

Telemedicine and Health Care IT: What's Coming Next

Telemedicine adoption is growing rapidly. And with that growth come both challenges and new developments that are creating new opportunities for partners serving the health care market.

By Kevin Casey

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KEVIN CASEY writes about technology and business for a wide variety of publications and companies. He won an Azbee Award, given by the American Society of Business Publication Editors, for his InformationWeek. com story, "Are You Too Old for IT?" He's a former community choice honoree in the Small Business Influencer Awards.

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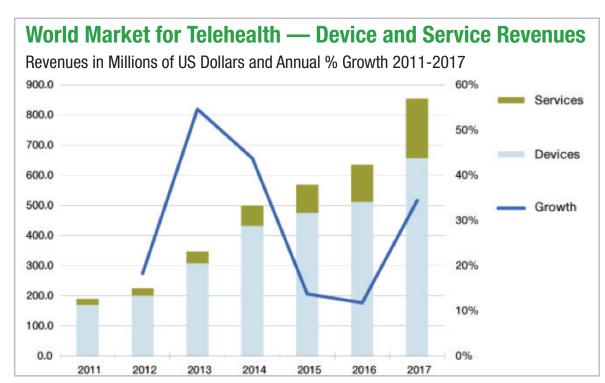
ELEMEDICINE HAS LONG BEEN A BUZZY topic in health care — and for the channel partners that deliver IT services to health care providers.

In fact, it's already old hat: More than half of U.S. hospitals use some form of telemedicine, according to the American Telemedicine Association, which also says that nearly 1 million Americans wear a remote heart monitor and that, way back in 2011, the Veterans Health Administration delivered more than 300,000 remote consultations via telemedicine.

Estimates of market size, meanwhile, vary by source and other variables, but suffice it to say that just about everyone pegs telemedicine as a multibillion-dollar field.

This isn't new terrain, per se, but it is still rapidly growing. Yet growing buzz and adoption haven't always translated to improved outcomes for providers or patients. As with any major technology-fueled evolution, there are ongoing challenges and pain points for providers, customers and the IT providers that enable telemedicine. But hold that thought for a moment.

First, a note about terminology: The ATA calls telemedicine "the remote delivery of health care services and clinical information using



Source: IHS InMedia

telecommunications technology. This includes a wide array of clinical services using internet, wireless, satellite and telephone media." However, there's **no** industry consensus on what the term should be. "Telemedicine" has been around awhile, so it tends to be the most widely recognized. Some experts, however, say "telehealth" is

the better umbrella term (the ATA uses the terms interchangeably). Then there are more specific categories — and terms that represent them — such as "telemental health."

In this Channel Partners Report, we will use "telemedicine" as an encompassing term while we examine some of the latest trends and

developments in how providers, patients and other stakeholders engage and interact.

While we explore the latest and greatest developments in telemedicine that channel partners need to follow, we'll also consider how partners can best pursue the opportunities — and solve the problems — that telemedicine creates so that their health care customers can deliver the best possible care and experiences.

4 Telemedicine Trends to Watch

There are a number of pain points in telemedicine,

but fortunately partners can help ease them a good business model if ever there was one. Before addressing those pain points, however, there are some key developments that will likely impact telemedicine going forward that must be considered first. They are worth paying attention to because they will exacerbate those pain points and increase the need for expert partners that solve problems with IT.

1. Expanding "B2C" and "B2B" adoption

J. Gary Seay, principal at BrightWork Advisory

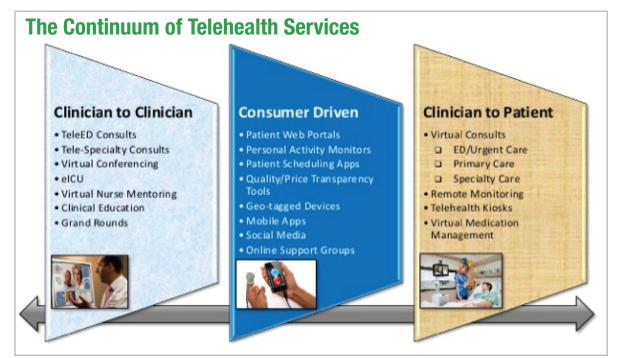
and former CIO of Community Health Systems, points to growing telemedicine adoption as one of the overarching trends. Simply put, telemedicine is going to become increasingly common. He breaks that into two types of adoption: business to consumer (B2C) and business to business (B2B).

By B2C, Seay is referring to provider-patient interactions delivered digitally. The next phases of growth in this category will be fueled by maturing technology, increasing technical competence on the part of doctors and other providers (thanks to **meaningful use** and the electronic health records boom), and what Seay sees as "broad acceptance of tech supported service delivery across our culture."

Seay also sees growing demand for telemedicine driven by hospital consolidation in urban centers and a decline in smaller, community hospitals.

"There is more consumer demand for convenient accessibility," he says. "Telemedicine can help make critical services available locally while maintaining quality standards of care."

