

Connected Care Is Essential to Telemedicine's Success

By ALAN PITT, MD

Telemedicine as a brand is flawed. Decades of overhype have left equipment gathering dust in storage closets and many hospital administrators skeptical. I believe that is because historically, telemedicine has been focused exclusively on access to care. Improving care accessibility may fit nicely with an organization's ideological mission, yet, in the end, it becomes a question of whether the effort makes sense from a business perspective.

The answer lies in changing the conversation. We need to stop talking about “telemedicine” and “telehealth” as if they were ends in themselves, and begin talking about the broader opportunities of collaborative care that the technology brings.

Recent federal mandates such as the Affordable Care Act are driving new models of reimbursement and accountability through shared risk — for the first time, the business of health care is being asked for guarantees. For example, congestive heart failure is the first diagnostic code requiring an outcome: a 30-day period of no readmission results in standard reimbursement. This payer/provider outcomes-based trend is certain to expand to other diagnoses and diseases. Shared risk and team-based assessments are the new reality, and connected care — that is, telemedicine — is an essential business tool, because in the changing health care climate, telemedicine can help improve care and reduce costs.

Since about 2010, improved hardware and software and more widely available bandwidth have contributed to a marked reduction in costs for telemedicine. Still, rules and regulations regarding reimbursement for telemedicine are in flux,

and the American Telemedicine Association has played an active role in updating the changing landscape. Many states — but not all — have passed parity legislation requiring private insurers to pay for telemedicine visits at the same rates as in-person care.

Also, state medical boards are re-examining antiquated licensure requirements for care and scripting across state lines,¹ and, in a 2014 revision, the Federation of State Medical Boards updated its policy to suggest that, in some cases, telemedicine technology could be used in lieu of in-person care.²

Much of this activity is being driven by fiscal imperatives. More and more, legislatures, which are the ultimate payers for low-income populations, are recognizing that telemedicine can provide a significant cost savings. The market is ripe and ready for a cost-effective, time-efficient method of patient care, and telemedicine can do that if it wins acceptance as an everyday tool. However, simply improving patient access to care is relatively low on the priority list for senior administrators struggling to keep their hospital's doors open. Instead, telemedicine must address



the organization's business imperatives. In general, these are:

- Strategies for increasing revenue
- Reducing internal costs for patient care (the total cost of ownership)
- Increasing the level of patient satisfaction

INCREASING REVENUE

Stroke programs were one of the early service lines to adopt and use telemedicine successfully.

These connected care programs enable smaller regional and rural hospitals (often referred to as spokes) to consult quickly with experienced neurologists in large, urban medical centers (hubs) for a recommended course of care for stroke victims.

To treat stroke effectively, a clot-busting agent, typically tissue plasminogen activator (tPA), must be administered within four to six hours of the documented onset of neurologic change. Given to

TRENDS

As health care organizations enter the world of ubiquitous telemedicine, there are several factors hospitals should consider when embarking on a collaboration strategy.

Market Consolidation: Rapid market consolidation exists today as smaller vendors have begun to leave the market. Where there once was a host of hardware and software providers, it now is coming down to a few major players. The remaining vendors almost certainly will be standards-based. This is a positive change and represents maturity in the marketplace.

Platform Consolidation: Consider the platform. Although vendors cannot fully execute on this model today, a collaboration strategy needs to consider how the solution scales from text to voice to video among the various use cases. Just as chief information officers cannot afford to have 20 different electronic medical records for a hospital, they cannot afford to have 20 different collaboration solutions. Moving forward, collaboration strategies need to be a single platform that offers the opportunity for flexibility for different work streams.

