



# FASTER EMERGENCY DEPARTMENT COMMUNICATIONS INCREASE PATIENT SATISFACTION

HOW MOTOROLA TWO-WAY DTR550 RADIOS ENABLE RUTLAND REGIONAL MEDICAL CENTER'S EMERGENCY DEPARTMENT TO STREAMLINE FRONT END OPERATIONS AND INCREASE PATIENT SATISFACTION.

## MOTOROLA TWO-WAY RADIOS



### CUSTOMER PROFILE

#### Company

- Rutland Regional Medical Center, Rutland, Vermont

#### Industry

- Healthcare

#### Applications

- Streamlined front end communications for improving Emergency Department service and patient care

#### Motorola Solution

- Motorola DTR550 two-way radios
- Motorola swivel ear pieces
- Motorola DTR multi-unit charger

#### Solution Features

- Instant communications with push-to-talk capabilities
- Affordable and reliable discrete communications
- Lightweight, wearable radios
- Easy-to-use swivel ear pieces that offer all day comfort

### OVERVIEW:

Located in Rutland, Vermont's third largest city, the Rutland Regional Medical Center is a not-for-profit hospital that has been serving the area for more than 100 years. With over 180 beds, more than 200 physicians and 1,600 employees, it is the state's second largest hospital. The facility is situated in the midst of some of the state's most spectacular scenery, a few miles from the Killington and Pico ski resorts and The Long Trail, a popular destination for hikers from all over the world.

**SITUATION:**  
**SIGNIFICANT PATIENT SERVICE CHALLENGES IN THE ED WERE CAUSING A SERIOUS DETERIORATION IN PATIENT SATISFACTION RATINGS.**

Rutland Regional Medical Center's Emergency Department (ED) had been using a patchwork system of communications. With only a few technicians having cell phones, communications consisted mainly of using overhead paging or physically tracking down personnel as quickly as possible. This resulted in service slow-downs, less-than-optimum use of personnel and resources and longer waits for treatment by physicians or physicians' assistants. The result was a substantial deterioration of patient satisfaction scores. One of the department's highest priorities became improving satisfaction rates, beginning with streamlining patient service and care through better and faster communications between nurses, technicians and staff.

**SOLUTION:**  
**IMPROVED COMMUNICATIONS BY EQUIPPING THE ED TEAM WITH MOTOROLA TWO-WAY DTR550 RADIOS WITH PUSH-TO-TALK CAPABILITIES.**

Understanding that the key to improving patient service was to significantly improve communications, and drawing on past experience, the new Emergency Department director installed a new communications system featuring powerful, affordable Motorola DTR550 radios operating in the 900 MHz ISM spectrum, and offering instant push-to-talk capabilities and comfortable swivel earpieces. Radios were provided for nurses, technicians and staff, enabling the department to create talkgroups that allowed for private, secure and virtually instant communications.



**RESULT:**  
**SIGNIFICANT IMPROVEMENTS IN THE TIME IT TAKES TO BE SEEN BY A PHYSICIAN HELPED THE ED IMPLEMENT "IMMEDIATE BEDDING" AND INCREASE SATISFACTION RATES.**

With personnel quickly adapting to and embracing the new two-way radio communications, service in the ED has significantly improved. Talkgroups facilitating one-to-many communications help ensure fast response—from Level 1 chest pain to Level 5 broken digit. Personnel can respond directly to the group, indicating their status and availability. This improved communication, coordination and more efficient use of resources helps eliminate wasted time, enabling the ED to optimize front end operations. The two-way radio system also helps make it possible to implement the concept of immediate bedding, the ability to assign a bed to patients as soon as they enter the ED. As patient service has been streamlined, patient satisfaction has greatly improved.

**"I've watched them. A tech can have a catheter in one hand and reach up with the other to hit PTT and say, 'I'm just starting a line,' then another tech can chime in and say 'I'll be able to come and put in that IV for you.'"**

**- Thomas Rounds, Director, Emergency Department, Rutland Regional Medical Center**



# MOTOROLA TWO-WAY RADIOS HELP IMPROVE ED TEAMWORK, EFFICIENCY AND FLOW

## SERVICE ISSUES

The hospital's Emergency Department treats about 100 patients a day, which can substantially increase during ski season. With 26 beds and four trauma rooms, the department has 24 physicians and a staff of 64. The ED has earned a reputation for excellent care, exceeding for example, national guidelines for heart treatment and stabilization. In the national hospital satisfaction index, however, the department showed considerable weakness in the area of patient service. Patient satisfaction ratings were in the bottom quartile.

## EFFICIENCY AND FLOW

In the past, patient perceptions of the ED had been, essentially, ones of "good care, not-so-good service." The department set about to turn those perceptions around, based largely on Studer evidence-based tools and tactics, Lean Sigma management concepts and improving process efficiency and flow. Says new Emergency Department Director Thomas Rounds, "We had two fundamental goals. First, to increase throughput by reducing the length of stay, and second, to reduce the time between patient arrival and examination by a doctor or physician's assistant."

