

Pennsylvania Community Hospital Converts X-Ray Rooms, Mobile Units to DRX-1 Detectors

New Wireless DR Technology Delivers Higher Productivity, Excellent Image Quality, Helps Enhance Patient Care

You could call it a triple play ... but the hospital thinks of it as a home run.

Memorial Hospital of York, Penn., purchased all three products in Carestream Health's innovative family of DRX-1 systems: the CARESTREAM DRX-1 System, the CARESTREAM DRX-Evolution and the CARESTREAM DRX-Mobile Retrofit Kit.

The 100-bed community hospital performs almost 80,000 imaging exams a year. The radiology staff converted from CR to DR to achieve greater staff

productivity, higher image quality and enhanced patient care. The initial objective was to replace an outdated x-ray room with a new DR suite. As the hospital's Director of Imaging Robin Wible, CNMT, CRA, was making site visits to view DR systems, she heard about the wireless, cassette-size DRX-1 detector. After seeing a hospital user demonstrate the benefits of this new technology, Carestream Health immediately moved to the top of her supplier list.

"The flexibility and productivity of the DRX-1 detector is very compelling, but the ability to use the DRX-1 detectors in existing x-ray rooms and mobile systems won me over. The financial payback is also very attractive. We were able to convert two rooms and one mobile system to the DRX-1 detector for the price of a single DR room from other vendors," Wible reports.

The hospital completed its DR conversion in less than three months. All DRX-1 based systems (including the mobile system) are integrated with the hospital's RIS and PACS through the hospital's wireless network. Workflow is streamlined through the availability of patient worklists on room-based and mobile x-ray systems. Just seconds after capture, imaging studies are available from the PACS for review by radiologists and physicians.

Jeff Callender talks with Robin Wible about the benefits of retrofitting mobile x-ray systems with the wireless DRX-1 detector.



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Leah Rohrer positions a patient using the DRX-Evolution system.

Productivity Doubles, Image Quality Improves

Exam times for mobile and room-based exams have been cut in half. Clinicians can review images just seconds after capture instead of waiting 10-15 minutes, which is especially important for ER, ICU and surgical patients.

"Image quality from the DRX-1 detectors is excellent. These detectors deliver

enhanced visualization, along with greater latitude and depth," said Richard DiPietro, D.O., Chairman of Radiology. "These quality improvements can lead to better diagnostic interpretation by radiologists, which benefits our referring physicians and their patients."

Exposures have also been reduced. "We trimmed our techniques by 30 percent and improved image quality at the same time," notes Jeff Callender, RT(R), Radiology Supervisor. "That is an impressive improvement for our patients."

Ease of Use Speeds Training

The first step in the CR to DR conversion was implementing the DRX-1 System in an existing general radiology room. Installation and training took less

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than one day. "Even though we were not familiar with Carestream Health's CR or DR systems, our technologists immediately understood how the user interface worked. It's very easy to use and all the commands on the touch screen make sense," Wible explains. "Our technologists were imaging patients the same afternoon they received training."

The detector fits into Buckys to allow efficient use of existing x-ray systems. Use of DRX-1 detectors improves staff productivity and patient comfort by eliminating cables and tethers required by most DR systems.

The hospital's conversion to DR doubled productivity in a general x-ray room. That allowed the staff to continue processing normal patient volumes with one room while a DRX-Evolution system replaced outdated equipment in a radiology/fluoroscopy room. "The DRX-Evolution offers significant advantages over traditional DR systems. Its robotic movements and auto positioning features are exceptional and the wireless DR detector delivers unmatched positioning for any type of exam, including stretcher and wheelchair patients," Callender notes. "Instead of moving the patient to meet the needs of the equipment, we are moving the equipment to meet the needs of the patient."

DRX-Evolution Offers Exceptional Positioning Flexibility

The wall stand Bucky offers extensive vertical and horizontal range of motion. Cross table exams of patients on gurneys can be imaged using the side-to-side feature. The overhead tube tracks detector movement for wall stand and table to ensure accurate source-to-detector alignment. An elevating table with a floating top accommodates 600-pound patients. Existing grids can be used with DRX-1 detectors to enhance imaging of large patients.

The staff purchased two detectors for the DRX-Evolution system, but the second detector is now used in a mobile x-ray system that services ER, OR and CCU. "It was so easy to move the detector from one Bucky to another that we use the second detector in our DRX-Mobile Retrofit kit," Callender explains.

The retrofit kit enables the DRX-1 detector to be used in the hospital's existing GE AMX-4 mobile x-ray system. Now images are available in as little as five seconds, instead of 10-15 minutes. Radiologists, surgeons and physicians are all pleased with the immediacy of image access.

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Mobile Images Now Available in Seconds

"Using the DRX-1 detector saves 10-15 minutes per patient for total joint replacement, spine surgeries and other procedures," said Dean Nachtigall, D.O., orthopedic surgeon. "That time savings enhances care because we reduce the time patients spend under anesthesia. We also gain additional capacity in our surgical suites."

ER, OR and CCU patients also benefit from an innovative Tube and Line Visualization feature offered by Carestream Health's software. This feature creates



Equipping a mobile x-ray system with a wireless DRX-1 detector allows Marianne Weaver to review ER images in just five seconds.



Richard DiPietro, D.O., Chairman of Radiology, reviews images captured using Carestream DRX systems at Memorial Hospital in York, Pa.

a companion image from the original exposure that enhances the visibility of tubes and lines used in the treatment of seriously ill or injured patients.

“Doctors positioning nasogastric or endotracheal tubes or a central venous catheter can know in as little as five seconds if these devices are properly placed. This is an important advantage for critical patients, when compared to waiting 10-15 minutes for a CR image to be processed and displayed,” said ER physician Nicole Peters, D.O.

Radiology managers, technologists, radiologists and clinicians all agree that moving to DRX-based systems was a good decision. “It’s not often that we find a solution that will deliver dramatic improvements in the delivery of imaging services while reducing costs,” Wible reports. “All the users of these systems agree that moving to DRX-1 detectors streamlines our process and helps us achieve our ultimate goal—excellent patient care.”

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