



Driving Efficiency and Throughput in the Gastrointestinal Endoscopy Suite

The Impact of Contract Partners on Positioning Hospitals for Success

WHITEPAPER



AMERICAN HOSPITALS AND HEALTHCARE SYSTEMS ARE UNDER FINANCIAL PRESSURE DUE TO THE RAPIDLY CHANGING LANDSCAPE OF THE INDUSTRY.

Increasing head counts, clinical innovation, and population health initiatives are contributing to shrinking operating margins. Further exacerbating this trend is a shift from volume- to value-based care, resulting in heightened pressure to deliver cost-effective care. As hospitals and healthcare systems assume increasing financial responsibility for the total cost of care, they must find ways to effectively mitigate this risk.

One response to this pressure has been market consolidation in the form of hospital mergers and acquisitions. Analysis by the American Hospital Association (AHA) has shown hospital mergers and acquisitions have been successful in reducing hospital operating expenses by leveraging volume and scale to distribute the financial risk.¹ But these actions alone will not be enough to combat projections of a negative operating margin by 2025 for a majority of hospitals,² a forecast that predates COVID-19. Pandemic-related trends already show declining case volumes and rising labor expenses, with reported median operating margins falling to -8% in March 2020 for hospitals nationwide, down from 4% in February 2020.³ As a result, the lion's share of hospital leaders must continue in search of cost-reduction measures and new revenue streams—again, particularly on the other side of COVID-19.

This whitepaper explores the key advantages of contract partnerships by first identifying industry trends and the challenges hospital leaders and managers face, and then by analyzing how third-party service providers can help to drive down expenditures and increase procedural volume, thus boosting hospital revenue. Such analysis and operational strategies are of value to hospitals at all times, but will be of particular benefit during the “surge” in case volume from restoring elective surgeries post COVID-19. The benefits of purposeful insourcing reflect the experience at Ochsner LSU Health Shreveport, as shared in this whitepaper, where the endoscopy department benefited from a targeted, continuous contract service solution amid a large health system merger.

Finding Opportunity in the Current Healthcare Environment

Operating room and procedural-based expenses continue to make up a significant portion of total hospital operating expenses. Based on a 2017 National Health Statistics Report, in 2010, 48.3 million surgical and non-surgical procedures were performed, of which 25.7 million (53%) were performed in hospitals. Surgical interventions on the digestive system accounted for 10 million (21%), of which 7.3 million (73%) were endoscopy of the large intestine, small intestine, and polypectomy.⁴

An opportunity exists to drive down procedural-based expenses by leveraging outpatient endoscopy suites. Third-party service providers can serve as an effective partner to improve performance in these endoscopy suites by providing clinical staffing support and supply chain management in this setting to facilitate significant cost reduction, as well as support increased case volume, enhance case turnover and throughput, and ultimately increase procedure volumes. Notably, the application of third-party service providers to hospital-based and freestanding outpatient endoscopy suites represents a strategic and adaptive framework to improve both patient care and the bottom line, which will be of amplified importance as hospitals and outpatient centers begin to recover from COVID-19 and begin to practice in a new normal. The shift to ambulatory procedure areas may also increase as hospitals continue to grapple with COVID-19-positive patients and the general patient population will not want to be admitted or visit hospital centers.

Three Key Trends for Hospital Leaders to Watch

Trend #1: Increasing regulatory requirements lead to increased labor hours not directly related to patient care.

Health systems, hospitals, and post-acute care providers spend \$39 billion annually to comply with no less than 629 discrete federal regulatory requirements. An average-size hospital dedicates 59 full-time equivalents

(FTEs) to regulatory compliance, of which more than 25% are physicians and nurses.⁵ The shift toward value-based care is a contributing factor to an already heavily regulated industry. In an era where hospitals are seeing shrinking operating margins, the potential financial upside associated with value-based care programs can have a substantial impact on the bottom line.