## IMMEDIATE BEDDING

One of the best strategies for improving ED patient satisfaction is the implementation of "immediate bedding" practices that help streamline front end activities, that is, the flow from arrival to examination to discharge or admittance. It's a solution designed to be faster and more efficient than the classic "triage room"



methodology, in which a patient is first placed in triage to be checked by a technician or nurse before being sent to the next available bed to be seen by a doctor.

"Going in the triage booth is just a stopping off point and in most cases, a waste of time," says Rounds. "With immediate bedding, we begin to observe and triage patients the moment they walk in the door, then send them to an available bed right away, enabling them to be seen by a doctor faster." Across the country, immediate bedding programs have proven to be exceptionally successful at reducing the time the patient stays in the ED, while at the same time, improving care.

**"We're trying to break down all the barriers to getting patients from the door to the bed and in front of the physicians as rapidly as possible."**

**- Thomas Rounds**



### **IMMEDIATE COMMUNICATIONS**

One of the most important facilitators of immediate bedding is immediate communication across the ED front end, involving nurses, technicians and staff. The primary challenge for ED management was replacing the inefficient status-quo system with continuous, reliable communications among all staff members.

The hospital had a modified system that consisted of looking for people, basically having to track them down. In addition, some technicians had cell phones. Even cell phones were inefficient. The nurse had to open her cell phone, punch in a number, then wait for the tech to reach and open his phone to answer. This consumed precious seconds. All in all, it was an inefficient, time-consuming process and it was the cause of significant slow downs in front end processes.

### **THE DTR550 TWO-WAY RADIO SOLUTION**

What the Rutland ED needed was the instant communication and instant response they could get from a powerful two-way radio system with push-to-talk (PTT) and talk group capabilities. Based on previous experience with the DTR550 radios at another healthcare facility, Rounds was confident of the benefits they could bring to Rutland. "Instead of having to chase everybody down or call multiple cell phones, when you have radios and

you use a talk group, everybody immediately hears and understands the urgency of what you need. They can acknowledge that they are going to respond, or if they are unavailable, other members of the group can offer to respond instead."

### **PUSH-TO-TALK**

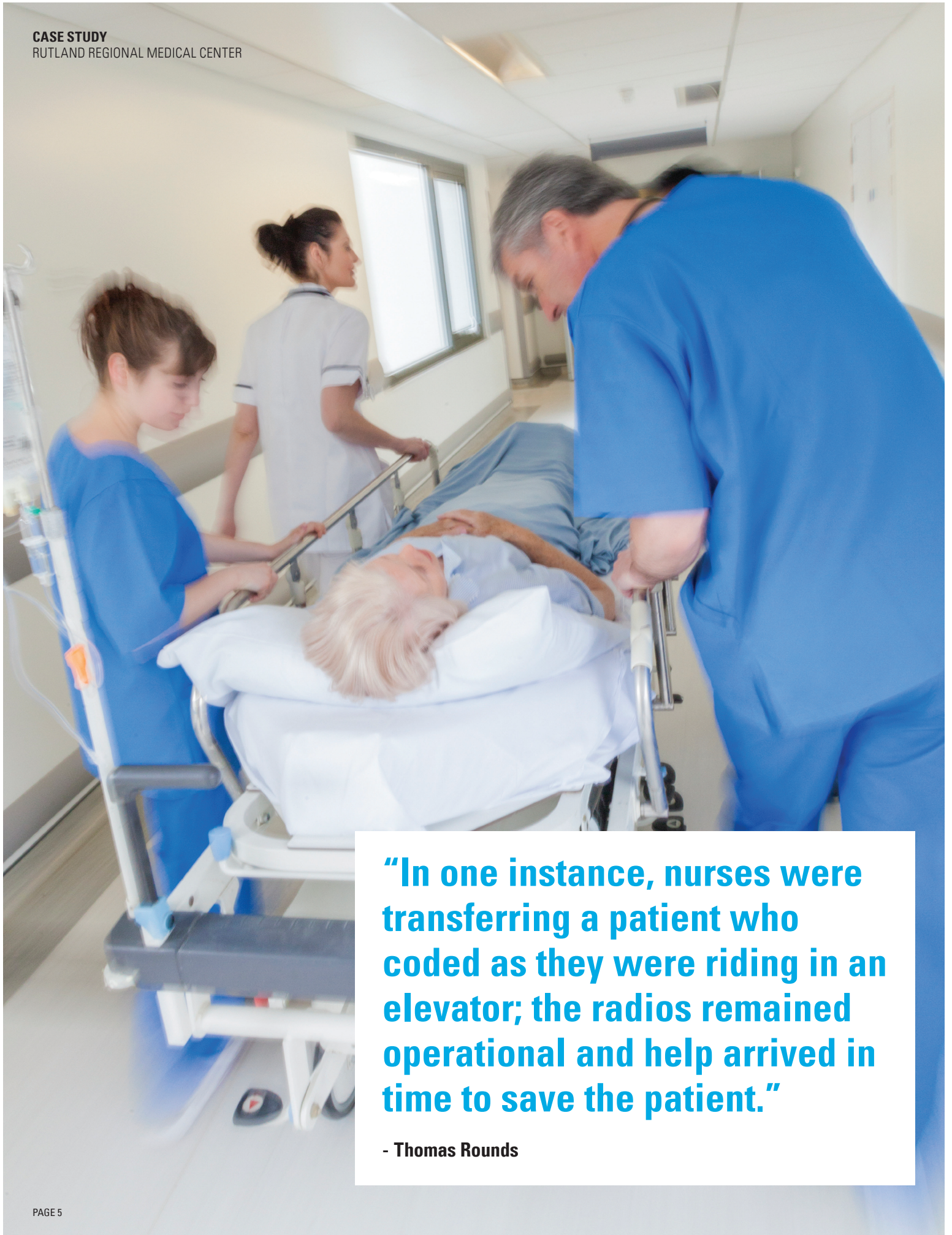
With PTT, the nurse can say, "This is triage, we have a Level 1 chest pain, we're going to Room 10." All the people who need to respond hear the call and can respond immediately. The nurse assigned to the room goes there, a tech brings in an EKG machine, the physician is notified. If someone is unavailable, the team knows it right away and can immediately make other arrangements.

