

The Intelligent Guide to Acute Telemedicine



How telemedicine helps hospitals
improve care and save lives



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The Challenge for Healthcare Leaders



INTRODUCTION



*In today's rapidly changing
healthcare environment,
hospital executives confront multiple
and often competing challenges.*

They must meet or exceed clinical guidelines aimed at establishing a national standard of care, while looking for ways to make that care more accessible and affordable. Administrators face a Gordian knot of federal data privacy and security regulations along with an industry-wide move to value-based care and population health management—changes that are driving massive shifts in payment and reimbursement systems and creating pressure to expedite care and prevent readmissions.¹

These demands are also taking place against a backdrop in which it's increasingly difficult to hire enough specialists to serve a growing—and aging—patient population. Pew Research Center places the U.S. population of people 65 and older at 83.7 million by 2050.^{2,3}



BETTER OUTCOMES



DATA PRIVACY



DISASTER RESPONSE

Such pressures are forcing many hospitals, including a growing number of Critical Access Hospitals, to close or reduce their services. More than 120 rural hospitals have shut down since 2005, and nearly 700 rural hospitals across 42 states are vulnerable to closure. HRSA predicts this trend will accelerate and that those most affected will be some of the nation's most vulnerable: poor, minority and elderly patients with chronic health conditions.⁴

Taken together, these numbers are prompting an urgent question: how can hospitals create and sustain a successful model that balances the natural tensions between financial performance and patient care?

While the day-to-day challenges of running a 24/7/365 business are numerous, large-scale natural disasters such as wildfires, hurricanes and flooding, along with emerging biological threats, also challenge hospitals to find new and more effective ways to mobilize and coordinate rapid response and recovery. The National Oceanic and Atmospheric Administration recently recorded 2017 as the costliest year on record for natural disasters in the United States, with a price tag of at least \$306 billion—and 16 separate events with damages exceeding \$1 billion.⁵

Increasingly, hospitals and health systems are turning to acute telemedicine for some of the answers.



SHIFT TO VALUE-BASED CARE



SPECIALTY SHORTAGES



AGING POPULATION

Increasing access to care



CHAPTER 1



When it comes to providing access to high-quality care, hospital CEOs are up against a basic staffing problem: a lack of specialists.

The National Rural Health Association estimates there are only 30 specialists for every 100,000 patients in rural parts the U.S. As a result, a person experiencing a stroke who goes to the ED in one of these areas may not be able to see a neurologist at all.⁶ Other specialist shortages include critical care, urology, psychiatry, pulmonology and maternal-fetal medicine.⁷

While attracting highly-qualified clinicians may not present as much of a problem for large, urban teaching hospitals, physician burnout is an issue in all settings. The New England Journal of Medicine Catalyst Insights Council survey reported that 96% of executives, clinical leaders and clinicians agree that physician burnout is a serious or moderate problem in the health care industry. Reducing evening, overnight and weekend shifts, as well as letting physicians go on vacation without being on call can improve work-life balance and lessen burnout. At the same time, hospitals still face the need to staff appropriately.⁸



SPECIALTY SHORTAGES



PHYSICIAN BURNOUT



ACCESS TO CARE

In addition to hiring shortages, access to care in rural hospitals is also limited by “windshield time,” or the time it takes a specialist to drive to a more remote area. Even in larger suburban and urban hospitals, the 15 minutes or so a neurologist may need to get from one medical building to another for a consult can critically delay care.

Even if a qualified neurologist is on site, what happens when multiple stroke patients arrive at the ED at the same time? Administrators can attempt to staff for peak times to address this situation, or keep three neurologists on call at all times, but these approaches are both ineffective and impractical in the long term.

Shorter distances, faster treatment

Acute telemedicine solves staffing issues by giving hospitals the ability to deliver qualified care to any location in minutes, essentially creating coverage on demand. Using telemedicine, a smaller hospital in a “hub-and-spoke” system can contact a larger facility the moment a patient arrives in the ED to ask if a qualified specialist can respond via telemedicine. By removing geography from the equation, patients are treated faster and before their conditions worsen. ⁶



SUPPLY AND DEMAND



COORDINATION OF CARE



HUB & SPOKE

Telemedicine also enables coordinated care for patients recovering at home or in post-acute care sites such as rehabilitation facilities or nursing homes. This is more comfortable, promotes faster healing and reduces the need for patients to travel to outpatient clinics for follow-up.

