



Telemedicine, clear and simple

Outreach programs flourish with high quality, easy-to-use
Marconi ViPr video telephony



Carle Foundation Hospital has successfully operated a telemedicine program since 1993, offering patient consults and video conferencing at 15 sites throughout east central Illinois. But it was the quality and telephone-like operation of the Marconi ViPr™ Virtual Presence System that inspired Carle administrators to think of faster and more efficient ways to connect patients with physicians — no matter where they happen to be.

Community ties: the Carle System

About to celebrate its 75th anniversary, Carle Foundation Hospital in Urbana, Illinois is an integral part of a not-for-profit, locally owned and operated health care system. In addition to the 295-bed Carle Foundation Hospital, the Carle System encompasses multiple health care businesses, including a primary care clinic, surgery centers, therapy services, nursing homes, a retirement center, medical transport services and retail pharmacies, and durable medical equipment stores.

The Carle Clinic Association, with whom Carle Foundation Hospital is closely associated, operates ten primary care clinics throughout the region. Together, they serve 15 regional hospitals. Altogether, the Carle organizations provide health care services to approximately 2.3 million people in 38 east central Illinois counties.

About Carle Foundation Hospital

Champaign-Urbana's only Level I trauma center and independent Level III Perinatal Center, Carle Foundation Hospital also jointly operates cardiac and cancer centers with the Carle Clinic Association. The Hospital is the primary teaching hospital for University of Illinois College of Medicine at Urbana-Champaign. The Hospital also offers a wide variety of professional and community health education programs. Nearly 2,000 physicians refer patients to the Hospital, and more than 60 percent of its patients come from rural areas outside of Champaign County.

Expanding telemedicine successes

Operators of a distance medicine program established in 1993, Carle Foundation Hospital provides pre-operative consults and follow-up visits via telemedicine to patients at several regional hospitals.

Carle also maintains two dedicated video conferencing rooms to connect eight sites in its service area for meetings, conferences, and continuing medical education sessions. A third telemedicine consult room is available for scheduled outpatient consults.

Whether a pre-op consult, education program, or a video visit to a homebound patient, telemedicine services are essentially scheduled events without much wiggle room for spur-of-the-moment participation. They also require certain logistics to complete.

For example, to attend a pre-op teleconference with a patient at a remote clinic, a specialist at Carle has to leave one area of the Hospital (with the patient's chart) to sit in front of a view station in another area of the Hospital and wait for the patient and primary caregiver to appear over the other end of the ISDN (digital transmission over telephone/copper wire) connection.

In addition, conventional video conferencing equipment at Carle is operated by a remote control, which is sometimes problematic. If caregivers participate in teleconferences on a less-than-frequent basis, it's difficult for them to maintain levels of comfort or competency with the remote control.

Issues like these led Carle's Director of Facilities Von Lambert and Director of Regional Outreach Services Stephanie Beever to look for better ways to provide telemedicine services. They found a better way at the American Telemedicine Association annual meeting, where they met representatives from Marconi and audio/visual system integrator ExhibitOne, and saw the unprecedented quality and user-friendly features of the Marconi ViPr Virtual Presence System.

Marconi ViPr: engineered for 'consults on demand'

ViPr, which supports IPv6 for next-generation communications networks, combines the immediacy of a multiparty telephone call with the impact of video and collaboration tools.

Desktop and conference room-sized ViPr units integrate high-fidelity audio and DVD-quality video with multimedia (such as radiology images and stored video) onto a Session Initiation Protocol- (SIP-) based voice-over-IP platform. Completely synchronized video and audio provide users with a "virtual presence" experience that's as close as they can get to being in the same room with somebody else.

Users also appreciate a touchscreen interface that makes it possible for them to speed-dial a ViPr "call" (or add additional conferees) without the need for a remote control. In fact, ViPr's telephone-like attributes really "got us to think down a different path," Lambert explained.

"The first things that drew us to ViPr were the clarity of its picture, the manageable size of the desktop unit, and its ease of use with the touchscreen," he said. "We started to talk about what our video conferencing challenge has always been, and that was ease of use."

"With ViPr," Lambert added, "A conferee only has to touch a button on the screen and say 'hello.'"

What this creates is an opportunity to make consultations more immediate. If a physician at a remote location wants to consult face-to-face in real time with a trauma surgeon at Carle Foundation Hospital, ViPr is the tool to make it happen.

Taking the consults-on-demand concept one step further, Lambert and Beever earmarked their first ViPr units for a Physician Access Line (PAL) service. With PAL, an RN performs a function much like the telephone operator of days' past, using a ViPr unit to connect a primary care physician at a regional hospital or clinic with a Carle specialist to facilitate urgent or emergent medical care.

The immediacy of such a conference may result in a faster decision to transfer a patient — or it may help to determine that a patient can be treated without being transferred. For Carle, the PAL service provides a way to more effectively deliver high-quality patient care throughout the system.

In addition, the same PAL RN who coordinates the ViPr conference can also coordinate and streamline the referral process from a patient registration and billing perspective. Telemedicine consults at designated originating sites are often reimbursed by Medicare and most third-party payers.

