

# Case Study

## Santa Barbara Cottage Hospital

Founded in 1888, the Santa Barbara Cottage Hospital (SBCH) is an acute care teaching hospital that is committed to patient safety and providing high quality healthcare to the growing communities of greater Santa Barbara, Calif. The hospital, which has a medical staff of more than 600 and annual admissions of more than 18,000 patients, is known for its maternal-child and pediatric services, cardiac, neurosurgical, and oncology programs, as well as outpatient services.

### Summary

SBCH partnered with Siemens to create an IP-based network that is designed to support growth and help provide patients with quality care.

### Challenges

- Capability to support future growth initiatives while helping to support the hospital's efforts to reduce costs, enhance security and compliance, and improve workflow practices
- Supporting critical communications and workflow in a hospital environment where staff work 24/7 to address patient needs
- Disparate communications features and voice mail systems can hinder productivity and efficient call transfer among hospital facilities

- Moving to the new communications technology without major interruptions in service to hospital staff
- Maintaining communication while transferring each hospital department on and off campus during earthquake retrofitting renovations

### The Technology Behind the Solution

- HiPath® 4000 Real-Time IP System
- HiPath 3000 Real-Time IP System
- HiPath Xpressions® unified messaging

### Top Benefits

- Improvements in workflow from more efficient communications, including easier call transfers from one building to another
- More cost effective support and maintenance of communication system through central administration
- Enhanced scalability for planned expansion in the number of network users and applications
- Single unified communications messaging system that eliminates disparities and simplifies training
- Seamless integration with switchboard operator console
- Potential cost savings from elimination of T1 lines

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**“With the new Voice over IP infrastructure, key management procedures have been simplified and can now be controlled remotely. Such abilities are critical to us, since we have a small telecommunications department and lack the resources to make frequent repairs.”**

**Alberto Kywi**  
Chief Information Officer  
Santa Barbara Cottage Hospital

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SBCH focuses on providing quality health care to residents of the Santa Barbara, Calif. area, including Goleta Valley and Santa Ynez Valley. As part of its efforts to better serve the community, SBCH places a great deal of importance on having a reliable communications network.

### Creating a long-range plan

SBCH had extensive experience with Siemens switches in the past, and management had been pleased with the performance of those systems and the associated technical support from Siemens. For these reasons, the hospital decided to build its new communications infrastructure using the latest Siemens voice over IP technology.

“We needed a vendor we could depend and rely on. A vendor that could give us the service we needed, when we needed it,” says Alberto Kywi, CIO of SBCH. “We had a solid working relationship with Siemens and a good internal systems support staff. Combine those two teams together, and we had a good match.”

With an existing telecommunications infrastructure in place, hospital management set out to develop a long-range telecommunications strategy that would carry them into the future. “It’s a multi-year plan that addresses the way we’ll get from a legacy system to a more up-to-date, modern environment that strategically integrates both voice and data,” Kywi says.

Amidst these plans, it was important that the hospital’s upgrade to an IP communications infrastructure not unduly disrupt day-to-day critical communication services. The seriousness of this

requirement was stressed further when the hospital received a mandate to retrofit all campus buildings in compliance with California Senate Bill 1953, which requires all acute care hospitals in California to perform seismic improvements to existing buildings. The resulting strategy had to enable hospital buildings and departments affected by the seismic retrofit to retain levels of communication.

Prior to this approach, the hospital’s four separate campuses had built networks using disparate technologies, including older systems that were becoming obsolete. Some of the key switches at each campus were operating well, Kywi says, but they couldn’t support expected growth or deliver the calling features the hospital needed. Furthermore, management was determined to centralize the communication systems under one vendor for the sake of operational efficiencies.

In the initial phase of its communications upgrade, SBCH installed Siemens HiPath 3000 and HiPath 4000 Real-Time IP Systems, replacing older switches. The HiPath systems are IP convergence platforms built over a distributed architecture. The hospital also deployed Siemens HiPath Xpressions, a unified messaging application that combines voice, fax and e-mail messages on a Windows server.