Hospitals, physicians and staff benefit from this arrangement as well. When hospital systems integrate acute telemedicine, physicians can treat patients more effectively while working in the hospital and city of their choice, which raises their job satisfaction and helps address hiring issues. This approach also helps hospitals take advantage of “excess capacity”—and fixed staffing budgets—by empowering on-call specialists to consult remotely at other hospitals when they are not seeing patients of their own. With telemedicine, nursing teams don’t need to incur the costs of travelling to patients; patients are able to recover in place. This follow-up care, even if not in person, can reduce 30-day readmissions rates and lower the risk of fines under the CMS Hospital Readmissions Reductions Program.⁹



REDUCE READMISSIONS



GEOGRAPHY CONSTRAINTS

Providing and enriching clinical expertise



CHAPTER 2

Physicians deepen their expertise through both case volume and variety. That can be a challenge in smaller or more rural facilities, where physicians may have fewer opportunities to develop and reinforce their clinical knowledge. This expertise is not only the foundation for patient health, but also the basis of a hospital system's success—including its ability to standardize treatment at a high level across facilities. That can affect whether an individual hospital is accredited as a Primary Stroke Center by The Joint Commission, for example, which determines whether or not paramedics will deliver stroke patients to their doors or bypass the hospital.¹⁰



CASE VOLUME



CASE VARIETY



STANDARDIZED CARE

Time is brain.

In the case of a stroke, the chance of brain damage and death increases with every second treatment is delayed. Recently released 2018 stroke guidelines urge centers to achieve door-to-needle times under 60 minutes for administering intravenous tissue plasminogen activator (IV tPA), the mainstay of early stroke treatment.

In the interest of speeding treatment, the new guidelines also recommend that hospitals without neurologists on shift use telestroke evaluations to determine whether patients are eligible for tPA or for transfer to receive mechanical thrombectomy.¹¹

Because telemedicine allows them to see far more stroke cases than they otherwise would, teleNeurologists have more experience assessing the appropriateness of prescribing tPA to ischemic stroke patients. When tPA is prescribed appropriately, it can break up a clot and help restore blood flow, returning oxygen to the brain. However, because the drug also increases the risk of intracranial hemorrhage (ICH), physicians with less experience—like emergency department physicians—may be reluctant to prescribe it.

In robust teleNeurology programs, however, tPA is administered more often and with a lower bleed rate, making it an invaluable tool for effectively treating stroke. Neurologists participating in such programs may also have a better understanding of recent clinical trials such as DAWN and DEFUSE 3, which support an extended treatment window of 16-24 hours for mechanical thrombectomy for certain patients.



*“There is a premium
on speed...
Literally every
minute counts.”*

— B. Tilman Jolly, MD



QUALITY OF CARE



WAIT TIMES



NEUROLOGY

Mental health patients straining hospitals

One of eight patients in the emergency department has a mental health or substance abuse issue. However, there are few psychiatrists on staff at hospitals nationwide. Experienced telePsychiatrists can make admission and release decisions more quickly, including reversing Involuntary Commitments (IVCs). This allows busy emergency departments to increase patient throughput and devote the appropriate resources to all patients. The average patient with mental health or substance abuse issues waits three times longer than other emergency department patients because many hospitals don't have psychiatrists on staff. TelePsychiatrists can lower those wait times significantly.



1 in 8 patients
has a mental health or
substance abuse issue



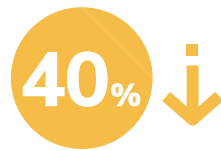
Mental health patients
wait 3 times longer
than other patients



Average boarding time
ranges between
8 and 34 hours



75% of emergency doctors
experience at least one
violent incident annually



Reimbursement
is 40% lower



Average wait cost
\$2,264 per patient



COLLABORATION



SPECIALTY SHORTAGES



PSYCHIATRY

Practice makes perfect

Acute telemedicine deploys physicians across a broader area, enabling them to increase their caseloads and build clinical muscle memory. The immediate and most important benefits are better patient care and better outcomes.

