Connecting with cable: smart solutions for healthcare IT

By Stewart Schley

Armed with modernized, high-capacity networks backed by billions of dollars of investment, cable companies have emerged as go-to resources for a wide variety of mission-critical healthcare IT and telecommunications applications. From large, multi-site health care organizations to independent practices, healthcare providers are discovering the pathway to successful technology and networking implementations can be achieved through their cable provider.

They're not alone. In the business Ethernet category, three of the top nine U.S. providers are cable companies, and cable companies continue to gain market share overall, according to a 2013 industry survey from researcher Vertical Systems Group. "Cable companies have developed a winning formula for the U.S. business Ethernet market," said Rick Malone, principal at Vertical Systems Group[1]. "They are successfully leveraging their on-net fiber footprints to offer aggressive pricing and rapid service provisioning."

Within this shifting business telecommunications marketplace, healthcare – and the healthcare industry's growing appetite for bandwidth, mobility and data security – is a major focus. Cable companies are aligning their networks and service capabilities with the needs of healthcare providers to help deliver next-generation levels of care, and the infrastructures that support them. And although cable-powered Ethernet is certainly a key component of the cable healthcare offering, cable's role in modernized healthcare IT extends beyond bandwidth and transport solutions.

Patient experience expertise

Healthcare providers are turning to cable companies to improve the patient experience in a variety of ways, ranging from in-room video entertainment to Wi-Fi networks in waiting rooms. Cable's extensive presence in the residential broadband market – the majority of U.S. homes with high-speed Internet service choose to get it from their local cable company – also positions the industry well for the forthcoming revolution in personalized, mobile healthcare. Cable customers have come to rely on their cable broadband services to connect a rising number of in-home and out-of-home devices.

In addition, cable brings a welcome dose of availability, in-person consultation and accountability to the competitive telecom world.

Imaging and transport

Another important focus area for cable is electronic patient records and medical imaging, the latter reflecting recognition that visual media – high-resolution imagery and video – have become fundamental tools in the evolving medical field.

As Alexandra Sewell, Comcast Business Executive Director of Emerging Markets, wrote for *Electronic Health Reporter* in April 2014, "Building a unified network infrastructure across multiple locations enables continuity of patient care, with providers having 'anytime/anywhere' access to patients' electronic health and medical imaging records." [2]

Here are some snapshots of how cable companies are helping healthcare organizations modernize in the area of imaging:

- Charter Communications recently worked with Oregon Health Network to complete an 87-mile fiber network running from Grants Pass, Oregon to Crescent City, California. This broadband pipeline allows technicians to send a magnetic resonance imaging (MRI) X-ray from Oregon to Sutter Coast hospital in Crescent City in less than a second.

- A rural health clinic in Oklahoma uses cable services from Cox Communications to support videoconferencing with health specialists in Oklahoma City. A stroke victim became the first patient to benefit from the system after it was installed in 2009.

- Time Warner Cable has begun to deliver video offerings to healthcare facilities, including access to training and patient education through its video-on-demand service, indicating that there is growing demand for healthcare-specific video delivery.

Cable companies recognize the critical need for security and reliability in the emerging imaging category. "The sheer size and private nature of EHR and imaging files alone requires not only a secure network (internally and externally), but also a scalable one, as more and more records become digitized and video applications become more prevalent," wrote Comcast's Sewell.

Video advancements for healthcare

Innovation and advancements also are happening in the field of patient experience, with cable companies working to develop customized solutions for in-room video services that contribute to patient satisfaction. One example: Time Warner Cable is among cable companies that have taken the innovation lead through a mountable "set back" box that supports a new HD video service customized for healthcare facilities and their patients.

Highlights of the service include more than 100 HD television channels; a large library of on-demand content; DVR-like capabilities (live TV pause, fast-forward, rewind); interfaces with most bedside pillow speakers; and an antimicrobial remote control.

This particular product advancement provides another strategic tool with which to serve the healthcare industry. The synergies that exist between emerging cable technologies and healthcare-facility needs have taken the conversation to an entirely new level, with cable positioned strongly for future growth.

Healthcare IT survey findings

Research commissioned in 2013 by the cable industry association CTAM and performed by HIMSS Analytics showed that many hospitals, clinics, and physicians' offices lack the IT infrastructure necessary to support their goals for improved patient comfort and care.

The study findings were eye-opening: The top strategic priorities for healthcare IT departments often don't match up with the level of support currently being used in-house, including the ability to digitize medical records and enable more information exchange and collaboration. This is where the cable industry is well-suited for serious business gains, with a proven ability to provide consistently reliable and secure connectivity in commercial healthcare environments, even under the most trying conditions.

There are few better examples than that of the Kings Harbor Multicare Center in the Bronx, N.Y., which was hit hard by Hurricane Sandy in 2012. For a full week the organization was without power and had to rely on backup generators. The Lightpath telecommunications network provided by the area's largest cable company, Cablevision Systems Corp., remained operating for the duration of the power outage, enabling Kings Harbor to communicate throughout the storm and continue providing care.

"We are so pleased with how our network performed during and in the aftermath of the storm," said Kings Harbor CIO, Kenneth Scharf. "Additionally, even though our network was up, we were still getting proactive calls from Lightpath asking if we had everything we needed. Our relationship with the company is unlike any we've had with a utilities provider."

Beyond providing reliable and redundant network connectivity, cable is working to satisfy rising needs among healthcare providers for overall expansion of their communications and data capabilities. The HIMSS study found nearly three-quarters of respondents are planning some type of activity in at least one of the telecommunications areas tracked in the report. The top three areas of focus identified by respondents were expanding Internet, network, and Wi-Fi services. Within this trio, Internet (42 percent) and network (27 percent) services are two of the top areas in which respondents said they're willing to consider use of cable technology.

This increasing awareness and consideration of cable as a networking and IT solutions resource reflects three broad attributes that differentiate the cable industry from other providers:

- **Cable is uniquely capable of ensuring complete health system connectivity.**
- **Cable delivers the total patient experience.**
- **Cable serves the same communities as healthcare companies.**

For these reasons, cable is well-positioned to play a prominent role in the world of healthcare IT and the modernization of healthcare. The path to more mobile, personal and efficient healthcare is well-aligned with cable industry capabilities – giving healthcare IT executives a welcome new choice for infrastructure, applications and localized support.

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[1] http://www.verticalsystems.com/vsglb/2013-u-s-carrier-ethernet-leaderboard/
[2] http://corporate.comcast.com/comcast-voices/comcast-business-built-for-a-new-healthcare-paradigm