided the opportunity to change the care delivery model for select total joint replacement patients who did not require a hospital stay.

2020 was a pivotal year for total joint patients needing surgery. The impact on elective inpatient total joint cases was significant that year during the COVID-19 pandemic. According to Premier Healthcare and National Inpatient Sample Databases, when reviewing the number of inpatient elective total hip and total knee patients between 2017-2019 and 2020, approximately 526,000 to 538,000 elective inpatient total joint cases were performed, representing a 46.5% to 47.7% decrease in 2020 inpatient total joint volume, compared with the 3 previous years<sup>3</sup>. While much of this volume reduction can be attributed to hospital surgical services suspending elective cases throughout 2020, there was also a migration of total joint patients to ASCs in greater numbers. This shift in volume now included total hip replacement patients as CMS removed total hip replacements from the "inpatient only" list in January 2020<sup>1</sup>.

As noted by Anthony A. Mascioli, MD, et al, in their retrospective study specific to total knee replacements in ASCs, Orthopedic Surgeons, along with their Anesthesia partners developed patient selection criteria and standardized surgical and multimodal analgesia protocols for same-day total knee patients. This approach allowed patients to successfully go home within 8 hours after their procedure once they could safely ambulate with appropriate pain control post-procedure<sup>4</sup>.

This same standardized methodology was applied to same-day total hip replacement patients. As noted in the total joint data reported by the Journal of Arthroplasty, the average hospital length of stay (LOS) for total joint patients decreased from 1.6 days in January 2020 to 0.9 days by December 2021. In addition, same-day discharges increased from 6.2% of cases in 2019 to 30.5% in 2021<sup>2</sup>. This supports the theory that total joint replacement

volume has significantly shifted from inpatient to outpatient and will continue to migrate to HOPD and ASCs over the next decade.

### Volume of Total Joint Replacements in an ASC

Total Joint Replacement procedures performed in an ASC are growing exponentially. By the mid-2020s, ASCs will perform around 68% of all Total Joint Replacements, as more than 550 ASCs offer the procedure.<sup>9</sup> The American Academy of Orthopedic Surgeons (AAOS) published the 2022 American Joint Replacement Registry (AJRR) on hip and knee arthroplasty trends within hospitals, ASCs, and private practice groups. The Registry reported a 14% growth with approximately 2.8 million Total Joint Replacements since 2012. From 2012 to 2021, ASC cases have grown by 57%. The two figures below show the increase in ASC Total Joint Replacements from July of 2019 to December 2021 and annual growth from 2012 to 2021.<sup>10</sup>

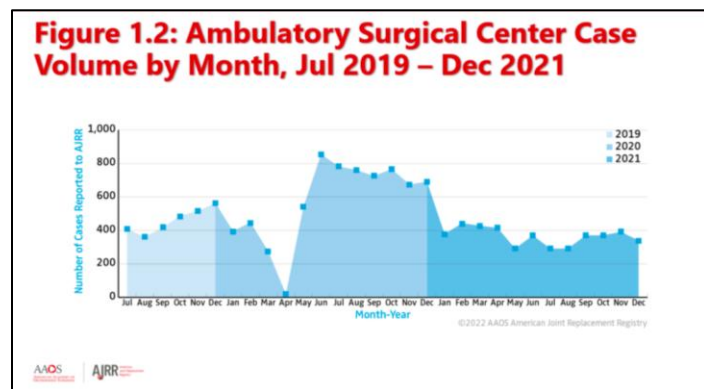


Figure 1.2: Ambulatory Surgical Center Case Volume by Month, Jul 2019 – Dec 2021.<sup>10</sup>

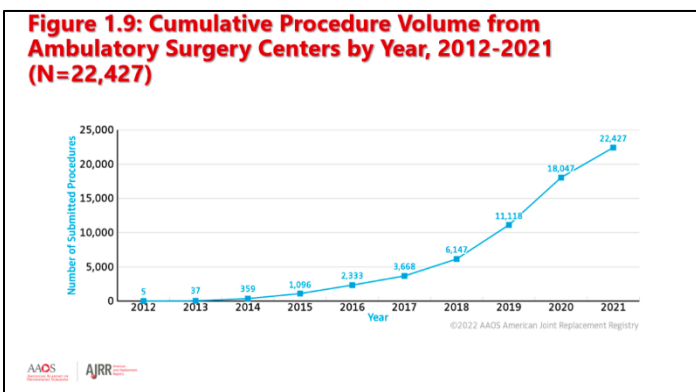


Figure 1.9: Cumulative Procedure Volume from Ambulatory Surgery Centers by Year from 2012-2021.<sup>10</sup>

### Quality Outcomes for Outpatient Total Joint Replacements

Anthony A. Mascioli, MD, et al, article in the Journal of the American Academy of Orthopedic Surgeons, specific to total knee replacements performed in two ASCs, did a five-year retrospective study on 439 conservative total knee procedures performed on 386 patients. Their data showed only a 1.4% complication rate for their ASC patients. The

90-day hospital admission rate was 0.7%, which is low. 90-day infection rates were 1.6% (range is 0.5% to 3.0%)<sup>4</sup> In a peer review publication from the Hospital of Specialty Surgery, Dr. Ast and colleagues, including Alvin C. Ong, MD at the Rothman Orthopedic Institute, conducted a study to compare patient outcomes for inpatient hip and knee replacement surgeries to those performed in an ambulatory surgery center. This study found no increased risk of 90-day complication or readmission rates for patients who were discharged the same day compared to patients who had the same procedures with a hospital stay<sup>5</sup>.