Telemedicine extends clinical expertise across hospital systems, making a board-certified specialist just a video call away. Hospitals can form collaborative networks with telemedicine solution providers to help them improve patient access to specialists by augmenting their own physicians. This relationship can also help standardize and reinforce robust protocols across the departments, outlying hospitals and partner organizations, as teams work together across those areas more frequently.



CLINICAL MUSCLE MEMORY



TEAMWORK



BETTER OUTCOMES

Easing financial pressures



CHAPTER 3



“No margin, no mission.”

— Sister Irene Krause,
Daughters of Charity National Health Care System

As CFOs know all too well, healthcare providers can't pursue their missions without sufficient revenue, and their financial pressures are increasing. The American Hospital Association, for example, reports that government payers underpaid hospitals for medical services by \$57.8 billion in 2015.¹²

To close the gaps, administrators often focus on cutting costs, pursuing reimbursements and reducing inefficiency, sometimes overlooking the staffing and coverage issues that contribute to the problem as well. Retaining physicians, nurses, and other clinicians can be challenging when hospitals are understaffed. Patient care can suffer if there are inadequate resources, and care givers may move on to more profitable hospitals, taking their knowledge and expertise with them.

For example, a patient who needs a psychiatric evaluation often has to wait in the ED for a consult because of limited bed availability. Nationwide, the average boarding time for psychiatric patients is eight to 34 hours. This delay causes undue stress on the patient and strains morale in the emergency department. This inefficient and ineffective use of resources also increases facility fees for the hospital and saddles the patient with a far larger bill.¹³

Hospitals that try to solve hiring issues by using local staffing companies or locum tenens face higher costs for a short-term solution, as well as issues with standardization and inefficiency.



COSTS



REIMBURSEMENTS



SPECIALTY SHORTAGES

Pursuing revenue, not reimbursement.

Telemedicine helps hospitals balance financial needs with patient care, providing a range of benefits in the process. One is that this model offers better utilization of existing staff. Consider the case of the specialist working in a large urban hospital; the physician receives a set salary but sees more patients per shift by providing video consults to outlying areas. In addition to helping more people, the physician is increasing billing without accruing additional costs to the hospital. He or she can also help reduce costs by stepping in to help alleviate immediate staffing issues in other hospitals.

Acute telemedicine also makes it possible to generate more appropriate revenue. For example, a larger hospital can create a transfer agreement with a smaller one to provide access to their in-house neurologists for stroke patients. Those neurologists can then improve the speed and quality of care at the smaller hospital by quickly and correctly assessing whether a patient should receive tPA. Patients who are transferred to the larger hospital for additional treatment benefit from improved care, including being more likely to be treated by the same doctor they first saw on screen in the ED. The larger hospital receives a high-value patient and both facilities reinforce their qualifications for primary stroke certification, which brings more patients through their doors.



RESOURCES



REPUTATION



UTILIZATION

Through telemedicine, physicians can travel or go on longer vacations, giving hospitals the powerful hiring draw of more flexible shifts. When not limited by geography, physicians have the opportunity to see more unique cases. Telemedicine also empowers physicians to perform to their highest level of certification, focusing on patient care specific to their training and experience, while also allowing hospitals to allocate clinical resources more appropriately.¹⁴

Finally, thorough patient follow-up facilitated by telemedicine can catch complications earlier, making it possible to treat patients in an outpatient or even at-home setting. In these cases, there is no need to send care teams off premise or return the patient by ambulance, which reduces costs as well as the potential for Medicare readmissions penalties.



EXCESS CAPACITY



STAFF RETENTION

Supporting people with technology



CHAPTER 4

Healthcare is one of the most heavily regulated and complex industries in the U.S., complicating workflow issues and business challenges. These include incorporating electronic health records along with mobile and connected devices into their workflows and dealing with some of the nation's strictest data security and privacy requirements. Hospital and health system executives also have to arrange for 24/7 coverage from shift-based physicians across all care sites while undergoing a sea change in their billing models as they move from pay-per-visit to value-based care. Last but certainly not least, hospitals must pursue continuous improvement in the form of meeting and exceeding a national standard of care across specialties.

In the face of all these requirements, hospital staff can be understandably reluctant to add one more piece of technology into their workflows. Administrators can also be concerned about creating an in-house telemedicine program that requires heavy up-front technology investment or which may be difficult to scale.

