

Tech firm's wireless system 'saves' hospital

By Bonnie Pfister
TRIBUNE-REVIEW

Wednesday, December 5, 2007

Technology developed by a 10-year old South Side company has helped to turn around a money-losing hospital in Buffalo, N.Y.

The company, PeriOptimum Inc., created a wireless system of tracking patients through surgery. Called PathFinder, the technology uses a keyfob-like radio transmitter that is clipped to a patient's IV tube as he or she is readied for surgery. It transmits his or her status before and during surgery to operating room and post-op personnel, helping to reduce costly downtime among the surgical suites.

Erie County Medical Center CEO Michael Young said the system was instrumental in transforming his facility from one that lost \$30 million annually to one that posted an \$11 million profit in 2006. The hospital is on target to report net income of \$15 million this year.

"Think of it as a kind of air-traffic control system," Young said. "You have 10 runways, 10 planes landing or taking off, 10 queued up waiting to take off, X-number in the air waiting to land. The rare commodity is the runway. The closer together you can get them landing and taking off, the more business you can do."

In surgery, Young said, the rare commodity is the operating suite -- by far the biggest potential revenue generator for hospitals. When lack of communication and planning leaves doctors and nurses standing around waiting for patients, backlogs ensue, overtime pay racks up, and fewer surgeries can be performed. PathFinder helped reverse that trend.

"Our OR utilization rate was 55 percent. Now it's 92 percent," he said. "By filling up almost 40 percent of empty ORs, it was like getting four new operating rooms. We can fill them up with patients. And surgeons are coming here because they know they can (treat) more patients."

PathFinder allows surgical nurses to focus more on what's going on the operating room, reducing telephone calls to and from other staffers about the status of a surgery, said Cathy Walley, PeriOptimum vice president of products and services.

Instead, surgical progress is conveyed in real time to pre- and post-surgical care colleagues, on monitors set up at nursing stations or by text message to wireless handheld devices, said Walley, who for 20 years was an operating room nurse in Pittsburgh hospitals.



PeriOptimum founder Hakan Ilkin (left) and CEO Mark Vernallis stand in the 10-year-old company's South Side office.
Keith Hodan/Tribune-Review

Patient families are also kept in the loop, via monitors in public areas that identify their loved ones's status by identification numbers.

"If you were told the procedure is going to be an hour, and it's an hour and 20 minutes, you're worried. But if you see them moving through the system, you're not," said PeriOptimum CEO Mark Vernallis. "Families are delighted to know what's going on."

PathFinder grew out of work begun in 1991 by Hakan Ilkin, an Istanbul native who was then a student at the University of Pittsburgh's Katz Graduate School of Business. For industrial engineers like himself, Ilkin called health care a fertile environment, because traditionally anecdote -- not science -- has been used to manage internal hospital processes.

"Health care operates in silos. By collecting this information and distributing it, we try to open it up and make it much more transparent," Ilkin said. "Our motto is, 'We can't manage what we can't measure,'" Ilkin said.

PathFinder has also put to use at Lancaster General Hospital in eastern Pennsylvania, as well as Lakeland Regional Medical Center in central Florida.

Consulting is another part of PeriOptimum's business, which Vernallis said posts annual revenues of about \$2 million annually and employs 18 people.

The company has studied internal systems and come up with suggestions to improve efficiency and patient care to consulting with 30 hospitals in the eastern U.S., including St. Clair Hospital in Mt. Lebanon. There, operating room utilization rates increased from 45 percent to 72 percent between 2002 and 2005, according to a statement by St. Clair officials.