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Endoscope Strategies Whitepaper

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KARL STORZ — ENDOSKOPE

Endoscopic Strategies for Elevating Operating Room Efficiency

Significant improvements in endoscope care, repair and maintenance can be made to achieve efficiency as well as high levels of quality and safety for an enhanced patient surgical experience.

Introduction

The outpatient surgery market, where a wide variety of surgeries are accomplished, is a complex, busy place with a myriad of protocols taking place across the team to ensure a safe patient journey. OR leaders in the outpatient market can take advantage of innovations and improvements in one area of this journey, in particular, that is critical for the success of all procedures executed in these ORs. In fact, the endoscope equipment that is universally utilized in procedures is a critical component of the overall surgical experience – and the care, maintenance and repair of these vital instruments are key aspects for the prevention of surgical site infections and the ability to offer cost-effective and safe patient care.

Efficient cleaning protocols are an essential part of proper endoscope care in all healthcare facilities. The benefits of paying attention to the process cannot be overstated. Facility leaders should establish reprocessing steps and follow manufacturers' Instructions for Use (IFUs) to ensure patient safety, but they also need to pay close attention where crucial steps in the process are often overlooked. In fact, the entire team needs to be drawn into the careful review of reprocessing steps to ensure that everyone is on the same page. It may be up to the SPD leaders to standardize the process for their facility and take the lead on this review and upgrade, but everyone is a stakeholder.

Clearly, areas such as visual inspection of the scopes, high-level disinfection or sterilization, storage and documentation are key parts of a complete endoscope reprocessing protocol. With that in mind, it will take a close inspection of a facility's process to unearth inconsistencies or missed steps in their unique protocols. Working with a trusted partner can shed light on just exactly where improvements can be made and where new innovations and strategies can be utilized. The first step is to define where knowledge gaps exist and then identify team members who need training and education to help finetune the process.[1]

Updating guidelines

The attention paid to the proper sterilization and repair of endoscopes is at a critical juncture today. Healthcare professionals are inundated with a myriad of challenges in their profession post-pandemic. Staffing shortages, burnout of both nurses and surgeons, labor strikes, and the ongoing challenges of ROI on all levels in the surgery market make this a most difficult time. No matter what the challenges, this part of the surgery cycle is critical for overall positive results. To that end, the Association of periOperative Registered Nurses (AORN) has updated their endoscope guidelines because of how urgent the need is to ensure facilities are using the best practices to keep their patients safe.

Original equipment manufacturer (OEM) on-site support can help address these challenges and also help ensure that guidelines are being followed with on-site specialists to observe endoscope care and handling in the perioperative processes. These specialists can provide staff training, enhance processes and help reduce waste and cost – offering a level of support for the whole OR team. Additionally, utilizing this expert support along with standardizing equipment from the same manufacturer, including a fleet of scopes and equipment needs, can aid in following guidelines as well.

With these complex instruments, "standardization" is key, and this term has two meanings. As mentioned, a fleet of scopes from the same manufacturer can arguably be invaluable to a busy sterile processing department that feels the fewer sets of manufacturers' IFUs, the better. It also means to heed the latest guidelines from groups such as AORN and AAMI, which include, among other items to note, the need to pay attention to storage, decontamination sinks, how to monitor air and water quality at facilities, leak testing and staff training.[2]

Benefits of OEMs for service and on-site support

The opportunity to utilize a full-service provider in partnership with the OR leadership and the rest of the team should be considered to achieve the highest level of results for reprocessing delicate instruments. This includes establishing updated protocols, maintenance of the equipment and repair of these important surgical instruments that are used daily in the nation's ORs. When it comes to endoscope repair, cost should not be the only factor that healthcare organizations consider.

