

# COUNTRESS OF CHESTER HOSPITAL PACS POTENTIAL



*“As Chairman of the influential parliamentary IT committee and as a patient I was doubly interested to see PACS up and running. Technically it is an impressive tool with very obvious benefits for patients”.*

**Andrew Miller MP,  
Ellesmere Port & Neston**

This case study highlights the benefits of CSC’s Picture Archiving and Communication System (PACS), the GE Healthcare-based solution introduced by CSC under the NHS National Programme for IT. PACS went live at the Countess of Chester Hospital in July 2006 and was completed in 12 weeks on time and within budget.

Dr Richard Sloka, a Consultant Radiologist at the Countess of Chester, Linda Williams, Radiology Services Manager, and Steve Moore, Emergency Medicine Consultant, talk about the impact of the new technology at their hospital.

## THE COUNTRESS OF CHESTER

The Countess of Chester Hospital NHS Foundation Trust is a 635-bed, two-site District General Hospital. The Trust has more than 3,500 employees and provides acute emergency and elective services, primary care direct access services and obstetric services for 400,000 patients a year. It is one of only 10 acute trusts in England to gain the highest three-star rating in performance, as assessed by the Healthcare Commission, for four consecutive years.

Since the PACS system went live, it has had a major impact on improving the diagnostic service provided by Radiology, speeding up provision of patient services through immediate access to X-rays and scans, and dramatically reducing overall turn-around times.

## HIGH QUALITY CLINICAL INFORMATION AND SHORTER WAITING TIMES

PACS has transformed the radiology department that serves patients from Chester and the surrounding areas Ellesmere Port and Neston, and the Deeside area of Flintshire. As the Countess of Chester Hospital works to deliver a whole-hospital maximum 18-week

patient journey by 2008, the radiology element of the journey is now down to eight weeks. Linda Williams, Radiology Services Manager, said: *“PACS has made a big impact as part of a complete re-design of our patient service. Now our MRI scanner is open 8.00am to 6pm, our CT scanner opens in the evenings and our Ultrasound department also opens on Saturdays - we don’t just offer a nine-to-five service. Our ultimate aim is to get all our patients through radiology within two weeks.”*

Dr Sloka, Consultant Radiologist, said:

*“Digital images can be so much clearer than the images seen under a light box. When an X-ray image is viewed by light box, basically what you see is what you get. If the image is under exposed all you can do is put a bright light behind it. With the electronic system there is an automatic window width and level so you can look at areas in greater detail.*

*“For instance, you can see the ribs better on an image and, if you lighten it up electronically, you can see the lungs all on the one exposure. It will, therefore, lead to more appropriate reporting.*

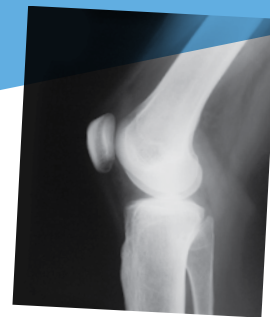
*“For example, an orthopaedic surgeon can request an image of a shoulder to see a fracture but because the printed out film had the right exposure for bone, a radiologist would be less likely to see a lesion in the lungs. With digital images, radiologists will be able to see clearer images and thus allow for more accurate prognosis for our clinicians.”*

## MORE EFFICIENT AND COST EFFECTIVE PROCESS

Before PACS, some images were not scanned appropriately for the tertiary referral centre, whether it be neurology or for cancer treatments. Patients were sometimes scanned two or three times just so that the imaging would be appropriate to where patients were being treated.

# RESULTS

BEYOND EXPECTATIONS



Dr Sloka said: "Now, because the government invested in a new system which is more appropriate and universal, we can obtain the images, put all a patient's examinations on to a CD, give the CD to a patient and the hospital can download the images. It cuts out the delay of re-scanning images reduces costs, and we are not exposing patients to radiation or further discomfort from duplicating examinations."

X-rays and scans were often put into a pile, the patient would be seen, then the consultant would examine them, but there was a delay putting them back into radiology for reporting. Sometimes the process took an hour or it could take several days.

Another key benefit from PACS is the improvement in storing, filing and retrieving images. X-ray films used to fill vast filing rooms which took a massive amount of clerical effort to maintain. Misplacing



images was commonplace, with the cost of repeating X-rays often substantial as well as time consuming.

## FASTER CLINICAL DECISIONS MEANS FASTER PATIENT TREATMENT

The new PACS is improving the speed of clinical decision-making, increasing the access to radiological diagnosis and is delivering savings, initially in film costs. These all benefit the patient. Staff can export anonymised X-ray images and save them to build up their own libraries and use them for teaching or for reference when a patient comes in with a similar problem.

Steve Moore, Consultant in Emergency Medicine, said: "In the past we could wait between 10 minutes and one hour for an X-ray of an injury to come back. Now, because the PACS system is interfaced to our Electronic Patient Record, we know as soon as the X-rays are ready. It is indicated on our screen so we can review it immediately and decide what needs to be done next for the patient. In Emergency Medicine, it makes a great difference. It's a real time-saving efficiency that benefits patients."

In summing up, Dr Richard Sloka said: "PACS will benefit patients considerably. Combined with electronic ordering and electronically transmitted medical reports within the Trust and to GPs; plus the speech recognition trial now under way; we are providing a much faster overall service."

*"It's a real time-saving efficiency that benefits patients."*

**Steve Moore, Consultant in Emergency Medicine**

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