Rapid Acceptance in a Competitive Market: Many health care systems now are actively researching telemedicine solutions with or without the fee-for-service model. This is being driven not

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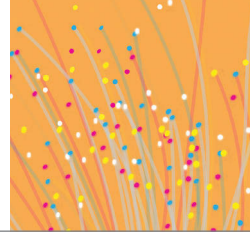
only by the Affordable Care Act, but also by private insurers. Such opportunities will only accelerate, and health care systems that take a "wait-and-see" position will become less and less competitive in the market as they try to manage large populations and actively compete against systems that have widened their reach and influence by embracing collaboration strategies.

Dissolution of Geographic Boundaries: Medicine is moving to a marketplace devoid of geographic boundaries. Radiology was one of the first services to adopt a form of telemedicine, referred to as "teleradiology" in the late 1990s. Radiologists recognized that they could interpret medical images remotely and began to develop businesses in which they could promote a high level of specialty care at a lower cost for hospitals. We are reaching a point where technology will support the full spectrum of clinical care, and it is natural to expect that the same market forces and levels of competition that were seen within radiology will come into play among physicians and other provid-

ers as they actively compete for patients.

We already are seeing evidence for this with groups like Specialists On Call, Teladoc and MeMD. Most of these are focused on urgent care cases as opposed to the full gamut of chronic care, but as telemedicine becomes more and more accepted, chronic issues such as cancer management, liver disease and lung disease will be virtually managed by specialists who will be able to provide a higher level of service at a lower cost. This inevitably will change the nature of hospital-physician relationships as hospitals attempt to engage physicians across broken-down geographic boundaries to expand their medical staffs. Telemedicine specialists currently are building solutions that will enable a fluid marketplace of providers.

Hospice Care: Care for the elderly, particularly at end of life, is one of the most pressing issues facing our nation. Based in Arizona, Hospice of the Valley (HOV) is one of the largest providers of hospice care in the United States. HOV recognized it had a burgeoning population in need of palliative care, those who are expected to live longer than six months but fewer than two years. In order to care for this group, HOV developed a new organization, Arizona Palliative Home Care (AZPHC). As part of this effort, Lee Ann Black, previous palliative care director for HOV, outfitted social workers and



the wrong patient, tPA can cause excessive bleeding and result in serious harm. In many smaller centers, emergency room physicians won't risk administering the drug without supervision from a more experienced professional, and transferring the patient to a stroke center may not be an option.

Telemedicine enables remote hub specialists to connect to a large number of spoke hospitals. The hub expert can quickly review the CT scan of the patient's head, examine the patient via video

and advise the local physician on the appropriate administration of tPA.

Numerous studies have shown a marked increase in tPA administration because of these types of collaborative partnerships, resulting in better short-term and long-term patient outcomes. The telemedicine connection brings advantages even when tPA is not administered: If the remote expert deems no advanced treatment is warranted, the patient and family are reassured

nurses with iPads. During home visits, they initiated virtual visits by AZPHC physicians for patient management. Over 12 months these visits reduced ER visits by 52 percent and hospital readmissions by 57 percent. The AZPHC program has become a successful part of per-member, per-month contracting with the payers for AZPHC.

Credentials: Antiquated and somewhat monopolistic state medical boards present another barrier in telemedicine. Currently, physician practice is confined within the state border where they are licensed. Although this is consistent with states' rights, it seems a bit artificial that a competent physician in one state is somehow not competent in a neighboring one. State medical boards are under pressure to revise the rules and regulations limiting trans-border care.

A separate but related issue of hospital credentialing recently has undergone modification. Previously, physicians had to obtain credentialing at every hospital where they practiced within a telemedicine network. A change in the rules and regulations now allows offsites to take responsibility for credentialing and reporting of the entire network. However, this creates a new form of complexity for medical staff offices to now keep track of relationships on a physician-by-physician basis throughout the network. It becomes the responsibility of the medical provider

to report adverse outcomes at one facility to all facilities in the physician's network. Technology provides the tools, but systemic changes must be created to better manage these relationships.