The Centers for Medicare & Medicaid Services (CMS) Hospital Value-Based Purchasing (VBP) Program financially incentivizes hospitals to meet certain performance criteria centered around four key domains: safety, clinical care, efficiency and cost reduction, and care coordination. The VBP program mandates that 2% of payments for all participating hospitals be withheld then redistributed based on their performance. CMS announced that for FY 2020, the average net VBP payment adjustment is 0.16%; however, the highest-performing hospital will receive a net increase in payments of 2.93%, while the lowest-performing hospital will receive a -1.72% net decrease in payments. The proportion of total hospital costs for patient care accounted for by Medicare and Medicaid was 60% in 2017.⁶ Considering many hospitals are operating on single-digit margins and the significant proportion of costs linked to these VBP programs, failure to perform or comply can dramatically affect the financial stability and viability of the hospital. In addition, poor outcomes related to lapses in infection control or other regulatory activity can have a devastating effect on the bottom line, especially for smaller centers who may not have the staff or expertise to keep up with the ever-changing rules and regulations and demands for more advanced technology. As such, for the time being, hospital managers and leaders have no choice but to meet these regulatory demands.

Traditionally, complying with regulatory demands has involved hospitals hiring more employees or increasing the demands and workload of current employees. Labor continues to be hospitals' single largest expense, and the healthcare industry became the largest source of jobs in the U.S. in 2017 with little evidence to suggest a slowing of growth.⁷ Most of this growth has been due to increasing numbers of administrative and clerical workers, as opposed to clinical staff hired to address

the needs related to direct care.⁸ However, the financial pressures hospital leaders are facing make further increasing labor expenses unappealing. Moreover, hiring additional non-clinical team members will likely not be looked upon favorably post COVID-19 when hospitals' cash positions will be as tight as ever. The burnout and additional stresses caused by COVID-19 will most likely lead to earlier retirements, and that also means losing experienced staff.

As a result, increasing administrative responsibility is shifted toward current clinical employees. In the AHA analysis of the regulatory burden, they found that the most burdensome regulatory activity was condition of participation (CoP), the administrative work required to qualify for the Medicare program. Roughly 45% of the CoP activities were placed on clinical staff, including physicians, nurses, and allied health professionals.⁵ It is no surprise that administrative burdens associated with documentation and the electronic medical record have been cited as a contributing factor to provider burnout. The Agency for Healthcare Research and Quality has dedicated significant resources to combat and prevent provider burnout. Nonetheless, burnout and employee dissatisfaction lead employees to quit, resulting in staff shortages and increased responsibilities placed on fewer employees.

The known effects of provider shortages are delays in patient care, increased rates of medical error, and decreased patient satisfaction. Hospital managers are left facing a catch-22: how to balance the administrative activities that are necessary to comply with regulatory requirements and directly related to their financial standing with the clinical and operational activities necessary to fulfill their clinical mission.

Trend #2: Lower-cost outpatient services combined with quality- and value-based reimbursement incentives leads to increased volume demands on capacity-constrained endoscopy suites.

Patient preference along with clinical and technological advances have been driving a shift to outpatient procedures and services over the past two decades. However, managed care organizations and value-based reimbursement models also generate

significant financial incentives that favor the outpatient setting. CMS reimbursement for top gastrointestinal (GI) procedures, both in freestanding ambulatory surgical centers and outpatient hospital departments, continues to increase, while hospitals' outpatient services revenue almost doubled between 1994 and 2016.⁹

Value-based reimbursement incentives also focus on preventive and population health screening services with efficiency-based performance metrics. Together, these forces generate significant demand for outpatient services to be performed in a timely manner. For many hospitals, this occurs without an increase in structural capacity or increased labor, and thus operational efficiency must be optimized in order to meet target volume metrics. Again, these endoscopy suite volumes will likely balloon even further in volume due to the surge in rescheduled elective procedures post COVID-19.

Trend #3: Hospital mergers and acquisitions result in complex integration of systems and staffing models. Large health systems continue to dominate the U.S. hospital market with the percentage of hospitals that are a part of a health system increasing to 66% in 2017.¹⁰ A database analysis of hospital acquisitions from 2009 to 2017 conducted by the AHA found that acquisition was associated with a statistically significant 2.3% reduction in operating expenses per admission.⁵ Findings highlighted that volume and scale are key benefits to how mergers and acquisitions help mitigate the increasing financial risk hospitals are taking on in the transition to value-based care.

The same study⁵ conducted qualitative interviews with hospital leaders. Although the benefits of scale include consolidation, supply chain optimization, and elimination of redundant administrative operations, these activities resulted in only 1.5% to 3.5% savings for hospitals. Leaders noted in the interviews that the true benefits of scale were realized through investment in healthcare IT infrastructure that aids consolidation and operational streamlining. A key benefit to scale included mitigating the financial risk by spreading out fixed overhead expenses across increased volume.

