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GARETH GOFF

PACS MANAGER AT THE  
PRINCESS OF WALES HOSPITAL  
BRIDGEND, WALES

## Kodak digital radiography system improves productivity in Wales

Testimonial

*Another KODAK DIRECTVIEW DR 9000, the only true direct to digital system, was installed at the Princess of Wales Hospital in Bridgend, Wales, in January.*

The DR 9000 is a fully integrated digital system incorporating a ceiling mounted U-arm system which features a variable source-to-image distance to accommodate a full range of general radiology exams, from routine chest exams and trauma. The radiology department at Bridgend, with a team of eight radiologists, has a new CT scanner, a two-headed nuclear medicine system, a mammography suite, four ultrasound and two fluoroscopy rooms (one with a cardiographic facility), and carries out around 120,000 exams per year, a number which is rising, on average, by 5% each year.

The hospital serves 250,000 people in south Wales, between Porthcawl and the Vale of Glamorgan, and its catchment area includes the largest residential caravan estate in Europe, with a consequential rise in the number of retired and elderly people.

PACS Manager at the Princess of Wales Hospital is Gareth Goff. He joined in 1991 and, in 1999, led a team which began to look seriously into developing a PACS

environment for the radiology department. "This was very much in line with the vision of our then Clinical Director,

Dr John Williams," explained Gareth. "At that time all our films

were microfilmed for archive storage, but the microfilm equipment was getting old and difficult to service, and the image quality left a lot to be desired," he went on. So the move to digital gathered pace, with a plan for the hospital to be effectively filmless within five years.

“ ...throughput has risen significantly... ”



*Princess of Wales Hospital in Bridgend, Wales*



*Radiographer Wendy Greensmith*



*KODAK DIRECTVIEW DR 9000 System*

*"When the new CT scanner was installed in what had previously been our general room, an initial reduction in the department's workflow was noticeable," said Gareth. "However, since installing the KODAK DIRECTVIEW DR 9000 in our new general room, throughput has risen significantly, so we have achieved a better use of space and an improvement in productivity. It's made a fantastic difference and, with the overall saving in film costs, we expect it to be resource neutral."*

The DR 9000 has also had an effect on staff levels in the department, as Gareth explained: "We've been able to reallocate staff who previously worked on microfilm and those helpers who labelled, filed and retrieved films and, as is the case generally, there is a shortage of radiographers and an increase in waiting lists, so the ability to get through the list faster with existing staff has made us much more efficient." He went on: "Using the KODAK DR 9000 makes our workflow easier and faster – our radiographers can make more examinations in the same time and we've found we can double patient throughput." With digital images made available on a network for soft-copy review, the productivity of both radiologists and referring physicians is also enhanced. The DR 9000 uses amorphous selenium technology to deliver the highest image quality – currently available in DR and Gareth Goff certainly appreciates the images' diagnostic quality: "The consistent quality of images from the DR



9000 means our radiologists have confidence in the system." Consultant Radiologist Dr N. Almokhtar agrees: "Image quality is extremely good. The system allows us to create a virtual library of digital images. And, with no more lost films, I certainly save time. I can report what and when I want. The barcode facility also makes life easier."

**“...Image quality is extremely good...”**

Radiographer Wendy Green-smith, three years with the department, also appreciates the increased throughput the DR 9000 has brought: "We can stay with the patient throughout the exam, and see an image on screen within eight seconds which makes things quicker for them and improves our patient care," she commented. "It's made a big difference." Once the initial image has been checked it is accessed on a Q&A workstation where any necessary enhancements are made, then it is routed to the archive server.

The KODAK system has linked seamlessly into the hospital's RIS, called RADIS, which operates nationwide, since all hospitals in Wales were linked by fibre-optic channels ten years ago. The hospital is soon to be linked digitally to a new hospital which is being built at nearby Port Neath and they will share a joint PACS. During the

period leading up to installation of the DR 9000 Gareth Goff and his team built up a good relationship with the Kodak team. He first saw the KODAK DR systems at the Kodak Technology and Innovation Centre in Genoa, Italy. "That

was a great trip, and a great facility," he said. "It was an excellent way to show how it all links together. We could appreciate how it would fit within our department."

Kodak is working hard to develop collaborations with healthcare professionals so, once a DR 9000 has been installed, Kodak engineers work closely with customers to train key staff and customise individual parameters, optimising image quality and finding an acceptable balance between dosage and noise levels. Once these parameters have been set, any image can be manipulated or enhanced to meet particular requirements. On-site training at Bridgend was carried out by Walter Streng from Kodak. "Walter was fantastic," enthused Gareth. "He spent two weeks with us, giving us comprehensive training and setting up our particular exam parameters." Supt. Radiographer Gail Watkins was trained as a key operator and she subsequently cascaded the information down through the rest of the department.

Gareth Goff recognises that, even with the best system, you can't always please everyone. "Some people are sceptical about changes in working methods," he said. "Some radiographers were initially wary about the DR 9000, now we can't keep them out of the room!"



Kodak engineer, John Rayner

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