HOW-TO

INCORPORATE POCUS INTO YOUR ENTERPRISE IMAGING PROGRAM: 8 TIPS

By Dave Pearson
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Point-of-care ultrasound has become ubiquitous enough in U.S. healthcare that major medical societies are formally examining the implications of its rapid increase.

"Profound developments in color Doppler capabilities, cine clip acquisition and storage, and handheld ultrasound technology have changed the ultrasound landscape; we need a new map," assert executive board members of the Society of Radiologists in Ultrasound and representatives of the American College of Radiology's Commission on Ultrasound. In a peer-reviewed paper published early this year in *JACR*, the group proposes defining POCUS simply: *the sonographic evaluation of a patient performed and reported in a patient evaluation and management encounter.*[1]

The authors' intent is to distinguish POCUS from standard diagnostic ultrasound so as to

allay confusion at the point of care and in clinical and administrative activities downstream from there. However, in the process, standardization of the term also could help the cause of hospital leadership as they increasingly seek to establish a comprehensive enterprise imaging program.

So suggest three EI thought leaders at Agfa HealthCare who, together, have a long cumulative background in both ultrasound and EI. The POCUS definition is fresh in their minds as they recently helped a large, top-tier health system through an intensive, POCUS-inclusive EI adoption experience.

This multihospital system's biggest challenge was "standardization on naming conventions, which can help make sure metadata on the back end is clean," explains Stephanie Bazinet, Agfa HealthCare's clinical product specialist and market segment manager for EI. "This is a huge factor in determining EI success or failure. Most places will struggle if they don't have consensus [on nomenclature] right from the beginning."

Bazinet, a former ultrasound technologist, sat with Agfa HealthCare Workflow Architect Bill Turlik and Field Client Executive Scott Degenfelder for a conversation with *Radiology Business*. Their insights and observations offer helpful pointers for hospitals and health systems of all sizes that are looking to incorporate POCUS into a new or established EI program. Here are eight of their best tips.

1 Keep in mind that POCUS is relatively new and unfamiliar to many people.

Portable X-rays have been around seemingly forever, but advanced imaging on wheels first appeared in the 1990s and is still coming into its own. This helps explain, for example, the "turf wars" over ownership that occasionally erupt between POCUS-happy emergency medicine and traditional imaging guardian radiology.

As recently as 10 years ago, Bazinet recalls, many if not most emergency department (ED) physicians were happy to order all advanced imaging through radiology. POCUS technology has now advanced to where those same doctors can easily learn how to both acquire and interpret high-quality sonograms, Bazinet points out. "Instead of waiting on a report from a radiologist, the ED physician scans and evaluates the patient in just a few minutes," she says. "Then treatment can begin without delay."

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> Stephanie Bazinet, Clinical Product Specialist and Market Segment Manager for Enterprise Imaging, Agfa HealthCare

On the other hand, a study recently published in *JACR* shows the rate of questionably necessary follow-up imaging plunges, and appropriately so, when sonograms are interpreted by radiologists. "We're not saying ultrasound interpretations should not be done by nonradiologists," study co-author Andrew Rosenkrantz, MD, told *Radiology Business Journal* in 2019. "There should be less worry about whose territory is whose and more working together on supporting each other." [2, 3]

2 Make sure your POCUS users properly save and store POCUS images.

In the early days of the technology's rise, clinicians routinely failed to practice good imaging stewardship, Turlik recalls. Prior to adopting POCUS protocols, whenever the scanner's storage filled up, the next user of the machine would simply erase all images from the past to clear space for the present.

Along with that habit's deleterious care-quality implications came unfortunate financial fumbles. Organizations regularly failed to bill for either technical or professional imaging services provided in these settings. "Clinicians were taking literally thousands and thousands of these [images] a

year and weren't getting any money for them," Turlik says. "They were thinking of POCUS as an extension of their stethoscope and nothing more."

"In some places, you still have that today," Bazinet adds. "If people are not capturing, storing and saving these images appropriately—or if they're saving them on a thumb drive, or if they're just saving them on a hard drive with no safeguards against data theft or deletion—they're at risk of violating HIPAA."

Degenfelder suggests a best practice might be having an ultrasound technologist handle the image acquisition whenever practical. "When deploying Enterprise Imaging for POCUS, we sometimes need to remind users that those images are now going to become part of that patient's permanent imaging health record," he says. "It's important that the images are of high clinical quality."

Agfa's experts agree that, when a health system dedicates resources for giving these images good stewardship, multiple positive benefits result. Among the top advantages are quality prior images for reference in follow-up clinical consultation, improvement and standardization of image quality, and improved reimbursement due to proper documentation.

3 Involve the C-suite, securing not only buy-in but also leadership.

This best happens prior to POCUS, since good governance is vital to enterprise imaging as a whole. But if your EI program hasn't covered this base, or done so only partially, a POCUS incorporation period can present an opportunity to catch up, the three agree.

"The overall EI program has to be based on a strategy and vision formulated from the corporate perspective," Bazinet says. "You also need a governance structure to guide where you're going and how you're going to get there as a hospital organization. Once you have those high-level elements in place, it can be fairly easy to phase in point-of-care imaging, including POCUS."

Turlik adds that it helps to have a steering committee to handle the governance piece. This group should be run by a hospital executive, he advises, and it won't get far without a physician champion or two—ideally one from radiology and one from emergency med.

