Why R.T.s Make the Best PACS Administrators

BY MIKE BASSETT, CONTRIBUTING WRITER

Laura Young in a hospital’s informatics control center
Laura Young, M.B.A., R.T.(R) (M)(QM), is a radiologic technologist who “always navigated to the new stuff.” Whether that meant a hospital’s new magnetic resonance unit, computed radiography or digital radiography systems, picture archiving and communications systems or even a BlackBerry, Laura has been intrigued to see how new technologies can be used to make employees more efficient and improve patients’ overall experiences. She has been, in short, a prime example of an R.T. eager to immerse herself in the world of imaging informatics.

Imaging informatics is a relatively new multidisciplinary field that encompasses biological sciences, health services, information sciences, medical physics and engineering. It affects nearly every aspect of the medical imaging chain, from the point at which images are acquired to how they are interpreted, stored, reported and communicated across and between enterprises. PACS, which provides storage of and access to images from modalities such as computed tomography and MR, is a key technology within the imaging informatics field.

After years of on-the-job training, some online education and the support of mentors “who saw [my] energy and would assign me to special projects to implement or support these new technologies,” Laura has spent the past few years working for Dell Services, a company that provides technology services. She is assigned to Catholic Healthcare West in Phoenix as its chief operating officer for information technology and is responsible for more than 750 staff members around the globe in support of information technology services.
Laura’s experience is anything but unique. Many R.T.s have moved beyond their traditional role in radiology to become PACS and radiology information system administrators, imaging system technicians or even the weightier positions of enterprise imaging systems managers.

Bill Brennan, M.A., R.T.(R)(CT), CIIP, got into imaging informatics because “I was in the right place at the right time.”

A senior systems engineer in radiology at New York-Presbyterian Hospital/Weill Cornell Medical Center in New York City, Bill had a bachelor’s degree that he parlayed into a hospital administration position. “I ran a program that I enjoyed, and which I’d still be doing, if it wasn’t for the advent of PACS,” he said. “My hospital was just beginning a PACS project and I saw an opportunity to get in on the ground floor. To me, this was obviously going to be the next important stage in radiology.”

Now, as a PACS director, Bill considers himself to be the radiology department’s “chief cook and bottle washer” along with “fireman.”

The “cook and bottle washer” part involves the countless number of responsibilities he has during a typical day — making sure all systems are running, ensuring studies from the day before have been read, verifying images from outside institutions have been imported into PACS and figuring out why a study has been rejected by PACS and then correcting the problem.

As “fireman” he must deal with password issues, connectivity problems and hardware failures involving hard drives, video recorders and voice recognition microphones.

Then there are the more infrequent but critical responsibilities such as dealing with image migration issues when installing a new PACS or configuring CT and MR so they can be properly integrated with PACS or RIS. In addition, Bill has to make sure every radiologist on staff is trained on all systems.

“No two days are ever the same,” he said. “There are things I do every day, and every day there are things that pop up that I’ve never done before.”

Much like Laura, Bill prepared for his role in imaging informatics “mostly through on-the-job training.” The same is true for Sue Ramthun, M.B.A., R.T.(R), CRA, CIIP, a director of electronic environment at the Mayo Clinic in Rochester, Minn., until she retired last year. But Sue also earned a bachelor of science degree and an M.B.A., which “set me up to apply for a radiology director job when the opening came.”

Her entry into the world of imaging informatics was fortuitous in the sense she got her position just as Mayo was going filmless. “And during the course of my career, I moved from radiography to CT management and learned more things about workflow and electronic archiving as stepping stones until the time I was able to lead our group into going filmless.”

From a radiology standpoint, informatics is all workflow, efficiency and process improvement. So if you had no R.T. background, it would have been a very tough step.
In moving her group into the digital world, Sue found that having a background as an R.T. was critical because it enabled her to know about workflow involving different modalities such as CT and MR. “From a radiology standpoint, informatics is all workflow, efficiency and process improvement,” she said. “So if you had no R.T. background, it would have been a very tough step.”

“I can’t overstate the importance of being an R.T.,” said Bill, who added that he’s done some research and lecturing on how to be a PACS administrator and determined that about 50 percent of PACS administrators are R.T.s, while the other 50 percent have an information technology background.

Not too many people with IT backgrounds understand anatomy, imaging physics or radiology department workflow, Bill said, but “as an R.T., I know how those things work. And when a radiologist complains about the quality of an image, an IT person won’t necessarily know what that image should look like, but I do.”

Most importantly, Bill said, IT people need to be reminded that patients “are not data — IT people see data. I see patients. That’s what I bring to my team here, an appreciation of the clinical side.”

Mark Perna, R.T.(R), CIIP, director of imaging informatics at St. Luke’s Hospital in Allentown, Pa., graduated from a school of radiologic technology in 1985 and progressed from being a radiographer to working with CT and MR.

“It was during my last five years as a radiographer that I started dabbling with what is now referred to as imaging informatics.”

Mark said the experience of being an R.T. has made a “huge difference” in the way he approaches his current job because he has worked with patients and “knows what the mission of a hospital is.” That’s not necessarily the case with someone from an IT background, he said.

“While someone else’s focus might be on saving money on a type of storage media, mine might be on ensuring a faster turnaround time on reports, so that the patient gets what he needs, or a physician gets what he needs on behalf of the patient, as quickly as possible,” Mark explained.

The end result is that despite the move into imaging informatics, these R.T.s remain just that — R.T.s. “I tell people I’m an x-ray tech specializing in imaging informatics,” said Mark.

Laura said one of her most important mentors was a chief operating officer who told her that he “loved” people who came from radiology more than any other area in the hospital because R.T.s knew about all the departments in the hospital.

