Unique technology in ICIS 'connects the dots' between EHR and patient images

Built-in acquisition and workflow reference tools create the links between data and users

INTERVIEWEE Jim Murry, Chief Information Officer, UC Irvine Health and Associate Dean of IT & Informatics, School of Medicine



Like many healthcare enterprises, UC Irvine Health needed a way to manage the explosion in patient images and data. From ultrasounds to OR videos, from X-rays to angiograms, the facility had to find a solution to manage these millions of patient images, securely and cost-effectively, and also link them seamlessly to the Electronic Health Record (EHR). With ICIS, an enterprise clinical IT platform from Agfa HealthCare, UC Irvine found a comprehensive solution that provides data storage and much more.

UC Irvine Medical Center is Orange County's only university medical center, not far from Los Angeles. Opened in 1976, the 422-bed medical facility offers a full scope of acute and general care services, including a regional burn center, Level I trauma center, neuropsychiatric center, Level III neonatal care unit and a National Cancer Institute (NCI) designated comprehensive cancer center. It has about 35,000 ER visits per year, and 18,000 admissions.

There were several key criteria that the UC Irvine image storage solution had to address. "It had to be able to hold any type of digital image, it had to be scalable, able to scale up and out, it needed to have a single viewer, and it needed to be very fast – users just won't tolerate a slow system," says Jim Murry, Chief Information Officer. "It needed to be compatible with our disaster recovery approach, and it needed "By giving people access to images from anywhere, connected to reports, we're improving patient care."

to have the workflow technology built right into it."

WORKFLOW TECHNOLOGY IN ICIS SETS IT ABOVE STANDARD VNAS

For Jim Murry and his team, the workflow technology in the Imaging Clinical Information System (ICIS) is what elevates this solution above standard vendor neutral archives. "A vendor neutral archive on its own does not typically have this connecting piece – a workflow tool that allows you to 'connect the dots', to connect an image to a report," describes Jim Murry. "In the Agfa HealthCare solution there are workflows and technologies that let you get into the archive, and build a reference that allows you to feed it back into the EHR through interfaces, and connect up with the report. This allows a physician to read a report, then click on an icon to see an image, and the system will retrieve that precise image from this massive collection of images and present them with exactly the one they want to see."

In its search for a partner for its image repository, UC Irvine reviewed the marketplace, compared other vendors, and also turned to its radiology department. Since the radiologists were accustomed to working with the image management capabilities of IMPAX, they were able to share their knowledge and experience. "That helped quite a bit," says Jim Murry.

REDUCED COSTS TO MANAGE AND STORE DATA

There are numerous advantages to moving to an enterprise approach. First, there

AGFA HEALTHCARE'S CONTRIBUTION

- » Global leaders in managing healthcare images and reports
- » Professional, expert teams contribute to projects of all sizes and scope
- » Understanding of hospital IT requirements and processes

DID YOU KNOW...

- » The ICIS repository at UC Irvine will contain about 17 terabytes of data by the end of 2013; the IT department anticipates about 1 terabyte will be added each month.
- » More than 60 UC Irvine Health physicians are listed as Physicians of Excellence in the January 2013 issue of Orange Coast magazine. selected by the Orange County Medical Association.
- » The UC Irvine School of Medicine offers summer enrichment programs to about 150 high school students interested in pursuing careers in healthcare and research.

are all the costs associated with running separate image storage 'silos' across the hospital enterprise. "Now, instead of buying and managing storage for all these one-off departments, I'm supporting one enterprise-scale storage system," explains Jim Murry, "greatly reducing the investment needed in these one-off storage solutions."

The approach also brings more focus around the role of the CIO, and strengthens the connection between technology and the hospital's strategic goals. For UC Irvine, this improved access to information will help towards the enterprise's goal to become one of the top 20 academic health systems in the United States, within five years. This ranking looks at clinical, research and education outcomes – all areas that will see benefits with the implementation of ICIS.

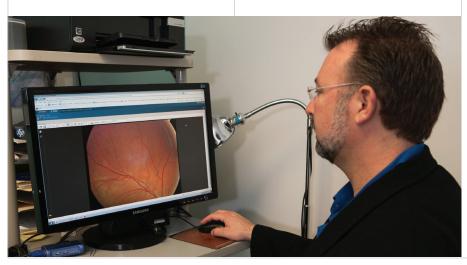


ENABLING BETTER CLINICAL OUTCOMES AND RESEARCH WORK

"By giving people access to images from anywhere, connected to reports, we're improving patient care," says Jim. "When you look at what we will be able to do with the data and the metadata, we're enabling better clinical outcomes and research work. For the first time ever, through this technology, and the right protocols, researchers will be able to access the metadata to understand and identify cohorts, and access images that they couldn't access before."

Another focus as a medical school is data security. Students, and professors, need access to images, but access must be strictly controlled. With all images in a single archive, it is easier to control and monitor access. "You can get access to the images from anywhere in the world, if you have the right security, but you can't download anything, without IT oversight and encryption," Jim comments.

So far, the ophthalmology department has gone live; cardiology is next, to be followed by ultrasound. At the same time, Jim is working with Agfa HealthCare's



Managed and Cloud Services to move the solution to the cloud. "Right now, the storage is sitting in my data center. When we move it to the cloud, it becomes even more scalable, we can look at genomics, research, we can move the entire PACS into this environment. Agfa HealthCare will look after backups, disaster recovery, all of that," he says. "Agfa HealthCare brought good, experienced resources to the table, they've got a great team, they made this happen." •

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- Imaging Clinical Information System (ICIS)
- » Provides a comprehensive view of multimedia patient imaging records, across regions, facilities and departments, creating a true longitudinal patient imaging record by integrating and linking multi-facility, multi-departmental and multi-specialty imaging data

XERO Technology Viewer

- » Enables anywhere, anytime access to images
- » Provides secure access to standard healthcare data from existing workstations anywhere on the network
- » Uses any popular internet browser and simple network connection
- » No software download or installation required

IMPAX PACS

» Integrated reporting solution provides easy and convenient access to reports, workflow optimized for the different users in an enterprise, web-deployable for access to data from any location



