



## Mobile Computers Help Minimize Medication Errors, Increase Patient Safety at Underwood-Memorial Hospital

### Overview

**Industry:**

Healthcare

**End-User:**

Underwood-Memorial Hospital

**Application:**

Medication administration

**Product Solution:**

Honeywell Dolphin® 9500 Mobile Computer and Cerner CareMobile® system

**Solution Provider:**

Honeywell

### Executive Summary

Underwood-Memorial Hospital (Woodbury, N.J.) was in a search of a technology solution that would increase patient safety at the point-of-care (POC). In July 2007, the 305-licensed bed, acute-care hospital embarked on rolling out a mobile and wireless medication administration verification system that has reduced reported medication errors by 15%.

### Challenge

Last year, administration at Underwood-Memorial Hospital committed to making a stronger push for safety at the point-of-care. Specifically, the hospital wanted to focus on ensuring the 5 Rights of patient safety when administering medications by verifying: the right patient receives the right medication at the right time in the right dose via the right route. The hospital needed a solution that would minimize misidentification errors that could potentially lead to clinical errors.

After testing several different technology products, Underwood-Memorial chose the Cerner CareMobile® system. The hospital also selected the Dolphin® 9500 Mobile Computer from Honeywell for automatic barcode verification and to wirelessly transmit real-time patient information. To complete the solution, Underwood-Memorial put barcodes on all patients and medications within the hospital.

Before implementation, the hospital mounted the mobile computers' chargers to the carts so that each clinician could have access to a charged device at any time.

"We didn't want a nurse waiting for a mobile computer to be charged if he or she needed to use one," explains Connie Smith, RN, BSN, IS Coordinator. "Mounting the devices makes them more portable and convenient for our staff, placing them at their fingertips was added incentive for compliance."



Typically hospitals mount the mobile computers' chargers at the nurses' station, but many are searching for a way to make the devices more accessible to nurses. By mounting chargers to the carts, accessing a charged mobile computer is easy and convenient.

About 50 carts with the handhelds were placed throughout the hospital, with roughly 6 on each wing. At the bedside, clinicians view a patient's electronic medical record on the cart's screen and verify patient ID and medications by scanning barcodes with the mobile computer. If there's a discrepancy, clinicians are flagged.

## Solution

When rolling out the system, one of the first things Underwood-Memorial had to do was secure the wireless system due to connections being lost to the handhelds. A wireless survey was required and network monitoring software needed to be installed to prevent the network from overloading and dropping connections. Smith continues to meet with the hospital's leadership team every two weeks to address any issues or concerns.

As a result of the initial challenges involved with the wireless system, some clinicians were hesitant to using the devices, even after the issues were repaired. But Underwood-Memorial's administration continued to stress to staff the importance of using the devices and closely monitor that they are using the devices at every opportunity.

Nurses were initially allotted eight hours to learn the new system and spent some time retraining when necessary. Smith attests that what is needed most to overcome any hurdle is support from an administration that recognizes the value and importance of technology.

"Our nursing staff needed to understand how to use the technology and the impact it makes on the safety of our patients. With an administration's support, it's likely that there won't be any pushback as to why we chose to invest in and are using this technology," Smith says.

Underwood-Memorial's reporting tools polled the hospital's largest medical-surgical wings and reported a 94% usage of the solution.

## Benefits

Since implementing the new system, the hospital has seen great results. Frontline clinicians now have the ability to access, document, and transmit critical patient information and medications in real-time, greatly enhancing staff productivity. The solution has also reduced the need for pen and paper at the bedside and for information transcription, resulting in increased accuracy.

Above all, the solution helps minimize identification errors that could potentially lead to errors in medication administration and ensure patient safety. In addition to peace of mind, Underwood-Memorial Hospital has witnessed a 15% reduction in reported medication errors comparing January 2007 to January 2008.