COVID-19: Impact on ASCs

AUTHORS: APRIL CHAN-TSUI, MEENU SANKAR, RAGHAV TANGRI, SWARNADIP DUTTA, AND ZAID AL-NASSIR
CONTRIBUTORS: DIWAKAR BAHUGUNA, LEXIE CODE, MARK O’REILLY, AND USMAN SYED
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Introduction

The COVID-19 pandemic has thrust the medical device industry into an unprecedented situation, forcing health care providers and regulatory bodies to quickly adapt to facilitate the provision of care to COVID-19 patients and other urgent cases. In doing so, the pandemic has in many ways accelerated an ongoing site-of-service trend—especially in the orthopedics, cardiology, pain management, endoscopy, and ENT fields—of shifting procedure volumes toward non-hospital settings, particularly ambulatory surgery centers (ASCs).

Below, we outline the causes and drivers of this shift prior to the pandemic, highlight the COVID-related challenges that have accelerated this trend, and shed light on what impact the pandemic will ultimately have on the various settings at which health care is provided, in both the short- and long-term.

Background

In the years prior to the COVID-19 pandemic, a clear trend of procedures shifting away from hospital settings had been firmly established, particularly in the US; for example, large-joint reconstructive implant procedures performed outside of hospitals grew at nearly 50% between 2017 and 2019 (see Figure 1). The reasoning behind this trend involves a number of different factors, discussed below, but is primarily driven by considerations surrounding costs, reimbursement policies, and improved outcomes, as well as advances in minimally invasive treatments and remote patient monitoring.

Figure 1: Site of Service Procedure Growth, by Procedure Type, 2017-2019

<table>
<thead>
<tr>
<th>Procedure Type</th>
<th>Hospital</th>
<th>Non-hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endovascular Interventional Procedures</td>
<td>8.2%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Vaginal Sling and PFR Procedures</td>
<td>0.1%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Large-Joint Reconstructive Implant Procedures</td>
<td>8.4%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Spine Procedures</td>
<td>6.8%</td>
<td>33.1%</td>
</tr>
</tbody>
</table>

Source: DRG (a Part of Clarivate)’s 2018 US Peripheral Vascular, Gynecological, Large-Joint Reconstructive Implant, and Spinal Implant Market Insights reports
Flexibility, Profitability, Lower Costs, and Patient Satisfaction

An increasing number of procedures—particularly on healthier patients—are being completed in hospital outpatient departments and ASCs primarily because of lower costs; many procedures, such as knee arthroscopies, lumbar fusions, and colonoscopies, reportedly cost nearly 50% less in ASCs than what they would in a hospital setting, further fueling rising patient demand for ASC procedures. Pricing data for large-joint reconstructive implants from our PriceTrack product, shown below, further illustrate the cost advantages at ASCs.

<table>
<thead>
<tr>
<th>Knee Implants</th>
<th>Avg ASC Discount</th>
<th>Hip Implants</th>
<th>Avg ASC Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedure Type</td>
<td></td>
<td>Procedure Type</td>
<td></td>
</tr>
<tr>
<td>Partial</td>
<td>-$118.87</td>
<td>Partial</td>
<td>-$237.33</td>
</tr>
<tr>
<td>Primary</td>
<td>-$466.37</td>
<td>Primary</td>
<td>-$182.80</td>
</tr>
</tbody>
</table>

Source: DRG (a Part of Clarivate)’s PriceTrack

In addition, ASCs allow more flexible scheduling, greater surgeon profitability, and a higher degree of autonomy for the surgeon in evaluating surgical options, given that decisions regarding surgical options and device usage in ASCs are far less centralized than in hospital settings, where hospital administrators play a more substantial role in such decisions. In addition, industry sources indicate that ASCs continue to generate Net Promoter Scores exceeding 90, indicating a very high rate of patient satisfaction with the ASC experience.

Value-Based Care and Favorable Insurance

Rising procedures in outpatient settings are also being driven by patient and payer demands to reduce costs, eliminate the risk of hospital-acquired infections associated with longer patient stays, and ultimately improve quality of care. For example, according to Healora CEO Tom Farmer, ASC patients are reported to have a much lower rate of infection than those in hospitals; in addition, research published in a variety of medical journals—including the Journal of Health Economics, the American Journal of Surgery, Health Services Insights, Anesthesia & Analgesia, The Journal of Arthroplasty, and the Advancing Surgical Care Association—has shown that ASC procedures, despite being less costly than those in hospital settings, are on average more efficient and are associated with lower readmission rates and lower rates of malignant hyperthermia following anesthesia than those performed in hospital settings. Moreover, some of this research has shown that ASCs are associated with comparable or superior readmission rates relative to other settings, such as hospital outpatient departments (HOPDs) and physician offices.