Surgeons and the OR staff need to be able to rely on high quality, consistent service as well as prompt turnaround times to avoid delays and risks to clinical performance. The routine maintenance and repair of these instruments is critical to positive outcomes and patient safety.[3]

Today, more problems with scopes are being identified because of updates to the **AAMI ST91 endoscope reprocessing standard**, which now recommends that techs visually inspect scopes using a borescope.[4] Specifically, techs are seeing things they simply could not see before and sometimes assuming a standard part of the manufacturing process is a problematic defect. Example: Certain manufacturers use dye in the internal lining of a device as a marker (a blue or red dot, a red line, etc.). An untrained technician could view this marker incorrectly and send the scope out for an unnecessary repair.The result is that more scopes are unnecessarily going offline for repairs they may not need. The training of technicians and staff to circumvent these issues is clearly one solution, but this emerging issue spotlights the importance of forging a solid, cost-effective, reliable service partnership with the scopes' OEM. This allows for the smooth continuation of surgical service lines. Endoscopy availability means everything for these enterprises. By combining proper preventative care with a trusted repair provider, outpatient facilities can feel much more confident that their endoscopy lines will always remain working efficiently.

The choice to use an OEM for endoscope service and on-site support is also likely the best solution to adhere to best practices in the industry and keep up to date on improvements and new strategies for the reprocessing journey. Facilities that have taken advantage of this type of service have seen results that surpass expectations. In fact, one case study demonstrates the ability to offer optimal care after reviewing the challenges of working with a third party, which is applicable to both ambulatory surgery centers and outpatient hospital settings. The study revealed that using a third-party repair company for their equipment service caused pain points that needed attention.[5]

In the study, OhioHealth's Riverside Methodist Hospital revealed a number of challenges that were experienced when using a third party including expensive repairs and inconsistent quality. For example, fogging issues continued to plague the OR team despite the repairs being made. Additionally, the turnaround time on equipment was often up to four weeks, a situation that delayed schedules and profitability. Downtime due to broken or missing equipment was an even greater issue as instruments needed to be replaced to adhere to a surgery schedule. Incomplete sets often remained in use and surgeons would frequently have to replace a missing instrument with a disposable one leading to higher costs.

Perhaps the two most significant areas of concern were the tracking of instruments that needed service and where they were in the repair process, all leading to inefficiency down the line. Second, surgeons were unhappy with the functioning of the equipment and incomplete sets with an average

of two surgeon complaints daily. This was an untenable situation and called for action and change. The resulting change was to work with KARL STORZ, the manufacturer of their endoscopic instruments. This change resulted in vast improvements that allowed for cost-effective, efficient patient care as the facility turned to KARL STORZ for service and enrolled in their On-Site Endoscopic Specialist program.[5]

Cost is a factor

Cost is also an important factor in the outpatient surgery market as OR teams look for the best solutions for their caseloads. When it comes to equipment care, what may seem less expensive at the outset often results in substandard outcomes and greater long-term costs. Any savings experienced up front are often negated by a poorly-performing product, reduced surgeon satisfaction and a higher risk to patient safety — all of which may have a significant financial impact on the facility.

One study of a leading hospital shows how cost-cutting measures can take a cut out of quality.[6] Endoscope service costs were measured using KARL STORZ as the service provider for a three-year period, and then using an Independent Service Organization (ISO) for three-years. In the case study, a hospital used KARL STORZ Service for three consecutive years. The costs for both repairs/exchanges and new capital purchases during that three-year period were measured. In an attempt to save money, the hospital switched to using an ISO once the three-year period with KARL STORZ Service had ended. Costs during the next three years with an ISO as the service provider were measured.

The results showed a long-term benefit of retaining the KARL STORZ Service. Over the three -year period with KARL STORZ as the service provider, the hospital spent an average of $100,031 for both new capital purchases and repair expenditures. After switching to an ISO for repair services for the following three years, the average expenditure per year went up by 23%, which included additional capital outlay for unplanned new equipment.

In fact, the increase in costs from using an ISO for endoscope service eroded any upfront savings that the hospital had experienced. When it comes to endoscope repair, cost shouldn't be the only factor that healthcare facilities consider. With higher quality of service, the initial equipment investment will be retained, reducing the need to repurchase capital equipment in the near future. This lowers long-term costs and the total cost of ownership.