The B2B category is actually more mature than B2C today, according to Seay. Here, B2B refers to provider-to-provider interactions, such as one doctor seeking a second opinion from another doctor; remote support; or any other type of collaboration between health care practitioners and organizations. Seay similarly



channelpartnersonline.com Source: Schumachergroup

expects demand for this form of telemedicine to continue on an upward trajectory.

2. Artificial intelligence (AI) and machine learning growth

Al and machine learning are two of the hotterburning topics in IT these days; health care settings are no exception.

Seay's prediction: "Al and machine learning creep into many aspects of clinical and business operations. Coding, billing, charting, treatment planning, post-discharge patient support and imaging analysis are all ripe for machine intelligence enhanced support."

He's not alone. Gregory Morawietz, CIO of managed services provider Single Point of Contact, also expects AI and machine learning to play an increasing role in telemedicine and other health care IT arenas.

"Al and machine learning are starting to be seen in endpoint security and other applications, so there will be spillover into health care tech," Morawietz says. "I see a lot of Al-based initiatives in the future in the health care industry, data mining being one example."

3. New virtual reality (VR) use cases

Morawietz also predicts that VR will play a key role in the next phases of telemedicine, enabling more robust experiences and outcomes for remote service delivery. (Read our related report, Ready Partner One: AR/VR Delivers Profits, **Customer Benefits.**)

"Doctors are pushing the boundaries of technology with VR apps that help them see things in a VR-based environment," he says. "Meeting doctors when you are in secluded or impacted areas can be hard, but when you use VR and other communications methods it bridges the gap."

4. The rise of precision medicine

We'll hear more and more about the burgeoning field of precision medicine going forward, according to Seay, and this will intersect with telemedicine practices. He sees accelerated progress in precision medicine being driven by the aforementioned new developments in AI and machine learning in health care settings.

"Al-enhanced analysis and pattern recognition applied to 'Really Big Patient Data' - growing comprehensive electronic medical record data for entire medical cases, eventually combined with genetic data - can discover medications and treatment regimens that prove consistently effective for patients with a common set of personal characteristics and genetic/biochemical research into cause and effect at cellular levels." Seay explains.

If that sounds daunting, well, it is and we mere mortals will need some help from technology.

"[As] more precise clinical guidance is discovered, practicing clinicians will need help from Al and machine learning to apply it to patients," Seay says.

4 Telemedicine Pain Points Partners Can Address

Channel partners are ultimately in the business of solving business problems with technology; in this sense, health care is no different from any other vertical market. There are common causes of suboptimal telemedicine experiences that partners are well-positioned to address.

1. Weak infrastructure

Successful telemedicine outcomes depend upon on a strong infrastructure. The good news is that high-quality, high-speed broadband access is better than ever, not just for health care businesses but for patients via fiber to the home and other high-speed connections. Wireless networks, too, continue to get faster, which is important for patients logging in via mobile devices.

But that's not a guarantee of a healthy infrastructure at your health care client sites.

"Your backbone or your infrastructure needs to be solid," Morawietz says. "If you don't have connectivity, robust networking and support, then you are going to have issues."

2. Too much choice

As telemedicine and other facets of health care IT have grown, so too has the menu of technology choices, particularly as vendors realize the outsized market opportunities. Choice can be good, but it comes with a downside, especially for health care organizations that lack the technical expertise and resources to make sense of their options. That's where you come in.

"Technology adoption and integration will continue to be a challenge for health care simply due to the overwhelming choices," says John Quinn, vice president of Channels, Americas at Digital Guardian. "The pressures on IT will continue to come from all directions — internal and external — and the lack of resources to assist in prioritization, implementation and, ultimately, long-term support is what appears will be the biggest pain point for health care providers."

3. Lack of continuity in patient care

"A lot of the current issues with telemedicine today are due to lack of care continuity. With a virtual visit, a physician won't be able to ask some of the questions they usually might in person," says Sas Ponnapalli, CEO at Beam Health Group. "Health care providers can mitigate potential issues by implementing follow-up policies and protocols to deal with any potential problems."

IF YOU THINK HIPAA IS JUST A HEALTHCARE INDUSTRY ISSUE, THINK AGAIN

Issues arise when organizations conclude that because they do not explicitly fall into one of the covered entity categories as defined by HIPAA, they do not need to concern themselves with HIPAA compliance.

BUSINESS ASSOCIATES AND THE CONDUIT EXCEPTION RULE

Generally, any organization or individual that creates, receives, maintains or transmits PHI in the course of performing services on behalf of the covered entity qualifies as a BA

THIS GUIDE EXISTS TO SHED SOME LIGHT ON SOME OF THE 'GRAY AREAS' OF HIPAA (THE HEALTH INSURANCE PORTABILITY AND ACCOUNTABILITY ACT).

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WHEN IS PHI NOT PHI?

Once information is de-identified, it is no longer considered PHI, and is therefore no longer covered by the HIPAA privacy rule.

THE DIFFERING PENALTIES FOR NONCOMPLIANCE

Failure to comply with HIPAA can result in both civil and criminal penalties. Civil penalties, which are enforced by OCR, are monetary and vary from \$100 to \$1.5 million, while criminal penalties, enforced by the U.S. Department of Justice, can result in imprisonment for 10 years or more.