In the US, payment models that place greater accountability on care providers support a shift toward procedures performed in the outpatient setting. This is because hospitals are at risk of being penalized for missing quality and cost thresholds under the bundled payment systems; therefore, performing procedures in the outpatient setting,
where costs are lower, helps minimize financial risk if adverse events or readmissions were to occur. Patient demand for faster recovery times and high-quality care in lower cost-settings—along with advances in technology and surgical techniques that have helped in increasing the safety and cost-effectiveness of various procedures—will also promote the trend toward outpatient procedures.

This is further supported by the continued expansion of favorable insurance for procedures performed in ASCs, as shown in the timeline on the previous page.

More recently, accelerated by the impact of the COVID-19 pandemic, the CMS has proposed further significant changes to reimbursement structures, including adding THAs to the ASC-payable list in 2021 and even eliminating the inpatient-only list by 2023. This is discussed in more detail below, under How COVID-19 is Impacting ASCs: Immediate and Long-Term Impacts.

Innovations Supporting Shift to ASCs

In addition to the increasingly favorable regulatory and insurance environment for ASCs, companies are also supporting this shift by developing products and resources designed specifically for those settings, whether by making procedures less challenging and shorter through device innovations, or by offering resources and services to facilitate educating and preparing patients for surgery, streamlining process workflows, optimizing patient length of stay, and ultimately reducing costs and improving outcomes.

For example, Zimmer Biomet’s Signature Solutions Outpatient Program—which includes products and services such as patient education and process improvement tools, surgical planning solutions, coding and reimbursement guidelines, and the company’s bundled hip, knee, and bone cement products and instruments—is designed to aid surgeons in performing knee and hip replacements in outpatient settings. Likewise, Smith & Nephew’s ASC Program, DePuy Synthes’ ADVANTAGE Outpatient Solutions, and Stryker’s Performance Solutions all offer similar one-stop shops for ASC tools, services, and bundled implants to enable outpatient facilities to perform procedures more efficiently.

In addition, Stryker’s Ascential program, which targets low-volume ASCs that perform less complex procedures by introducing simpler implants in sterile packages and offering a streamlined distribution process, has resulted in a decrease in Stryker’s non-manufacturing costs and an increase in profit margins even though the company is selling implants at a lower price. In 2020, Stryker launched an ASC-focused business that provides tailored strategic and financial solutions for ASCs, such as by ensuring they have all the products that ASCs may require, enabling opportunities for bulk purchase discounts and substantially streamlining product procurement processes.

The growing availability of robotic systems is also supporting the procedural shift to ASCs; robotics systems are being adopted at ASCs because they enable less invasive and shorter procedures, allowing ASCs to bolster their volumes. In addition, unlike older systems where preoperative CT scans were needed to aid in implant positioning, systems such as Smith & Nephew’s CORI, Zimmer Biomet’s ROSA, and Stryker’s MAKO are compact and incorporate technology that performs the same functions previously provided by CT scans, eliminating the need for preoperative imaging.

Smith & Nephew’s revenues, for example, have been boosted in recent years by the rapid adoption of its NAVIO robotic systems for knee surgeries, which is particularly suitable for outpatient and ASC settings given its relatively low cost and high portability as well as relatively strong patient safety associated with the device. Additionally, the company has entered into a strategic partnership with the national medical billing services to provide revenue cycle management services to ASCs in the US, illustrating how companies are increasingly targeting these settings. Zimmer Biomet’s ROSA and Stryker’s MAKO have also both seen strong uptake during the COVID-19 pandemic, and the former company has indicated that it anticipates its systems will be used in more than 3,000 cases per quarter by the end of 2020, effectively doubling the volumes performed in Q4 2019. In a recent earnings call, Zimmer Biomet’s CEO was highly optimistic regarding the outlook for robotics in ASCs:

“It’s not surprising to me that we’re seeing some additional pace moving to the ASC from a procedure volume standpoint...I think it bodes well for us, quite frankly. And I’m very happy to hear that our competitor also saw a surge in robotic placements. It tells you that the demand for robotics is real and the penetration of robotics is still very low.”