### **MOTOROLA DTR550 RADIOS**

The hospital chose to deploy the affordable Motorola DTR550 radio system in the ED, equipping nurses, techs and staff. Results have been outstanding. The radios not only offer clear audio communications, PTT, talkgroup and all other essential capabilities, they are also wearable, lightweight and ergonomically easy to use. Before full implementation, of course, the hospital vetted the radios in a wide range of locations to ensure they would not put patients at risk by interfering with crucial equipment. The DTR550 is certified to operate in the 900 MHz Industrial, Scientific and Medical (ISM) band.





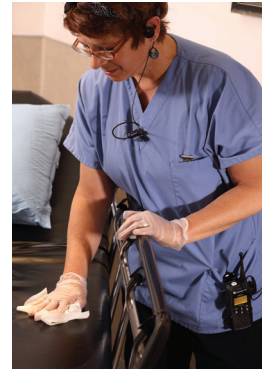


**“In one instance, nurses were transferring a patient who coded as they were riding in an elevator; the radios remained operational and help arrived in time to save the patient.”**

**- Thomas Rounds**

**“When our housekeeper asked to become part of our system, the ability to clean and turn the rooms around faster became another benefit of the system.”**

**- Thomas Rounds**



The department set up a system that utilizes three Motorola multi-unit chargers, each holding six radios. Employees take a radio at the beginning of the shift, then return it at the end, so there are always fully charged radios at the start of the next shift. Employees also use Motorola swivel earpieces that are comfortable and easy to wear, and, because they do not go inside the ear, pose fewer sanitation issues. Users simply use wipes to clean the units, and the PTT and earpiece wires, before their shifts.

#### **EMBRACING THE CHANGE**

How have Rutland ED employees adapted to the new technology? “They adapted very quickly,” says Rounds, “and now the staff rave about them. The reality is, to work efficiently in our ED, you must have a radio or else you’re out of the loop.” There were even a few surprises. “One day the housekeeper assigned to the ED said ‘Do you mind if I wear a radio?’” Rounds recalls. “That linked another department into our team. Now she can know immediately when to turn a room around, to clean up a spill or perform a total cleaning. That was a surprising bonus.”

#### **PROGRESS REPORT**

The Rutland ED has been using the two-way radio system for more than six months, and the department is quite satisfied. Performance has been excellent.

“At times when we have a Code 99, which involves the entire hospital,” says Rounds, “our radios have been operational throughout the entire five-story building.” The success of the system is being noticed throughout Rutland Regional Medical Center. After other personnel have seen the DTR radios and how well they work, other departments have gotten their own radios. For example, reception has gotten three units, and the oncology department now has 14 radios.

#### **WHAT’S NEXT?**

The Rutland ED’s next steps include expanding capacity, outfitting more employees with radios, including the scribes who shadow the Rutland physicians. This will effectively keep doctors in the loop, too. These radios are planned to be next generation DTR radios.

The Rutland Emergency Department is very pleased with their Motorola two-way radio system. “I’ve been a director for 12 years in large facilities, and I’ve looked at a lot of products,” says Rounds. “Overall, I can tell you these radios make the patient experience fabulous.”

Most important, however, customer satisfaction scores have risen for the ED. “We’ve had tremendous improvement with satisfaction,” concludes Rounds, “and I credit a lot of that to the radios.”

For more information on how Motorola’s two-way radio solutions can improve your healthcare operations, please visit us on the web at [www.motorolasolutions.com/healthcare](http://www.motorolasolutions.com/healthcare). For additional product information visit: [www.motorolasolutions.com](http://www.motorolasolutions.com)