C Spire Telehealth

Technology and Healthcare are uniquely linked. From stethoscopes to MRI, from scalpels to image-guided laser treatments, these two giants have always advanced hand in hand. Today, telehealth technology is helping extend the reach of doctors out to even the most remote communities.

We're proud to be a leader in telehealth. No other provider can match our combination of powerful LTE+ wireless network and 6000+ miles of buried fiber optic circuits. Together we provide a reliable, secure, lightspeed, and highly redundant way to remotely manage your patients' health.

c spire
business solutions™

A New Type of Healthcare

Telehealth is one of the fastest growing opportunities in healthcare. It utilizes digital information and communication technologies, such as computers and mobile devices, to connect doctors with patients remotely, allowing them to manage a patient's health in real-time over high speed networks. It enables a wide array of services that are both convenient and improve the quality of life for patients. These are just a few of those services:

E-Visits – Conduct a doctor's appointment online instead of in person.

Using a chat feature, the patient can type in his or her question and the health care provider will review it and send back a response. This could include a prescription for medication, a recommendation for a follow-up appointment or other advice. Visits can also take place in real-time via a video conference. This option is especially convenient for people in rural areas or those without easy access to transportation.

Electronic Personal Health Records (PHR) – Provide patient access to health records over the web.

PHR systems make an individual's health records accessible to him or her at any time through a web-enabled device such as a computer, laptop, tablet, or smartphone. This is especially useful in an emergency, allowing patients to provide emergency personnel vital information such as a disease they're being treated for, medications they take, allergies they have, and how to contact their family doctors.

Mobile Health Apps – Help patients organize and access their medical information.

These digital tools allow patients to store, track, and upload their health records with a mobile device such as a smartphone or tablet. For example, they might monitor and log their glucose levels or blood pressure. This information can then be easily shared with healthcare providers. Some companies provide employees with access to a collection or portal of health care apps as a workplace benefit.

Home Health Monitoring – Connect with patients in their homes, in real-time over the Internet.

Devices such as blood pressure monitors can be connected to the Internet or to video equipment through our fiber optic network, allowing real-time, face-to-face interaction with health care providers. This is particularly useful for patients with chronic diseases as well as those who live in rural areas. It's convenient, eliminates office visits, and increases accessibility to care and consultation.

A New Type of Healthcare
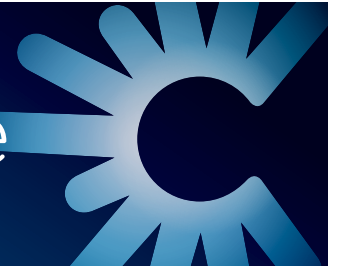
Smart Home – Track a patient's health through automated remote monitoring systems.

Equipping a home with sensors and automated devices allows for early detection of emergencies and promotes safety and quality of life. A smart home might include a sensor system and wearable devices that assess a patient's vitals and activity and initiates a response when necessary. This can enable older adults to live independently rather than in assisted living facilities.

Specialist Access – Collaborate more quickly with virtual access to specialists.

Primary care physicians can take advantage of technology to provide better care to their patients. Through virtual consults, doctors can share X-rays or test results and get input from specialists when they have questions about a particular diagnosis or treatment. The specialist can then respond electronically or request a face-to-face meeting. The specialist can even meet with the patient over video chat.

Keeping Up
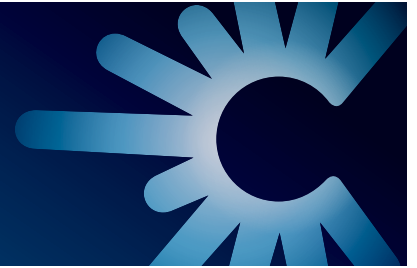
As with any nascent industry, the landscape is constantly in shift as everyone involved discovers best practices and new solutions. Here are a few important developments:

Microscopy and Medical Vision Markets

The flexibility afforded by ultra-fast fiber optic solutions enables an unlimited number of systems to be developed in microscopy and medical vision markets. The global machine vision market is expected to grow at a CAGR of 12.51% from 2014 to 2020; it holds a great potential across the automation industry. Machine Vision systems are used in many applications to provide more accuracy in the manufacturing procedures and for proper inspection in detecting flaws.

Device Makers

For emerging and established markets alike, device makers are increasingly turning to third-party supply chain partners to help simplify an increasingly complex international logistics landscape — and to deliver products more quickly, efficiently, and inexpensively to the healthcare professionals and patients who need them.

Broadband

The ongoing digitalization of medicine has been data-intensive. The improvement of broadband networks makes the transmission of that data possible. Today, transmission lines have enough speed and bandwidth for high-tech sensors to transmit complicated signals almost in real time, for hi-res image files to be shared rapidly over great distances, and for patients to video-chat in high quality. At the same time, buried fiber networks have boosted the redundancy and uptime of telehealth services, making them truly reliable for patients.

