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FIONA ROOKE
Diagnostic Services Manager,
Yeovil District Hospital, UK

More exams, not more equipment

With DR 600 and DX-D Retrofit, UK's Yeovil District Hospital balances the increasing pressure to handle more patients with the need to provide fast, high-quality care

More exams, not more equipment

Interview with FIONA ROOKE, Diagnostic Services Manager and PENNY PARCELL, Superintendent Radiographer, Yeovil District Hospital, UK

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PENNY PARCELL

Superintendent Radiographer, Yeovil District Hospital, UK



The diagnostic department at Yeovil District Hospital is under pressure. “Nearly everyone who passes through the hospital, passes through the diagnostic department,” comments Penny Parcell, Superintendent Radiographer. “At the same time, we need to keep patient waiting times low and turnaround times fast,” explains Fiona Rooke, Diagnostic Services Manager. It’s a balancing act facing imaging services everywhere: how to handle ever more patients and exams, while keeping workflow efficient and providing excellent image quality.

Searching for a solution, Yeovil turned to Agfa HealthCare. “They gave us a demo of their DR solutions, and we were won over by the ease of use, image quality and potential reduction in patient radiation dose,” recalls Fiona.

Now, the hospital has two DX-D 30C Retrofit solutions and was the first in the UK to install the DR 600 fully automatic X-ray room. “There is no reason to think that the ‘patient pressure’ on the imaging department will let up,” says Penny. “That means we have to do more diagnostic tests, but with the same amount of equipment. Our DR solutions make the difference: they enable us to achieve this. DR is fundamental.”

More images, less waiting: “The patients appreciate the difference, and so do we”

With the Retrofit and DR 600, the productivity of Yeovil’s imaging department has shot up: the number of X-rays taken has increased by 8%, in part, says Fiona, due to the faster image capture speed of DR.

Even before the patient enters the X-ray room, the difference is felt. Fiona describes: “We strive to keep waiting times for patients as low as possible, below national targets. With our DR solutions, the patient is usually in and out in 15 minutes – about half of the time it took before.”

Imaging excellence: “Nobody can beat Agfa HealthCare on image quality”

As an existing customer of Agfa HealthCare for CR, Yeovil – and Fiona Rooke – were well aware of the quality of its solutions, but moving to DR brought the hospital a new level of imaging excellence. “Nobody can beat Agfa HealthCare on image quality,” says Fiona.

At the heart of all Agfa HealthCare DR solutions is the MUSICA image processing software. “MUSICA is a key decision maker for us: it’s one of the reasons we stick with Agfa HealthCare, because the image quality is second to none,” comments Fiona.

“You have the details, the contrast, you can zoom in and out and still have clarity,” explains Penny. “We’ve been using it for 10 years (in CR as well as DR); it’s a major strength of Agfa HealthCare’s offer.”

Dose reduction: “We can use lower doses, yet get high image quality”

Everywhere, controlling and reducing the radiation to which patients are exposed during imaging is a priority, and Yeovil is no exception. But reducing dose can result in higher noise in images, so it is important to find the right balance. Using Fractional Multiscale Processing (FMP), a new mathematical multiscale framework, MUSICA reduces active noise while preserving the fine and subtle image structures.

In addition, the Retrofit and the DR 600 come with a choice of Cesium Iodide (CsI) or Gadolinium Oxy-Sulphide (GOS) detectors, both of which provide excellent image quality. Yeovil chose the CsI technology, which also delivers the potential for dose reduction*.

“We follow the ALARA (as low as reasonably achievable) principle,” explains Fiona. “We conduct dose audits which we compare to the national reference doses provided by the public health service. With the Retrofits and DR 600, we have been able to cut doses by an average of 20-30%, and in a few cases in half! And we still have the high image quality. We saw the realization of this reduction first with the Retrofits, and it was one of the reasons we chose the DR 600.”

Fast Forwarding to DX-D Retrofit: “The easiest thing in the world”

The hospital first upgraded two X-ray rooms to DR with the DX-D 30C DR Retrofit, converting one room in the imaging department, and one in the emergency department. Agfa HealthCare’s Fast Forward program, with the Retrofit, gave the hospital a quick and cost-effective path to DR, while maximizing the use of its existing imaging investments. This upgrade was a huge success, and was welcomed by technologists and doctors alike.

