

# Beautiful Transition



## Putnam Hospital Center's Metamorphosis to PACS

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The transition from film-based radiology to digital imaging is often seen as a costly, time-consuming endeavor. That serves as a barrier for medical facilities considering the switch. Few hospital executives imagine that they could implement PACS and improve patient care for less than the cost of their existing film-based process.

However, some facilities, such as Putnam Hospital Center (PHC) in Carmel, N.Y., have learned that implementing a PACS can be a seamless, cost-effective way to increase operational and staff efficiency, provide electronic access to exams and reports, improve patient care, and eliminate the high cost of producing and storing film studies.



Putnam Hospital Center, Carmel, NY

This level of efficiency is key to PHC, a 164-bed affiliate hospital of the Health Quest System, the mid-Hudson Valley's largest healthcare system. PHC is the first medical facility within the Health Quest System to implement PACS, and chief operating officer Maureen Zipparo sees PHC as the system's early adopter in the move toward more automated systems. She says service and quality are the focus at PHC and looks to solutions such as PACS as ways to enhance both. Providing high-quality service with a system that also improves operational efficiencies in a cost-effective manner is a bonus.

"Using PACS has enhanced our delivery of care," Zipparo says. "We made the decision to raise the bar as far as service and quality of patient care in our radiology department was concerned. Part of that assessment included an evaluation of equipment, people, and PACS.

"And there's no question that eliminating film and switching to digital imaging has increased our cost-effectiveness and efficiency on the operational side," she adds. "We've definitely seen hundreds of thousands of dollars in financial savings since implementing PACS."

Two years ago, Putnam turned to **CoActiv Medical Business Solutions** to facilitate its transition from film to digital images. At that time, PHC was experiencing significant operational issues in its radiology services, according to

**Zipparo.** There were concerns about slow turnaround time (TAT) in reporting, exams not being returned to the film library, and diminishing physician satisfaction. Added to those concerns were film processing needs and expenses, as well as the question of where to continue storing films.



### Reducing Turnaround Time

PACS provides PHC with a comprehensive approach to the storage, retrieval, distribution, and presentation of medical images. The system is designed to provide radiologists with immediate electronic access to medical imaging studies, as well as faster and more efficient distribution of images and reports to referrers and patients. Comparisons with prior exams can be made within minutes. The time from patient imaging to final report can routinely be reduced from days to hours—and sometimes less. The hospital's storage issues shrink from rooms full of films in large envelopes to server space on a medical facility's computer network and on **CoActiv's off-site redundant archive.**

PHC's full-service solution includes **CoActiv EXAM-Vault, CoActiv EXAM-Filer, and CoActiv EXAM-Sender.** These components are essentially software-based and require minimal hardware purchases, which is important for the success of a system that will be utilized from locations outside the hospital. One technology benefit of implementing PACS is the doctors' ability to access images at any time from their remote offices or homes.

Technology can now provide an **all-inclusive solution to be implemented at a facility such as PHC at a cost less than that of maintaining its film-based system.** Eliminating that cost barrier enables facilities of all sizes to streamline workflow and ultimately enhance patient satisfaction with PACS.

According to Scott Berger, MD, PhD, chief radiologist at PHC, the move could not have come at a better time. In his position with Putnam Imaging Associates, which provides PHC's reading services, he was experiencing the same operational issues as those observed by Zipparo. Bottlenecks were occurring in the imaging process that began with patient registration and ended with the radiologist's final report. **Berger, a veteran of PACS conversions at other facilities, referred to this implementation as remarkable.**

**"This was a completely seamless and painless implementation,"** Berger says. **"CoActiv completed the switch from films to digital over the course of one weekend.** While there was network-related IT work that needed to take place behind the scenes about one week in advance of the conversion, **CoActiv worked closely with our IT people to make this switch happen."** Berger adds that the system has had **100% uptime since its installation nearly two years ago.**

Zipparo says the needs of PHC, an acute-care facility serving the 150,000 residents of a growing New York region, required a system with flexibility to adapt to the increased needs of its patients.