Building from a strong foundation.

Telemedicine as a platform does much more than simply solve short-term staffing issues by providing physicians: instead, it can help hospitals streamline their ability to provide excellent care as well as meet operational and financial goals. With the right solution, telemedicine can be deployed, optimized and scaled across many care sites rapidly, seamlessly and cost-effectively, solving coverage issues.



CLINICIANS



PATIENTS



SCALABILITY

For those hospitals who need help load-balancing their clinicians, telemedicine as a platform can help with analytics to predict supply and demand, to integrate scheduling of telemedicine consults with existing workflows and EHR systems, and to provide performance measurements on individual clinicians.

Telemedicine is no longer uncharted territory, but is secure, easy to use, and accessed from technology like tablets and video carts that are familiar both to physicians and patients. Studies consistently show that the quality of care delivered via telemedicine is as high as care provided in traditional in-person consultations.¹⁵

What's more, patients—including 60% of millennials, according to one study—support the use of telehealth and telemedicine in hospitals and appreciate the speed and convenience of the technology. In a 2016 NIH study, between 94% and 99% of 3,000 respondents reported being “very satisfied” with telemedicine, with one third preferring it to in-person visits.^{16, 17}



“Every once in a while, a new technology, an old problem, and a big idea turn into innovation.”

— Dean Kamen



INNOVATION



WORKFLOWS

Building a telemedicine program from scratch requires a significant outlay of capital, resources and time. Hospitals can take advantage of telemedicine as a platform to provide enterprise-level infrastructure with tested controls, proven workflows, 24/7 support and continuous improvement and upgrades. This also offers hospitals the advantage of sophisticated reporting, analytics and benchmarking to support clinical outcomes tracking, workflow optimization, and supply-and-demand scheduling based on actual traffic patterns.

Most importantly, a good telemedicine provider can act as a true partner, collaborating to align their services and technology with existing workflows and offering the benefit of their own operational, clinical and technical expertise.



SUPPLY AND DEMAND



VALUE BASED CARE



QUALITY OF CARE

Looking to the Future



CONCLUSION

When it comes to assessing the future of healthcare in the U.S., one thing is clear: there's no shortage of forces working to drive change and disruption in this vital industry. Regulatory requirements, payment systems and reimbursement models will continue to evolve. Studies predict that patient populations will continue to grow as the number of qualified new specialists shrinks. Large-scale crisis events will continue to challenge hospitals to find new and more effective ways to mobilize and coordinate a rapid response. And clinical advances will continue to raise the bar on how quickly and effectively physicians can save and improve lives.



*“Wherever the art of medicine is loved,
there is also love of humanity”*

— Hippocrates

Telemedicine is a powerful tool to help hospitals build the resilience and expertise they'll need to meet the challenges of the coming decades. As successes in neurology, critical care and psychiatry are replicated in more specialties, telemedicine will become a well-integrated part of American medicine, with established protocols that help hospitals comply with regulations, control costs and offer rapid, effective and compassionate patient care.



DISRUPTION



CHALLENGES



COMPASSION

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About SOC Telemed



SOC Telemed is very familiar with the challenges outlined above. We've helped executives at more than 450 hospitals use telemedicine to improve access to care, enrich clinical expertise and ease financial pressures. SOC Telemed can provide our innovative technology and deep clinical expertise to help you and your organization.

Telemed IQ, the same telemedicine platform we've used to deliver nearly 500,000 virtual consultations, is available to help your organization build or expand your own telemedicine program. With this true enterprise-wide platform, your clinicians can leverage our state-of-the-art technology, industry-leading reporting and analytics, and a robust physician network.

Plus, our teleNeurology, telePsychiatry and teleICU services can connect you to 24/7 patient care that enriches your organization with continuous clinical innovation. By accessing our physician network, you gain the experience of 200 clinicians and the perspective that comes from our clinical expertise and clinical-driven workflows that have evolved over the course of 15 years. SOC Telemed is the first telemedicine company to earn the Joint Commission's Gold Seal of Approval, which we have maintained since 2006. We support our platform and our partners with efficient, effective workflows, data-driven insights and Lean Six Sigma principles.





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