Reimbursement: It is clear that most states are moving toward parity where telemedicine visits are reimbursed on an equal basis with in-person visits. The same dialogue is occurring at the federal level. Earlier this year, the Centers for Medicare and Medicaid Services expanded the number of conditions and

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geographies covered for telemedicine visits. These changes are expected to continue. In fact, with confusing state-by-state analysis and changing federal regulations, it limits effective telemedicine business planning for many health care organizations. Some organizations are simply billing the insurer, bumping up against the limits of the current interpretation. Their position is that the clinical efficiencies are compelling enough to deal with some of the expected denials.

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Medicare in terms of evolving with the new regulations and technology. Currently, Medicaid programs have begun to recognize telemedicine as an opportunity for more frequent visits between their recipients and care providers, which enables them to reduce the overall cost of care. This is particularly true for telepsychiatry where Medicaid has broadly approved the use of telemedicine.

Private payers also are moving to change their reimbursement regulations for telemedicine. Employer-based care is adopting strategies to allow employees to see convenient care providers over whatever technology they find most agreeable, inclusive of telemedicine, since employees typically don't want to miss work to see a physician. While physical exams should not be thrown away completely, most of the time a problem can be solved through conversation around how a patient is monitoring a condition, and telemedicine can add significant value.

The hope is for Medicaid and the private sector to inspire movement to a transparent system in which both in-person and virtual visits are treated the same. In terms of truly transparent collaborative care, the prefix "tele" is removed from telemedicine with the universal understanding that the ultimate goal is efficient patient care with measurable results.

that their local provider is giving them the best possible care.

This telemedicine stroke care model presents a dual advantage of avoiding expensive transfer costs as well as offering additional revenue for the local hospital. Rural hospitals face unique branding issues in terms of health care. Community residents often perceive their local care provider as a good source of primary care, but not sufficient for serious chronic issues such as cancer, neurological disorders or heart conditions. Many pass up the local clinic in favor of urban hubs, leav-

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ing the rural hospital with low-reimbursing goods and services.

For urban hubs, a telemedicine program can create a fisherman's net for referrals. Telestroke programs, for example, help identify not only stroke patients, but the even greater number of patients whose symptoms clinically mimic stroke or indicate an acute neurological change, such as epilepsy, brain tumors and intracranial hemorrhages. Many of these conditions require treatment in an urban center focused on a specialty. By bringing urban specialists together with general practitioners at outlying primary care centers, telestroke programs provide a win-win-win for patients, community hospitals and specialty facilities.³

To be sure, the opportunities for urban-rural partnerships extend beyond care for stroke patients. Andrew Watson, MD, at the University of Pittsburgh Medical Center, set up a referral network for patients with colorectal cancer. In leveraging telemedicine, both the university and the rural provider were able to show positive revenue, and patients were able to avoid significant travel, receiving routine follow-ups locally and visiting the university only for tertiary services.⁴

Also, the advantage that telemedicine presents for increasing referral patterns is not limited to rural areas. It is not unusual for a downtown hos-

pital — many of which struggle with a poor local payer mix — to partner with a large employer to place a brick-and-mortar clinic and provider on the business campus to improve employee access to care. However, typically the arrangement offers employees only a primary care provider. Telemedicine can give employees access to all the providers in an accountable care network, thus extending primary care at the clinic through the full spectrum of specialty services. The employee can decide to meet the care provider in a space set up for telemedicine or, alternatively, schedule a virtual follow-up visit using his or her own desktop computer to meet with a host of providers.

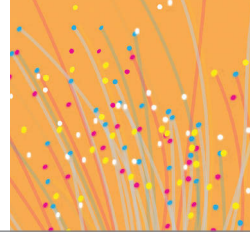
Such an arrangement benefits providers, payers and patients, for, to truly show value, telemedicine must become a tool for managing the continuum of care, not just for acute transactions. A full-spectrum telemedicine program allows integration into both inpatient and outpatient electronic medical records, and employer-based care should be an extension of a larger care delivery system rather than be a separate, siloed event. As such, employer-based telemedicine opportunities need to be considered in the context of a broader collaboration strategy.