BRYAN HANSON
CEO, Zimmer Biomet
Alternative Treatments

The emergence of alternative treatments that can be performed in ASCs also plays a factor in the ongoing shift toward ASCs. For example, Relievant Medsystems gained FDA approval for its INTRACEPT nerve ablation system in 2017; this system uses RF energy to ablate nerves that transmit pain signals, thereby alleviating back pain, effectively delaying or negating the need for spinal surgery.

Furthermore, the CMS recently issued HCPCS codes for INTRACEPT procedures, which will allow hospital outpatient departments and ASCs to receive reimbursement for these procedures; as a result, more patients will have access to these alternative treatments and many are likely to choose to seek these treatments at ASCs in place of spinal surgery, most of which continue to be performed in inpatient hospital settings.
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Procedure Growth Outlook, by Site of Service

**Large-Joint Reconstructive Implant Procedures, by Site of Service, 2019 vs 2029**

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2029</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>94.75%</td>
<td>70.02%</td>
</tr>
<tr>
<td>ASC</td>
<td>5.25%</td>
<td>29.98%</td>
</tr>
</tbody>
</table>

ASC Procedure 10-Year CAGR ~23%

Source: DRG (a Part of Clarivate)'s US Large-Joint Reconstructive Implant Market Insights Report

**Spine Procedures, by Site of Service, 2019 vs 2029**

<table>
<thead>
<tr>
<th></th>
<th>2019</th>
<th>2029</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td>97.47%</td>
<td>70.44%</td>
</tr>
<tr>
<td>Non-hospital</td>
<td>2.53%</td>
<td>29.57%</td>
</tr>
</tbody>
</table>

Non-hospital Procedure 10-Year CAGR ~32%

Source: DRG (a Part of Clarivate)'s US Spinal Implants Market Insights Report
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Endovascular Interventional Procedures, by Site of Service, 2019 vs 2029

- **2019**: Non-hospital Procedure 10-Year CAGR ~4%
  - Non-hospital: 23.21%
  - Hospital: 76.79%
- **2029**: Non-hospital Procedure 10-Year CAGR ~4%
  - Non-hospital: 26.97%
  - Hospital: 73.03%

Source: DRG (a Part of Clarivate)'s US Peripheral Vascular Device Market Insights Report

Vaginal Sling and PFR Procedures, by Site of Service, 2019 vs 2029

- **2019**: Non-hospital Procedure 10-Year CAGR ~4%
  - Non-hospital: 5.00%
  - Hospital: 95.03%
- **2029**: Non-hospital Procedure 10-Year CAGR ~4%
  - Non-hospital: 6.74%
  - Hospital: 93.26%

Source: DRG (a Part of Clarivate)'s US Gynecological Device Market Insights Report
Immediate and Long-Term Impacts

Given that the pandemic has led to severe pressures on health care resources at hospitals, ASCs have been called to support the response in some cases by making their resources, such as protective, surgical, and respiratory equipment, available to other facilities; however, ASCs have also been impacted by lockdowns and infection-mitigation measures, which have forced many to temporarily close. In addition, delays of elective and nonurgent procedures (discussed in our COVID-19: Impact on Elective and Nonessential Procedures) will have a substantial impact on the distribution of procedures across inpatient and outpatient settings in the short-term. In the long-term, the shift toward ASCs and outpatient facilities will be accelerated by the pandemic.

In the large-joint reconstructive implant market, for example, procedure growth in 2020 declined substantially in hospital settings, whereas in ASCs procedure volumes expanded by nearly 70% (see Figure 2); though hospital-based procedures are projected to spike in 2021, due largely to a backlog of deferred procedures, that growth is anticipated to subside in 2022, after which procedure growth in ASCs substantially outpaces that of hospitals.

Figure 2: Large-Joint Reconstructive Implant Procedure Growth, 2020–2029

![Figure 2: Large-Joint Reconstructive Implant Procedure Growth, 2020–2029](image_url)

Source: DRG (a Part of Clarivate)’s US Large-Joint Reconstructive Implant Market Insights Report
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Short-Term

Supporting the Pandemic Response

In the immediate aftermath of the pandemic, many of the nearly 5,500 ASCs in the US were required to declare and make available their inventory of specific products that may be in short supply at hospitals managing the inflow of COVID-19 patients.

