



---

January 1, 2006

## Telemedicine comes of age

By Les Goldberg

When NASA astronauts first ventured into space and their vital signs were monitored by Earth-bound doctors using video conferencing equipment, the term "telemedicine" was born.

However, telemedicine—or telehealth—is beginning to gain overdue respect by the medical community. Healthcare executives, doctors, clinic operators, medical schools and even Corporate America now are closely watching this technology as a feasible way to cut the costs of today's healthcare while treating more patients in the most remote areas.

According to statistics from the American Telemedicine Assn. in Washington, D.C., there are nearly 200 healthcare systems with telehealth networks installed, and countless more are trying them out or using them on a limited basis.

"Telemedicine outreach results in diagnostic changes and treatment regimens that significantly impact the short-term clinical output of patients," states Dr. Thomas Nesbitt in a University of California at Davis study.

Such positive data, along with increased awareness among payers and providers alike about the benefits of telehealth applications, are likely to improve the acceptance and reimbursement for telemedicine, say industry followers.

One person who doesn't need convincing is Dr. Daniel Sterman, whose offices are five blocks away from his patients in the intensive care unit of the University of Pennsylvania Hospital. As part of his rounds, he sits at the controls of the "eICU," a remote monitoring system that allows him to simultaneously track dozens of patients with computers, cameras and audio hookups in four ICUs at the hospital's two facilities.

Aided by real-time data obtained at bedside from a variety of medical monitoring devices, Dr. Sherman can detect worrisome signs, check electronic medical records, consult with nurses and residents in the wards and occasionally zoom in on a patient.

Another convert is Dr. Christopher N. Otis, director of surgical pathology for the Baystate Medical Center in Massachusetts. He uses a teleconsultation application to save time and

allow greater input by his staff of pathologists who, by simultaneously viewing a large plasma screen, can examine cell and tissue sections residing on remote microscopes and offer opinions to colleagues miles away.

Otis also can use his office or home PC to look at slides sent by remote colleagues or the health center's 24 operating rooms.

But the biggest boost to telehealth medicine is coming from rural America. Thanks to advances in telecommunications and video conferencing technologies, healthcare professionals are now able to perform patient exams, exchange critical data, conduct distance learning and utilize networks of physicians, nurses and medical specialists without spending extensive time and money on transportation.

Kurt Grossman, founder and CEO of Doctors Telehealth Network in Newport Beach, Calif., says telemedicine is "filling a widening gap in the healthcare system by bringing doctors, nurses and other medical providers closer to the patients, no matter how far they are apart. It provides a higher level of care to those who might otherwise not receive doctor visits or exams at a remote facility."

He added that telemedicine's primary goals are "to eliminate the need to transport patients for medical exams and procedures and to reduce the costs arising from transportation." His company installs the equipment, trains the doctors and staff at participating health facilities and offers full-time technical support.

Evidence of the growing need for telehealth medicine can be found in the rural outposts of Canada where specialists are far and few between. "If telemedicine were available near my home 125 miles north of Toronto, I would not have had to suffer six weeks of pain," says Donald Mitchell, regarding his knee operation. "There's only one doctor in the area who does that kind of surgery, but he's not a specialist. I don't care where my doctors are. I just need them to care about me."

Making doctors aware of the benefits of telemedicine and relieving their anxieties about the relatively new technology remain the two primary hurdles to faster acceptance. Once that occurs, says Dr. Edward Lemaire, president of the non-profit Telehealth Association of Ontario, more and more doctors will be willing to treat remote patients.

"Right now," he says, "specialized doctors may practice in rural areas for a short time, but they rarely stay. They feel cut off from colleagues, research and professional advancement. Telehealth can change all that."

Another major growth area for telemedicine is closer to home. In fact, according to Jay H. Sanders, MD, president emeritus of the American Telehealth Assn. and president/CEO of the Global Telemedicine Group, the latest word in telehealth is "telehomecare".

"Finally," he says, "there is the beginning of a metamorphosis in which the benefits of

telemedicine are not viewed simply as providing access to care for those who are geographically isolated, but changing the concept of where the exam room has to be: namely where the patient is, not where the healthcare practitioner is."

Dr. Arnold Milstein, a quality expert at a Washington-based consortium of large companies seeking to improve medical quality, sums it up by saying: "The idea that physical presence is necessary for care is going to evaporate."

However, while the need for the technology grows, there are some other issues to be addressed before telemedicine can be fully embraced by healthcare management and physicians. Among them is the lack of reimbursement by public and private payers. According to a recent report by the U.S. Office for the Advance of Telehealth (OAT), the Balanced Budget Act of 1997 expanded coverage options for telemedicine but also included several requirements or conditions that must be met under Medicare and Medicaid rules. Many telemedicine practitioners still find these rules too narrow for most practical purposes.

Legal issues still loom. Consumer use of the Internet for health-related information, purchase of prescription drugs and online consultations are raising new legal and licensure issues. Several states have yet to allow physicians to practice interstate telemedicine and, in the states that do, each has its own regulations and interpretations.

These issues are rapidly being resolved, however, as technology develops much faster than government and regulatory organizations can react. Doctors Telehealth Network and other private companies are rapidly creating new solutions that allow different brands of the same equipment to work together properly, making networking across projects and remote locations easier and more cost-effective.

In the eight years since the Balanced Budget Act was enacted, several reform measures have alleviated some of the concerns among providers by streamlining the discount application process and prompting increased funding.

The general acceptance of telehealth medicine is gaining ground, albeit slowly, across the country, especially in rural areas and in specialized healthcare applications, such as nursing homes, remote clinics and correctional institutions.

Research studies, such as the one taken by the Health and Human Services Department at the University of Oregon, revealed an average "moderate to high satisfaction" response among both patients and physicians who had experiences with telemedicine.

In its report to Congress, the OAT summarized its recommendations for increased federal funding by stating, "reimbursement for both rural and urban patients may be a cost-effective policy decision. Studies show telehomecare can save money by decreasing unnecessary hospital and emergency room admissions. Around the clock monitoring and nurse availability via videoconferencing has helped patients better self-diagnose and maintain drug therapies on schedule."

Telehealth is not yet fully embraced, but it may be the thread that can weave many technology innovations into a fabric strong enough to bridge the future.

Les Goldberg is a freelance journalist based in Southern California.

Advanstar Communications Inc.



2006 Advanstar Communications Inc.. Permission granted for up to 5 copies. All rights reserved.

You may forward this article or get additional permissions by typing [http://license.icopyright.net/3.7353?icx\\_id=283034](http://license.icopyright.net/3.7353?icx_id=283034) into any web browser. Advanstar Communications Inc. and Managed Healthcare Executive logos are registered trademarks of Advanstar Communications Inc. The iCopyright logo is a registered trademark of iCopyright, Inc.