



**HIMSS** Analytics

# HIMSS Analytics Stage 7 Case Study

Rockford Health System



# Profile

Rockford Health System, located in Rockford, Illinois, is the largest health system serving northern Illinois and southern Wisconsin. Our long tradition of care is built on a commitment to clinical excellence and cutting-edge technology. All of us work together to achieve our mission: to provide superior care, every day, for all our patients.

Rockford Health System includes:

- Rockford Memorial Hospital, a 396-bed tertiary care hospital.
- Rockford Health Physicians, outpatient clinics with locations throughout the region.
- Van Matre HealthSouth Rehabilitation Hospital, a 55-bed inpatient hospital offering a full range of rehabilitation services.
- Visiting Nurses Association, which provides a variety of home health care services to people of all ages.
- The Rockford Memorial Development Foundation, dedicated to raising funds in support of the Rockford Health System mission

HIMSS Analytics recognized 11 of Rockford Health System sites with its HIMSS Analytics Ambulatory EMR Adoption Model<sup>sm</sup> Stage 7 Award on December 18, 2014.

## The Challenge

Rockford Health System continues to optimize decision support technology within their EMR. The organization was interested in developing decision support tools for high tech diagnostic imaging that were integrated in the physician order entry workflow. The goal was to improve patient care by providing real-time alerts based on appropriate use criteria developed by the American College of Radiology.

Many times the order for high tech diagnostic imaging required modification once the patient arrived for the scheduled procedure. This occurred after the scheduling and precertification process was complete which resulted in precertification rework, delays performing the study, additional work effort by the radiology technician and overall patient dissatisfaction. Exposure to additional radiation if the incorrect imaging study was performed was also a concern. In an effort to improve quality and streamline the patient experience, the evaluation of decision support tools for high tech diagnostic imaging began.

## Implementation Overview

Rockford Health System partnered with National Decision Support Company to evaluate and implement ACR Select across the enterprise. ACR Select includes appropriate use criteria supplied by the American College of Radiology. The appropriate use content and decision support feedback is integrated within the EMR's CPOE application. The system utilizes discrete indications/reasons for study that are associated with imaging procedures. The clinical algorithms associated with the coded indications and ordered procedure produce a



calculated decision support score. Based on the decision support score, feedback is provided to the ordering physician with recommendations for imaging alternatives.

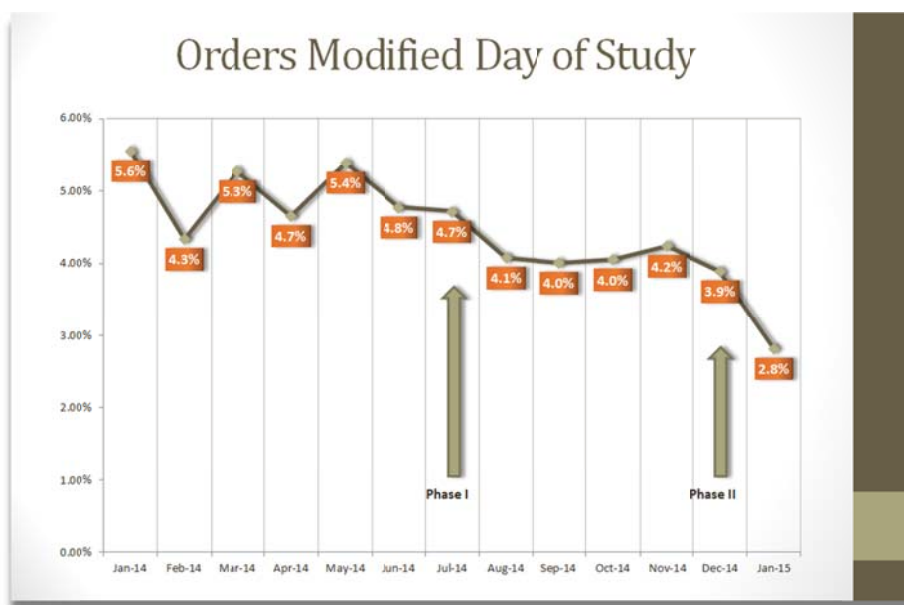
Rockford Health System rolled this technology out to their organization in two phases. Phase I of the project was initiated in July 2014 and included changes to the order entry workflow to select discrete/coded indications for all MRI, CT, ultrasound and nuclear medicine orders. During Phase I, the project team collected baseline data, reviewed mapping of indications/procedures and analyzed the decision support scores. They worked with ordering providers and radiologists to build additional decision support rules within the system that supported local radiology protocols. Phase II of the project began in December 2014 and incorporated the display of the decision support score for orders that were designated as 'low utility' to the ordering provider. Alternative procedures were recommended allowing the provider to select the more appropriate study.

*"A lot of thought and careful planning has gone into optimizing the implementation of the ACR Select decision support tool at Rockford Health System. I foresee the program providing useful information in a concise format for ordering clinicians as they plan for the best care for their patients."*

*- Dr. Christopher Vittore, Radiologist*

## Resulting Value / ROI

Although the fully implemented system has only been live for a few months, Rockford Health System is beginning to see improvements in appropriate high tech diagnostic imaging ordering. Prior to the implementation of ACR Select, the organization was tracking the volume of orders that needed to be modified the day of the scheduled study. During Phase I of the implementation, there was a decrease in the number of modified orders which was sustained during the first phase of the install. This is represented in the August through November data displayed below. Phase II of the implementation resulted in another decrease in modified orders. Although the system was recently implemented, Rockford Health System is encouraged by these results and is working to further refine the system to sustain these gains and achieve additional efficiencies with the use of this technology.



# Lessons Learned

- Rockford Health System was able to customize and refine the decision support rules during Phase I of the implementation. Collecting the baseline data and analyzing how the providers were utilizing the system prior to rolling out the scores and feedback to the ordering provider is important for a successful implementation.
- Reconciling the appropriate use criteria with local radiology protocols requires a significant effort and multiple interactions between the build team and the radiologists. Engage the radiologists in the build and allocate time in your project plan to fully assess the calculated decision support scores.
- Engage and work with ordering providers to assure the common indications and nomenclature utilized supports their ordering practices to improve utilization and acceptance of the workflow changes.
- Rockford Health System plans to continue to use outcomes data to engage physician leaders and education providers on the use of the ACR Select tools. Optimizing the toolset to include additional modalities and expanding the decision support tools to cardiology content is also being analyzed for the future.

*“...In terms of workflow and EMR optimization, they implemented an imaging decision support tool that directly integrates with the American College of Radiology's evidence-based imaging guidelines into the physician's order entry workflow. This allows physicians the ability to ensure patients get the right scan for the right indication. It improved the utilization of imaging resources by reducing unnecessary imaging; it improves communication between ordering and rendering provider; and it eliminates scheduling and pre-cert rework due to ordering the incorrect study. Good work, Rockford, I would like to see more clinics optimize their EMR like this.”*

- John Daniels, CNM, FACHE, FHIMSS, CPHIMS, Vice President, Strategic Relations, HIMSS

