

Midwest Hospital Improves Imaging Workflows

University of Wisconsin Health and McKesson integrate Unified Communications with Picture Archiving Communication Systems.

EXECUTIVE SUMMARY
<p>UNIVERSITY OF WISCONSIN HOSPITAL AND CLINICS</p> <ul style="list-style-type: none"> • Healthcare • Madison, Wisconsin • 7,000 Employees
<p>BUSINESS CHALLENGE</p> <ul style="list-style-type: none"> • Inefficiency in communicating imaging results between radiologists and referring physicians • Inability in maintaining a record of results notification and acknowledgment • Need to meet stringent regulatory and audit requirements
<p>NETWORK SOLUTION</p> <ul style="list-style-type: none"> • Integration of Unified Communications and PACS
<p>BUSINESS RESULTS</p> <ul style="list-style-type: none"> • Streamline the communication between radiologists and referring physicians • Capture and store and auditable record of results communication and acknowledgment

Business Challenge

There are three key challenges for radiologists in current imaging workflows. One: the wasted time in tracking and locating referring physicians to communicate results; two: the inability to maintain a record of the results notification and acknowledgement interactions with referring physicians for regulatory compliance purposes; and three: the lack of collaboration tools and screen-sharing capabilities that limit the effectiveness of current interactions with referring physicians.

Over the last decade, leading healthcare organizations have made large investments in Picture Archiving and Communication Systems (PACS) to enhance clinician productivity and to increase the effectiveness of using digital imaging to provide accurate and timely diagnosis of various conditions. PACS investments have thus far focused on optimizing the presentation, distribution, storage,

and retrieval of patient images, but have not addressed the integration of physician-to-physician communication and collaboration into imaging workflows.

Radiologists still largely rely on manual processes to communicate and collaborate with referring physicians. This not only affects radiologist productivity, but impacts patient safety and patient care. With the increasing complexity of imaging workflows, there is a growing need to simplify, streamline and enhance the timeliness of communications and collaboration between clinicians.

“Today, radiologists waste a lot of time playing phone tag before they can reach the right clinician to communicate results,” says Dr. Gary Wendt, enterprise director of medical imaging and vice-chair of informatics, University of Wisconsin Madison, Department of Radiology. “The productivity impact is significant when this happens multiple times per day.” In addition, a delay or breakdown in communications also has an impact on patient safety, especially for unexpected or critical results communication.

Another key challenge for healthcare providers is the need to prepare for more stringent regulatory and audit requirements in support of Joint Commission National Patient Safety Goals and American College of Radiology (ACR) guidelines. Sentinel event statistics from the Joint Commission clearly indicate that ‘communications’ was the top root cause for sentinel events. “In today’s imaging workflows, there is typically no record of the two-way interactions between radiologists and

referring physicians, and no record that the referring physician has acknowledged the findings communicated by the radiologist,” says a radiologist at UW Health. “I generally have no idea how the clinician is acting on what I tell them.”

Network Solution

UW Health Radiology, at the University of Wisconsin Hospital and Clinics has teamed with Cisco® and McKesson's Medical Imaging Group (MIG) to deploy an integrated solution of Cisco Unified Communications and Horizon Medical Imaging™ PACS. UW Health Radiology has embarked on an initial phase of the integrated Connected Imaging Collaboration and Reporting solution, Horizon Medical Imaging Collaboration that will align Unified Communications capabilities with imaging workflows to address key communication and collaboration challenges, and that will quantify the benefits achieved with the solution. UW Health Radiology has recognized the value that the integrated solution provides in transforming imaging workflows and streamlining communication and collaboration to enhance clinician productivity, improve patient care, and simplify compliance with emerging regulatory compliance requirements. UW Health will be working jointly with Cisco and McKesson over the next few months to improve imaging workflows and refine the technical and integration aspects of the solution as well as measure the business and clinical value of the solution.

