Avail

Outpatient Providers Turn to Remote Collaboration Technology as They Ramp Up Their Caseload Capacity

As non-emergent surgeries migrate from hospitals to dedicated outpatient facilities, ambulatory surgery centers (ASCs) and office-based labs (OBLs) are preparing to absorb a growing influx of patients with a variety of medical needs.

Before they pick up that mantle, these providers will need to ensure that they can expertly perform a wide range of procedures; that the quality, safety, and convenience of their practices are top-notch; and that these benefits are recognized by patients and their referring physicians. It's a complex process ideally undertaken with support from a network of collaborators.

"To distinguish themselves as trusted facilities, outpatient providers will need to stay deeply connected not only with potential patients, but with the galvanizing influence of colleagues and medical-device experts around the world," said Dr. Joel Rainwater, an interventional radiologist and founder of Comprehensive Integrated Care, an outpatient practice in Arizona, Utah, and Oregon. "For facilities with small footprints and lean budgets, an ideal way to engage with those communities is to furnish procedure rooms with technology designed to instantly connect staff members with remote collaborators."

Using remote collaboration technology, outpatient providers can learn from physicians and medical-device experts, accrue patient referrals and confidence, keep in touch with staff doctors who also spend time at hospitals, and lead by becoming centers of excellence — without increasing foot traffic in their compact surgical suites and buildings.[1,2]

Avail Medsystems provides a solution by facilitating livestreaming from the procedure room to remote viewers' iPads or computers. The Avail System allows providers to receive real-time proctoring from off-site experts, teach surgical and support techniques to associates or students outside their own facilities, and work with field representatives to incorporate new tools and devices into their practices. Equipped with high-definition, high-powered video cameras and inputs for surgical imaging, the system allows remote users to "join" a procedure, view it from different angles and distances, monitor imaging, communicate and interact with the operating practitioner and share their screens with others

Driving a Transformation

Affected by the changing setting for elective procedures are both ASCs — highly regulated facilities that conduct outpatient preventive, diagnostic, and therapeutic surgeries — and OBLs, which provide health exams, diagnosis, and ambulatory treatment of illness or injury, particularly surgeries that are non-emergent and carry little risk of complication.[3]

Across the United States, ASCs and OBLs — now numbering more than 9,200[4] and 700,[5] respectively — conducted more than half of all outpatient surgeries in 2017, compared with 32% in 2005.[6] Furthermore, one healthcare analytics company has predicted that 85% of all surgeries will be conducted in the outpatient setting by 2028.[7] Primarily owned by physicians — in partnership with hospitals in about one-quarter of cases — these facilities are perfectly positioned to capture a growing proportion of the elective-surgery market, in part because of advancements in technology, technique, and safety[8] that have prompted Medicare to determine that numerous procedures no longer require hospitalization — decisions that are likely to inform private payors' policies, as well. As a result, a variety of cardiovascular services,[9] spine surgeries, interventional radiology treatments, joint replacements, and image-guided procedures are now routinely performed by outpatient providers.[10]

The trend is also driven by the $40 billion saved annually[6] by shifting those services to outpatient facilities, which receive Medicare reimbursement at 55%[11] of the hospital rate. The transition is cost-effective not only for patients, who are charged lower co-pays, but for physicians,[12] who garner a larger proportion of reimbursements when providing care in these lower-overhead, freestanding facilities.[3]

A final catalyst for the shift is the COVID-19 pandemic, which has left hospitals with a backlog of elective procedures and many patients determined to avoid high-volume, general-care settings in the long term.

"We see patients every day who feel more comfortable receiving surgical care in outpatient facilities than in hospitals that cater to a wide variety of illnesses, some of them contagious," Dr. Rainwater said. "I expect that to continue, because patients' eyes have been opened to risks they might have overlooked before. While some may still be reluctant to switch to a new setting, they will likely reconsider that position as outpatient providers take their place as the go-to facilities for affordable, high-quality care that's not only close to home but offers remote hospital backup at any moment if needed."

Connection Facilitates Expansion

Capturing this increased demand will depend on the ability of outpatient practices to compete and offering cutting-edge services may not be sufficient; rather, providers will also need to differentiate themselves within their own space and in the eyes of larger institutions. By adopting remote collaboration technology, providers open the door to support on this journey through connection with the colleagues, device representatives, and patients who will be crucial to their growth.

An important first step for these providers will involve ensuring that their physicians, lab technicians, nurses, physician assistants, and other staff members are not only aware of but trained in the latest techniques and device applications across a wide range of procedures, resulting in greater expertise at individual facilities and broadly across the field of outpatient care. While outpatient providers may not initially have the knowledge or experience to perform or support high-acuity cases, they can expedite the absorption of those skills using remote collaboration technology while simultaneously boosting staff confidence by ensuring that hospital expertise is remotely available should complications arise. Remote proctoring can involve a range of scenarios: a surgeon receiving advice from a colleague about how to perform a complex procedure or guidance from a device representative about how to apply a technology; a nurse giving a teletalk to peers about how to care for patients after a high-acuity surgery; or one technician guiding another in the evaluation of lab results.