"We're also working with Marconi and ExhibitOne to add video recording software to our ViPr units for a patient's medical record," Beever added. "With the PAL service, a central operator can coordinate referrals and patient records, at the same moment that referring physicians and specialists are communicating about the patient's care."

Physicians examine ViPr

In fact, it's the "transparency" of the ViPr experience (users forget about the intervening technology and interact naturally) that has made her virtual presence demonstrations to physicians, "just about the smoothest process ever," Beever said.

"We have demonstrated ViPr to our regional primary care physicians, to our retired physicians, and to just about every sub-specialist I can think of in our organization, and without fail, they are fascinated with the clarity of the picture and absence of a remote control," she added.

"The other thing that is particularly fascinating to physicians," Beever explained, "is that they can multitask with ViPr, just like they multitask when patients visit them in their offices."

Unlike a conventional telemedicine consult, during which physicians are typically able to see or hear just one thing at a time, "ViPr enables physicians to open several windows on the screen concurrently, so while they're listening to a patient's heart tones, they can converse with the patient, or look at something on the patient's chart," Beever said.

“The experience more closely resembles an office visit,” she added. “Besides that, if we install units in doctors’ offices, the physicians can maintain their office routine, and patients and their families aren’t inconvenienced by excessive travel. A physician can see patients in person, then step across the hall to see a patient over ViPr who is at a clinic that’s two hours away.”

Physicians may also use their ViPr desktop units to attend administrative or department meetings, which can help minimize their travel time, too. This is also a plus from a facilities management perspective. The goal at Carle is to use as much of the facility as possible for patient care. ViPr desktop conferencing means that less space may be allocated for meeting rooms, and more space may be used for clinical purposes.

ExhibitOne connects with ViPr’s appeal

Carle works with Phoenix, Arizona-based ExhibitOne to install ViPr units in various locations throughout the Hospital, including specialists’ offices and trauma areas. ExhibitOne has also designed carts for emergency rooms in rural hospitals. Each cart houses a ViPr desktop unit equipped with scopes that are required for exams, as well as the system’s video servers.

ExhibitOne Regional Sales Manager Adam Lofredo understands why ViPr clicks with the user community at Carle.

“Quality and functionality, the two specific reasons why Carle chose ViPr, are both exceptions to the rule in the video conferencing world,” he said.

That’s also why Lofredo works closely with Marconi product developers to apply ExhibitOne’s knowledge of telepresence technologies to the ViPr platform.

“Normally we’re brand non-specific. We deal with hundreds of manufacturers and thousands of products, because we’re interested in finding the right solution for each of our clients,” he said. “ViPr has been different for us. We’ve really taken to this product, to the extent that we’ve invested our resources on custom programming and systems control, all because of ViPr’s quality and its uniqueness. We are impressed with the ViPr system and what it has to offer the marketplace.”

Von Lambert agrees. “There are many things that ViPr is set up to do better than any piece of equipment that we’ve run across so far.”

ViPr and mobility

One of the things that ExhibitOne is working closely with Marconi to do is develop a wireless ViPr, for a couple of reasons.

“Obviously, wireless capabilities are prevalent inside hospitals because you don’t have to worry about installing jacks and maneuvering around cables inside a surgical suite or beside a hospital bed,” Lofredo said. “Literally you could wheel the ViPr unit to wherever it’s needed, and pull up an IP address.”

There are also opportunities to use ViPr outside of the Hospital itself. Carle operates a semi trailer-sized mobile clinic that doubles as a triage unit in the event of a natural disaster or bioterrorism incident.

“One of the big problems that occurs during a natural disaster is that several specialists — for example, ten orthopedic surgeons — are needed at once and there may be only two available, especially in a rural area,” Lambert explained. “Inside our mobile clinic, first responders could consult over ViPr with Carle’s orthopedic specialists to get them involved with triage, while the two available local surgeons can concentrate on surgery.”

Improving the delivery of advanced medical care

Whether it’s improved access to surgeons for first responders, consults on demand, or a virtual office visit with a specialist, Carle’s new, ViPr-based approach to telemedicine connects physicians to physicians and physicians to patients faster and more efficiently than conventional systems.

“By finding innovative uses for ViPr, Carle has changed the mindset of what outreach programs can achieve,” Adam Lofredo said. And the team that’s responsible for outreach at Carle is energized by the possibilities.

“There is a video visitation aspect to ViPr that’s really striking,” Stephanie Beever explained. “For example, an elderly woman from a rural community may be hospitalized at our facility for a week or longer. Maybe her children live 90 minutes away. We can set up a mobile cart with ViPr at her bedside, and they can visit with her on a daily basis from one of our regional hospitals and still go about their daily lives. And ultimately, the family can use ViPr to meet with their mother’s caregivers once she is ready to be discharged.”

“With programs like these, as a tertiary hospital, we’re taking service to a very high level. We can reach patient populations that were once too far away. We can better connect with regional providers, our patients, and their families. Our goal is to make distance much less of a factor.”

For more information:
www.carle.com
www.marconi.com
www.exhibitone.com

ViPr opportunities at Carle Foundation Hospital

- Physician Access Line service for consults on demand
- Telemedicine office visits for convenient patient access to Carle specialists
- Departmental and administrative meetings and conferences on demand
- In-hospital mobile units
- Full mobility outside of the hospital in first responder and triage environments

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