Overall, the less expensive solution is not always the best choice as this real-world example demonstrates. Significant problems including increased frequency of repairs, slower turnaround time, inconsistent repair results, and operating room delays can cause risks to clinical performance. For endoscope care, the higher the quality of service and

repair, the lower the total cost of ownership. Additionally, surgeons and OR staff needed to be able to rely on high quality, consistent service and prompt turnaround times. The value of timely, high-quality service is more than worth the investment.

Hospitals and outpatient facilities require equipment that is well maintained and ready to deliver optimal surgical performance and patient safety at all times. The resulting surgeon confidence and satisfaction helps them attract and retain the best surgeons. The quality and dependability of endoscopic equipment is essential to the facility's recruiting efforts, as well as their overall reputation and patient safety. Additionally, investing in OEM service and on-site support can further address many clinical, operational and financial challenges – leading to greater efficiencies, staff satisfaction and lower costs.

One size does not fit all

Important in the scheme of things is the fact that each OR setting is not the same – in fact, with the growth in ambulatory surgery centers during COVID-19 and continuing to evolve post-pandemic, that has become even more apparent. The need for customization when dealing with an OEM provider in the endoscope space has become a necessity rather than a luxury, so it is significant that KARL STORZ recognizes that need in an increasingly challenging environment.

The company can support OR teams with an on-site solution tailored through the On-Site Endoscopic Specialist (OES) program. With this program, the facility receives dedicated, full-time support to help ensure equipment is performing to specification. The program offers comprehensive support in the perioperative areas, including the OR and SPD, to help ease the burden on the entire team and allow them to remain focused on your patients. Based on a facility's needs, OR leaders can opt for the standard OES program or make the upgrade to the full-service program, which is a bundled solution that includes KARL STORZ equipment with service coverage, multiple on-site specialists, vendor-neutral equipment management and robust data analytics.[7]

In 2022, a KARL STORZ customer achieved significant results by utilizing their services that upgraded their procedures and saved significant costs – all while improving staff safety and patient outcomes.[8] Reporting on the upgrades, the organization noted that the case volume supported by KARL STORZ was 38% (Figure 1). Productivity and cost savings increased with almost half a million instruments handled (Figure 2). Almost $100,000 in savings occurred for this facility with the handling of robotic equipment within this new program, a very positive outcome for this OR leadership. Additionally, as robotic use increased, it was noted that the

cost per case also was reduced (Figure 3) for even greater profitability. The intertwining of equipment maintenance, service repairs and streamlining equipment readiness all resulted in positive outcomes for this facility.

The facility also saw an improvement of repairs from previous years as the full-service program evolved (Figure 4). As a positive conclusion to the study, survey results revealed enthusiastic words for the overall change and the new service partnership with comments that summed it all up: "These guys get the job done! The STORZ team is a valuable asset to our OR." OSM

2022 Case Volume

38% of all 2022 cases were supported by KARL STORZ

Month	Total Case Count	KS Case Count	% of Volume
Jan	1378	507	37%
Feb	1546	571	37%
Mar	1761	631	36%
Apr	1635	601	37%
May	1686	619	37%
Jun	1647	627	38%
Jul	1420	580	41%
Aug	1815	670	37%
Sep	1570	583	37%
Oct	1670	663	40%
Nov	1583	599	38%
Dec	1639	635	39%
Total	**19350**	**7286**	**38%**

