Video Interpreters Cut Wait Times in Half

Medical centers cost-effectively share resources and deliver language services using network and video systems

BUSINESS CHALLENGE

Healthcare providers must bridge many language and cultural differences as part of delivering quality care. Interpreter services, often mandated by regulatory agencies, can be provided in a variety of ways. Hospitals have traditionally chosen the methods most suited to their patient populations, including onsite interpreters, phone-in services, and bilingual staff. Alameda County Medical Center (ACMC) and San Francisco General Hospital (SFGH) serve populations that are among the most diverse in the United States, with more than 50 percent of patients having limited English proficiency and unable to effectively communicate with healthcare providers. As a result, both ACMC and SFGH have large in-house interpreter services departments. “Even with our in-house resources, we found we could not keep up with the demand,” explains Janice Chin, director of interpreter services at ACMC and the program manager for the Video Medical Interpretation (VMI) Project. “We have to respond on a 24-by-7 basis to more than 125,000 requests per year. Combine this with our business initiative to address drastic reductions in funding, and we had to ask ourselves how we could more efficiently leverage our staff and potentially share resources across multiple sites and organizations.”

The challenges faced by the department also included the need to minimize waiting times for both clinicians and patients. The time it takes for an interpreter to be scheduled and travel to the site of the request meant waits of 20 minutes to 2 hours. Phone-in services were used in some cases, but were considered unsatisfactory in general because of the loss of visual cues that are required to confirm patients’ meanings and level of understanding of the topics being explained by a healthcare provider.

NETWORK SOLUTION

According to an independent study conducted in 2000, patients and providers are very comfortable using video communications. Based on these findings and funded with a monetary federal grant from the Office of Minority Health, ACMC and SFGH participated in a clinical pilot to develop and evaluate a medical interpretation project that uses videoconferencing to deliver interpreter services. In 2005, the team received additional funding from The California Endowment to expand the scale of the VMI Project to evaluate sharing resources across multiple organizations. The goal was set to establish a videoconferencing interpreter deployment model that could be referenced by any U.S. healthcare organization. Health Access Foundation served as technical consultants for the VMI Project at ACMC and SFGH.
ACMC and SFGH sites operated Cisco Medical-Grade Networks. The ACMC network extends to two hospital facilities, which houses primary care services, specialty care services, a level two trauma center, skilled nursing facility, and rehabilitation services. In addition to the hospital facilities, ACMC also includes a psychiatric inpatient facility, and three community based clinics. The SFGH network includes the acute care trauma hospital, and is under the auspices of the Department of Public Health, which includes a skilled nursing facility, acute rehabilitation hospital, behavioral health facility, and 10 community clinics that are connected over the SFGH network. This networking foundation allowed the organizations to quickly and cost-effectively introduce video traffic without major upgrades. Cisco quality of service (QoS) features were used to help ensure adequate bandwidth and performance for the translation solution, and a virtual local area network (VLAN) was established for the interpretive services network of video end-points, allowing them to manage the video traffic separately from other network traffic.

The joint Cisco-TANDBERG Collaborative Care solution combines Cisco CallManager software, Cisco IP phones, and TANDBERG video communication systems. The TANDBERG 1000-MXP solution provides a small, mobile system that can be easily shared within a clinic and moved to the point of care whenever interpretive services are required. Prior to the VMI solution, clinicians had to submit a request for an interpreter. Patients were kept waiting until an appropriate interpreter was available and had traveled to the site. With the VMI solution, a clinician can simply locate a TANDBERG Intern video station, roll it into the room, and place a video call to the interpretive center. ACMC uses Cisco CallManager software to transfer incoming video calls to the appropriate interpreter. The user interface for handling video conferencing calls matches the features available on any Cisco IP phone: directory search, hold, transfer, and conference. The familiar interface avoided the need to retrain the interpretive services center staff on the system, saving time and money.

When the pilot phase began in June 2003, ACMC spent the first six months designing and planning the video interpretation solution. The new systems were then phased in at its Highland Hospital and community-based clinics. Today, the solution is available at all of the ACMC ambulatory care sites. At SFGH, pilot deployments began in January 2005, and have been carried out for two high-volume primary care sites, the Adult Medical Center and the Family Health Center clinics, along with the medical specialty clinics. After a move to new facilities, the VMI project at SFGH will be expanded to include nine ambulatory care clinics, the Urgent Care Center, and two community clinics. Twenty-eight portable video translation systems are in use at ACMC and SFGH, with plans approved to continue to add more stations and completely cover all sites.