Clinical quality has also seen improvement due to data-driven clinical standardization. However, in the race for value, hospital revenues per admission have seen a decline of 3.5% relative to non-merging hospitals, which is statistically significant.¹ Trends in endoscopy also suggest a declining volume in colonoscopy, upper endoscopy, and flexible sigmoidoscopy.¹¹

In addition to the benefits of scale, the benefits of vertical affiliation and acquisition were highlighted. Value-based care incentivizes cost-effective care, which has resulted in a shifting of care to the lowest-cost setting. Vertical integration has become a way for systems to effectively manage expenditures by internalizing decisions related to right care at the right place and time. Although ownership is the preferred arrangement for optimal affiliation, hospital leaders emphasized the importance of business segment expertise and the role of effective joint ventures and non-hospital partnerships as a source of said expertise.¹

Vertical integration has become a way for systems to effectively manage expenditures by internalizing decisions related to right care at the right place and time.

Given rapidly shrinking operating margins, hospital acquisitions and mergers focused on ownership and control will not be enough. In order to succeed, hospitals and health systems must restructure and redesign care by eliminating variation and reorganizing service delivery to avoid any unnecessary capacity.¹² Tapping third-party strategic partners to help take on some of the human capital burden makes sense because it shifts consumption of expensive resources like capital equipment and repair service contracts for said capital equipment to a risk-share model.

As the U.S. healthcare system continues to evolve and markets consolidate, hospital managers will continue to be pulled in all directions by competing environmental forces. These include the following:

- Regulatory requirements take up more labor hours, leading to decreased clinical productivity and reduced employee satisfaction.
- Value-based care incentives shift care to the outpatient setting and target population and preventive health metrics challenge capacity constraints.
- Hospital mergers and acquisitions result in organizational restructuring and corporate governance structure that can contribute to operational roadblocks directly impacting performance and care.

These challenges are present and will continue to be challenges that hospital managers face. Third-party service providers can offer support in adapting to these challenges.

The continued challenge to find and fill positions with qualified candidates will also remain. It takes, on average, 50 days to fill qualified positions, and that does not take into account the orientation and training required to bring that individual up to speed to work independently.

Top Three Ways Contracted Services Position Outpatient Endoscopy Suites for Success

Current trends in the environment have placed significant stress and pressure on hospitals, and GI/endoscopy suites are no exception. An increasing amount of time is spent on compliance as a result of regulatory demands that are directly tied to quality and compliance incentives. In addition, providers and staff are performing more non-core functions as a result of volume demands. This leads to operational inefficiencies, poor productivity, and decreased throughput, culminating in longer hours and increased overtime leading to employee burnout and turnover. This is a vicious cycle.

Hospital leaders and managers are searching for ways to handle more cases, schedule more patients, and keep up with regulatory, compliance, and quality metrics that directly impact their shrinking budget and

workforce. Efficiency is critical in this environment. One source of efficiency can be provided by third-party service providers who can streamline processes and drive efficiency and throughput. For high performance to truly be a benefit to hospitals, it needs to be coupled with the efficiency that contract partners are able to provide. Here are top examples of how contract partners can help hospitals.

Reason #1: Outsourced partners in endoscopy services improve throughput with timely and efficient management of capital lease equipment and repairs.

Technological innovation not only is critical to improved patient care but also facilitates a hospital's cost-cutting efforts by shifting care to the outpatient setting. Advancements in endoscopic techniques and capabilities have resulted in the ability to treat and perform procedures in the outpatient setting. For instance, gastric balloons can now be removed endoscopically, without anesthesia or an incision.¹³ However, these gains can only be realized if the technology is available to providers through adequate capital investment. With any technology or equipment, repairs and maintenance are necessary to seamless operations; therefore, having an adequate amount of capital equipment is as crucial as careful management of the equipment's repairs, inclusive of "repair and exchange" programs for damaged equipment (to ensure equipment is available). Outsourced partners can help across all of these dimensions.

The financial impact of unavailable equipment is often understated. As providers compete for scarce resources, wait times increase for patients. Barriers to effective and timely management of capital equipment include the complex organizational structure and hierarchy common to hospitals and healthcare systems. This is often exacerbated in large health systems. As reported by the AHA, the number of hospitals in health systems in 2017 was 3,494 (66%) compared with 3,259 (60%) in 2012.¹⁰ Managers may find themselves taking on tasks that they would not traditionally take on (e.g., managing supply chain, scheduling patients, and vendor relationships) to limit head count. In taking on these necessary activities, costly inefficiencies may be

realized due to decreasing bandwidth of employees and staff.

