

# Technology enhances healing in cardiovascular centre

By Peter Nielsen

Caring for patients in one of the largest cardiovascular centres in North America, the University Health Network's Peter Munk Cardiac Centre is leading the way through excellence in safety and quality of care, research and innovation and academic excellence. The centre has the largest cardiac teaching program in Canada and cares for a wide range of patient needs – from the simplest to the most complex cardiac patients.

The Centre's 28-bed Inpatient Cardiology Unit serves adult cardiology patients who require primary, secondary, tertiary and quaternary levels of assessment, diagnosis and intervention of their cardiac condition. The majority of patients have diagnoses of:

- Acute coronary syndromes
- Cardiomyopathy
- Heart failure
- Heart rhythm disorders
- Congenital heart defects

In 2003, Cardiology Inpatient staff moved to a new

unit with decentralized nursing stations. Although this move enabled nurses to be physically closer to patient rooms, it also isolated them from other staff. Regular communication is necessary between the receptionist, the charge nurse, and the telemetry nurse, who manages communication devices.

In the old, centralized unit, face-to-face communication between nurses was easier, but staff were extremely dependent on overhead paging. Paging announcements were heard on all areas of the unit, including every speaker located on the wall above each patient's head. On a busy day shift, this would result in overhead announcements approximately every 3-5 minutes, creating a very noisy environment, which interfered with the patient's ability to rest and recover.

With the move to the decentralized unit, staff were concerned about how essential nurse-to-nurse communication would take place and that they would become even more reliant on overhead paging to communicate. At that time, operat-

ing room personnel at Toronto General Hospital were working with a third party vendor to improve their communication and automate workflows. After learning about the improvements enjoyed by the operating room personnel, the Cardiology Inpatient Unit approached the professional services team at ConnexALL, a software integration solutions provider, to see if they could design a solution that would enhance communication, make workflow more efficient and create a quieter environment for patients.

The team worked with cardiology staff to understand the layout of the new unit as well as the unique workflow and communication needs of staff and patients. The resulting solution was transformative: every nurse now carries a wireless phone, which means individuals can be reached directly when they are needed, which allowed the unit to ban overhead paging while ensuring faster response times. Nurse Nick Law who works in the cardiology unit says: "Using a wireless phone in the decentralized unit

reduces the amount of walking back and forth I do each day. It's very convenient and gives me more time to spend with my patients."

The software has also enhanced patient care. It is integrated with the nurse call system and the wireless phones, enabling patients to reach their nurse directly and communicate their needs. Integrating the remote communication devices and network with a workstation assigned to a telemetry nurse enabled rapid notification of patient telemetry alarms. Again, this allowed for faster response times and less noise.

The nurse call system is now well-managed by software. With this new system, when a patient calls a nurse from his or her room, all alerts are programmed to go directly to assigned nurses on their wireless phone with the ability for the nurse to communicate back directly to the patient. Additionally, alerts are configured to notify individual caregivers or groups of caregivers based on the degree of urgency, and the call system allows for

one-step forwarding of all alerts to the nurse covering during break times.

Nurses are now able to communicate directly with patients, with each other, the nursing stations, and the receptionist. A complete ban on overhead paging in the cardiac unit, resulting in a significantly quieter, more restful environment conducive to patient healing and staff efficacy are additional positive results of the new technology.

As an outstanding model of quality cardiac care, the Cardiology Inpatient Unit in the Peter Munk Cardiac Centre represents technology's potential to transform a health-care environment. Internationally noted for its commitment to research innovation, the Centre continues to serve as an example of using innovative integration for enhanced staff communication and improved patient care.

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