

[ CASE STUDY ]

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| Customer: | Carolinas Healthcare System   |
| Solution: | The only purpose-built, clinical grade handset                          |
|           | Professional messaging that integrates seamlessly with hospital systems |
|           | The professionalism of the Ascom team                                   |



## CAROLINAS HEALTHCARE SYSTEM CASE STUDY

### ASCOM WIRELESS COMMUNICATIONS SAVE TIME AND IMPROVE PATIENT SATISFACTION

Carolinas Medical Center (CMC) is the first North Carolina hospital to be recognized by J.D. Power and Associates for service excellence in maternity care.

In addition, CMC has been named “Consumers’ Choice Preferred Hospital” in the Charlotte market by the National Research Corporation eleven times. U.S. News & World Report named CMC to its 2008 ranking of “America’s Best Hospitals” for urology.

At CMC, Carolinas Healthcare enjoyed a 10% increase in patient satisfaction scores after installing Ascom’s communications system.

With 23 hospitals and facilities, Carolinas Healthcare System (CHS) is the largest healthcare system in the Carolinas and one of the largest non-profit public healthcare systems in the nation. CHS’s operation comprises over 5,000 licensed beds and employs more than 35,000 full-time and part-time employees.

Given this size, the Information Services (IS) and Nursing groups had a difficult decision when it came to selecting technologies for improving efficiency and effectiveness throughout their system. Ultimately, a decision was made to focus on tools based on the importance to overall patient care and the organization as a whole. The goal was to find a solution that would eliminate obstacles facing nurses in their daily work – thus allowing the nurses to focus on their primary responsibility – providing excellent patient care.

As CHS investigated the obstacles, it found that existing information systems and resources were not being fully leveraged. These challenges impacted patient safety, patient satisfaction, and overall workflow. They were...

- Time spent providing direct care was reduced by frequent travel to unit for phone calls and alarms
- Overhead announcements were contributing to higher than acceptable noise levels for patients
- Communication across unit was difficult

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The i75 Medic portable handset, when bundled with the UNITE Messaging Suite, is the only healthcare-specific VoWiFi device capable of smart integration with Clinical and Nurse Call Systems.



“The handsets have become a huge tool. It’s not just the voice aspect. It’s the knowledge and information being sent out to people.”

— Linda Boroi, Emergency Department RN

CHS evaluated solutions from four different vendors to provide wireless communications for the clinical staff. The hospital’s primary need was improved communication both in and out of nursing units, but CHS also wanted a device that could deliver data and alarm alerts to caregivers. CHS chose Ascom’s i75 Medic handset due to its durability and flexibility. The Ascom solution provided an intuitive user interface and was easy for first time users to learn.

CHS first trialed the FreeNET VoIP solution and UNITE messaging middleware from Ascom (US) Inc. at their flagship facility, Carolinas Medical Center (CMC). The CMC campus houses an 874-bed hospital which includes a Level I trauma center, a research institute, the 234-bed Levine Children’s Hospital and a number of specialty treatment units (heart, cancer, organ transplant, etc.) CMC also serves as one of North Carolina’s five Academic Medical Center Teaching Hospitals, providing residency training for over 200 physicians in 15 specialties. The trial was conducted in CMC’s Med/Surg Orthopedic unit.

For the trial, the unit used Ascom i75 Medic handsets, Integrated Message Server, and UNITE Gateway integrations to the Nurse Call and Pulse Oximetry systems to send messages and alerts directly to the care giver handsets. The benefit of the handsets quickly became apparent as response times for clinical staff to patient requests and alarms decreased. Nonproductive nurse time waiting for clinician call backs was reduced, resulting in more productive time available to patients. In emergency situations, staff were provided instant communication with response teams by the push of a single button.

The trial proved that the technology allowed nurses to spend more time with their patients; the unit saved 17 person-hours per day through enhanced workflow processes. Patient satisfaction increased by 10% with a clear correlation to the introduction of integrated wireless phones. In addition, overhead paging was significantly reduced to an average of 11 pages per day.

Overall, the pilot users gave the solution an “A” rating. Clinicians indicated that the handsets were easy to use, improved communications, and were beneficial to delivering better patient care. Given the success of the pilot, Ascom was chosen as the corporate standard for VoIP / messaging handsets and awarded a contract to implement the solution more widely.

“Post installation, most units widely accepted the new technology and most nursing units – especially med/surg – can’t live without them,” says Christian Harrocks, the implementation project manager.

Repair and replacement costs have decreased tremendously since implementing the Ascom solution. The hospital was fixing approximately 5% of their previous wireless handsets per week and the repair costs were unreasonable. That is not a problem with the Ascom handsets where repair rates are a fraction of a percent.

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— Clay Fisher, Senior Director of Information Services

Other facilities are eager to implement the solution, as well. The original plan was to roll out the solution across a core subset of facilities over two years. After reviewing the payback to patient safety and the improved workflow, the project was accelerated. In addition to clinical areas receiving deployments, areas such as Dietary, Environmental Services and other non-clinical departments have also received the solution.

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CHS will look at future integrations with hospital information systems to further utilize the handsets and improve efficiency further. Says Fisher, “We are looking at other ways to improve ourselves and, more specifically, to provide better care. Integration of the Ascom solution with a locationing toolset is next on the horizon and promises to move Ascom further up the value chain.”

### **About Ascom**

Ascom is the Americas' market leading developer of workplace wireless communication solutions providing system users with greater freedom of movement, better service and increased safety. Our research and development focuses on products and solutions for our core business of on-site wireless communication. We are committed to providing the Americas with products that are unique, durable and innovative.