

## ▶ CASE STUDY: SpeechQ for Radiology™

### Northeast Regional Medical Center Improves Radiology Reporting

#### Northeast Regional Medical Center Kirksville, Missouri

- 40,000 Annual Reports
- 2 Radiologists

#### The Situation

- Radiologists hand wrote and faxed preliminary report for every exam
- Report turnaround time averaged four days

#### The Solution

- Implement front-end speech recognition solution
- Integrate SpeechQ for Radiology with hospital information system

#### The Result

- Radiologists dictate, review and sign reports in single step
- Report turnaround time averages seven hours

#### The Benefits

- All radiology reports are “final”
- No more handwritten or faxed radiology reports
- Referring physicians extremely pleased

The motto of Northeast Regional Medical Center (NRMC) is “Quality Care, Right Here.” And they provide this quality care with the compassion and understanding that you would expect from a 109-bed rural community hospital staffed by neighbors and friends. As northeast Missouri’s regional referral center, NRMC has a rich history of offering the highest level of care.

### Proper Planning and Preparation

Before NRMC selected a speech recognition vendor for the hospital’s radiology department, the staff did a great deal of planning to determine if -- and then how -- to integrate this technology into the hospital’s workflow. The planning committee included the hospital’s chief executive officer, the chief financial officer, the HIM director, the radiology director, the information technology department, radiologists and the person designated as the “system administrator.” This diverse group determined that to best serve their referring physicians, other hospital departments and patients, they should implement speech recognition within the radiology department. They also agreed that the best approach for NRMC was to require the radiologists to use the “dictate and self edit” methodology.

After considering several vendors, NRMC selected MedQuist’s SpeechQ for Radiology™. In addition to meeting all the hospital’s functional requirements, NRMC had successfully partnered with MedQuist on other projects, and knew that MedQuist’s staff shared their commitment to excellence. Before the hospital contracted for SpeechQ for Radiology, the two companies met and agreed on a Scope of Work that identified the key components of the project, a project plan, the workflow process and points of integration with other hospital information systems. As a result, both parties clearly understood their roles and responsibilities, had already identified and resolved potential issues, and were well aware of the other’s expectations.

### Clearly Identified Goals

One of the key goals identified by each member of the NRMC planning committee was to improve the radiology department’s workflow process and report turnaround time. Before SpeechQ for Radiology was implemented, the radiologists would receive an image and a paper requisition. The radiologist would review the image, and create a handwritten, preliminary report that would be faxed to the referring physician and to hospital departments such as HIM, the Emergency Department or to an inpatient unit secretary. The radiologist would then dictate the report and send it to a transcriptionist. Finally, a paper copy would be returned to the radiologists for review. Often this process took several days before the radiologist could sign the report.

The planning committee agreed that if they were going to invest in a speech recognition solution, it should be used to eliminate this cumbersome manual process. The group mandated that radiologists would no longer send reports to transcriptionists or medical editors, and would not handwrite or fax reports. All reports would be created using the

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speech recognition software, and the radiologists would review the report while the patient's image was still displayed. They would then sign the report electronically.

Another goal was that the speech recognition solution would support integration with the hospital's information system. This allowed all radiology reports to be electronically signed, stored and distributed, so they were available through the hospital's information system, to appropriate hospital personnel and physicians as soon as they were finalized.

## Making It Work

During the planning process, it was clear that a "system administrator," who both understood the radiology workflow and could be readily available to the radiologists, was vital. And everyone agreed that Julie Atchley was the perfect choice. Atchley had held several different positions in the radiology department, including stints as the radiologists' office assistant and as a radiology technologist. She clearly understood the business and clinical needs of the hospital, the radiology department and the radiologists.

During the implementation process, Atchley was involved in every decision. "I had the full support of the planning committee which included the CFO and CEO. Because the hospital's executive management was involved in the planning and goal setting I was able to confidently make decisions that supported their expectations," says Atchley. "And, because of my experience within the radiology department, I was able to anticipate the radiologists' needs."

Atchley believes their successful implementation was due to how they approached training the radiologists to use the system. "I spend a great deal of time in the reading room with the radiologists. This allowed me to understand their needs and concerns so I was able to fine-tune the system to meet their unique needs and help them to quickly become proficient with the system," she adds. Since Atchley is so accessible to the radiologists, they can quickly get any questions or concerns addressed, which eliminates the frustration that may be generated when learning any new software application. For example, Atchley set up templates so that the headers are formatted to the radiologists' specifications within a few hours of their request. She also set up radiologist specific macros to help them streamline the report creation process.

## Radiology Service Improved

Since SpeechQ for Radiology was implemented, finalized radiology reports are now created and distributed within hours -- and often within minutes -- after the image is available. The referring physicians, hospital departments and patients now have access to the radiologist's findings in an easy-to-read, typed and legible format. Preliminary reports no longer have to be handwritten and faxed. One transcriptionist who had been dedicated to radiology has been reassigned, so the cost of radiology report creation has been reduced. Betty Barber, the director of radiology, indicates that the department's return-on-investment was realized in approximately four months.



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