The key differentiators of the Connected Imaging Collaboration & Reporting solution are: presence capability to see the availability of other clinicians and their preferred method of communications and eliminate unnecessary 'phone tag' and interruptions; recording of results notification and acknowledgments for regulatory compliance; and collaboration tools to enhance the efficiency and richness of interactions between radiologists and referring physicians. The capabilities are provided by integrating the Cisco Unified Communications suite with McKesson's Imaging Horizon Medical Imaging PACS, through open Cisco Unified Communications APIs and the Cisco Unified Applications Environment (CUAE). It is delivered to radiologists and clinicians through the Horizon Medical Imaging user interface and leverages the solution's Enhanced Communications add-on module. In order to provide the full range of benefits, the solution leverages multiple Unified Communications services and applications including the Cisco Unified Presence Server, Unified MeetingPlace Express, Unified Personal Communicator, and Cisco IP Phones.

The solution will significantly transform results communication to referring physicians. Radiologists will have the flexibility to communicate patient results to referring physicians using the most appropriate mode of communications such as synchronous or asynchronous, based on acuity of care, and criticality of the results and the patient. “This flexibility will improve clinician productivity by reducing the number of interruptions, enhance patient satisfaction, and increase the number of patients a hospital can treat,” says Dr. Wendt.

Today, for all unexpected or critical results, radiologists call the referring physicians to share results. This is currently an interrupt-driven process to discuss these results between the physician and radiologist. This can negatively affect the patient experience and results in longer treatment times for patients. Patients are forced to wait while the physician discusses another patient's results with the radiologist, and the physician may not be able to devote his or her full attention to either patient. Without the ability to know if the radiologist or physician is available or busy, either party may interrupt the other and detract from the best patient care. “For the majority of my cases, I don't need to interrupt the referring physician and get an immediate acknowledgement,” says Dr. Wendt. The integrated solution leverages presence capabilities to indicate availability of both sides and eliminates unnecessary interruptions.

“We can enhance radiology throughput by streamlining the workflow and eliminating communication inefficiencies,” says Dr. Wendt. When radiologists need to communicate unexpected results to referring physicians, they no longer have to waste time making multiple calls or waiting for responses to pages to find the right clinician to communicate results. Tight integration between Horizon Medical Imaging, CUAE, and Cisco Unified Presence Server enables the radiologist to be presented with a filtered list of clinicians that is relevant for that patient study along with their presence, availability, and preferred mode of contact.

PRODUCT LIST

- Cisco Unified Presence Server
- Unified MeetingPlace Express
- Unified Personal Communicator
- Cisco IP Phones
- Horizon Medical Imaging

Business Results

One of the key sources of value from the solution is the ability to capture and store an auditable record of results communication and acknowledgements between radiologists and referring physicians. “This capability will become increasingly important for healthcare providers in order to comply with more

stringent regulatory requirements,” says Dr. Wendt. These capabilities will enable providers to show progress towards the Joint Commission’s goal of ‘improving the effectiveness of communication among caregivers.’ There are also significant benefits from a legal perspective since over 75 percent of radiology lawsuits are related to a breakdown in communications.

The ability to collaborate and share the same screen will also enhance radiologist and referring physician productivity. Today, the process for a radiologist to collaborate with a referring physician and show them an area of interest in a patient study has a lot of inefficiencies. Referring physicians don’t always know what to look for and which image they need to navigate to. The solution will streamline the workflow by enabling radiologists to push specific images to referring physicians and share the same screen while they highlight the areas of interest. “I like the ability to control what the physician is looking at because I know they are focusing on what I would like them to see,” says a radiologist at UW Health. In addition, no patient images are transferred, which eliminates privacy and latency concerns.

Increased communication and collaboration between radiologists and referring physicians is critical to building stronger relationships and reinforcing the value that radiologists provide. With increased usage of digital imaging, there are fewer in-person consults with referring physicians, which over time could lead to “disintermediation” of radiologists, which refers to the loss of intermediaries or middlemen in a process. “Referring physicians don’t come down to the Reading Room anymore,” says a radiologist at UW Health, “and losing the personal connection is a huge concern.”

The pilot at UW Health will demonstrate multiple areas of business and clinical value and serve as the foundation for a broader production environment. Once the Connected Imaging Collaboration and Reporting solution is deployed in a fully operational environment, it will help significantly to transform imaging workflows, drive higher clinician productivity, enhance patient safety and quality of care and enable better regulatory compliance.



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