The Siemens solution set is part of the company’s LifeWorks™ vision of unified communication and collaboration – a strategic effort it calls “open communications.” The provision of open communications solutions is based on several key technology and business goals: to allow employees to communicate and collaborate more effectively regardless of device, network

or IT environment they’re using; to provide organizations more flexibility in moving toward an open communications environment; to provide solutions that can be integrated into business processes; and to provide solutions that are more intuitive and more easy-to-use.

Siemens’ OpenPath™ approach, which provides a logical transition for organizations to transform their communications infrastructure at their own pace, was also more suited to SBCH’s needs. Siemens experts helped the organization design a more structured, effective conversion. OpenPath provides a number of more clearly defined routes that facilitate a smoother transformation according to technology requirements, financial considerations and business processes.

### The move to IP

Largely because of the hospital’s previous relationship with Siemens and the vendor’s familiarity with the hospital’s infrastructure and needs, challenges were minimized during the transition to the new systems. “The support staff was extremely helpful,” Kywi says. “I was a little nervous about introducing an entirely new technology like Voice over IP, and I had some concerns about how it would all work out. But the Siemens representatives were knowledgeable about the technology and eased my concerns tremendously.”

The move to the new systems was completed within 60 days, with no undue interruption of phone service. The communications upgrade with sophisticated IP-based calling features provides the hospital with the opportunity for more efficient collaboration among healthcare

staff, administrators and patients. "We're able to more efficiently communicate with each other by eliminating access codes and forwarding calls to other locations," Kywi says. "Streamlining our contact processes means medical decisions may be made more quickly, creating more time that may be spent caring for patients."

While SBCH didn't invest in the new equipment specifically with the purpose of saving money, as it was more of a strategic communications upgrade, the organization may see some cost reductions. For example, with T1 lines no longer needed, the hospital can save about \$1,000 a month.

Another benefit includes more simplified phone system support, maintenance and training, as the organization now uses the same family of devices. "With the new Voice over IP infrastructure, key management procedures have been simplified and can now be controlled remotely," Kywi says. "Such abilities are critical to us, since we have a small telecommunications department and lack the resources to make frequent repairs."

The Siemens systems are designed to be expandable, allowing the hospital to support a growing number of both staff, administrative and community users. "The newer communications equipment is all rack mounted, so we can add more capacity without adding physical footprint," Kywi says. "This is key in a hospital environment. Scalability was definitely critical in our selection of the Siemens solutions."

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### Unified messaging

Another major benefit to SBCH was the move to unified messaging. "One of the objectives of the network upgrade was to provide a single point for voice mail," Kywi says. "In the past, we had four different voice mail systems, which hindered staff from transferring calls among each other. Administrators previously had to call and leave messages every time they wanted to conduct a transfer. Talk about a strain on resources and productivity!"

Now the institution has three facilities on the same HiPath Xpressions voice messaging system, Kywi says. This upgrade not only gives the hospital uniform messaging features in each of its facilities, but has also simplified staff training. The hospital plans to integrate voice messaging and e-mail under one umbrella, which may make it easier for staff members—many of whom use e-mail frequently as part of their jobs—to receive messages.

Yet another benefit of the Siemens technology is its ability to integrate with IntelliDESK from SDC Solutions, which SBCH has implemented. IntelliDESK is a PC-based console that is designed to enable switchboard operators to more efficiently manage and transfer large volumes of calls and track the status of those calls.

The hospital is also deploying PhoneGuide *LIVE!* computer-based training for end users. SBCH anticipates it may be able to save hundreds of hours per year in training session time by enabling users to train themselves on how to use the one new phone system. PhoneGuide *LIVE!* is available 24 hours a day, seven days a

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week and allows users to train at their convenience and repeat training as often as needed.

The communications network transformation at SBCH has been worth the effort, according to Kywi. Additional enhancements are planned for the coming months, all aimed at helping to create a more efficient network in an effort to enhance the hospital staff's productivity so it can focus more on patient care.

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