"The important thing is having the EI initiative moved along by some of the hospital's top business and clinical decision-makers," Turlik says. "They need to give the reasons behind the move to EI to the people who will actually do the work of making it work."

4 Establish a set of POCUS workflows that run on as few varying applications as possible.

One of the hardest challenges in implementing EI POCUS is developing workflows that run across the enterprise and yet allow each POCUS-using department to work to their preferences, Bazinet says.

"The clinical departments themselves should be driving the workflow development," she says. "When we rolled out EI for the large health system mentioned earlier, we spent a lot of time talking with clinical leaders about how they work day by day. We asked them—and ourselves: 'Can we capture these preferences in a current state workflow? What is the future desired state workflow? How do we establish that workflow within our application to get you from beginning to end? And what steps do we need to take to get from current state to future state?'"

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Bill Turlik, Workflow Architect, Agfa HealthCare

5 Use this POCUS moment to help establish universal medical terminology.

Also in their work with that health system, the Agfa EI team cheered when the EI steering committee set out to standardize nomenclature for almost 250 point-of-care imaging exams that didn't involve radiology or cardiology.

"They struggled with this project," Turlik recalls. "The 'dictionary' went through multiple renditions. It probably took six to eight months for them to ratify a list, get everybody to agree to it and decide how they were going to use it. But now it's up and running and they're using it, to their great credit."

Meanwhile the episode highlights the need to standardize anatomical labeling across U.S. healthcare, the team suggests, if EI is ever going to truly transform care delivery on a broad scale. The Society for Imaging Informatics in Medicine has taken a leading and active role in pushing for progress with EI nomenclature. Agfa HealthCare strongly supports SIIM in this important undertaking, the three agree.

6 Keep the EI interface simple and inviting.

Unlike radiologists, who are accustomed to sitting still and clicking constantly, physicians serving patients at the point of care want minimal interaction with application software, Bazinet says. "The interface has to make their screen time easy, quick and seamless," she adds. If it lacks any of those attributes, "the adoption rate is going to be very low—and so will the level of success."

That would be an especially hard pill for hospital leadership to swallow. A primary reason for EI's very existence is working toward a common viewing experience for physicians interpreting everything from 3D brain scans to smartphone photos of external wounds. Again, physician champions and the governance/steering committee play an important role in balancing needs across styles and workflows.

7 Accept that POCUS users come at imaging from an oblique angle.

A prime example is POCUS reporting, says Turlik. "A lot of POCUS users don't do traditional reports like radiologists and cardiologists do," he says. "Instead, they make notes in the EMR."

On top of that, Bazinet says, "you've got the whole complexity of resident workflows, supporting patient-facing physicians with widely varying competencies and skill levels." Further, residency programs require tracking skill growth, so "you have to have the whole credentialing piece and the grading criteria within analytical reports to show the residents' performance." Her point is that IT and other support personnel must be nimble to keep up with, and train, POCUS users' sometimes freewheeling, occasionally demanding outlook on imaging.

8 Make sure learning flows both ways.

In an enterprise imaging world, POCUS users have much to learn from radiology and cardiology. Those departments have been capturing, saving and storing medical images for generations. Yet at the same time, the traditional guardians of imaging data can feed off concepts emerging in POCUS image management—and, with them, entire enterprises.

> "Point-of-care ultrasound is going on across organizations, across institutions in various ways and in various departments," Bazinet reiterates. "Innovative workflows are being developed to make sure providers can leverage the power of those images to show patients' complete, longitudinal clinical timelines to every clinician who might draw from all-source image data to formulate an optimal treatment plan for the patient."

Getting more hospitals and health systems to appreciate this value proposition, which comprises a core aim of enterprise imaging, will take some in-house education and advocacy, Bazinet suggests.

"Whether EI images reside in an enterprise PACS (aka MIMPS), a VNA or elsewhere, it's going to take clinicians applying steady pressure on executive teams to realize the full potential of enterprise imaging," she says. "Until physicians start to put more pressure on their institutions, the clinical, patient safety and time-saving value of enterprise imaging may be lost on the financial decision makers across the U.S. healthcare system. The educating has to come from clinicians voicing the need."

"Everybody gets the idea of a one-stop shop for medical images," Turlik adds. "It's best for patients when all their doctors can see all their images. But not everyone appreciates how important it is to turn that idea into action. I do think we're making progress, and the growth of POCUS is helping."

Dave Pearson is a digital editor at Radiology Business and Innovate Healthcare.

Footnotes

1. Maitray Patel, MD, et al., "Mapping the Ultrasound Landscape to Define Point-of-Care Ultrasound and Diagnostic Ultrasound: A Proposal From the Society of Radiologists in Ultrasound and ACR Commission on Ultrasound." *Journal of the American College of Radiology*, January 2021.

2. Bibb Allen Jr., MD, et al., "Downstream Imaging Utilization After Emergency Department Ultrasound Interpreted by Radiologists Versus Nonradiologists: A Medicare Claims-Based Study." *Journal of the American College of Radiology*, April 2017.

3. Julie Ritzer Ross, "Focus on POCUS: Hey, Emergency Medicine and Radiology: Who's in Charge Here?" *Radiology Business Journal*, August/September 2019.