### Reducing Turnaround Time

Putnam Imaging personnel were already familiar with PACS, Berger explains, because they worked with systems at other medical facilities. **CoActiv provided on-site training on a flexible schedule for hospital personnel who wanted a hands-on lesson in how to use the system but didn't always have significant time to spend in training. They soon learned that minimal training was necessary to use what proved a user-friendly system.**

**Berger notes that utilizing PACS at PHC has dramatically increased productive workflow.** Currently, images are acquired by technologists and then interpreted by a radiologist who dictates a report. The hospital's transcription service prepares a preliminary report for review, the radiologist's changes, and the doctor's signature to complete the final report, which can then be sent electronically to referring physicians. **The radiologist also can type or record a note and append it to the digital exam for immediate review by emergency department (ED) and other staff physicians. Then, when the official radiology report is completed and signed, it is digitized and "attached" to the exam images for automatic distribution and archiving as part of the official medical record.** Berger notes that the radiology group is also investigating the future use of voice recognition digital dictation.

Berger says the speed of PACS comes into play, particularly when dealing with ED cases, where time is of the essence for making the proper diagnosis.

"When we weren't on PACS, films taken for the ER [emergency room] had to be delivered to a radiologist for interpretation," he says. "Delays can occur in this process and tensions can rise as the process becomes more prolonged."

Berger adds that many physicians, including pulmonary specialists and surgical subspecialists, also see a vital need for immediate access to digital images. "They want to see images firsthand," he says.

The capability to access PACS extends throughout PHC, Zipparo says. Physicians can view images on an as-needed basis, anytime, anywhere.

"Studies are available almost immediately throughout the hospital," she says. **"Even the operating rooms are outfitted with monitors so that surgeons can have images displayed during the course of an operation. We have monitors in physicians' offices as well. Physicians off site receive automatic PACS-based notification when a study and report are complete and ready to review. There is no waiting and no need to allow for film retrieval time."**

PHC has also seen improved communication with PACS—specifically, electronic communication. The PACS communicates seamlessly with the hospital's RIS, Berger says. Final reports appear on PACS and are shared with the hospital's electronic records for billing and other purposes.

### Online Storage

On the storage side, PACS reduced PHC's long line at the film library by providing online storage of digital images. While medical facilities using PACS have numerous options for handling the prior films currently filling their film library shelves, PHC selected a gradual phase-out of films dating back one year rather than retroactively scanning all old films from the library into the electronic system.

### Handling Priors

"We find that 90% of all comparisons of patient data occur within one year," Berger says. "With that statistic in mind, the decision was made to not attempt to scan and digitize prior films for comparison purposes. Scanning old films is both expensive and time-consuming. During the first year of implementation, prior films needed for comparison purposes were viewed on traditional light boxes next to the digitally displayed new exams. After the first year, essentially all required prior exams were already PACS acquired digital exams.

"On the subject of film," Berger continues, "PACS has allowed PHC to reassign members of the film library staff who were previously focused on film handling and storage to positions that enhanced customer service and patient care.

"The implementation of our PACS coincided with a sharp decline in the rate of turnover of technical staff in the radiology department, which we attributed to a greater degree of job satisfaction," he adds.

With the PACS implementation at PHC, the hospital's film library has gone through a volume-reduction program during the past two years, and the need for off-site film storage is a thing of the past. Also gone are instances of misplaced or lost films.

"Like any manual filing system where items are alphabetized, the system works, but it has flaws," Zipparo says. "Films are large and bulky. It's a big responsibility to maintain them effectively. In the end, it's been much more convenient for us and more efficient to use PACS. **Physicians can now access current, as well as comparison studies from 2005, in seconds, meaning earlier diagnoses for our patients."**

With patient care and quality service an ultimate goal at PHC, Berger has noticed that patients have been positively affected since PACS was implemented. Berger says he has seen improved reactions from patients and knows that the service they receive and the quality of care offered by PHC is enhanced by the digital imaging system.

"We've seen a general increase in the utilization of our services," he says. "The [improved] turnaround time for reports is important, as patients and their families want to receive imaging results in a timely manner. I find that PACS can also decrease a patient's stay in the hospital. A faster diagnosis can lead to faster treatment and recovery time."

**Utilizing PACS for the past two years has positioned PHC to better serve its patients, while improving operational and staff efficiencies throughout the medical facility—all while reducing costs.**

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