

Multi-Specialty Clinic Successfully Implements Filmless Radiology Department in Four Months

For most medical centers, installing a Picture Archiving and Communication System (PACS) to create a filmless radiology department is an extended, step-by-step process over the course of one to two years. However, one facility found that by bringing radiology, information technology and administrative departments together to believe in a common goal, it is possible to implement PACS and "go live" in just four short months.



K Kelsey-Seybold Clinic

Founded in 1949, Kelsey-Seybold Clinic is a premier integrated outpatient clinic. It performs 230,000 exams at 20 locations throughout the Houston, Texas area, staffing over 300 physician generalists and specialists and is owned by a joint venture of St. Lukes Hospital and the Methodist Hospital in Houston.

"Our goal in switching from traditional film-based imaging to electronic imaging was to perform imaging procedures and report turnaround for our patients and physicians in 'real-time,'" states Dr. William H. Fisherman, chief radiologist. "This means within 24 hours."

"Historically, film exams were made at our satellite clinics throughout the greater Houston area and were transported by courier to the main sites where radiologist were located," explains Dr. Fisherman. This time consuming process often took 72 hours before the image and report was available to the referring physician.

Several factors guided the swift transition at Kelsey-Seybold, most notably the construction of a new main campus. Opening the facility from the start in a filmless environment provided three advantages: general workflow design modifications to change from film-based to electronic imaging were not required; permits for environmental wastes were not needed; and budget dollars would not be expended on new film processors, tanks and lightboxes. Further advancing the filmless department was administration's realization that Kelsey-Seybold spent over one million dollars on film and chemicals each year and continued complaints from doctors about the lack of availability to films. Adds Bob Burns, Director of Information Systems, "It didn't make financial sense unless we were filmless when the new building opened."

Background investigation with BRIT Systems of Dallas, Texas began in the fall of 1998. By the

RSNA meeting in early December 1998, advances in computed radiology and voice recognition technology became available, advancing the clinic's goal to "go live" when the new facility opened in April 1999.

"We were able to proceed this quickly due in large measure to the support of our senior medical staff, board of directors and joint policy committee and a very strong administrative staff," says Dr. Fisherman. The system design was finalized at RSNA 1998 and included: Lumisys ACR 2000 CR; SwissRay DR; IBM computer systems and Talk Technology; and extensive integration by BRIT Systems. According to Dr. Fisherman "This could not have been possible at all without the support of the information technology department at Kelsey-Seybold Clinic, under the direction of Bob Burns," continues Dr. Fisherman.

Adds Bob Murry, Ph.D., VP of Engineering at BRIT Systems, "Kelsey-Seybold has a great

telecommunications infrastructure. This is one area that was reviewed time and time again because it alone could stop the project. It would be difficult to see how anyone else could have done a better job than Kelsey-Seybold."

Kelsey-Seybold's IT department was consulted from the start. Says Burns, "We helped radiology look at the technology to make sure IT could support it and provide the infrastructure. Working as a multi-discipline team is just inherent to Kelsey-Seybold's business." Burns also looked to the future and selected the best technology available today, Cat 5 fiber-backed wire. "We wanted an infrastructure that could last ten years," he adds. A catalyst 5500 from Cisco facilitated the backbone and high-speed pathway required for a PACS network.

BRIT Systems' role as PACS integrator was responsibility for all segments to connect and talk to each other. By mid-January 1999, the contract was approved, giving BRIT Systems less than four months to install the complete system. According to Murry, the contract stated that the Main and West facilities must be "live" by April 12th, opening day.

Kelsey-Seybold also installed an RIS at the very same time. "Integrating a new radiology information system at the same time provided additional challenges. The IDX RAD module was up to the task," boasts Dr. Fisherman.

Reducing time further was the fact power in the

new facility was not guaranteed to be stable or continuous in the weeks prior to opening day. Power was up, down and off, limiting computer up-time.

"This was an unprecedented short period of time—completing a 24 month project in just four months," states Burns. By dedicating part-time staffers to this project full-time and pulling others off line within radiology, IT and administration, Burns believed the deadline could be met. "To have a successful project, it must be each individual's primary duty—not collateral—especially in this time frame."

Even though BRIT didn't have the luxury of lead-time, the system was up on time and working properly. Burns points out; "There was a lot of interactivity between BRIT, IDX and Mitra. It was full teamwork." Burns re-stated a quote by Dr. Mavis P. Kelsey, founder of Kelsey-Seybold, that he believes exemplifies the cooperative effort: 'this project will be successful if nobody cares who gets the credit for it.'

The project, completed on time, was within budget. Although BRIT's PACS doesn't require any IT knowledge, Kelsey-Seybold has a BRIT engineer on staff for the next few years. "We feel that BRIT is a partner in this whole project, not just a vendor who picks up a paycheck," Burns adds.

Within the past two months, Dr. Fisherman has noticed the improvements PACS has brought to his radiology department. The network has eliminated delays in film transport and lost film, particularly when patients had appointments with different doctors in the various clinics. For patients undergoing procedures outside the network, the staff can print images on a dry laser printer.

Patient care has also improved. "Now our outlying physicians, many of whom are 20 miles from the main center, can view imaging procedures with various specialties in real time and obtain a consult while the patient is still in the doctor's office," comments Dr. Fisherman. "This has been particularly useful in orthopedic medicine."

Economically, administration has found significant cost savings in switching to this system. According to Dr. Fisherman, an abstract has been submitted to the Radiological Society of North America to present the financing module at the annual meeting in December 1999.

"Our future and our challenge is to establish appropriate guidelines and breakdown barriers so that those institutions that are filmless can have archival links with each other and that appropriate personnel will have access to patient's imaging 24 hours a day, seven days a week. This process facilitates patient care with more continuity as they go from outpatient to inpatient status and as examinations need to be compared with different examinations at other facilities," concludes Dr. Fisherman. "Kelsey-Seybold and our imaging partners in Texas Medical Center are determined to be innovators in making this happen."

For more information visit the Lumisys website at: www.lumisys.com



Dr. William H. Fisherman