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Technology for improved workplace safety and efficiency

By Karin Archer



Two nurses in surgical health services using the Vocera communication system.

Photo credit: Kevin Holm, TEGH

Trying to determine whether Vocera, a wireless communications system, is a phone, pager or walkie talkie, depends on who you're speaking to. Yet, to the staff and physicians at Toronto East General Hospital (TEGH), it's the latest tool in their commitment to workplace safety. "The risk of workplace accidents, including violence and assault in the workplace, is higher for health-care workers than anyone else," says Rob Devitt, President and CEO of Toronto East General Hospital.

"Vocera is a unique and leading edge approach that is helping the hospital become a safer place to give and receive care." Vocera is a wearable device that weighs less than two ounces and can be clipped to a pocket or lanyard. The multi-dimensional system enables users to speak directly to one another and make or receive telephone calls. The safety feature is activated by pressing the centre button twice, which immediately alerts hospital security. The user is instantly connected to all security on-site, enabling them to communicate and learn about a situation.

Toronto East General Hospital (TEGH) is the first hospital in the Greater Toronto Area to implement the system throughout its facility. The project, which began in March 2008, is partially funded by the Violence in the Workplace Committee and is currently used on many units, including the emergency department and mental health unit.

"TEGH is being proactive and placing a lot of emphasis on violence prevention in the workplace," says Denny Petkovski, Vocera Project Manager. "It wasn't one particular incident that led to Vocera. It was our zero-tolerance initiative [against violence] and Vocera was the first big push towards that."

In a few short months, staff at TEGH have already seen a vast improvement in security response times. "The response times were already good to begin with," says Petkovski. "Vocera is just adding to that." TEGH has improved their non-urgent response times by 95 per cent and urgent response times by 61 per cent. Security is now able to arrive at the scene of an emergency in 59 seconds, compared to two-and-a-half minutes, with Vocera systems. "This is significant," says Rocky Prosser, Manager of Protection Services and Emergency Management. "It's so fast because the message can reach everyone on the security team." Part of the reduction in time can be attributed to the efficiencies of the system. Prior to Vocera, calls were sent to a dispatch centre before connecting callers to a department. Now, with Vocera, anyone can be contacted directly. "It takes out the middle man," says Prosser.

Prosser and his team can also track any Vocera user within the hospital parameter. In a crisis situation, if users are unable to speak, security can still determine their location once the panic button has been activated. "One comment I have heard is that you're never away, you can always be contacted," says Nancy Casselman, Director of Human Resources and Organizational Quality, Safety and Wellness. "It's not intended for supervision; it's for personal security. The point is, if used properly, it can be a great tool."

With the support of the hospital's executive team, Vocera was implemented within a few months. The information technology (IT) department, in partnership with IBM, completed the hospital-wide wireless installation. The infrastructure was tested for wireless conductivity to ensure users would be able to communicate from any floor or room, including elevators and stairwells. "The program will benefit and foster other IT projects not only now, but in the future as well," explains Petkovski. "There really aren't any drawbacks of using Vocera. Staff and departments are requesting it. They are asking us when they can be next and use it."

Once the project is complete in June 2009, all necessary departments will have Vocera. Some hospital units will even have their devices hooked-up to patient call-bells. "Safety is everyone's business," says Prosser. "This is why I think this is a great system. There are so many things you can do with it." With 3,000 hospital staff, security can't be everywhere, but with Vocera they are a lot closer.

The reporting features are also advanced. Vocera systems record distress call activity on the device. This helps Prosser and his team analyze data to determine trends in specific areas and departments. "We can see what is taking place in certain units and if they press the panic alert often, we want to know why and decide whether more training is necessary for their safety," says Prosser

"Our approach to safety is comprehensive," says Devitt. "Vocera allows for violence prevention, communication, rapid responses and most of all strengthens safety."

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