CMS has a quality reporting requirement for participating Ambulatory Surgical Centers. It is the Ambulatory Surgery Center Quality Reporting (ASCQR) Program. This requires facilities billing Medicare and Medicaid to report quality of care data on standardized measures. As with CMS hospital-based metrics, ASCs must maintain expected quality standards or face the potential of reduced annual payment rates for underperforming facilities<sup>6</sup>. There is a specific measure, “ASC-17 Hospital Visits After Orthopedic Ambulatory Surgical Center Procedures.” This measure reports unplanned emergency visits, hospital admissions, or a patient observation stay within 7 days of an orthopedic procedure at an ASC<sup>7</sup>.

### Considerations to Optimize Outpatient Total Joint Outcomes

<b>Patient Co-Morbidities<sup>11</sup></b>	<ul style="list-style-type: none"> <li>Surgeon or anesthesia team will determine if the patient is too high a risk. A few common barriers are: <ul style="list-style-type: none"> <li>A high body mass index of &lt;40kg/m<sup>2</sup>.</li> <li>Untreated obstructive sleep apnea.</li> </ul> </li> </ul>
<b>Patient Education</b>	<ul style="list-style-type: none"> <li>Does the patient understand the post-op instructions given by the physician practice.</li> <li>Did the patient attend a pre-rehabilitation visit with Physical Therapy? Early mobility, swelling, and pain management are addressed in this pre-surgical session.</li> </ul>
<b>Medical Equipment</b>	<ul style="list-style-type: none"> <li>What adaptive equipment can be placed in the home prior to surgery (commode, etc.) for use or practice?</li> <li>What medical equipment will be needed the day of surgery (walker, cane)?</li> <li>Equipment is usually arranged by the physician practice.</li> </ul>
<b>Home Support System</b>	<ul style="list-style-type: none"> <li>Is there someone available in the home to assist with post-operative “dos and don’ts” along with prescribed physical therapy exercises?</li> <li>Having a support system at home can reduce the likelihood of complications, an ER visit, or</li> </ul>

	hospitalization in the first 7-10 days postoperatively.
<b>Post-Acute Care</b>	<ul style="list-style-type: none"> <li>Is the patient participating in home care or outpatient physical therapy?</li> <li>Compliance with joint range of motion, edema management, and mobility are all key to a successful functional outcome.</li> </ul>

9. [10 things to know about total joint replacements and ASCs \(beckersasc.com\)](https://beckersasc.com)
10. [Newsroom November 2022: American Joint Replacement Registry Releases 2022 Annual Report \(aaos.org\)](https://www.aaos.org)
11. Total Joint Arthroplasty in Ambulatory Surgery Center: Analysis of Disqualifying Conditions and the Frequency at Which They Occur. Kingery, Matthew T. et al. The Journal of Arthroplasty Volume 33, Issue 1, 6-9.

## Conclusion

The future remains bright for HOPD and ASCs performing same-day total joint replacements over the next decade. Appropriate patient selection, surgical standardization, tailored multimodal pain management, and streamlined processes both in the physician practice and with the care delivery team have contributed to ensuring low infection rates and low hospital admissions compared to national benchmarks. Patient satisfaction and functional outcomes remain high for patients that chose to have their total joint replacement in an outpatient setting.

While patient selection criteria is imperative for the orthopedic surgeon, the cornerstones of success for outpatient total joint patients are having a strong support system at home to reinforce mobility, post-op orders, and ensuring post-acute therapy is initiated early. To ensure your organization is making the most strategic decisions about where total joint procedures should be performed, partner with [Corazon](https://www.corazoninc.com)—experts in evaluating and optimizing surgical site selection for maximum efficiency, quality, and patient satisfaction.



*Brad Kirkes is a Vice President at Corazon, a national leader in program development for the Heart, Vascular, Neuroscience, Spine, Orthopedic, and Surgical service lines, offering services in Consulting, Recruitment, Interim Management, and Accreditation. To learn more, visit [www.corazoninc.com](https://www.corazoninc.com) or call 412-364-8200. To reach the author, email [bradley.kirkes@corazoninc.com](mailto:bradley.kirkes@corazoninc.com).*

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