UZ Brussel Hospital, Belgium, Moves To DRX-1 Technology

New Wireless DR Technology Delivers Higher Productivity, Excellent Image Quality and Enhanced Patient Care

UZ Brussel is the Flemish speaking university hospital in Brussels with a teaching and scientific research mission. With nearly 800 beds, the hospital is one of the seven university hospitals in Belgium with around 200,000 patient contacts a year in radiology across a variety of disciplines.

The hospital first partnered with Carestream over a decade ago with the installation of PACS and with the introduction of the CARESTREAM DRX family of solutions, has now finally achieved full digital status across the hospital, with the Emergency Department and Intensive Care being the last to convert. The flexibility of CARESTREAM DRX technology has also led to a change in strategy for their new Emergency Department currently under construction, where instead of two fixed rooms, only one room will be fixed with two CARESTREAM DRX-1 Systems taking up the remaining capacity.

Delivering CR Flexibility With DR Image Quality

Popularity and high demand for the CARESTREAM DRX-1 System within the hospital led to a decision to upgrade existing Siemens and Phillips mobiles from phosphor plates to high quality DR technology using the CARESTREAM DRX-1 Retrofit Kit. "Introduction of the CARESTREAM DRX-1 Detector meant that we could easily and cost effectively upgrade our existing mobile equipment," explained head of the Radiology Department, **Professor Dr Johan De Mey**. "Conversion was undertaken seamlessly, in less than a day, and straight away we saw workflow improvements as a result of immediate access to images. The primary benefit is that procedures take less time and the patient is helped more quickly."

"Our experience of imaging at the bedside is very positive — it is better for the patient, imaging is of a higher quality than we previously experienced and we save time and money. Moving to DR with the DRX-1 System was the right decision for our hospital,"

Professor Dr Johan De Mey.

Instant image review via the intuitive user interface.

Radiographer **Steven Jacobs** explains the difference that the CARESTREAM DRX-1 Detector has made to his working day. "We start our day in Intensive Care at 6.30 am by taking 35 X-rays of the chest. Previously we had to take 25-30 phosphor plates with us, now we take only one plate for everything. This is of great benefit. We save a lot of time because we see the results within seconds and the attending doctor can act immediately. We also work in the Emergency Room and when we have a patient involved in a big accident (polytrauma) we can't move them. Now with CARESTREAM DRX-1 technology we can image them quickly and easily which helps our clinicians to reach a speedy diagnosis and start treatment in a timely manner."

Easy placement of the CARESTREAM DRX-1 Detector provides increased patient comfort.

Long tube head reach allows easy bedside imaging.

The mobile equipment in the hospital was one of the last systems to be upgraded to digital simply because wireless technology was not available until now. "A suitable wireless solution was not available until Carestream came up with the CARESTREAM DRX-1 System," said Medical Physics Doctor **Professor Nico Buls**. "A wireless capability was very important to us as wires compromise sterile environments such as Intensive Care. The instant image feedback provides our clinicians the ability to perform imaging guided procedures without moving the patients from the bed to the Radiology Department."

Image Guided Procedures

This ability to perform imaging guided procedures has enabled clinicians working in Intensive Care to treat patients more aggressively without surgery. The position of catheters, supporting devices like inter-aortic balloon pumps and line control can be closely monitored and corrected at the bedside, procedures that were much more difficult to monitor previously. Having a flat panel detector with higher detective quantum efficiency (DQE) also means that clinicians can take images at a lower dose than typically with phosphor plates

"It is a big advantage to have a system that allows you to identify problems, such as the position of a pacemaker wire, and make corrections at the bedside," said **Professor Dr. Luc Huyghens**, Head of Intensive Care. "The quality of the imaging is certainly better than what we had before.

"Recently we had to put an extra cathertary pacemaker in an 80-year-old man who had received an artificial aortic valve. As the patient had a very large heart it wasn't easy to position and start pacing correctly. We asked for digital radiography of the thorax which showed the wire was directed to the vena cava inferior. We needed to reposition it and thanks to the imaging knew exactly which way to turn the pacemaker wire and correctly pace. The result was a better cardiac output for the patient."

New Department

Successful use of the DRX-1 Mobile has also led to a change in imaging strategy for the hospital's new Emergency Department currently under construction. "Capacity will double over current figures with an estimated capability of treating 300-400 patients daily," added **Professor Dr Johan De Mey**. "Instead of two dedicated radiology rooms, which would take space and not be occupied 100% of the time, another DRX-1 System will be purchased to add to the one already in use. The one fixed room will be used for fluoroscopy and high-end imaging with the two DRX-1 Systems becoming mobile X-ray rooms, going wherever imaging is required. This will result in cost savings, workflow efficiencies and increased patient comfort."

The team at UZ Brussel has been impressed with the flexibility and image quality of DRX technology. "Our experience of imaging at the bedside is very positive—it is better for the patient, imaging is of a higher quality than we previously experienced and we save time and money. Moving to DR with the DRX-1 System was the right decision for our hospital," concludes **Professor Dr Johan De Mey**.

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