REDUCING INTERNAL COSTS

Historically, telemedicine networks that reach outside of their network to experts, as in telestroke, have received the lion's share of attention. However there is an even greater opportunity to leverage technology for internal opportunities.

The continuum of care can be thought of as a series of "wait states." The patient arrives in the emergency room and waits. From check-in, to nurse, to physician and finally to specialist, it often takes hours of waiting before a patient receives a consultation, diagnosis and planned course of treatment. The wait time may be longer in university settings with training programs, where residents must consult with attending physicians before deciding on a care plan. A phone call may not be enough to make this decision, and often the patient must wait for the attending physician or specialist to arrive.

Once admitted to the hospital, the patient will see a series of specialists who all participate in his or her care. These care providers often are not immediately available — so there is another wait.



In order to do something about all these wait states, consider the broader definition of collaborative care — it centers on effective and timely communication. Telemedicine often is thought of as the use of video-based technologies. However, the vast majority of collaborative communication in a hospital is, and will continue to be, via text and voice.

Medicine is one of the last businesses to use the pager as a central form of communication, but it lacks accessible reporting tools for transparency and accountability — the person who sends the page doesn't know that the receiver actually saw it, and there is no time stamp to document the response for overall accountability.

St. Joseph's Hospital and Medical Center in Phoenix, a Dignity Health hospital, uses a cloud-based system for communication. Clinicians' calendars are hosted on a secure website, and the hospital unit clerk simply clicks on the person's name or role to send a secure message to his or her pager, cell phone or specified call center. This system has the ability to document when the call was made, when it was received and when it was acknowledged. If the call is not acknowledged within a specified amount of time, the message can then pass automatically to a backup physician. This system allows for improved communication and accountability for the entire care team and helps cut down the wait states.

Notably, this transition has not been easy. Even with physicians' preferences taken into account for the mode of communicating with them (secure text, email, phone or call center), there still is resistance. Many physicians do not want to be reached directly by nurses or unit clerks. Given their workload, this becomes understandable. If the physician is in the middle of a critical patient-care episode, he or she may not be able to respond to a semi-critical event on the floor — hence the reason for an intermediary, a call center that buffers the physician from some communications. Better role-based communication methods are being developed to help overcome these barriers.

If the desired product is the patient's return to wellness, hospital admissions are a poorly functioning assembly line, and each consultation — and each wait — factors into the calculated cost to do business. This is a sensitive issue for hospitals, because payments for care are now bun-

dled. There is a limited number of days allotted to manage a condition. Hospitals are under constant pressure to reduce patient length of stay. As the average length of stay increases, revenue per bed declines and costs for nursing staff and ancillary services increase.

INPATIENT BEHAVIORAL HEALTH

Behavioral health — telepsychiatry — typically is thought of as an outpatient opportunity for telemedicine. In fact, the University of Missouri claims that 80 percent of all telemedicine transactions are related to behavioral health issues.⁵ However, there is a significant need for inpatient telepsychiatry services as well.

Psychiatric patients often have multiple medical comorbidities. Our health care system is poorly designed to accommodate patients with concurrent medical and psychiatric problems. Facilities are typically either psychiatric or medical in nature; all hospitals have a need for additional psychiatric professionals to assist in the care of their patients. Without these experts, psychiatric patients often languish in emergency rooms or potentially insecure units until they can be placed in more appropriate locations.

Keeping psychiatric patients in the hospital often requires one-on-one nursing, which can be an extremely expensive cost of care that isn't billable to the insurer. Although telemedicine can't solve the shortage of placement facilities for the mentally ill, it can address some of the friction in

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the journey these patients have while they are in the hospital. Even converting a patient from involuntary to a voluntary admission status for psychiatric care via assistance from a remote expert can result in considerable savings for the organization.