As their practices and experience grow, outpatient providers can find just as much value by turning the camera outward to broadcast interactive educational events that showcase their knowledge and distinguish them as centers of excellence. This can be a particularly effective strategy for facilities that want to establish a niche as specialists in specific types of procedures, such as cardiovascular services or joint replacements.

Having the ability to livestream their own procedures can also vastly compound opportunities for providers to build collaborative relationships with new sources of patient referral. For instance, Endovascular Consultants of Colorado has been successful in using the Avail System to reassure referring physicians by allowing them to observe and communicate with the surgeons conducting procedures.

Finally, remote collaboration technology can further the expansion of practices by connecting owners with physicians in target markets,

something that is difficult to achieve without the ability to network creatively from the operating room. By assisting providers in expanding their communities and establishing trust, this technology can help physicians overcome hesitations about building additional clinical sites or collaborating to develop or buy into them.

"At our facility, we have seen a marked increase in our procedural volume as additional surgeries have moved into the outpatient setting," Dr. Rainwater said. "Using the Avail System has helped us immeasurably in serving our growing patient base. Our educational give-and-take with top medical and device experts has prepared us to provide cutting-edge services and defined us as an elite and well-known facility within our region and beyond."

Moving Forward with Remote Collaboration Technology

Avail's fully integrated A/V hardware and software system includes a mobile console that features two high-definition, 30x-zoom cameras; a large display monitor; and plug-ins for procedural imaging sources. After users answer a call on their iPad or laptop, a secure, web-based app enables them to control camera views of the surgery in progress, the operating-room team, and the equipment table. A split-screen feature lets viewers watch while also examining imaging, such as intravenous ultrasound or fluoroscopy. Viewers can collaborate with the broadcasting practitioner via two-way audio and by making annotations visible on the procedure-room display. Those watching can share their screens with others.

Finally, the Avail Member Hub, accessible via login on Avail.io, allows users to collaborate at the click of a button, manage schedules, and update availability in real time.

The Avail System is cost-effective because there is no capital expenditure involved, but rather a subscription-based fee — making it a good solution for small facilities with lean budgets.

The effectiveness of remote collaboration technology is backed up by research.

For example, a 2017 Swiss study[13] demonstrated that telementoring could be used to successfully assimilate the performance of endovascular aneurysm repair (EVAR) into routine practice at a remote health care site. Over four years, 49 patients were treated at the remote health site, with virtual proctoring conducted from afar by doctors at a university care center. After that period, when assimilation of the procedure was considered complete, the remote center treated another 86 patients without assistance. In a comparison of health outcomes between the two groups of patients, researchers found similar procedural success, complication rates, and 30-day mortality, and noted that those treated in the post-telementoring period experienced a lower rate of reintervention.

"The telementoring program followed here allowed excellent EVAR skill assimilation into the routine practice of a remote health care site," the authors wrote. "Telementoring is a feasible strategy to support skill introduction in remote medical facilities."

Further, a different group of researchers completed a review of 66 studies[14] on telementoring conducted before July 2017 that included 12 comparing telementoring with on-site mentoring. Seven of the studies demonstrated no difference in the health outcomes associated with the two strategies, and no studies found remote teaching to result in poorer postoperative outcomes, the authors determined. "The results of this review suggest that telementoring has a similar safety and efficacy profile as on-site mentoring," they wrote.

For outpatient providers invested in growing and differentiating their businesses, the Avail System can serve as a crucial tool. By helping to support these providers in meeting growing patient needs, remote collaboration technology is contributing to a revolution in outpatient care.

Conclusion

As Medicare policies facilitate the shift of many non-emergent procedures from hospitals into more cost-effective settings, outpatient providers face an immediate need to absorb an unprecedented volume of these minimally invasive surgeries.

Professional networking through remote collaboration technology (i.e., the Avail System) is an efficient and effective way for staff members at these facilities to embrace this shift — both by learning techniques, procedures, and the application of tools from top experts and by sharing their own knowledge with the medical and device communities. Together, these interactions can spur the growth of these freestanding practices individually and across the entire outpatient ecosystem by establishing them as centers of excellence, in some cases with specific areas of specialty, and offering them new avenues for referrals. Ultimately, this raises patient awareness about the comfort, convenience, cost-effectiveness, and professional excellence of these facilities, creating a solid level of trust that reassures clients who initially may have been reluctant to transition away from hospitals.

For outpatient providers, the ability to livestream surgeries and other procedure-room interactions at the touch of a button, anytime, anywhere, is crucial to the top-notch, comprehensive provision of elective surgical care that is designed to fill a growing patient need — and the Avail System facilitates the supportive network that makes it possible.

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