Additionally, the CMS Hospitals without Walls initiative has introduced temporary exemptions that allow procedures that have been largely performed in hospitals—primarily those requiring essential non-COVID care, such as trauma patients—to be performed at ASCs. Hospitals can now work with other sites of service to provide care that was previously only reimbursed when performed in inpatient settings. The initiative also allows ASCs to temporarily enroll as hospitals and provide hospital services (Centers for Medicare & Medicaid Services, 2020). These exemptions will be important for increasing the capacity of the health care system and addressing the backlog of elective procedures, and reducing the risk of exposure for patients and healthcare workers.

Taking on More Procedures

Because ASCs are smaller and handle smaller volumes at a faster pace than hospitals, they are able to adapt to the requirements of operating during the pandemic—such as creating new safety processes and procedure-prioritization models and managing procedure backlogs—more quickly. This will allow ASCs to take on some of the procedures that would typically be performed in hospital outpatient departments, substantially bolstering their revenues in 2020 and 2021, as reflected in figure 2. This was echoed in a recent industry conference, where an ASC CEO noted that when deferred procedures started to resume, most were higher-acuity procedures, which are associated with higher profit margins, as opposed to lower-margin procedures such as colonoscopies and ophthalmology procedures, which can be deferred for longer periods of time. Demand for ASCs will be further supported by continued patient concerns regarding possible infection, which may encourage more patients to seek out services at ASCs rather than hospitals; the aforementioned CEO also noted that these legitimate concerns surrounding infection have driven some patients to ASCs for the very first time and have also expanded physician’s criteria for which cases are eligible for treatment at ASCs (which is typically at the physician’s discretion), effectively expanding the ASC patient population.

Long-Term

Accelerating Shift Toward ASCs

Because the pandemic will highlight the advantages and benefits of ASCs and raise patient awareness surrounding these settings, it is expected that patients will seek out and demand treatment at ASCs whenever possible. As previously noted, and in line with trends in previous years, payers will continue to incentivize the shift to ASCs to reduce costs.

In August 2020, for example, the CMS proposed the elimination of the inpatient-only list—which shows what procedures cannot be performed in ASCs—by 2024, beginning by removing about 300 musculoskeletal-related services starting in 2021. In addition, the CMS plans to bolster ASC reimbursement by nearly 2.6% in 2021, and expand the ASC-payable list to include 11 new procedures, including THAs and transcervical uterine fibroid ablations.

In line with similar moves in the past, these changes will support ASC procedure volume growth substantially; in the long-term, the proposed elimination of the inpatient-only list and the continued expansion of reimbursement and procedure eligibility at ASCs indicates that the CMS will likely ultimately move to eliminate the ASC-payable list as well, further expanding reimbursement for ASC procedures.
Increased Industry Focus

This will push medical device manufacturers to continue expanding their ASC-dedicated offerings and increasingly integrate ASCs into their long-term growth planning, as reflected by various industry experts in the Orthopedics space:

“We’ve created an entire offense around the ASC that I’m really excited about. If you asked me three or four, five years ago, I was kind of concerned about ASCs, not sure how it would be for Stryker’s business. Now I’m actually believing that it’s going to be a very good thing for us because we have the booms, the lights, the operating tables, the Makos, all the capital power tools, Neptune waste management, everything that they need for their surgery, we can help them, and we have the disposables and the implants.”

KEVIN LOBO
CEO and Chairman of the Board, Stryker

“I would say that we will have a focus as we look for diversification, and being able to get better penetration in the ASC to be able to continue to focus in those subcategories and set that we know are going to be attractive, and to be able to think about acquisitions now, to get us away from our dependence on elective procedures.”

BRYAN HANSON
President and CEO, Zimmer Biomet

Rising Healthcare System Interest in ASC Acquisitions and Investments

In addition, given the increased availability of minimally invasive treatments that can be performed in non-hospital settings, as well as generally heightened patient convenience and improved cost effectiveness in outpatient settings, health systems are increasingly featuring outpatient facilities, such as community-based physician practices and ASCs, into their acquisition and investment planning. As a result, a number of providers, such as HCA Healthcare, the largest health system in the US, have been working to bolster their focus on ASC and physician practice acquisitions. Given that the COVID-19 pandemic further established the efficiency and adaptability of ASCs, it is expected that this trend will accelerate as health care systems look to continue to reduce costs and improve patient outcomes.