According to Alyssa Rapp, CEO of Surgical Solutions, a healthcare solutions company that specializes in providing minimally invasive surgery support, it is third-party service providers that are uniquely positioned to obtain, maintain, and care for valuable capital lease equipment and their associated repairs through preferred relationships with capital equipment manufacturers: “As a contract partner, we are very successful working with hospitals as an unbiased expert resource to help identify roadblocks to their efficiency and throughput in the operating room (OR), many of which we can help them solve. When we partner in that consultative capacity, we can be very impactful. We work in tandem with our partners to identify and address problems.” For instance, by managing repairs and repair contracts, there is an incentive for third-party providers to complete tasks expeditiously. This can prove very useful to hospitals, especially during times of reorganization like mergers or acquisitions.

Case Study Insight. Ochsner LSU Health Shreveport includes North Louisiana’s only Level 1 Trauma Center at its 452-bed hospital in Shreveport, Louisiana. With more than 3,400 employees and the Ochsner LSU Health Shreveport Physician Group of approximately 500 physicians, Ochsner LSU Health Shreveport serves more than 135,000 patients with more than 600,000 visits annually. When asked about the benefits of partnering with Surgical Solutions, Perry Branim, GI Director at Ochsner LSU, shares: “When a scope breaks down, now we get a loaner right away. That has been significant positive change for us. Through our own biomedical department, it used to take weeks or even months to get a loaner scope in. Or, by the time the loaner came in, we would have already gotten the repaired one back.”

Lack of capital equipment readiness can further negatively impact hospitals and endoscopy suites by contributing to longer wait times for patients. Longer wait times negatively impact no-show rates. A *New England Journal of Medicine* article highlights the correlation between wait time and no-show rates, in that the longer patients wait to be scheduled for an

appointment, the more likely they are to no-show.¹⁴ No-show rates of 12% to 24% have been reported in outpatient endoscopy suites and contribute to underutilization and decreased revenue.¹⁵ According to Branim, no-shows must be managed at Ochsner LSU Health Shreveport because they are one of the biggest barriers to productivity: “That is why keeping us from being down a scope is a huge thing,” he says.

As Rapp explains, ensuring timely repairs and access to replacement equipment is critical to the success of outpatient endoscopy. “Partnering with third-party service providers like Surgical Solutions not only improves turnover for the patients being seen, but further offsets increasing no-show rates,” she says.

Reason #2: Nurses and surgeons are able to function at the top of their license, increasing hours spent on direct patient care and increasing employee and patient satisfaction.

Providers and staff spend increasing amounts of time functioning outside of their license (e.g., doing more admin work), which results in decreased productivity, operational inefficiency, and burnout (i.e., less satisfaction). RN staff no longer have to focus on shipping repairs, requesting loaners, tracking scopes, and worrying about standardized procedure for high-level disinfection and tracking scope use. Labor remains the single largest component of healthcare costs.¹⁶ The number of full- and part-time hospital employees continues to increase, reaching 6.15 million in 2019.¹⁰ The AHA reported that more than 25% of physicians, nurses, and allied health staff make up the FTEs dedicated to regulatory compliance. Quality reporting is a part of compliance and is also a significant performance metric, especially related to endoscopy and OR procedures. The quality reporting burden is magnified by the transition to value-based purchasing models due to non-standardization of reporting requirements across models.⁵

Case Study Insight. At Ochsner LSU Health Shreveport, Branim experienced firsthand the challenges inherent to quality reporting when the outpatient endoscopy suite switched from time-based billing, as is typically seen in operating rooms, to procedure-specific billing. As a result, productivity in the GI/endoscopy suite

switched to a procedure-specific benchmark of time per patient. The current benchmark for a standard endoscopy procedure is approximately five hours per patient. Outside of the operating physician, the procedure utilizes a nurse and a technician. Based on the current benchmark, the nurse and technician can spend two-and-a-half hours on each patient. Considering the perioperative check-in time, in-procedure time, recovery time, and transport time, this is a reasonable metric for a high-volume, streamlined endoscopy suite.