PATIENT SATISFACTION

The third and final business driver for most hospitals is patient satisfaction. Patient satisfaction typically is measured by a patient survey known as

the HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) survey, which is conducted six to eight weeks after a patient's discharge from a hospital. First and foremost, this is a federally mandated survey. However, it is also a way for the hospital to get patient feedback on the care delivered. When hospitals boast, "We're ranked #1 in patient care," they're typically referring to HCAHPS measures. Moreover, the hospital CEO, CFO and other high-ranking corporate leaders often have bonuses tagged to patient satisfaction metrics.

In our rushed, technology-driven world, it is not surprising that among the most common complaints from patients involves feeling that they didn't know or see who provided their care. In both rural and urban emergency rooms across the country, for example, an ED physician frequently will call a specialist to review a patient's care and, thanks to today's electronic medical record systems, the specialist can log on and prescribe medication before ever laying eyes on the patient.

Telemedicine offers an opportunity for the doctor at a distance to introduce himself to patients via video link before prescribing medication. The benefits are twofold: The specialist can "see" the patient and observe the patient's breathing pattern or general state of distress. An audio call does not have the ability to capture this level of observable patient data. For the patient, there is

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an opportunity to look into the eyes of the person providing care to get a sense of trust and reassurance that this expert will take good care of them. They say that a picture is worth a thousand words, but when it comes to the potential of collaborative care, it might just be worth a thousand lives.

Opportunities to improve the doctor-patient relationship (the primary determinant of patient satisfaction) and the overall patient experience extend far beyond the emergency room. The evaluation of care often is as much about the family as the patient, and telemedicine can foster important communication. A well-informed and engaged family can support the patient through periods of

stress and enable good communication with providers, while families that are distant, both physically and mentally, can become adversarial, driving unnecessary care and occasionally pursuing legal recourse when they feel their loved one was mistreated.

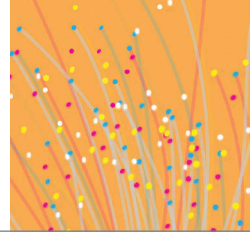
BARRIERS

Beyond reimbursement and state licensure issues, barriers to telemedicine adoption include the technology itself, the workflow and resistance to change.

Telemedicine has come a long way in the last few years. There has been a migration from fixed endpoints and expensive video conferencing rooms to the current state in which telemedicine encounters can be carried out on devices on a desk or in a pocket. However, the technology needs to adapt further to the specific roles and responsibilities of the various health care providers within the system.

For example, physicians are typically mobile, they move from clinic to hospital to operating room. Nurses and hospital unit clerks tend to work in defined desktop locations. Therefore, to be useful, applications must function equally well on mobile hardware as well as on the desktop. Many secure messaging platforms, however, are designed strictly for mobile devices, while various departments often deploy their own desktop solution for collaboration — the technology vendor used for obstetrics likely will be different from psychiatry and different for outpatient visits.

What's more, we are headed to a world where telemedicine/collaboration will be an integral part of every clinic and every hospital room via the wall monitors that currently are limited to television. Imagine patients calling a nurse via a wall monitor and then speaking virtually with their care provider or family as though they were standing with them in the room. This scenario will require the current wall-mounted monitors to be collaboration-enabled. Although this may seem futuristic, the Mercy system (mercy.net), based in St. Louis, already is moving to incorporate this into their facilities. (See story on page 13.) In the move from cart to wall, there will be additional technology that will add value to how the wall monitor is being utilized in care, but the ultimate goal should be collaboration across departments. For example, the major outpatient



and inpatient electronic medical record vendors are beginning to offer video as part of their software. Video, however, does not equal collaboration across departments, much less across the

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continuum of care, and most vendors are currently focused on a piece of the puzzle — secure messaging, or biometric monitoring, or virtual urgent care — rather than an end-to-end collaboration platform.

BRINGING PEOPLE TOGETHER

Most organizations are beginning to think about telemedicine as a potential tool to improve care and lower costs. Rather than focus on the technology, however, it is better to visualize opportunities that bring people together in what are deemed to be business imperatives.