“Having that high-level overview of all hospital departments, I was specifically recruited for that reason when I came to Dell,” she said. “Being an R.T. has been the basis for who I am, the basis for my career. And if potential employers don’t bring up my background, then I sure will.”
Where the Jobs Are

Among the provisions of the American Recovery and Reinvestment Act of 2009 is the investment of more than $20 billion to modernize health care technology systems. This massive infusion of cash has led to a rapid increase in the demand for employees who can support the implementation of electronic health records in hospitals and other medical facilities.

Interoperability and the exchange of data between EHR and picture archiving and communications systems are key principles of EHR initiatives, so there should be an increasing demand for imaging informatics professionals as medical facilities implement EHRs.

According to experts in health care information technology, recruiters are looking for people with clinical backgrounds to fill these new positions because they understand issues such as workflow, patient safety and the urgency of providing care. R.T.s who are used to working with computers and PACS should have a major competitive advantage.

For those R.T.s looking to go into imaging informatics, the career paths of R.T.s like Laura Young, M.B.A., R.T.(R)(M)(QM); Bill Brennan, M.A., R.T.(R)(CT), CIIP; Mark Perna, R.T.(R), CIIP; and Sue Ramthun, M.B.A., R.T.(R), CRA, CIIP, are examples of the different opportunities available to R.T.s in imaging informatics.

And the possibilities are broad. Within health care facilities you can find positions such as PACS administrators, radiology information system administrators, RIS/PACS administrators or analysts and imaging systems technicians.

Vendors offer employment opportunities as well. Imaging informatics professionals can find employment as PACS sales engineers, PACS project managers, application trainers, implementation and workflow consultants and project managers, and engineers. Moving into the world of consulting offers another possibility.

“There are going to be a lot of opportunities, from hospitals to companies like the one I work for,” Laura said.
Since imaging informatics is still a relatively new field, opportunities for educational advancement are rare.

As chairman of the board of directors of the Society for Imaging Informatics in Medicine, Bradley Erickson, M.D., of the Mayo Clinic in Rochester, Minn., wrote an article for SIIM in which he bemoaned the lack of imaging informatics content in traditional training programs, whether they’re for radiologic technologists or individuals studying computer science.

That said, Dr. Erickson pointed out that SIIM has established a “strong history” of providing quality educational content, whether at its annual conference or through its online presence.

Sue Ramthun, M.B.A., R.T.(R), CRA, CIIP, said joining SIIM (formerly known as the Society for Computer Applications in Radiology) and attending the annual conference played a critical role in helping her build a knowledge base that supported her entry into the imaging informatics field.

The recent establishment of certification programs has also provided a way for people in or entering the field to demonstrate their competency as picture archiving and communications systems administrators.

The Certified Informatics Imaging Professional, or CIIP, credential is sponsored by the American Board of Imaging Informatics and the American Registry of Radiologic Technologists. The Certified PACS System Manager, or CPSM, credential is sponsored by the PACS Administrators Registry and Certification Association. “Right now there are very few formal educational programs available [for imaging informatics],” said Bill Brennan, M.A., R.T.(R)(CT), CIIP. “So getting credentialed is a way of ensuring professional quality, and also a way to open doors to prospective employment.

“When PACS starts to be more formalized when it comes to education — and that will happen — then employers are going to want people they can be assured will know what they’re doing,” said Bill. “I chose CIIP because ARRT is a sponsor of that credential. I’m proud of being an R.T. and I know that anything ARRT is involved in has to represent quality.”

While education is obviously useful, Sue said one way R.T.s can get into the PACS administrator track and beyond is to demonstrate to senior managers an interest and willingness to learn how information systems like PACS or radiology information systems work.

And Laura Young, M.B.A., R.T.(R)(M)(QM), suggests R.T.s can take that a step further. “If you’re interested in informatics, you should start looking at solutions to help control costs, improve IT service reliability, manage health information more effectively and increase physician and patient satisfaction,” she said. “Presenting these solutions can help hospitals maximize their return on their IT investment with measurable results, and help you build your career.”
A deep interest in computers and information technology seems to be a common bond among R.T.s drawn to imaging informatics.

Mark Perna, R.T.(R), CIIP, began his career as a middle-shift radiologic technologist at a small hospital. During down times he began educating himself about computer systems. At one point he began working with a programmer to build a homegrown radiology information system, “so I was kind of hooked on this. When I found picture archiving and communications systems and imaging informatics, I felt like I had discovered my true niche.”

Another R.T., Bill Brennan, M.A., R.T.(R)(CT), CIIP, moved into computed tomography as soon as he began his professional career, “which sparked my interest in computers right from the get-go,” he said. “I kind of automatically migrated toward the digital end of things.”

An interest in computers and IT is fine, but some R.T.s believe it is just as important to have an inquiring mind.

“I didn’t know what the field was called when I started,” said Sue Ramthun, M.B.A., R.T.(R), CRA, CIIP. “Anything having to do with informatics was labeled as information technology. But I would badger the biomedical folks with questions so I would get to know how the equipment functioned, making sure I knew how things worked so I could understand the whole picture.”

“You need to be detailed and inquisitive,” said Laura Young, M.B.A., R.T.(R)(M)(QM), who added that one can acquire these attributes over time. “The individual who transitions most easily into imaging informatics is the one who wants to streamline the patient experience through creative thought processes — and it’s usually not the one who misses being at the bedside of the patient.”

An R.T. “who likes putting puzzles together” could be a good candidate for a move into imaging informatics, said Mark. “Are you the kind of a person who, when you run into trouble doing a software upgrade, gets frustrated when you have to dig back to find the root of the problem? That kind of a situation gives me an adrenaline rush,” Mark said. “But if it gets you frustrated, then imaging informatics probably isn’t for you.”