As stated above, no-shows and cancellations are expensive, resulting in wasted capacity and lost revenue. Screening colonoscopies can now be scheduled without a referral or physician appointment, but still carry risks associated with bleeding, perforation, and medication complications, and can result in day-of cancellations if not properly managed. Established provider means of mitigating this behavior include telephone reminders and preassessment appointments.¹⁵

At Ochsner LSU Health Shreveport, Branim hired four full-time licensed practical nurses (LPNs) dedicated to scheduling and mitigating the risk of no-shows and cancellations. Their work, as well as the time needed for sterile processing by technicians, is not included in the five labor hours per patient allocated for the hospital's productivity performance metric. Failure to meet this benchmark is directly tied to financial reimbursement for the hospital, staffing, and budgetary support that is necessary to operating the endoscopy suite.

In this environment, service providers serve as a viable solution to help hospitals meet productivity metrics as well as improve employee and patient satisfaction. "It was by contracting out the sterile processing staff that Ochsner LSU Health Shreveport was able to recover approximately 100 labor hours per week," states Rapp. "These hours translate directly into technician and nursing staff spending increased amounts of time on their core functions and less on-call and overtime."

A Surgical Solutions technician at Ochsner LSU Health Shreveport stated she is happier as a Surgical Solutions technician as opposed to working as a medical assistant at a hospital-run outpatient clinic: "The work and

dynamics are more consistent, and I like knowing what I have to do every day from when I walk in to when I leave. The training I received prepared me for the daily challenges I face. Consistency and high reliability are built into every process we do, with the aim of providing exceptional patient care each and every day."

Hospital leaders and managers can utilize third-party service providers to provide necessary labor that can be recognized as variable operating expenses not related to direct labor costs. Other benefits of this type of strategic partnership include service-line optimization. As Rapp points out: "At Surgical Solutions, technicians are cross-trained for the operating room and endoscopy suites, enabling them to own the processing of all endoscopes within a hospital, regardless of designation." This flexible approach also supports the procedure areas, with technicians available to support bedside and emergent procedures 24/7, often a sticking point for hospitals to achieve without on-call and overtime expenses.

Reason #3: Effective partnerships leverage knowledge and experience to facilitate the implementation of clinical standardization and best practices.

Following are the top five Joint Commission requirements most frequently identified as "not compliant" during surveys and reviews from January 1 through June 30, 2019:

60% > IC.02.02.01 – The organization reduces the risk of infections associated with medical equipment, devices, and supplies.

56% > LS.03.01.35 – The organization provides and maintains equipment for extinguishing fires.

52% > IC.02.01.01 – The organization implements infection prevention and control activities.

46% > EC.02.03.05 – Maintain fire safety equipment and fire safety building features.

45% > EC.02.02.01 – Manage risks related to hazardous materials and waste.¹⁷

Third-party service providers add consistency and expertise to sterile processing through consistent and reliable staffing. Moreover, third-party service providers serve as expert resources for hospital managers and leaders. As infection control efforts and hospital auditing increase nationwide, having a reliable service provider decreases the stress experienced by managers.

Case Study Insight. At Ochsner LSU Health Shreveport, prior to partnering with Surgical Solutions, one out of seven technicians took turns rotating in sterile processing. Repetition by Surgical Solutions technicians built consistency and expertise, yielding greater certainty of the byproduct in endoscope reprocessing. While performing a routine audit of endoscopes, an on-site Surgical Solutions representative noted poorly legible sterile processing documentation. Through collaboration among Branim, the Surgical Solutions technicians, and an on-site representative, a sterile processing audit procedure and reporting system was created. As a result, data from the audit was reported to the infection control director on a monthly basis. A collaborative relationship was formed where both OSHU and Surgical Solutions work hand in hand to demonstrate compliance with all infection control standards for the endoscopy suite.

"This audit initiative was not the result of a failed review or an attempt to meet new compliance standards," explains Rapp. "It was the result of having contract experts embedded in the day-to-day operations who proactively worked with the hospital staff to identify an unmet need and then utilized their resources and experience to create and implement a solution that was valuable for both parties."

Specialization for providers leads to efficient and improved patient outcomes. "The same can be said for technicians whose core responsibility is to sterilize and process endoscopes," adds Rapp. "Their expertise lends itself to identifying inefficiencies and gaps in the system, and they are dedicated to helping hospital managers perform well as it directly reflects on their organization."