ADDRESSABLE HIPAA SAFEGUARDS ARE NOT OPTIONAL

The three sets of safeguards that define security standards to help ensure the confidentiality of patient information and prevent a breach of PHI are physical, administrative, and technical.

Partners can help by ensuring their health care clients are making full use of their digital portfolio, not just in table-stakes arenas like mobile apps or website experiences but also in some of the emerging technologies like VR or Al. Consider, for example, how a virtual or digital assistant app could play a role in patient interactions.

4. Compliance and security headaches

Health care settings have a well-known compliance burden, with the Health Insurance Portability and Accountability Act (HIPAA) and other regulations requiring considerable diligence in how massive amounts of data get handled. That's an ongoing area of need for most health care organizations. Quinn notes, too, that the focus on compliance sometimes pushes the security to the background. The two may be related, but they're not one and the same.

"While compliance is essential and determines priority, it does not equate to being secure," he says.

Security tools that are baked into part of a larger solution are key; they're even more appealing when they're highly automated or otherwise require less ongoing management, Quinn said. (As Morawietz notes above, expect AI and machine learning to become a growing part of IT security in general.)

"Customers will be looking for cyber-security solutions that can be implemented and managed with limited resources, and more importantly, show measurable results quickly to demonstrate progress," Quinn says. "Resource pressures will force a closer look at solutions capable of addressing more than one organizational need."

4 Ways Partners Can Improve Telemedicine Outcomes

Channel partners can play a key role in shaping better telemedicine experiences in this expanding field by actively addressing those pain points. Successful partners will be problem solvers, not just the folks that set up the hardware and install the software.

To that end, we asked our experts to identify some specific ways of doing so. Here's what they had to say:

1. Build "semi-bulletproof" systems.

Partners need to have a relentless focus on delivering and maintaining what Morawietz calls "semi-bulletproof systems," from connectivity to networking to redundancy and support. The phrase reflects that there's no such thing as a fail-proof system, but that doesn't mean you shouldn't try.

"Nothing is going to be perfect, but you can strive to get as close to perfect as you can," Morawietz says. "Exercise change control methodologies and frequent maintenance and upgrades to keep everything working and flowing as well."

2. Develop a deep(er) understanding of health care.

When you hear the term "vertical industry," health care almost always follows as an example. One reason, aside from the sheer size of the sector, is that health care has such specific needs and demands.

Telemedicine is ripe with opportunity for partners that can truly understand and specialize in the health care business. (Read our related report: Sky's the Limit: 6 Ways to Become a Vertical Industry Specialist.) Before a partner can help clients navigate overwhelming technology choices, for example, it needs to understand the practical consequences of those choices in a health care context.

Developing that kind of inside knowledge, or bringing in someone else who already has it, will help a partner evolve from mere IT provider into a "value creator" for health care clients. says Christian Milaster, founder and principal at Ingenium Healthcare Advisors. As Milaster notes, that expertise then enables your sales pitch to evolve from "let us sell you some technology" to "let us help you get the most value out of technology."

"In order to implement any kind of technology in health care, you need first and foremost [to build] clinical expertise, understand clinical workflows and have experience in managing organizational change in an industry where the producers — the physicians — are better-educated than anyone

else," Milaster says. "Channel partners need to offer that expertise."

3. Help people get help.

Partners and IT pros need to understand that doctors, nurses and other health care practitioners aren't necessarily born technologists. Sure, sea changes such as electronic health records have required the health care industry to step up its technology game. But health care professionals are typically focused on health care outcomes, not technology outcomes.

When things do go wrong, people need to be able to get help. Communication is key. Partners that recognize and enable this deliver much more value than those that just implement the system and move on to the next job.

"You don't fix negative outcomes by throwing more or different technology at problems. You do that by improving communications," Morawietz says. "Most issues arise when communication is poor, so you need to take steps to improve it. Chat, surveys and helpdesk services should always be available so that people can get the help they need or understand. Improve communications and make more options for support available."

4. Help people — not technology make choices that achieve desired outcomes.

Partners are well-situated to enable health care

practitioners to use technology to drive the best outcomes, instead of simply forcing technology on people. The latter is a common IT pitfall that breeds all manner of challenges, including stoking people's natural resistance to change.

"When it comes to telemedicine, [success depends upon the realization that this is not about technology and can't be simply pawned off to the IT department — which is later then made the scapegoat," Milaster says.

As telemedicine and health care IT in general continue to grow and evolve, it's the people delivering and receiving health care who matter most. The best partners will be those that recognize and enable that reality, especially as technical trends like those we outlined begin to seriously impact health care settings.

"It's the people using the technologies that must be put in charge — and coached [or] helped by outside experts — [of] determining how that technology should be put to use," Milaster says.

Successful partners will see telemedicine from the people perspective first and the technical perspective second.

"It's the investment in soft resources, not hard resources, that [is] necessary to help health care organizations to take advantage of the latest technical advances," Milaster says.



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