

Hospital hails power of radiology systems



By **Jared Nelson** jnelson@timesleader.net Monday, October 03, 2005

Two new systems installed at Caldwell County Hospital (<http://www.caldwellhosp.org/>) this week are on track, hospital officials say, to improve the facility's efficiency at providing radiology services.

Technicians with Raypax and Radiology Services spent time Sunday and Monday outfitting the hospital's radiology department with Radiology Information System (RIS) and Picture Archival and Communications System (PACS) technology, a move that effectively ends the department's reliance on film-based radiology and replaces it with digital technology.

Previously, a patient who went to the hospital for X-rays, CT scans, ultrasounds, bone densitometry or other radiology procedures would have the results of those procedures put on film.

Developing that film, getting it to the consulting physician and taking resulting action with the patient proved to be a time-consuming process — sometimes taking as long as three hours in some emergency rooms, said John Hales, director of sales and marketing for Raypax.

With the digital PACS system, that process can be cut down to 45 minutes or less, he said.

All of the hospital's existing X-ray and radiology equipment can continue to be used. The film traditionally used with each machine, though, is replaced with a reusable digital charge plate that stores the image until it is uploaded onto a nearby computer unit and sent to a central server, a process that takes much less time, Hales said.

"It's a considerable improvement," he said. "They're going to be able to support the community much more efficiently."

Once on the server, the data can be accessed by other computer workstations in the radiology department.

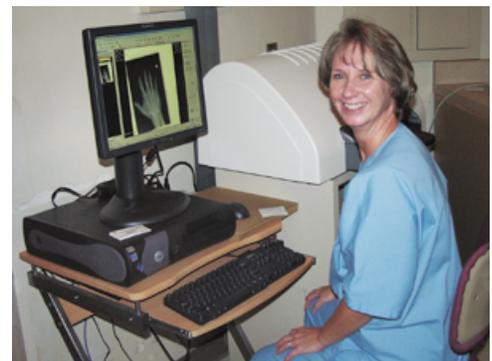
The 3-D images themselves provide physicians and technicians with detailed views of the patient's scanned area.

Views of a broken bone, for instance, appear in both color and black-and-white, for doctors to review from any angle.



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Hospital radiologist Dr. Larry Long displays the PACS system's capability of providing detailed images of bone fractures and other injuries.



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Hospital radiology technician Sandy Stephens examines a hand X-ray on one of the department's new workstations utilizing the PACS and RIS systems. The new technology slashes the time required to process film for X-rays and other scans by utilizing digital imaging. The images can also be posted online and made available to consulting physicians miles away.

Physicians can also look at different layers of the scan, from the bone itself to the blood vessels surrounding it, Hales said.

In the film era, said Dr. Larry Long, the hospital's radiologist, images of that detail would require repeated X-rays. "This gets it to them just like that," he said, snapping his fingers.

The images can also be reviewed by other physicians on the Internet, with access through a user ID and password.

In a serious automobile or farm equipment accident, for instance, the hospital would receive a victim, take X-rays and/or other scans and put the patient on a helicopter to be airlifted to another facility.

With the PACS system, said Jill Cunningham, the hospital's director of radiology, the hospital can send digital images of the scans to the surgeon in the destination hospital as the helicopter is en route.

"The surgeon can completely plan that patient's surgery before they hit the ground," she said.

The amount of knowledge made available in that "golden hour" after the accident is increased significantly, she said.

With the reduction in materials and processing time, the hospital's radiology staff can spend more time taking care of their patients.

"They don't have to worry about this part of it," Cunningham said. "It's so exciting."

Link: http://www.timesleader.net/articles/stories/public/200510/03/43SS_news.html