

When Images Outpace the Patient:



SeeMyRadiology.com Helps Orlando Regional Medical

Center Enhance Trauma Transfers with Real-Time Image Access.

When a helicopter carrying three critically injured children touched down at Orlando Regional Medical Center (ORMC), a team of highly trained medical specialists were waiting, surgical plan in hand, to deliver the care that ultimately saved the youngsters' lives. Following a devastating automobile accident, the patients had been transferred to the highly regarded Level I trauma center from a community hospital 100 miles away. When seconds mattered most, skilled surgeons arrived, informed and ready-to-operate, in the middle of the night, with the expertise that may have ultimately meant the difference between life and death.

The crucial step that enabled ORMC to provide this immediate, targeted emergency medical care? Quite simply, their medical images arrived in advance of the patients.

Thanks to Accelarad's innovative SeeMyRadiology.com, a cloud computing platform that enables real-time

image sharing in full diagnostic resolution over the Internet, ORMC was able to evaluate the cases, accurately gauge each patient's condition, bring together the necessary treatment team and even prep the operating room (OR) before the patients' arrival.

"For complex trauma transfer cases such as this, almost every doctor would agree that you can fax all sorts of medical records, but a picture truly is worth a thousand words. Correctly accessing a patient's condition and planning appropriate treatment can best be accomplished through viewing a medical image," says **Tim Bullard, MD**, Chief Medical Officer for ORMC. "While trauma centers make the most of available information, without image access, they simply have to fill in a few dots. Naturally, that impacts patient care and also has implications for the allocation of resources within the hospital overall."

In 2008, with the belief that technological advances had opened new paths to immediate image communication, ORMC decided to seek out an unconventional solution to the long-standing problem, and the hospital's trauma care took a dramatic step forward due to what they found.

ORMC - BACKGROUND

The flagship facility of the Orlando Health network, Orlando Regional Medical Center is central Florida's only Level I trauma center, caring for the area's most critically ill patients. The 808-bed tertiary medical facility is recognized for its pre-eminent medical staff, advanced technology and commitment to delivering the highest level of care.

Orlando Health comprises six additional facilities that share images through a common PACS environment. However, ORMC's landing pads are busy around the clock bringing trauma transfers from about 10 hospitals beyond the Orlando Health network. Some patients are transferred from rural hospitals, while others from more comprehensive community hospitals. But, none of these sites have 24/7 access to advanced specialists and technologies available at ORMC. Particularly for complex cases involving neurosurgery, cardiology, orthopedics and plastic surgery, surrounding hospitals look to ORMC to provide patients with the highest standard of care.

THE NEED

According to Carlos Carrasco, Director of Business Development for the hospital, Accelarad's SeeMyRadiology.com brought to ORMC a solution for a long-term problem ubiquitous throughout the medical system. "High quality medical care depends on matching the right patient with the right resources at the right time," he says. "And the difference that having timely access to medical images makes in accomplishing this goal is enormous."

He notes that an accurate window on the body greatly enhances clinical decision-making, saving critical time. It can allow key specialists to be onsite waiting for a patient's arrival and equipment to be prepared in advance. The result, not surprisingly, is better outcomes.

In the case of ORMC's critically injured young patients, after speaking with doctors at the local community hospital where they had been admitted, specialists at ORMC immediately had digital x-rays up on their workstations for review. "This allowed us to identify in advance the appropriate medical talent, to speed diagnostic images to them on their home PCs, to confer about the case, and even to develop a surgical plan that enabled treatment to begin as soon as the helicopter touched down," explains Bullard. "The result was likely a better outcome."

But, in today's challenging healthcare environment, access to trauma images across unaffiliated hospitals also reaps additional important benefits. According to Bullard, "A clearer understanding of each patient's condition at the time of admission helps a facility to maximize limited resources. It can help avoid admission of trauma patients not actually in need of acute intervention and enable triaging of incoming cases so that the highest level of care is delivered to those who it will benefit most."

With beds no longer reserved for people not truly in need of critical care, hospitals will not be forced to turn away seriously ill patients due to lack of space.

Carrasco agrees, "Every medical professional has seen space reserved for patients who could have been treated in an office setting or conversely for cat-



"If a new technology can solve a problem today, we're going to use it," says Dr. Bullard



astrophically ill patients who simply would not benefit from any level of care. Then, critically injured people may have to be referred to a more distant hospital. Until now, that was the state of the art.”

