



Healthcare

Daily Use

- Telemedicine
- Telestroke
- Teletrauma

Solution

- Polycom® Practitioner Cart® HDX® mobile healthcare systems
- Polycom desktop video conferencing solutions
- Polycom People+Content™ technology

Results and Benefits

- Able to provide patients and doctors at 14 hospitals with access to stroke specialists
- Enables neurologists specializing in strokes to remotely help ER physicians assess and treat patients in the crucial minutes following an attack
- Since 2007, helped ER physicians assess nearly 400 stroke patients
- Assessments led to treatment of 160 stroke patients with highly effective “clot busting” drugs
- Improving quality of care at smaller hospitals and clinics throughout Western Pennsylvania
- Enabling regional facilities to maintain statewide certification as stroke treatment centers

UPMC Stroke Institute Uses Polycom Telemedicine Network to Save Lives of Patients with No Time to Lose

The University of Pittsburgh Medical Center (UPMC) is the second largest healthcare system in the United States and one of the leading nonprofit healthcare organizations in the country. Like many large healthcare systems, UPMC has worked hard to find ways to offer access to specialty care in the rural and medically underserved regions that surround its headquarters facility in Pittsburgh. For UPMC and the patients it serves, a Polycom-powered telemedicine network is helping provide that access to world-class specialists.

Nowhere is this more evident than in UPMC's approach to stroke treatment. Afflicting more than 750,000 people a year, stroke is the third leading cause of death in the United States and the leading cause of adult disability.

Since 1995, UPMC's Stroke Institute has used advanced therapies to treat stroke and help patients in their recovery. The institute's stroke experts see more than 1,000 patients a year. For hundreds of other stroke patients who arrive in Emergency Rooms (ERs) in hospitals throughout Western Pennsylvania, however, access to a stroke neurologist in those first critical hours is limited or non-existent. And that's a problem, because in the cases of ischemic stroke—when a clot blocks blood flow to the brain—diagnosis must be quick and accurate.

“There is a shortage of stroke neurologists in the towns and communities of western Pennsylvania surrounding and outside of the Pittsburgh city limits,” says Lori Massaro, clinical supervisor at the UPMC Stroke Institute. “Because outcomes can be devastating if a stroke isn't recognized or treated properly, we are the support and backup for many local ER physicians who might not be able to make these assessments and decisions.”

For years, the Stroke Institute served as a lifeline for ER doctors faced with making treatment decisions. The institute counseled ER physicians by phone until 2005, when Dr. Lawrence Wechsler and his colleagues in the UPMC Department of Neurology saw a Polycom-powered telemedicine system at work in Massachusetts. What they saw in Massachusetts prompted the launch of the UPMC Stroke Institute Telemedicine Program in 2006.

Today, the program links 11 UPMC hospitals, and three hospitals outside the UPMC system, with a staff of six stroke neurologists, two of whom are on call at any given hour. Each facility is outfitted with at least one Polycom® Practitioner Cart® HDX® mobile healthcare unit featuring a high-definition (HD) display, microphone, and remote-controlled camera. With the Polycom units, UPMC specialists can accurately and completely assess patients and

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Dr. Lawrence Wechsler, Director, UPMC Stroke Institute

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Lori Massaro, Clinical Supervisor, UPMC Stroke Institute

interactively ask questions of patients, family members, and physicians; while using PCs to view computer tomography (CT) scans that help specialists assess the type of stroke involved.

“Video-enhanced telemedicine gives us a far better remote interaction than is possible with anything else,” says Wechsler, co-founder and director of the UPMC Stroke Institute. “We can see each other and establish a much better patient-doctor connection.”

Making Decisions that Save Lives

The Stroke Institute’s guidance is especially valuable when determining if patients may be treated with powerful drugs designed to dissolve the clots that caused the stroke. One of these so-called “clot buster” drugs is tissue plasminogen activator (t-PA), or Activase. t-PA helps restore blood flow to damaged areas of the brain, but it must be administered only to patients whose CT scans show no sign of bleeding, and intravenous (IV) treatment should begin within three hours of the onset of symptoms.

Although t-PA side effects are relatively rare, facilities like UPMC that administer t-PA in higher volumes record fewer patient side effects. “That’s where we benefit smaller hospitals,” Massaro explains.

Since the program began tracking patient statistics in 2007, the UPMC Stroke Institute has provided remote consults on nearly 400 patients, 160 of whom have been treated with IV t-PA. That’s well above the national average of 3 percent of all patients—and further evidence of how UPMC’s Polycom telemedicine network helps save lives by enabling accurate, timely diagnoses.

“Video dramatically improves the accuracy of our assessments and diagnoses,” says Massaro. “If you are an ER doctor in a community hospital, you may only see one patient who qualifies for IV t-PA each year. With the access and support of the telemedicine program, you can consult with a stroke specialist who assesses and treats hundreds of patients a year. That helps ER physicians avoid making a decision on treatment that may be too cautious—or in some cases, too aggressive.”

UPMC also uses Polycom desktop video conferencing software to enable on-call doctors to provide consults from home. Many specialists also use Polycom’s People+Content™ technology to view electronic medical records (EMRs) while assessing stroke patients.

Wechsler and Massaro say Polycom offers some unique advantages. “Polycom is very easy to use; you turn it on and make a connection,” says Wechsler. “With so many different people in an ER and everyone so busy, it’s important that the telemedicine units be very easy to use. That’s one advantage to using Polycom.”

“Polycom is very reliable,” says Massaro, who points out that quality video and audio are also crucial, because both are essential to assessments. “Polycom video is so good that I’ve been able to zoom in to monitor the patient’s blood pressure during an exam.” UPMC also uses the Polycom systems for training and for use in trauma areas. Another plus: its stroke telemedicine program has helped at least one hospital in Maryland meet its statewide designation as a qualified stroke treatment center.

Building on a Larger Effort

The Stroke Institute Telemedicine Program dovetails with another telemedicine initiative at UPMC—one that comprises every aspect of care, from electronic medical records to video consultations to electronic monitoring systems in patients’ homes. The program connects UPMC’s flagship Pittsburgh facility with the Stroke Institute’s network of 14 hospitals, in addition to four other facilities in Southwestern Pennsylvania. Like the Stroke Institute’s system, UPMC uses Polycom telepresence solutions to enable live interaction with specialists and real-time access to diagnostic tools and patient information—all delivered with the crisp clarity of HD video and audio.

UPMC is so committed to integrating technology with medical care that it has become a founding partner and driving force behind the Center for Connected Medicine (CCM). This high-tech experience center allows leading healthcare providers to learn about the collaborative, integrated approaches to medicine practiced at UPMC.

“UPMC’s entire telemedicine effort is about making sure patients get the best possible care wherever they are, and whenever they need it,” says Wechsler. “Without the advantage of video conferencing systems like Polycom’s, that goal would be much more difficult to achieve.”

Learn More

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