



Why should Enterprise Imaging matter to the Radiologist?

Enterprise Imaging and the changing role of the Radiologist

Interview

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Cheryl Petersilge is President and Founder of Vidagos, an enterprise imaging strategy firm.

A respected physician, imaging leader, and innovative engineer, Dr. Petersilge provides extensive expertise as a pioneer in enterprise imaging with deep knowledge in healthcare informatics. Dr. Petersilge held numerous Chair and Medical Director positions in radiology and information technology at the Cleveland Clinic. Dr. Petersilge was at the forefront of the movement to design best practices and establish cutting-edge systems that informed the Clinic's rise to global leadership in enterprise imaging.

Note: The following comments are gleaned from a recent presentation by Dr. Petersilge. Her remarks have been edited for concision and clarity.

As with any meaningful discussion, our first requirement when examining Enterprise Imaging is to make sure everyone is starting with the same description of the term. The official definition developed by the HIMSS-SIIM Enterprise Imaging Community is:

A set of strategies, initiatives, and workflows implemented across a healthcare enterprise to consistently and optimally capture, index, manage, store, distribute, view, exchange, and analyze all clinical imaging and multimedia content to enhance the electronic health record.

It's a comprehensive definition, and the key point here is that use of the word "all". All clinical imaging, not just radiology. And it is this broader, system-wide approach that reflects the changing role of the radiologist within the enterprise and within healthcare as a whole.



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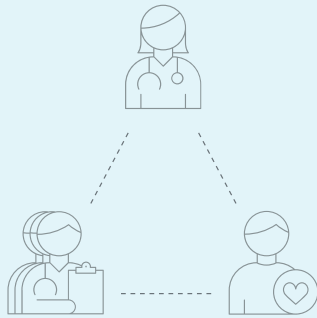
The two cases for Enterprise Imaging: Business and Clinical

But why should radiologists care about Enterprise Imaging to begin with? Why should they welcome, and even take leadership, in the move away from siloed departmental (radiology PACS and other) technologies to centralized, consolidated Enterprise Imaging systems?

They should, quite simply, because radiologists can derive value from Enterprise Imaging, while at the same time expanding their value to their healthcare organization as it embarks on its Enterprise Imaging journey.

Looking at the top challenges facing radiology today, we see Artificial Intelligence, centralization of IT, automation, new diagnostic technologies, affordability and the 'invisibility' of the radiologist all coming into play. Enterprise Imaging can help the radiologist with each of these challenges. In addition, making all images available in the electronic patient record makes good 'business' sense for the healthcare organization, enabling economies of scale, increasing organizational efficiency, streamlining vendor portfolios, reducing archives, improving data utilization, and standardizing workflows across the organization. Ultimately, it is the right thing to do for patients and their families.

Enterprise Imaging and the engaged patient



There is a lot of data that shows patients become more engaged in the care process when they can visualize their disease, through images including photographs as well as radiology images. They are very interested in their imaging studies, and often share them with non-physicians. Enterprise Imaging can thus support patient engagement, experience and satisfaction, by providing access to all of their medical images. Just by turning the screen, the physician's computer becomes, not a barrier between doctor and patient, but a tool to meet the patient's needs.

Leading the way: experts in medical imaging and image sharing

As the organization transforms toward Enterprise Imaging, radiologists are in the right position to take a leading role. They are, after all, the experts in imaging technology: both imaging itself, and image sharing. They can transmit that expertise and mature understanding of imaging workflows to the entire organization. They can deliver a strong voice for the selection of imaging technology, share experience with life-cycle management, and communicate standards and quality needs for imaging. Most importantly, they can contribute significantly to the governance that Enterprise Imaging programs need in order to be successful.

There are so many opportunities for radiologists in this space, if they are willing to extend themselves. Radiologists are, after all, a critical component of the diagnostic process and disease monitoring process. This is especially notable, as likely more than 50% of patients undergo radiology imaging at some point in their care. It's time to remind health organizations of this fact.

Imaging across the organization: the POC Ultrasound

When radiologists take an enterprise approach to image sharing, many use cases and opportunities open up. Take the example of Point-of-Care (POC) Ultrasound (POCUS). Ultrasound technology offers value in so many specialties: consequently, more and more of them have begun offering it themselves in their clinics and departments.