For Fiona, one major advantage of the Retrofit is how easy it is to start using. “The system is so similar to using the CR, it was very quick to learn. It’s like the same room – only better! Training took perhaps 30 minutes, and then we were on our way. You can feel the benefits immediately, though: the image processing is so much faster, you get

Agfa HealthCare solutions

■ DR 600

Fully automated, ceiling-mounted, high-productivity digital X-ray room that is ideal for facilities with a high patient load looking to streamline workflow and increase throughput. The fully-automatic system includes the latest in leading-edge auto-positioning technology.

■ ZeroForce technology

All movements of the tube head, wall stand and table in all different directions are quick and require almost zero effort. Easier operability means reduced risk of error, a faster process for patients, and increased staff comfort and satisfaction.

■ DX-D Retrofit

A quick, simple and non-invasive way to go direct digital, making the most of existing investments in radiography equipment and systems – whether analog or CR – by affordably upgrading them to DR. Easy installation helps assure that it is up and running quickly and very cost-effectively. It offers a choice of detectors, plus the MUSICA workflow, intelligent image processing software and seamless connectivity.

■ Fast Forward program

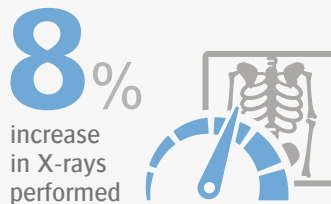
Lets medical imaging facilities advance at their own speed and budget from analog to computed radiography (CR) to cassette-less direct radiography (DR).

■ MUSICA

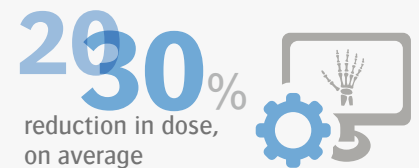
All Agfa HealthCare DR solutions come with the 'gold-standard' MUSICA image processing. MUSICA is fully automatic, very easy to use and gets maximum information from an image, independent of whether the patient is thick or thin, or of the exam type. There is little or no need for extra manual post-processing, and it provides consistent, high image quality (to help avoid retakes) and greater detail, as well as improved workflow. The high image quality also facilitates potential dose reduction for patients.

Agfa HealthCare contribution

- DR is no longer the future: it's the present, transforming imaging in more and more hospitals around the world. Committed to making the benefits of DR available to any hospital, whatever its size or budget, Agfa HealthCare has developed a range of DR products and services for every need. This made it the ideal choice when Yeovil District Hospital took the next step in its digital evolution. The hospital started by upgrading two existing CR systems to DR with the DX-D 30C Retrofit solution in 2014, and then added a top-of-the-line, fully automated DR 600 X-ray room in 2015.
- The resulting benefits have been clear: in decreased patient waiting times, the potential to reduce patient radiation dose, increased number of exams, reduced repeats and enhanced image quality. But each of the DR solutions also brings its own advantages, for technologists, doctors and the hospital.



Patient waiting times cut in half
Patient is in and out in



About Yeovil District Hospital

- The 345-bed Yeovil District Hospital provides a full range of clinical services, including general medicine, cardiology, general surgery, orthopedic surgery, trauma and pediatrics. It offers both public and private healthcare services. Serving South Somerset, North and West Dorset and parts of Mendip, each year, it handles around 20,000 emergency admissions, 3,500 elective admissions and 18,000 day cases.
- The radiology team includes 38 radiographers and 9 consultant radiologists, who carry out exams not only for the hospital's patients but also on an out-patient basis for the South Petherton, Crewkerne and Wincanton hospitals. In total, the radiology staff undertake around 110,000 examinations per year, including X-ray, CT, MRI, ultrasound and mammography.

your previews and images in seconds. Switching to the Retrofit was the easiest thing in the world.”

Penny agrees: “We were already used to working with the Agfa HealthCare CR, so with the Retrofit we only slightly adapted our way of working. The Retrofit also proved to be a perfect fit in the emergency department: it’s quick and you get your images right away, which is just what you need for urgent care.”

