

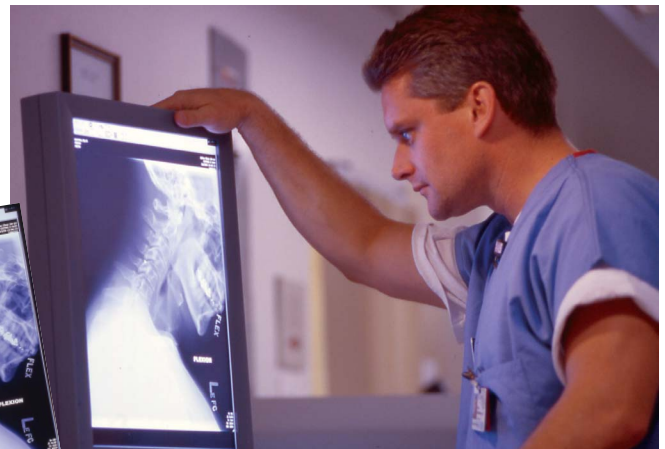
Not Your Average X-ray

With hundreds of X-rays performed at Lahey Clinic every day, physicians know that time is of the essence. The length of a patient's wait correlates directly with the time it takes to develop an X-ray and transfer it to the physician in charge of diagnosis.

What if that transition could happen immediately and electronically? This is a change that patients have seen since the recent implementation of a Picture Archiving and Communications System (PACS) at Lahey. Not only is the average time from arriving for an X-ray to departure now significantly shorter, but exam rooms are equipped with computer screens where physicians can share X-rays with patients. According to Thom Shook, director of digital imaging, "It essentially makes it possible to release the patient as soon as the exam is complete."

Already, patients are amazed at how fast the system is. "Patients go back to the waiting room, and when we tell them they can return to Orthopaedics, they say, 'Can I really go up?'" says Elaine McHugh, senior technologist in the Radiology Department.

The PACS system is an electronic network of machines and computers that capture, store, transfer and display X-ray images.



Technologist Paul McGunigle, RTR, examines an X-ray on the PACS system.

The Computed Radiography and Direct Radiology machines, now installed in Burlington, form digital X-ray images that can be immediately assessed for quality. The X-ray image is then sent via Internet to the radiologist and attending physician. If the patient was referred from the Emergency Department, a copy is also sent there.

Similar machines have been installed at the Lahey sites in Peabody and Lexington. "Radiologists are now able to view X-rays taken at these sites from any location," says Shook.

While PACS systems are not uncommon today, Lahey has made an extra effort to make its system an asset to patients as well as doctors. The patient exam rooms in the Orthopaedic Surgery Department

contain computers that are wired with PACS, which allow doctors to display images for their patients. Another advantage of using digital images is that, unlike with traditional X-ray films, the brightness and contrast of the X-rays can be adjusted. For patients, this means a decreased need for repeat X-rays and less exposure to radiation.

The PACS system has been the key to improving the quality of radiology services for patients. "Our service level goals seemed impossible to attain at first, but the implementation of PACS has been phenomenal," says Shook. "We're at the point now where we're going to be doing things no one else in the country has done in order to carry out the department's objectives."