Some of these are obvious case-based clinical revenues: For example, the cost center for psychiatric one-on-one coverage within the hospital might be the first opportunity to deploy the technology. Alternatively, if the business climate in the community is asking for employer-based care, a solution for that problem has to be the higher priority.

Then, it is important to look within the organization to find clinician champions who are looking to adopt new technologies to better care for their patients. Perhaps the most innovative program I have heard of to date comes from the Mercy system, which elected to incentivize all of their physicians at one of their facilities to each come up with a telemedicine pilot program within a 12-month period. Toward the end of the incentive period, they had a plethora of proposals for telemedicine. This has fundamentally changed the culture of the organization. Once physicians got out of their comfort zone, they found that telemedicine could significantly add value to their practice.

SPACES OF CARE

As a patient moves from home to hospital to convalescence or nursing home, there is a loose rela-

tionship between each of these spaces for care. For example, it is mandated that a patient be given a list of three placement facilities on discharge from the hospital. These nursing homes are relatively similar in terms of the level of care they provide, and many times they send a patient back to the hospital for a condition that could be treated locally if there were a clinician available. The decision for hospital readmission is made based on telephone conversations between an in-house provider and a physician.

Telemedicine blends spaces of care by enabling care collaboration for our elderly that not only provides a higher level of service, but is more cost-effective. The middle-of-the-night urinary tract infection, pneumonia or bed sore case is treatable if the clinician can see — rather than simply hear about — the patient.

BEHAVIORAL HEALTH

For the foreseeable future, behavioral health will remain one of the major focuses of telemedicine. America currently is facing a national health care crisis related to behavioral health, which is among the most poorly reimbursed medical specialties today. This has resulted in a limited number of behavioral health specialists. Because of this, patients with comorbidity issues often come to a halt within the medical system as hospitals struggle to find ways to address the mental illness aspect of their condition. As such, behavioral health likely will be one of the first areas within telemedicine to adopt what is called a health care pyramid, in which the roles and responsibilities of health care providers will change dramatically. In behavioral health, for example, lower-cost providers such as licensed clinical social workers will form the base of the pyramid. They will be monitored by nurse practitioners, who in turn will be supervised by licensed psychiatrists.

This model will be a fundamental shift for many high-level care providers who view their traditional roles as patient-facing. As we move into the world where top-tier specialists become responsible for managing care providers using telemedicine tools across disparate geographies, the provider of tomorrow will need managerial skills that currently are not being taught in medical and nursing schools. Incorporating such skills into the education system is key to successfully supporting new roles moving forward.

Health care systems should look to have someone within their organization who, every day, wakes up thinking about how to enable collaboration.

THE FINAL FRONTIER

Bringing telemedicine into the home is the final frontier. However, the technology has a long way to go before this can become the standard method of practice. With so many opportunities both in-hospital and with external partnerships, there is a lot to do in the interim.

Health care systems should look to have someone within their organization who, every day, wakes up thinking about how to enable collaboration. This requires a broad strategy including text, voice and video. Consideration should include both external, traditional opportunities, as well as cases of internal use to improve care delivery. What's more, chief information officers ultimately must advocate for a single telehealth platform that will make collaboration possible across systems. The best technology in the world fails if the people and processes using the technology are not fully considered.

Experts generally have offered three reasons telehealth has lagged: barriers to reimbursement; licensure requirements limiting practice across state lines; and lack of widespread clinician and administrative buy-in. However, I believe there is a far more fundamental issue — telemedicine has been a *nice to have* — not a *have to have*. For telemedicine's long-term success, the technology must be aligned with core health care system strategies for both patient care and business growth, and it must become a tool for managing

the continuum rather than for acute transactions.

The future is clear, and it is a business imperative: Those who do not begin to look at collaborative care strategies using technology inevitably will become less and less competitive in the marketplace.

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NOTES

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