

Standardizing Vital Signs Devices:

A Strategy that Works for Patients and Nurses



Overview

Customer

The Ottawa Hospital

Location

Ottawa, ON

EMR Partner

TELUS Health

Customer Profile

The Ottawa Hospital is one of the largest teaching hospitals in Canada, spanning three campuses with 1,100 beds, nearly 12,000 staff members and 1,300 physicians.

Key Business Outcomes

Faced with a fleet of aging, disparate vital signs monitors and more than 250,000 nursing hours spent maintaining them each year, The Ottawa Hospital needed to select a vital signs monitor that would meet its needs for the next 10 years as part of a comprehensive medical device strategy.

Introduction

Three minutes. It may not seem like much time, but The Ottawa Hospital (Ottawa, ON) recognized a problem taking place within this short time period.

Nurses were spending an average of three minutes searching for a vital signs monitor, cleaning it and transporting it to and from patients' rooms. This seemingly minor problem was adding up to **252,000 nursing hours per year**—costing the hospital **\$11.3 million in nursing time annually** for non-value-added activities.

Faced with this challenge, as well as a significant number of vitals devices needing replacement, Dr. Glen Geiger, The Ottawa Hospital's Chief Medical Information Officer, knew the hospital needed a better way.

Previous State

The Ottawa Hospital maintained 500 mobile vital signs monitors, comprised of more than 15 different brands and models. In addition, it used more than 600 pulse oximeters, 1,100+ thermometers and even some manual and mercury sphygmomanometers.

Dr. Geiger's team studied the hospital's current vitals collection methods to see where improvements were needed. Key pain points noted included:

- Finding a device
- Needing multiple devices at once (e.g., blood pressure device, separate thermometer and separate pulse oximeter)
- Cleaning devices after each use
- Untangling wires
- Manual vitals transcription

Developing a Smart Strategy

Dr. Geiger's team studied the hospital's current device footprint and clinical workflows to identify several opportunities for improvement.

- **Rethink configuration:** Rather than sharing monitors between multiple rooms (which required device transport, charging and cleaning between each use), the hospital installed one device at each bedside. This model not only improved nursing workflows, but also reduced infection risk with one device for each patient.
- **Take advantage of new technologies:** The hospital chose to standardize on Welch Allyn Connex® Vital Signs Monitors, featuring wireless transmission of vitals directly into its EMR. This connectivity saved time and prevented errors commonly associated with manual transcription.

According to Dr. Geiger, "The time savings associated with having a device at every bedside was a huge driver of efficiency at the hospital. We built a business case around one device per bedside."

The move to Connex Vital Signs Monitors also helped The Ottawa Hospital:

- Avoid forgetting to document patient vital signs in the EMR
- Improve quality of care by avoiding up to a two-hour delay between vitals capture and documentation

Enduring Success

One year after expanding the use of Connex Vital Signs Monitors at The Ottawa Hospital, **more than 4 million** measurements have been captured and automatically documented in the EMR.

According to Dr. Geiger,

“After one year of having the system live, we tried to obtain a surrogate measurement to see if the technology was being used effectively and if the cost was actually being saved. The data shows that the solution is effective. We got what we paid for.”

