

San Antonio Orthopaedic Group improves efficiency and patient care with digital X-ray

The San Antonio Orthopaedic Group provides high-quality diagnostics, therapy and surgery at five locations in its headquarters city and surrounding Texas communities. Its 24 board certified surgeons are subspecialty trained to treat the full range of musculoskeletal disorders, diseases and injuries.

In 2005, the group upgraded from analog to digital radiography, installing a GE Definium 8000 radiography systems from GE Healthcare in each of four locations. The change to digital brought a dramatic increase in productivity, enhancements in patient care, greater physician and staff satisfaction, financial benefits on the cost and revenue sides, and better equipment functionality.

Improved productivity and workflow



Christen Kean

San Antonio Orthopaedic Group is a busy and growing practice whose diagnostic capabilities also include MRI and CT. Physicians see about 2,700 patients per week. The staff saw digital X-ray as essential to growth. "We knew that if we invested in old technology, it would catch up with us later," recalls Christine Kean, chief operating officer.



Stephen Burkhart, M.D.

An extensive cost-benefit analysis showed that digital X-ray would boost throughput and revenue while eliminating costs for film processing, filing, storage and retrieval. "Our biggest bottleneck was in X-ray," says Stephen Burkhart, M.D., managing partner. "We knew digital radiography could dramatically increase our patient volume."

Since getting their Definium, exams times decreased by 75 percent from 15 minutes to two or three minutes. Physicians see the results immediately on exam room monitors.

Radiographers are equally pleased. The system is extremely intuitive and easy to use, allowing them to position patients more easily and to complete many more exams daily. Exam repeats are rare. "We walked in the first day, never having used the equipment, and by day's end we had imaged more than 60 patients," says Larry Gonzales, RT, radiographer/technologist. "We still had time to go to lunch, which was unheard of with analog. I believe it's better for everybody – patients, physicians, as well as us."



Facility: The San Antonio Orthopaedic Group

Location: San Antonio, Texas

Year Opened: 1947

Number of Physicians: 24

Web: www.tsaog.com

Enhancing patient care



Usman Mirza

Faster exams have sharply reduced patient wait times as well. With their previous analog system, patients sometimes waited more than an hour – a major point of dissatisfaction raised in patient surveys. Now, notes CEO Usman Mirza, "Patients are in and out in two or three minutes. They're back in the doctor's office, and the doctor is showing them the images on a high- definition

plasma screen in no time. To see the patients go through that process, and to see the awe it generated in them, made the whole experience worthwhile."

Most patients are imaged either standing or seated in a wheelchair. "Patient motion is not an issue because they're not squirming on the table trying to get comfortable," Gonzales says. "Patients were used to hearing clangs and clatters...the moving of cassettes in and out. But they don't hear that anymore. It's a very calm, quiet environment."

The physicians were immediately impressed with the image quality. "The clarity of the images is as good as or better than with analog," says Burkhart. "And our ability to control the image is a lot better. We can magnify it. We can change the window level or the window setting and get a better image if we need to. There are some specialized views that I wasn't sure we could get with digital. But as it turns out, even for some unusual views, for which there were no specific protocols, we get at least as good and sometimes better images than we had before."



Financial benefits: Cost and revenue

The financial benefits of digital x-ray went far beyond immediate savings on film-related costs, the practice leaders agree. Burkhart observes that practice revenue increased with higher patient throughput and larger volumes in X-ray. The switch to digital also helped improve the use of space. For one new facility in the planning stages, the group chose a single digital X-ray room in place of two analog rooms. "We converted one of those rooms into two exam rooms," says Kean. "That has allowed us to see more patients in that office than would have been possible otherwise."

CEO Mirza adds, "I have a responsibility to maximize revenues and maximize profit for the organization. We have been able to do that in the short term, and we're very confident that we'll be able to do it in the long term, as well. In terms of fiduciary responsibility, I feel digital radiography has helped our organization tremendously."

Better equipment functionality

Technicians and doctors alike are seeing the benefit in Definium as it makes their work easier and helps them be more effective. Technicians are freed from carrying film cassettes and from moving patients onto and off the table – they see patients more quickly and deliver the images to physicians much faster.

"Physicians who used to think computers were a fad are now very conversant with the computer," Mirza adds. "They're using the mouse. They're templating. They're able to be more accurate in their pre-operative diagnoses."

Gonzales appreciates the digital system's image pasting function, which acquires seamless images of the spine and leg bones in a single, highly automated exam. "The software automatically takes two, three or four images and pieces them together to create one image," he says. "The quality is great. You see from top to bottom with no degradation in image quality. Physicians love that. They can take accurate measurements from the pasted image that they need for surgery."

Choosing the right partner

San Antonio Orthopaedic group carefully reviewed a number of digital products on the market before settling on the GE Definium 8000. They chose GE not just for image quality and advanced features such as image paste, but also for the service standing behind it. GE Healthcare has long been known for having the largest field service team in the U.S.

"We're relying on one digital X-ray system in every location to produce the images physicians need to make a diagnosis," notes Carrie Miller, director of information technology. "Going to just one digital room, we have no back up – yet we need to have that equipment up and running 100 percent of the time. That's where service backing comes in. GE understood that this machine cannot be down."

Kean advises practices to pay close attention to the relationship with the digital radiography supplier. "The technology and equipment are very important, but your partnership with your vendor is what will carry you through the next decade," says Kean. "Your vendor is going to be your partner for a very long time. Make sure it's somebody you can live with. It's like a marriage."

The practice group also found GE's Healthcare Financial Services financing package to be very competitive and easy to work with given that the entire solution for them was within GE.

All in all, San Antonio Orthopaedic group regards the switch to digital X-ray as an unqualified success. "This technology has helped physicians do their jobs better, and more important, it has given patients greater confidence than anything that I've seen before," Mirza says. "I think patient care has improved dramatically because of what we are able to offer through digital radiography technology."



GE Definium 8000 digital radiography system

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