POCUS has become ubiquitous, and radiologists should embrace that reality. The goal of a POCUS examination is different than a diagnostic study performed in the radiology department. The views and image quality expectations are different. Radiologists often don't want such POC images included in the patient's imaging record or studies. They don't 'fit'. Yet, the entire purpose of Enterprise Imaging is to provide access to all images across the enterprise. Images performed outside of the radiology department can be crucial comparison examinations. Radiologists can work with all clinicians to develop enterprise-wide standards and quality expectations. POC ultrasound will enhance the whole stream of patient care.



Case in point: Enterprise Imaging and the patient interaction



An ultrasound was conducted on a patient in the ER, revealing a seven-centimeter, complex ovarian cyst. The patient mentioned that, during an earlier pregnancy, an ultrasound had shown ‘something.’

Without access to these images, the ER radiologist can only tell the patient to ‘get it checked out.’ But if Enterprise Imaging enables the ER radiologist to see the original POC ultrasounds by the OB/GYN, he/she can confirm that the cyst has been longstanding and there has been no cyst growth. The ED clinician can reassure the patient, and tell her to keep following up with the OB/GYN. The patient interaction thus becomes more definitive and informative -- in short, the care becomes quality care.

Teaching, sharing, leading

As leaders, radiologists need to ‘lead’, not criticize or reject. This means sharing and educating clinical colleagues on workflows, quality control, peer review and other areas of radiology excellence. It shouldn’t matter where an image comes from: all medical images can provide value equal to one captured and reported by the radiology department. What if radiology chooses to drive these imaging standards, by bringing together everyone in the organization who does ultrasounds, and educating them on common expectations for quality and views? We could explain how and why radiology does things a certain way. We could teach other service lines why it’s so important to ensure consistency and quality.

“We could teach other service lines why it’s so important to ensure consistency and quality ... for the sake of the patient.”

It’s a delicate issue, which requires a lot of communication and trust. But it always has to be about the patient. So when explaining why a right quadrant ultrasound should always include the right kidney and liver, the response isn’t “because that’s what radiology does.” It’s because an obstructed kidney can mimic gallbladder pain, which is why the ultrasound is being done in the first place! The goal is always to improve, for the sake of the patient.

There are certain technical challenges that need to be addressed, as well. For example let’s consider descriptors or procedure names as well as standardizing metadata. Data needs to be cleaned up, and it needs to be consistent across the organization. This requires standards, including anatomic standards for imaging, i.e. ‘body parts.’ The HIMSS-SIIM Enterprise Imaging Community is bringing together clinicians, vendors, people on the standards committees, to work on selecting an anatomic standard that everyone can agree on. Hopefully, the industry will then move quickly to embrace it, and begin to incorporate it into their own imaging management solutions and the EHR.

Radiologists coming out from the shadows

One of the biggest direct effects of Enterprise Imaging for the radiologist will be coming out from the shadows, taking a more visible and value-added role in the clinical process.

With Enterprise Imaging, the radiologist can become the informed expert, the integrator of information, the one who searches all the patient data and then makes informed clinical judgments. In this new role, and to support the move toward patient-centric, value-based care, the radiologist can contribute knowledge of practicality and appropriateness into the decision-making process and find ways to interject himself or herself into the care itself. Multi-disciplinary rounds and conferences, such as tumor boards, are a great opportunity to do so, offering a collaborative forum to discuss cases together with the goal of improving patient outcomes. Of course, taking a seat at the leadership table is going to put added pressure on the radiologist. Some might be tempted to say, "I'm too busy to do all these things, to get involved with each patient's story, to expand and share my knowledge." Or, "I just don't have the time during this stressful era."

This is where Artificial Intelligence is going to be a gamechanger, making it possible to utilize all the new data, turn it into insight and improved diagnostic confidence, while simultaneously freeing up valuable time. It won't be easy, and it won't happen tomorrow, but it is coming. We need to embrace it, because it is going to enable us to do what we love, and to take better care of our patients.



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