THE TECHNOLOGY SEARCH

Long in the forefront of medical technology, when the ORMC team launched its search for a real time image access solution, they knew the marketplace offered numerous options. However, they found most technologies were difficult to manage, requiring significant advanced set up and maintenance, and were not scalable to support the addition of new referring hospitals.

Taking another tack, the team considered providing its surgeons with access to the PACS solutions running at each of its referring institutions. But the jumble of passwords and other security measures, viewers with inconsistent features and potential technology conflicts made this impractical. ORMC also even considered placing its own servers in referrer’s radiology departments but the ongoing maintenance would have been problematic.

“Coincidentally, we just stumbled upon SeeMyRadiology.com at a client hospital, which was using the technology to pare down the number of exams it had to manage on CDs,” explains Carrasco. “We knew immediately that it was an excellent solution for our needs. After requesting a live demonstration, we were convinced it was a great one.”

PROBLEM: SOLVED

Dedicated to meeting its goals efficiently and cost-effectively, the ORMC team worked with SeeMyRadiology.com to develop new features and fine-tune implementation for its intended use. “The company really pushed the boundaries of its technology,” says Bullard. The result was a next-generation SeeMyRadiology.com application that allows ORMC physicians to view images as quickly, easily and accurately as they would if the radiology department were across the hall.

SeeMyRadiology.com allows any user with appropriate permissions to log on to the advanced Web-based application upload DICOM images in full diagnostic resolution to Accelarad’s high-capacity cloud-based servers. Almost instantaneously, subscribing sites, such as ORMC, can then view the images from anywhere around the world using their own Web portal. Images can be downloaded as needed, and ORMC has automated the process of bringing them into its own PACS.

SeeMyRadiology.com utilizes existing Internet infrastructure without requiring any additional technology, although small onsite servers will streamline the transfer process for high-volume referers. The technology provides state-of-the-art data encryption with no need for VPNs, advanced security and manages all permissions and authorizations. The entire process is seamless and requires no large capital expenditure. “We just pay one convenient monthly fee for an agreed-upon feature set with the flexibility to increase this as needed,” notes Carrasco.

While the solution was created to address a broad range of image management issues in today’s complex healthcare environment, sites such as ORMC are discovering it is a powerful and much-needed solution for managing trauma transfer imaging data.

ADDED BENEFITS

While mastering the technology processes was relatively simple, ORMC anticipated a greater challenge when it came to the human processes: gaining acceptance for it among its physicians and referring sites.

However, in addition to improving patient care, SeeMyRadiology.com also delivered a host of secondary benefits that helped to drive adoption. “Simply put, SeeMyRadiology.com makes everyone’s life easier,” quips Carrasco. “Sites can eliminate time-consuming exam burning onto CDs as well as the risk of those files disappearing in the rush of patient transfers. Exam retakes also have been minimized, along with other CD associated problems, making image communication management that much easier.”

While not its primary goal, the hospital also has realized important cost-savings through its SeeMyRadiology.com implementation. Naturally, the soft expenses of exam CD management and exam retakes are down. Further, the greater efficiency of more timely and efficient patient management saves significant dollars. Referrals from several new hospitals that prefer the ease of sending images over the Internet also has added to the economic benefit.

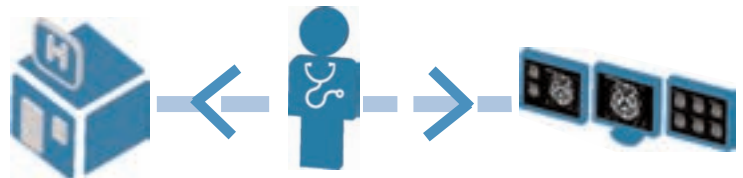
MOVING FORWARD

After building up a critical mass of referring hospitals on the system, adding a new site has become relatively easy, because many are already familiar with the benefits. Today, less than one year after implementation, ORMC receives about 90 percent of acute care transfers images through SeeMyRadiology.com and expects to achieve 98 percent by year end.

Not surprisingly, for a multitude of reasons, ORMC has become an evangelist of sorts for the unique image sharing technology. Notes Bullard, “We often receive spontaneous inquiries about the system from other hospitals. We just received calls from locations as diverse as Kansas City and



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Utah last week. And we’re happy to share our experience because everyone benefits.”

In the end, for the dedicated team at ORMC, it’s all about patient care. “If a new technology can solve a problem today, we’re going to use it,” says Bullard. As technology races forward, ORMC has enhanced its level of trauma care with images that outpace the patient.



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