Figure 1

Productivity

30,665 Sets Assembled

7,455 Peel Packs Processed

498,878 Instruments Handled

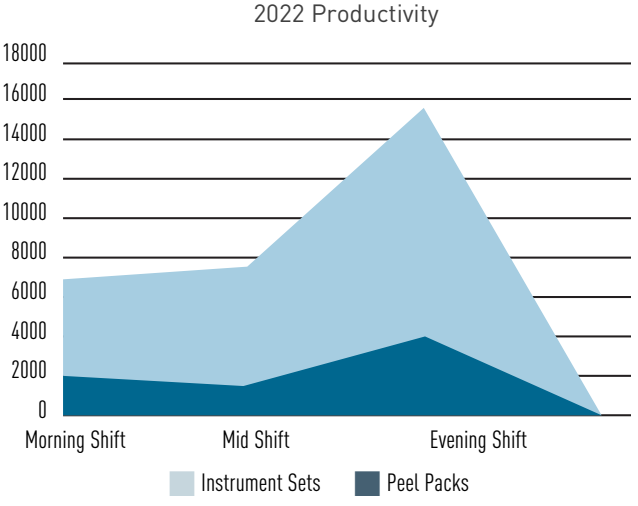


Figure 2

Cost-Per-Case Reduction While Robotic Volume Increased

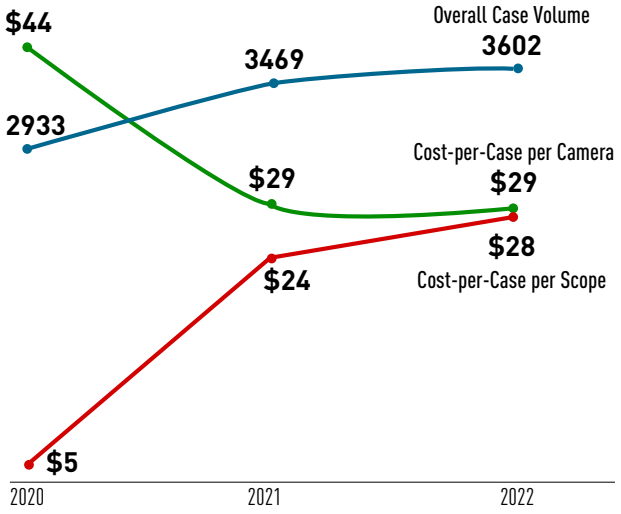
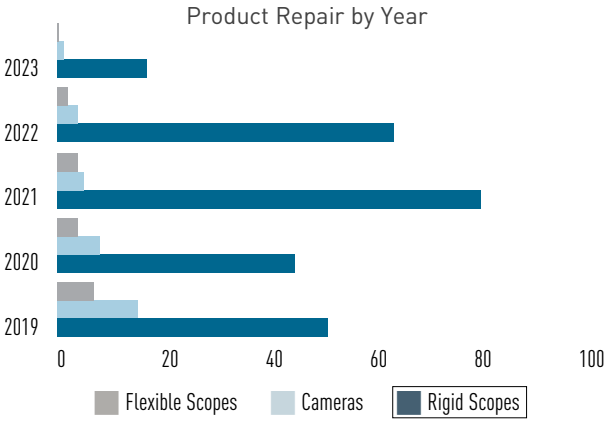


Figure 3

KARL STORZ Repairs



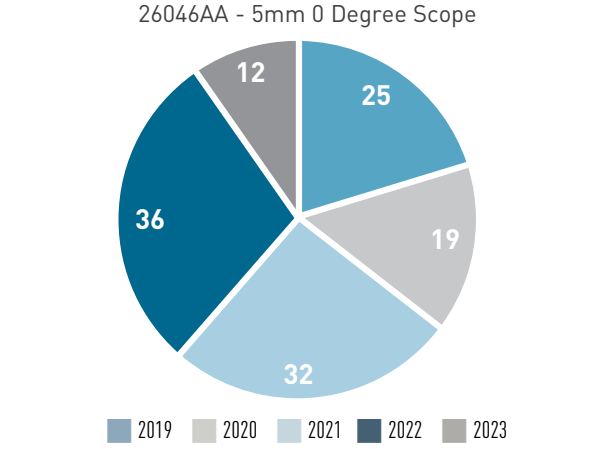


Figure 4

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