

Veriphy™

Virginia Commonwealth University Health System's Radiology Department Brings Critical Test Result (CTR) Communication Turnaround Times Down to 13 Minutes with Nuance Healthcare's Veriphy

For the central Virginia communities surrounding Richmond, the Virginia Commonwealth University Health System (VCUHS) is the region's only academic medical center, and also the only Level 1 trauma center. With approximately 30,000 admissions and more than 500,000 outpatient visits each year, the 779-bed hospital performs upwards of 340,000 annual imaging exams.

Before implementing Nuance's Veriphy solution, VCUHS's radiologists had to call and page ordering clinicians to present CTRs, and then wait for a response. It was an inflexible system that took expert radiologists away from time-critical diagnostic readings, choking workflow and adding risk to healthcare delivery. VCUHS made the search for an effective Critical Test Result Management (CTRM) solution a top priority, and turned to Nuance Healthcare.

Defining the CTR Challenge and Finding the Solution

Communication of critical results by "manual" telephone is a vulnerable process, subject to the mishaps which Joint Commission standards try to prevent. VCUHS's radiologists were often unable to locate the right phone or pager number for the ordering clinician, and could get caught up in long bouts of phone tag. Tracking and auditing the "manual" process was almost impossible.

The criteria for making VCUHS's CTR communication system more effective were clear. Patient safety was the first priority. A reduction of the inappropriate burden on radiologists' workloads was also important, but only if it did not impact patient safety and care in a negative way. The new process had to be auditable, and comply with Joint Commission standards on healthcare service diagnosis and delivery. As a clinical organization with many sites serving a wide area, VCUHS also wanted a CTRM solution that would replicate effectively throughout the organization.

Highlights

- Veriphy improves radiologists' efficiency and the communication of critical test results
- Of 1,220 CTR messages across all categories, 1,207 are in compliance with VCUHS thresholds
- Average turnaround time (TAT) to communicate a critical test result is 13 minutes
- Veriphy integrates CTR management with CIS (clinical) and RIS (radiology) information systems
- Robust auditing and documentation meet Joint Commission recommendations
- Radiologists are in 96 percent compliance

“We were looking for a solution that could be easily integrated with our current workflow, while still providing the highest level of service to both patients and referring physicians. Veriphy has helped our radiology department speed patient care and become more reliable and timely in its communication of critical test results.”

— **Ron Miller**, Director, Department of Radiology
VCU Health Systems



The CTR team also considered the Joint Commission National Patient Safety Goals (NPSG) determination that the greatest CTR-related risk to patient safety was ineffective communication.

Nuance Healthcare’s Veriphy solution met VCHUS’s criteria for an automated, closed-loop system for critical test result management in all diagnostic departments. The system had a well-known record of usability, compliance and success at other hospitals where the Joint Commission and other healthcare authorities had acknowledged its effectiveness. Because Veriphy is a Web-based solution, it requires no investment in new hardware. Impact on a healthcare organization’s IT resources is minimal.

How Veriphy Functions

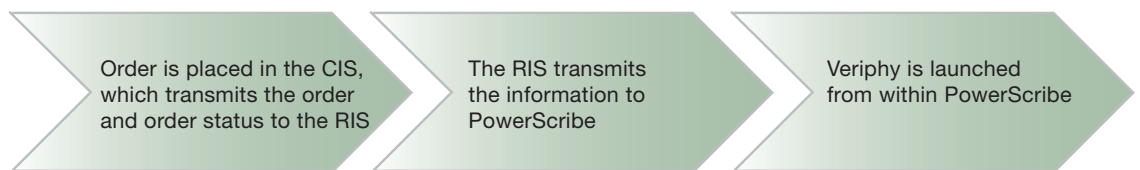
VCUHS clinicians place orders for clinical tests within their CIS, which conveys the order to the radiology information system (RIS) which in turn transmits the information to PowerScribe®—the powerful speech recognition solution designed by Nuance to integrate easily with radiology workflows and provide instant report availability. Veriphy is launched from within PowerScribe.

How to Implement Safe and Effective CTRM with Veriphy

To ensure a smooth workflow transition, the Veriphy system was explained to VCUHS staff and user input was elicited prior to implementation. Their radiologists in particular welcomed the opportunity to spend more time evaluating tests, and less time calling and paging.

Working with Veriphy service professionals, the VCUHS team developed an extensive ordering clinician database and identified ordering clinicians’ preferences for notification – for example, cell phone, pager, fax, or text pager. Veriphy includes ongoing support to ensure that the ordering clinician database is up-to-date.

The VCUHS team set up prioritized clinical information system (CIS) order categories and Veriphy “finding” categories to identify the criticality of each CTR notification, from “life threatening” to “potentially concerning” to “document”, and then defined the response times for each category. Nuance’s 24x7 Veriphy call center team backs up the automated electronic escalation process by contacting clinicians directly to alert them to an outstanding CTR.



“Our staff has decreased critical result communication time from one hour to just 16 minutes and Veriphy has, in part, helped us to increase the number of radiology exams processed annually from 312,000 (FY 2008) to 360,000 (FY 2009.)”

— **Ron Miller**, Director, Department of Radiology
VCU Health Systems

The radiologist records the critical test result and sends it to the ordering clinician. The system alerts the clinician to the outstanding CTR message, escalating notification as needed. Veriphy requires the clinician to listen to the entire message, automatically sending further alerts if there is a disconnection before it is complete. Once listening is complete, Veriphy closes the CTR notification and documents receipt of the message. The communication loop is closed and documented for compliance.

VCUHS department administrators use Veriphy’s real-time performance measurement tools to detect any patterns of noncompliance, so communication problems can be fixed immediately. The auditing system keeps a robust record of actions, devices, electronic addresses and message status, meeting Joint Commission requirements completely.

The Right Technology Means Better Healthcare

After going live in April 2008, VCUHS staff noticed immediately how streamlined the automated CTR communication processes had become, in part because of their integration with CIS, RIS and PACS systems. Efficiency statistics soared. Going into the implementation, VCUHS set a goal of completing the notification of life-threatening results in 60 minutes or less, 90 percent of the time. The success rate soon exceeded this goal, and they reset the threshold to 60 minutes or less, 95 percent of the time.

Challenge: VCUHS wanted to improve efficiency and accuracy of CTR communication, reducing the burden of “manual” telephone contact on radiologists so they could do more actual radiology, and putting the system in greater compliance with Joint Commission standards.

Strategy: VCUHS implemented Veriphy for automated CTR communications.

Results: VCUHS’s initial goal was to complete the notification of life-threatening results in 60 minutes or less, 90 percent of the time. Since going live with Veriphy, VCUHS has raised that goal to 95 percent and on average, all CTR notifications are completed within 13 minutes.

In January 2009, VCUHS tracked 1,220 CTR messages transmitted across all seven finding categories and found 1,207 in compliance. The average turnaround time (TAT) for a CTR notification is approximately 13 minutes, from the time a message is generated to the time it is heard.

While the CTR communication process accounts for only a small fraction of a radiology department’s workflow, CTRs represent a high threat to patient safety if not communicated effectively. With Veriphy, VCUHS has seen a dramatic increase in the rate of effective CTR reporting, with a very high percentage in compliance compared to industry standards. Nuance Healthcare’s Veriphy has helped VCUHS achieve its mission of providing superior, compassionate and innovative patient care to improve health in the communities it serves.

For product information please visit Nuance Healthcare at www.nuance.com/healthcare or call 866-325-1096 Ext 106.

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