The Society for Computer Applications in Radiology

FILMLESS RADIOLOGY IN PRACTICE

ONE OF THE highlights of the SCAR 97 conference was the Keynote Panel Discussion on filmless radiology. The panel featured Dr. Eliot Siegel, Chief of Radiology at the Baltimore VA Medical Center, Dr. Jeremy Young, Chair of the Department of Radiology at the Medical University of South Carolina, and Dr. Tom Berquist, Chair of the Mayo Clinic Jacksonville Department of Diagnostic Radiology. These radiologists have implemented filmless radiology departments that use systems provided by General Electric, Agfa, and Siemens respectively.

The wide-ranging discussion included many aspects of implementation and operation of filmless departments. Some of the interesting observations follow.

Currently there is no such thing as a turnkey Picture, Archiving and Communication System (PACS). Each radiology department is unique, and each implementation must be tailored for the specific site. Education is key both inside and outside the radiology department.

Interfaces from modalities to the PAC system are a major hurdle; they can be time-consuming to develop and tend to be unstable and slow. A consultant can help in integrating the pieces of the system.

No site stopped producing film immediately upon installation of the PACS; rather, all sites operated in a dual environment (electronic and film) for a number of months. During this period radiologists and others became accustomed to soft-copy display and procedures for handling images and reports were reengineered for filmless operation. Many system hardware and software issues required resolution during this period. To minimize costs, it is desirable to stop printing film as soon as possible. On the other hand, the longer the dual operation lasts, the more images will exist in the electronic archive when radiology operations become filmless. After six months of images have been stored in the electronic archive, approxi-

mately 95% of images that need to be retrieved for patient care will be electronic, so relatively few hard-copy images will have to be retrieved from film storage. If old film-based images or films from outside institutions need to be compared to electronic images, this is usually accomplished by viewing the films on a viewbox adjacent to the soft-copy workstation; it is not usually necessary to digitize films to allow comparison on the workstation.

Downtime can be caused by problems with the PAC system itself, the Radiology Information System (RIS), the Hospital Information System (HIS), the network, or other components of the electronic practice. Even when the system is down, imaging can generally be performed by individual modalities and interpretation can proceed by using modality workstations. Printing hard-copy images can be the backup during longer outages. It is mandatory that a plan be developed to distribute images and reports when the system is down.

The issue of releasing images outside the radiology department before reports are available is controversial. When local factors do not allow immediate availability of reports, some filmless departments are releasing images without reports. Ideally, reports should be produced so quickly that images and reports can be released simultaneously.

The panel discussion at SCAR 97 was so successful that the original participants have been invited to return for SCAR 98. In addition, other panel discussions are planned to provide viewpoints of other users. If you have not already done so, I encourage you to register to attend SCAR 98 in Baltimore, Maryland, June 4-7. The panel discussions alone are worth the price of admission!

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