SURGICAL SOLUTIONS SERVICES AT A GLANCE

To help your facility improve financial/operational performance and physician satisfaction with better OR management and greater efficiency, Surgical Solutions' customized programs include:



Expert handling of scopes and instrumentation by highly experienced team members

Our CRCST technicians are on hand for every case. They're accountable for:

- Pre-, intra-, and post-procedure technical support
- SPD, decontamination, prep and pack



Repair maintenance management

Surgical Solutions assumes the logistical process and cost of:

- Instrument and scope repairs and disposables for laparoscopic procedures (e.g, trocars, cannulas, etc.)
- Maintaining your contractual requirements for rebates through trace sales reporting



Access to capital

- Deliver the instrumentation and equipment to support all scope procedures in the OR and endo suites
- Acquire physician-preferred disposables and equipment

All services and products by Surgical Solutions are charged on a price-per-case basis, transforming your fixed costs into variable costs.



Click here

for a free on-site assessment to see how efficient your facility can really be.

Conclusion

In the post-COVID-19 era, there will be increased pressure on hospitals—and in GI/endoscopy suites, specifically—to reschedule all of the cases that were cancelled during the Global Pandemic of 2020. “The biggest benefit of contract partnership post COVID-19 is the ability of hospitals to flex up their access to human capital, capital equipment, and repairs management on a variable basis,” says Rapp. “This is the moment to leverage partners like Surgical Solutions because that can support hospitals and ambulatory surgery centers in their recovery post COVID-19.”

Whether it is doing more running between cases or keeping everything moving as quickly as possible, these are benefits that drive greater consistency in sterilization and high-level disinfection activities and help providers to maintain consistency of operations, even in the face of the maximum productivity anticipated and expected of clinicians in the post-COVID-19 environment. The case study insights from Ochsner LSU Health Shreveport, in partnership with Surgical Solutions, demonstrate a scalable model for hospital leaders and managers to emulate to address the surge in elective surgeries post COVID-19 and beyond.

REFERENCES

1. Noether M, May S, Stearns B. Hospital Merger Benefits: Views from Hospital Leaders and Econometric Analysis: An Update. AHA. Sept 2019.
2. Hayford T, Nelson L, Diorio A. Projecting hospitals' profit margins under several illustrative scenarios: working paper 2016-04. Congressional Budget Office. Sept 2016.
3. Kaufman, Hall & Associates LLC. National Hospital Flash Report. April 2020.
4. Hall MJ, Schwarzman A, Zhang J, Liu X. Ambulatory surgery data from hospitals and ambulatory surgery centers: United States, 2010. National health statistics reports. Feb 28, 2017.
5. Regulatory Overload: Assessing the regulatory burden on health systems, hospitals and post-acute care providers. AHA. Oct 2017.
6. American Hospital Association 2019 Chartbook, Chapter 4.
7. Thompson D. Health care just became the U.S.' largest employer. The Atlantic. Jan 2018.
8. Kocher B. The downside of healthcare job growth. Harvard Business Review. Sept 2013.
9. Abrams K, Balan-Cohen A, Burbha P. Growth in outpatient care: The role of quality and value incentives. Deloitte. 2018.
10. American Hospital Association 2019 Chartbook, Chapter 2.
11. Peery AF, et al. Burden and cost of gastrointestinal, liver, and pancreatic diseases in the United States: Update 2018. Gastroenterology 2019; 156:254-272.
12. Decline in utilization rates signals a change in the inpatient business model. Health Affairs Blog, March 8, 2013. DOI: 10.1377/hblog.20130308.029038
13. New York-Presbyterian. Advances in gastroenterology and GI surgery. 2016.
14. Ryu J, Lee TH. The waiting game: Why providers may fail to reduce wait times. N Engl J Med 2017; 376:2309-2311. DOI: 10.1056/NEJMp1704478
15. Berg B, et al. Estimating the cost of no-shows and evaluating the effects of mitigation strategies. Med Decis Making. Nov 2013; 33(8): 976-985.
16. Gamble M. Where can hospitals find labor cost savings? Becker's Hospital Review. Oct 2013. Available at: <https://www.beckershospitalreview.com/finance/where-can-hospitals-find-labor-cost-savings.html>.
17. Top 5 most challenging requirements for first half of 2019. The Joint Commission online September 4, 2019.



Founded in 2007, Surgical Solutions is a Chicago-based healthcare solutions company that provides mission-critical services to hospital operating rooms for minimally invasive surgeries.

CONTRIBUTORS



ALYSSA J. RAPP
CEO of Surgical Solutions



VANESSA BUIE, MD, MBA
University of Chicago, Research Analyst,
Surgical Solutions



ANTHONY DAWSON, RN, MSN
Chief Clinical Officer and Chief Operating Officer,
Surgical Solutions