SFGH is currently routing interpreter service request calls manually. They plan to add Cisco Call Manager as soon as possible, based on the benefits gained from Cisco CallManager at Highland Hospital. “Cisco CallManager is going to save us a lot of time,” states Garcia-Orme. “Without it, calls from the video end-points cannot be transferred. We have to make three to five phone calls to set up a videoconference call. The software will give our operators the ability to quickly match requests to the appropriate interpreter.”

The two organizations’ networks are linked using a T1 connection. With the VLANs connected, a pilot evaluation has demonstrated excellent overall performance, with no dropped calls. At times, up to three video transmissions were active between facilities, with no perceived performance or quality degradations.

“By sharing resources over a Cisco Medical-Grade Network, patients gain a visual solution without a long wait, and clinics don’t have to carry the entire expense of a large staff of interpreters.”
— Janice Chin, Director, Interpreter Services Department, Alameda County Medical Center

BUSINESS RESULTS
Taking advantage of their underlying Cisco Medical-Grade Network to deliver video translation services has provided both ACMC and SFGH with an efficient business model for the future. The benefits affect patients, clinicians, interpreters, and administrators:
• **Quick adoption** – Deployment is straightforward. A video station can be deployed anywhere on the network and requires only an Ethernet connection. The video stations operate like the Cisco IP phones that are already in use at these sites. Placing calls from a video end-point is fast and easy for end users, who can simply dial a four-digit extension. Cisco CallManager software simplifies the call center operator functions as well, allowing transfers and eliminating the need for multiple calls in response to each request.

• **Increased patient satisfaction** – Wait times have been drastically reduced, and patients are very happy to have visual communications with the interpreter. Post-visit interviews at ACMC indicate that patients feel like they are seen faster with the availability of the new video translation solution, and the faster process is raising satisfaction levels. When patients were asked to rank VMI services on a scale of 1 to 3, where 3 is “completely satisfied,” the average score was 2.9.

• **Better use of interpreters** – Less time is spent on each request, because interpreters need not travel between the center and the clinics. At ACMC, the average request time has been reduced from 37 minutes to 17 minutes with the use of the video translation stations and Cisco CallManager software.

• **Cost efficiencies across sites and organizations** – The participation of SFGH established that interpreter resources can be effectively shared by linking the Medical-Grade Networks of both organizations. The video equipment consists of off-the-shelf applications and servers, keeping costs affordable. End-points are on carts, and can be set up anywhere, without requiring dedicated video rooms. SFGH looked at three months of data comparing the time spent responding to in-person and VMI interpretations from the point of the request to the completion of the interpretation. The data showed that using VMI technology could save approximately 40 hours per day, 2.6 hours per interpreter, 14,500 hours per year, or seven full-time interpreters at a cost of more than $420,000. This savings means that SFGH will be able to provide more timely service to current patients and to begin providing language services to those departments throughout the department of public health that do not have professional interpreters in their respective units.

“This deployment has shown us that an expensive resource—interpreters—can be more efficiently used within our organization, and even shared with other organizations to reduce costs over the long-term,” says Gloria Garcia-Orme, director of primary care clinics and patient relations, SFGH. “At SFGH, we deal with approximately 35 languages, so this solution is vital if we are going to continue to provide efficient and timely service when we are under pressure to cut costs.”

**NEXT STEPS**

The success of the VMI Project has attracted national attention, with many healthcare organizations expressing an interest in the deployment model. The ACMC and SFGH teams plan to continue the refinement of the model as they expand to include additional sites in their videoconferencing network. ACMC will soon provide stations for its emergency and in-patient clinics, to test the model within those unique environments. SFGH will grow to provide 100 percent coverage for ambulatory clinics. The combined team will also evaluate other video endpoint products for the clinics, and plan to introduce Cisco desktop video endpoints for interpreter stations.

“Hospitals are obligated to provide interpretation services, but we are hoping that our videoconferencing model will encourage more organizations to replace on-call or phone-in services with a video call center solution,” says Chin. “By sharing resources over a Cisco Medical-Grade Network, patients gain a visual solution without a long wait, and clinics don’t have to carry the entire expense of a large staff of interpreters.”

**FOR MORE INFORMATION**

To find out more about the Cisco Medical Grade Networks, go to: [www.cisco.com/go/healthcare](http://www.cisco.com/go/healthcare).

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