Growing Significance of Value Products

As ASCs increasingly occupy a larger footprint in health care provision, the demand for lower-cost, high-quality products will also rise. In a number of markets, such as many orthopedics spaces, value products are already making a strong impact, capturing share from premium devices and forcing competitors to lower their prices or offer similarly affordable versions of their products. Although physicians—rather than administrators of large health care systems who are known to be highly cost-focused—fully own more than half of ASCs in the US and also have a stake in nearly all other ASCs (according to industry experts), the trend of seeking out better prices is nonetheless also seen among physicians at ASCs, which will further support demand for value products.
Potential Challenges

- **Costs and Efficiency:** Given that demand for ASCs will rise and available procedures will be expanded, the expenses of ASCs will also rise; in addition to the added short-term costs of following strict sanitization and safety protocols during the pandemic, ASCs will also have to invest in PPE to ensure the safety of their staff and patients for the foreseeable future. Due to such added costs and internal process changes, the efficiency of these settings may be negatively impacted to some degree, possibly leading to longer wait times and some level of degradation in the advantages that have been drawing patients away from hospital settings for years.

- **Coping with ASC-Driven Trends:** Medical device manufacturers will increasingly have to take ASCs into account as these sites continue to host an expanding volume of procedures; in addition to pressures surrounding developing ASC-friendly products and offerings and being able to represent “one-stop shops” that provide all the various products ASCs need—which enables product bundling and bulk purchasing discount opportunities—manufacturers will also have to contend with downward pricing pressures as the significance of value products increases.

- **Capacity:** Although ASCs will see rapid growth going forward, the fact that these settings are relatively small and handle a still-limited amount of procedures will restrict growth in these settings to an extent, as recently noted by a Stryker Executive:

  “There are about 300 ASCs in the U.S. doing hip and knee procedures...[and] about 5,000 [hospitals]. So...you’re going to see the shift continue, but I wouldn’t expect some massive climate change in the trend because the capacity just isn’t there.”

  **KATHERINE OWEN**  
  VP of Strategy and Investor Relations, Stryker

- **Continued Patient Hesitance:** It is expected that some patients may continue to be hesitant to seek health care services, especially of the elective variety, due to lingering concerns regarding infection. This will not only slow down overall market recovery, but may also hinder growth in ASC procedures as well, at least until such a time that a vaccine is available or local transmission is strictly contained.

- **Overcoming Established Practices:** It is important to note that, while some procedures are already more established in ASCs—sports medicine procedures, for example, are not currently seeing much change because the shift to ASCs has been taking place for some time and most of these procedures are already performed in ASCs—the expanding list of other procedures, such as cardiology procedures, that are increasingly being performed in ASCs may be accompanied by their own unique challenges that all industry stakeholders will have to contend with. For example, reimbursement for cardiology procedures in ASCs is not yet sufficiently favorable to shift a significant number of procedures away from hospitals; in addition, challenges surrounding staffing ASCs with specialized and certified professionals may also hinder the ASC procedural shift in some segments.
Final Considerations

The challenges associated with the COVID-19 pandemic have further solidified ASCs as a highly efficient and adaptable site of health care provision; beyond accelerating ongoing trends, the pandemic has also demonstrated the resilience of ASCs in the face of substantial uncertainty and change, showing beyond any reasonable doubt that the shift toward ASCs is here to stay.

The COVID-19 pandemic will continue to have a substantial impact on health care providers for some time. The situation is also highly fluid and can change abruptly; all industry players are therefore advised to remain vigilant and be prepared for the implications of renewed localized restrictions. DRG's Medtech Insights (Part of Clarivate) will continue to monitor the situation to provide our industry partners with a clear, real-time understanding of the impact on their business, customers, and patients.

In addition to this paper, we’ve also assembled resources on topics such as telemedicine, access, clinical innovation and more to help companies plan for the post-pandemic marketplace.

Visit our COVID-19 resource hub: decisionresourcesgroup.com/covid19
Ask us your questions: Questions@TeamDRG.com

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