Case Study

Providence Healthcare

Optimizing Workflow To Increase Resident Safety

About Providence

Providence Healthcare is a leading Toronto health care facility, specializing in rehabilitation for patients who have experienced strokes, orthopaedic surgery, lower limb amputation, or who require specialized geriatric rehabilitation, assessment and treatment. Providence also provides complex continuing care, community outreach and long-term care through their highly respected long-term care home, the Cardinal Ambrozic Houses of Providence.

Before Connexall®

When staff members raised concerns about the reliability of the nurse call and resident wandering safety systems at the Houses of Providence, the management team saw an opportunity to improve the facility's efficiency, staff job satisfaction and residents' comfort. It was also the perfect opportunity to replace an aging phone system that was the primary means of communication between staff in the sprawling 288-bed home.

A comprehensive assessment revealed that staff wanted a reliable system that could handle any type of notification by sending it to their wireless devices. This would improve staff efficiency and response times to residents' requests.

Staff requested a system that ensured every call bell request had a guaranteed delivery to the resident's own clinical care team, irrespective of shift and staffing changes or temporary off-line phones (e.g. when swapping in a newly-charged battery).

Working with Providence's facility administration, the Connexall team added additional solution features as they became necessary. The implementation team also put together a troubleshooting guide, complete with methodologies specific to the environment at Providence.

"Connexall has improved our workflow and the safety of our staff and patients. It's incredibly reliable and easy to use."

– Tom Clancey

Director, Environmental Sciences
Providence Healthcare

The Connexall Solution

The final implementation used Connexall to integrate six disparate systems through one simple, easy-to-learn interface:

- Rauland Responder IV Nurse Call system

- SpectraLink IP wireless telephone system

- Wide area pager system

- RBH Axiom access control system and EXI patient wandering tags

- An in-house email server used to relay outgoing email notifications

- An in-house database server to facilitate real-time activity data and custom end-user reporting

Nurse Call

When a resident activates their bedside nurse call, real-time notification is delivered directly to the appropriate staff person's SpectraLink NetLink handset, regardless of where they are situated in the home. This eliminates the need to disseminate alert information from a single receiving point and physically locate an appropriate solution or staff member.

Resident Wandering

Residents with wandering tags are categorized as either high or low risk. High-risk wandering residents are restricted to their own cluster – the house where they reside. They are restricted from all exit doors and certain hallways. Alarms are triggered when high risk residents are near one of these zones. Additionally, elevators are locked for high risk resident alarms. Low risk wandering residents can access common facilities and use elevators, but they are not allowed to enter any other resident cluster. Access is also restricted to perimeter doors, stairwells and basements.

Two alarms are triggered when a tag is detected in a restricted zone: the Resident Wandering alarm with the patient's room number is sent to the applicable nurse's wireless phone. The assignment of these alarms corresponds to that of the nurse call assignments, so that the same nurse is alerted regardless of whether a patient makes a request via the nurse call system or has entered an area they are not supposed to be. The location alarm indicating the zone where the tag is located is then sent to the security guards' pagers.

In each case, pre-defined escalation rules mean that all alerts are automatically sent to backup personnel, if the responsible nurse does not acknowledge within a pre-set timeframe.

To cancel a triggered alarm, the ID badge of the responsible nurse will be swiped at the proximity reader closest to where the resident breached a threshold. This is followed by a cancellation event at the RBH console captured by Connexall. The alarm will then stop ringing on the wireless phone and all escalation processes cease.

The Connexall team worked closely with Providence staff to design a solution that met their specific needs – in this case, keeping residents safe – and took into account their specific workflow. Providence wanted the different levels of escalation to be easily identifiable, so the Connexall team created a ring-tone system that indicates primary, secondary, and backup escalations. Providence also utilizes Connexall's unique automated scheduling application, which allows for the redirection of alerts to specified phones when an employee goes on his or her scheduled break, using a predetermined swing shift schedule.

Connexall Results Summary

Ultimately, response times were dramatically reduced and resident care quality continues to improve significantly. Providence's target response times range between 3 and 5 minutes depending on the type of alert. Since Connexall provides automatic escalation, any notification sent to a busy caregiver will be automatically re-routed to a secondary caregiver, if no response is received within a predefined time limit, making it easier to respond to wandering patients or patient requests within an acceptable time.

"Connexall is the bridge that helps us use our resources more effectively and efficiently."

- Tom Clancey
Director, Environmental Sciences
Providence Healthcare