DR 600: “So quick to learn, and the room is ready in 30 seconds”

The imaging department had another X-ray room, which was reaching its end of life. “It was an analogue room that had been upgraded to CR, and it was obvious it needed to be replaced,” explains Fiona. With the success of the Retrofits, Fiona knew the hospital would pick an Agfa HealthCare DR solution. “In fact, if it had been possible, I would have taken another Retrofit,” she smiles. Instead, the hospital chose the high performance, fully automated DR 600.

“Like the Retrofits, the DR 600 offers us excellent image quality with increased productivity and patient throughput, and it supports our goals to reduce patient radiation dose and waiting times,” comments Fiona. “But it also offers a fully automatic, high precision system. It is a different way of working: the Retrofits still require a manual set-up of the room, while you have to program the DR 600 in a structured way.”

For Penny, it was easy to adapt to the new workflow. “We were already familiar with the Agfa HealthCare MUSICA workstation: how it looked, how to find and select the patient name, which workflow to use. So it only took 15-20 minutes to learn to use the main features. I’d say 99% of the staff were hesitant at first, but after using it once they were completely comfortable with it.”

The technologist simply finds the patient’s name on the MUSICA workstation, selects the type of exam to run from the thumbnails that have been tailored to Yeovil, brings the patient into the room, and does the X-ray. “Preparing the room takes perhaps 30 seconds,” Penny says.

Smoother, faster workflow: “In one visit to the X-ray room, we have everything we need”

Once the room is set up, the incredibly smooth workflow of the DR 600 comes into play. Fiona explains: “We have previews and images in seconds, without leaving the room. This means we can also do any retakes immediately,” she describes.

This fast image availability has completely transformed the patient flow for imaging. Before installing the DR 600, the technician had to leave the room to check the quality of the images, and, says Fiona, “our policy was to never ‘leave a patient on the table.’” This meant that after images were taken, the patient would be removed from the room, and

the next patient who needed X-rays brought in. The first patient would then remain outside the room to discover if retakes or additional images were needed. If they were, the technologist would wait for the room to be available, re-set it up for the images needed, and bring the patient back in.

“Now, everything happens in the room: the imaging, the confirmation by the technologist, the retakes – all in one go. Not only does this immensely speed up the process, but it also improves the patient’s experience,” Fiona explains. “In one visit to the X-ray room, we have everything we need,” agrees Penny.

ZeroForce: “We can move the tube with one finger”

The DR 600 offers a number of advantages that increase the comfort of use for the technologist. Penny highlights that the automated set-up can reduce repetitive strain from manipulating the equipment. The ceiling tracking system is quieter and neater, allowing better hygiene control, and the touchscreen is very easy to use, she adds.

But even more, she continues, “everything we need to use it for, the DR 600 can do: we can take X-rays on beds and stretchers; we can do knees, ankles, lumbar spine or pelvis, ... It’s simple to use, quick to learn and it’s so easy to move the entire bucky tray.”

The ZeroForce technology, which makes manual movement of the tube head in all directions quick and almost effortless, has won over the users, as well. Several technologists had experience working with heavy digital systems, and were nervous about the effort that would be needed to move the DR 600. “But you can move the tube head actually with one finger; it’s quite remarkable how easy it is to maneuver!” Penny describes.

Full service: “Agfa HealthCare goes ‘above and beyond’”

The installation of the DR 600 went very smoothly. “Actually, it took less time than we had expected,” comments Fiona Rooke. “The room was only unavailable for about three weeks.” The hospital chose to have the complete installation performed by Agfa HealthCare, and was very pleased with the result. “I would advise any hospital to work with Agfa HealthCare on a turnkey basis. That way, if any issues pop up, they are handled right away. And Agfa HealthCare’s service is impeccable,” she concludes.

For Penny as well, the reactivity of the Agfa HealthCare team plays a key role in the hospital’s satisfaction. “We have the first DR 600 in the UK, so there were of course some occasional hiccups. The Agfa HealthCare team would come over within 24 hours, take the logs to figure out what had happened and resolve it. Their service is always excellent, and they do their utmost to communicate and fix any issues; in fact, they go above and beyond.”

* Testing with board-certified radiologists has determined that Cesium Bromide (CR) and Cesium Iodide (DR) detectors, when used with MUSICA image processing, can provide dose reductions between 50 to 60%, compared to traditional Barium Fluoro Bromide CR systems. Contact Agfa HealthCare for more details.

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