

RFID Fills Security Gap at Psychiatric Ward

After construction work disabled the alarm system at Australia's Rockhampton Base Hospital, nurses began using battery-powered RFID cards to send alerts if they need assistance.

By Beth Bacheldor

Oct. 24, 2006—Rockhampton Base Hospital In Queensland, Australia, is leveraging RFID to improve workers' safety during a renovation that's brought down walls and left holes in building security.

Nurses in the hospital's mental-health ward are using [Protrac iD's Duress Alarm Card](#), which combines a long-range wireless duress transmitter, a photo ID and proximity access control in one credit-card-sized device. The duress transmitter features a battery-powered RFID tag operating at 433 MHz. Any nurses in danger or in need of assistance can push a button built into the back of the card, causing the transmitter to send a signal to an RFID reader to alert coworkers that help is required. The nurses receive the cards when they sign in at the beginning of their shifts, and the tags' unique ID numbers are correlated in a database with the nurses' names and photos.

RFID interrogators have been installed in areas throughout the ward, and also in outdoor areas and gardens. The tags constantly emit radio frequency pulses, which get picked up by the nearest reader. Each tag has up to a 50-meter range, depending on the application and environment.

Protrac iD's software analyzes the interrogator reads and creates a visual display of the nurse triggering the alert. The visual display features the photo and name of the nurse, as well as her location within the ward. The system can also trigger audible alarms on the computers when the event occurs.

The RFID system augments a wall-mounted alarm system that nurses can use if they need assistance. That security system, however, has been compromised as walls have been torn down during renovation.

A number of other hospitals are installing RFID systems to help protect patients and staff members, as well. The [Michael E. DeBakey Veteran Affairs Medical Center \(MEDVAMC\)](#) in Houston is implementing an RFID-based system created to care for patients (see [RFID System Helps Houston VA Hospital Maintain Patient Safety](#)). And [Saint Luke's East-Lee's Summit](#), located in Lee's Summit, Mo., tested a tracking system that includes passive RFID tags, beacons and access points to improve the processes involved in admitting and treating patients at the hospital's emergency department (see [Hospital Tries ZigBee to Track Patients](#)).

Roger Whyborn, spokesman with Protrac iD, says RFID is gaining popularity in health care. "We're now doing [manufacturing] runs of 10,000 to 15,000 [tags]," he explains.

The three-in-one ULR tags augment the Australian company's existing RFID portfolio, which includes tags enabling hospitals to track patients to ensure their safety. The tags, worn as wristbands, trigger alarms if patients try to leave monitored areas. Protrac iD has installed its patient-tracking system at three Australian facilities: at Arundel Nursing Home in Queensland and two hospitals in the city of Victory.

Protrac iD also offers RFID tags and applications designed to protect assets and people in mines, and RFID-enabled asset tracking systems for logistics and supply chain management. The company is getting ready to launch an RFID tag in the form of a tamper-resistant wristband that could be used to monitor inmates in correctional facilities, according to Whyborn.

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