Managed Network Services

Many healthcare providers are discovering the advantages of using a Managed Network Services provider that specializes in health IT. These include better cost controls and a more comprehensive and up-to date IT infrastructure that's dependable, stable, and allows medical practices to comply with regulatory compliances.

A Success Story
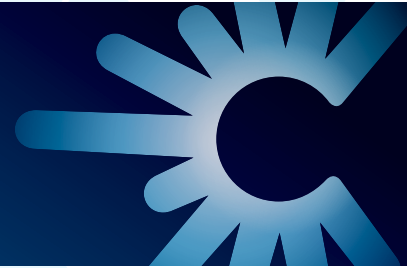
High speed connectivity provides the potential to improve the quality of health care through telehealth and to make it accessible to more people, in more parts of our region. The following is a story about telehealth's role in combating the diabetes crisis in Mississippi.

Managing a Growing Crises with the Diabetes Telehealth Network through a Partnership with the University of Mississippi Medical Center (UMMC) and Intel-GE Care Innovations.

There is a growing diabetes crisis that affects more than 370,000 adults in the state of Mississippi and 29.1 million people nationwide. In 2010, 12.1 percent of adults in the Mississippi Delta, which is among the more rural and impoverished regions in the nation, reported being diagnosed with type 2 diabetes. Of that group, 293 died from complications related to the disease. In 2012, diabetic medical expenses in Mississippi totaled $2.74 billion, according to the American Diabetes Association.

In an effort to positively impact the prevalence and burden of diabetes in Mississippi, Governor Phil Bryant partnered with the University of Mississippi Medical Center (UMMC), North Sunflower Medical Center (NSMC), GE Healthcare, Intel-GE Care Innovations, and C Spire in January of 2014 to provide people with diabetes more consistent and timely access to clinicians through the use of telehealth technology in their homes.

The program, known as the Diabetes Telehealth Network, utilizes a population health-care model that leverages telehealth technology delivered over state-of-the-art fixed and mobile broadband connections, and is designed to improve the health of participants while also reducing the total cost of care. C Spire provides the high-speed mobile broadband communications network needed to support the connection between patients and clinicians in even the most remote parts of Mississippi.

The Diabetes Telehealth Network began recruiting patients in August of 2013 in the Mississippi Delta to participate in an 18-month remote care management program, a concept that fused technology with UMMC specialists to improve patient outcomes in a rural area of the state. The program – a first of its kind nationally – was intended to forge a stronger connection between people with diabetes and clinicians in a way that supports earlier clinical intervention, more effective use of health services, and creates positive health habits and behavior change.

"We know that diabetes is one of the foremost chronic diseases in Mississippi," said Dr. Kristi Henderson, director of telehealth at UMMC. "This program can help improve care coordination and strengthen connections between clinicians and patients, and will serve as a proof of concept as we look to expand this model geographically and to other diseases. Sunflower County has been a pioneer with us for telehealth and often is one of our primary sites in starting up new specialties. We will be able to provide interactive video consults, deliver patient education and engage with the patient daily to meet their needs. Until now, this type of coordinated care that engages the patient in their home setting was simply not an option."

Participants in the Diabetes Telehealth Network were given tablets powered by a Care Innovations telehealth solution that enables health-care providers to remotely manage patients with chronic conditions. With their tablets, patients share what's going on with them physically, emotionally and psychologically through daily health sessions with their clinicians. In addition, the tablets automatically capture their health data, such as weight, blood pressure and glucose levels, and transmit that daily to clinicians.

A Success Story
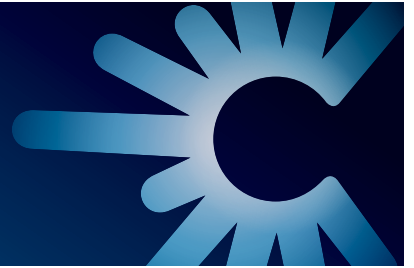
This daily information provided by patients gives clinicians a much more complete view of a patient's health status, permitting earlier, proactive care. Using this technology, clinicians can better engage and educate patients, easily adjust medical care plans, schedule phone calls or video chat with patients.

> We're encouraged by the early reports of progress with this innovative pilot program, which promises to make a real difference in the lives of Mississippians who are dealing with the reality of this chronic disease every day.
>
> Combining the power and ubiquity of our high-speed mobile broadband communications network with technology solutions from Care Innovations that link UMMC specialists and patients in rural areas in new ways will help us deliver more connected, collaborative and cost-effective care.
>
> - **Hu Meena**, *president and CEO of C Spire*

C Spire Business Solutions™ provides a comprehensive, highly secure suite of connectivity solutions for telehealth. This includes point-to-point connections, high speed fiber optic circuits, and 4G LTE wireless networking. C Spire has a long history of working with customers to understand their specific needs and designing a solution to meet them.

Contact us to learn more at **enterprisesales@cspire.com** or call **1.855.CSPIRE2.**