

# Here We Go Again

Tackling the challenges  
and reaping the benefits  
of a **second-generation** imaging system

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By Brian Loflin and Mark Watts

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**TRANSITIONING FROM FILM-BASED IMAGING TO PICTURE ARCHIVING AND COMMUNICATIONS SYSTEM (PACS)** is pretty much a walk in the park the first time around. It takes a bit of planning and effort, and the results are pretty much a sure thing. But the second time around, when implementing a second-generation PACS, it's more like climbing a mountain. It takes a lot more preparation and energy. Reaching the top is not necessarily a given, but the results are potentially exhilarating.

Here's the typical scenario: By simply changing over from film-based imaging to PACS, organizations tally up a long list of short-term benefits, including improved clinical care, enhanced efficiency, and the all-important cost savings in reducing the use of costly film.

Some healthcare organization leaders, however, then realize that simply mimicking a "film-based" workflow in the digital world will not necessarily result in long-term productivity benefits. So they start to wonder if replacing their first-generation PACS with a new system can result in even more benefits.

But here's the rub: The second time around is fraught with challenges that were not even a concern during round one. For example, healthcare leaders need to:

- ☀ Assess how well the current PACS is meeting organizational and user needs
- ☀ Determine if a replacement PACS could deliver significantly enhanced benefits
- ☀ Devise and implement a plan that will make it possible to transfer all legacy data and images from the old system to the new system
- ☀ Ensure that all resources are in place to smoothly and quickly transition to the new PACS
- ☀ Partner with a vendor that provides the technology and support necessary to incorporate changes and enhancements as medical imaging continues to evolve

## DECISIONS, DECISIONS

The decision to move from a film-based environment to a PACS is relatively easy, as these systems are virtually guaranteed to bring about a bevy of benefits. And most PACS on the market will provide the horsepower to make these benefits a reality in pretty quick order.



Brian Loflin, chief information officer for IASIS Healthcare

The decision to replace an existing PACS, however, is more complex and requires careful analysis. To start, healthcare leaders should determine if a replacement system could provide any enhanced benefits with respect to ease of Web access, service to referring physicians, hardware requirements, radiologist workflow, functionality, and integration with other clinical systems. In addition, when implementing a replacement PACS, organizations need not only install the technology but must optimize workflow in an effort to enhance results.

A few years ago, IASIS Healthcare LLC, a 16-hospital system headquartered in Franklin, Tenn., started exploring the idea of installing a replacement PACS. Even though we had achieved our initial cost and care goals, we sought even better results. For example, we wanted to make additional strides in the reduction of film usage. One of our hospitals was still spending about \$40,000 annually on film – and they wanted to find a way to eliminate the use of film entirely.

After identifying the features required to support our growth, we then examined our options. The big question we faced: Would we be able to implement a new system in a manner that would enable us to achieve the additional benefits that would make the project worthwhile? Remember, although it is easy to

garner the first 80 percent of benefits associated with PACS, the remaining 20 percent of potential benefits remain much more elusive. These are the benefits that should be captured with a replacement PACS. And, they are most often realized by reengineering the workflow during the implementation process.

To answer this question, we compared the benefits gained from our current system to what was possible with more advanced healthcare information technologies – and then analyzed whether the improvements would justify the replacement. Certainly, the systems available today offer access to advanced functionality such as fully integrated, real-time radiology service with all modalities, RIS integration, document scanning, voice dictation, enterprise-wide distribution capabilities, and Internet access from remote locations.

As such, we needed to determine if the new system could extend our initial benefits and produce further results such as:

- ☀ The elimination of film instead of a reduction in usage
- ☀ The enhancement of clinical decision-making attained via improved integration with other technologies
- ☀ Further improvement to radiologist workflow with easy access to images and all functionality, including 3-D viewing from one convenient workstation
- ☀ The development of stronger alliances with referring physicians by providing more comprehensive imaging results in a time-efficient manner

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## STELLAR SUPPORT

Perhaps even more important than analyzing the features of a system, the leaders needed to consider the service and support that potential vendors could bring to the table. Vendors should not only provide technology, but must also work closely with staff members to change workflow processes in an effort to get the most out of a replacement PACS.

What's more, in today's hospitals, PACS is considered a mission-critical component to patient care and service delivery; you cannot afford for the system to go down. Therefore, service and support are key considerations as organizations wrestle with the prospect of the disruption that goes hand-in-hand with "ripping and replacing" technologies. In addition, service and support also are crucial moving forward. Considering the around-the-clock nature of PACS, you need to trust that your vendor is there to support you; you cannot manage this alone.

After conducting a review of several technologies and vendors, we found a vendor, San Francisco-based McKesson, that could help us successfully transition to a new PACS. Its system enables organizations to acquire, distribute, and archive medical images and diagnostic reports across the enterprise. It also integrates images from multiple modalities with clinical patient data, streamlining the department's workflow and contributing to improved radiologist efficiency. In addition, the system provides referring physicians with patient images as part of a comprehensive medical record.

The support available from the vendor, however, was one of the key considerations. "As the complexity of our system grows, we need a partner that appreciates the mission-critical nature of our business and can provide 24/7 support," says Sandra McRee, president and chief operating officer at IASIS. "Our vendor is a long-term partner for us, providing real-time services, supporting our evolving needs, and bringing innovative solutions to marketplace."

## THE TRANSITION

The goal was to get the system up and running at 15 hospitals in just 60 days. When going from film to PACS, you have the luxury of turning on systems (and removing film) department by department. But when you have patient image history on a PACS and your users rely on immediate access to the information, the switch to the new system must be quick and painless in order to continue to operate business as usual. Additionally, it is costly to support two systems at once. If the transition isn't quick with a well-executed implementation plan, you will be living with two systems much longer.

To this end, IASIS was determined to quickly import all of the 3.5 million imaging studies from the old system to the replacement PACS. If they were not able to do so, they would not be able to realize the workflow efficiencies and enhanced benefits that they were seeking.

To make this transition possible, the vendor brought representatives from the clinical assessment team into the implementation. The vendor worked closely with IASIS to identify where potential improvements could be made, conduct a workflow evaluation, develop a structured implementation plan, train staff members using a "train the trainer" model, and provide around-the-clock support to ease the transition.

To keep the implementation moving at a quick pace, the team made sure that each user was comfortable using the PACS. Implementation staff customized each login, making it possible

for the system to match the preferred protocols of each clinician. The team even took the customization one step further by ensuring that each physician would actually take to the system. For example, to meet the preferences of one physician, the vendor adapted the system so that the radiologist could navigate left to right instead of up and down.

The high level of support didn't stop after the initial implementation. The vendor continues to assist users around the clock – no matter what the question or the hour. A tiered support system ensures that issues or problems are solved on the spot. When staff members call with a question, if the vendor's support professional cannot provide answer, the query immediately gets bumped up a level until it is successfully addressed. Staff members never have to wait long time periods to get crucial issues resolved.

In addition, as technology evolves and new features become available, the enhancements are incorporated into the PACS, eliminating the need to upgrade. For instance, digital mammography was recently integrated into the PACS.

## REAL RESULTS

Making the transition to a second-generation PACS required taking a deep breath, carefully planning, and the selecting the right vendor partner. The following results, however, are proving that the project was well worth the effort:

**Quick and painless installation.** The transition to the new PACS was complete in a little more than two months at all 15 sites – and with little disruption, as all of the archived images were made available throughout the installation. Typically, such installations take anywhere from one to two years.

**Improved report turnaround times.** Referring physicians receive complete imaging reports quickly. For example, emergency department physicians now receive imaging reports from the radiologist in just eight to 12 minutes, a process that used to take 24 to 48 hours.

**Better resource utilization.** Productivity has improved, and not only in imaging departments. With improved workflow, access to data, and a full-featured reporting solution, our staff is no longer chasing paperwork to complete their work.

Most importantly, because the transition to a second-generation PACS was so smooth, IASIS is accelerating its efforts to better serve patients through the use of advanced technology. In fact, we already have moved on to the implementation of a cardiology imaging system to further enhance care.

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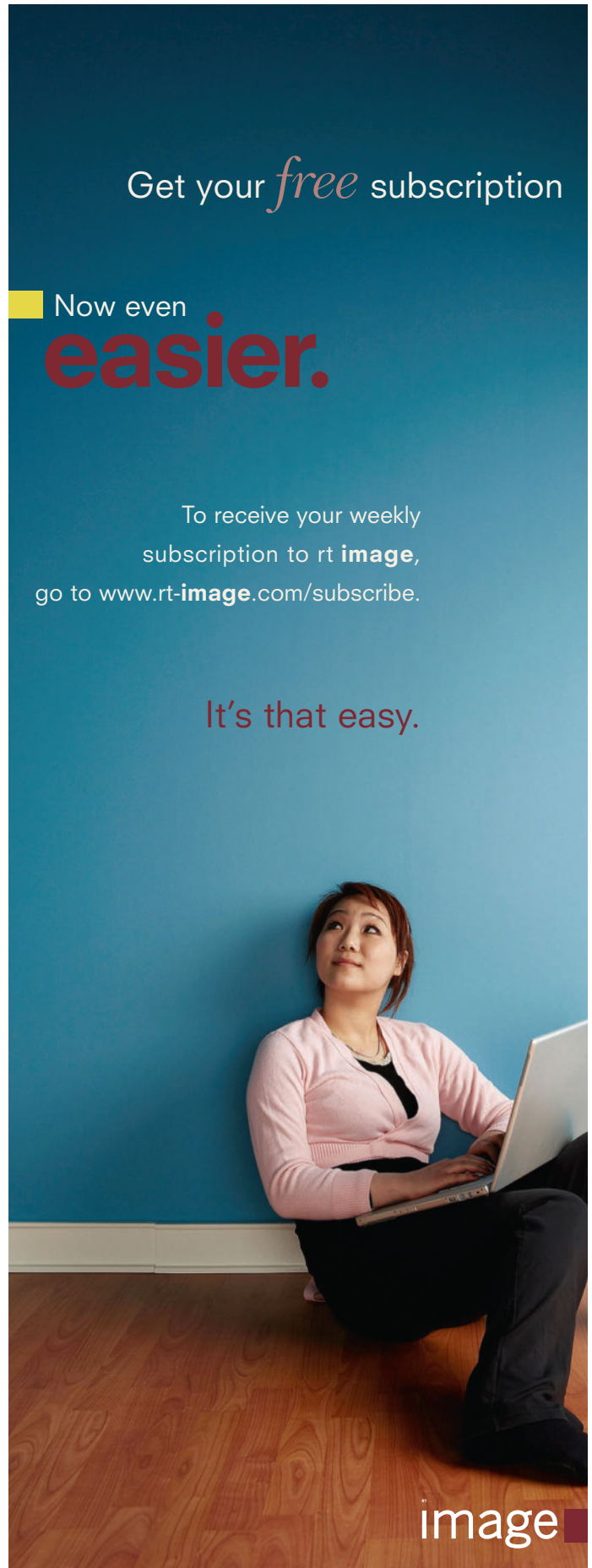
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