



AGFA
RADIOLOGY
SOLUTIONS

Faith, trust, and technology

With its 4th DR 600, The Rotherham NHS Foundation Trust becomes a fully DR, all-Agfa X-ray environment

Case study

Interview with Rachel Bell,
Professional Lead for Medical Imaging,
Physics and Illustration

In the space of only four years, the Rotherham NHS Foundation Trust successfully transitioned from a computed radiography (CR) environment to a modern, fully direct radiography (DR) environment, including four automated DR 600 rooms and three mobile X-ray units. To accompany them on their journey, the Trust chose Agfa. “It was a leap of faith, but thanks to Agfa’s exceptional service and excellent technology, we are delivering the benefits of DR to patients, staff and clinicians alike,” says Rachel Bell, Professional Lead for Medical Imaging, Physics and Illustration at The Rotherham NHS Foundation Trust.



“We needed a solution that would increase patient throughput and speed of imaging in the busy A&E, and help us to improve care quality. We felt the DR 600 would be perfect for this type of imaging, plus it offered a good price/quality ratio.”

Rachel Bell

Professional Lead for Medical Imaging, Physics and Illustration.

The Rotherham NHS Foundation Trust is a combined acute and community Trust providing services at the 370-bed Rotherham Hospital and across the borough, to a population of 264,700 people. In 2017, the Trust received funding for a new X-ray room for the Rotherham Hospital emergency department. “We looked around the market and narrowed our choice down to two vendors, one of which was Agfa. We needed a solution that would increase patient throughput and speed of imaging in the busy A&E, and help us to improve quality of care. We felt the DR 600 was perfect for this type of imaging, plus it offered a good price/quality ratio,” explains Rachel Bell.

A rocky start with a smooth finish

The Rotherham Trust was an early adopter of the fully automated DR 600, but the journey was not always smooth. “As with any new technology, there were teething issues but we kept the lines of communication open. We were transparent about our needs, and Agfa was honest about how they were handling them. That honesty is so important from a vendor!”

The situation came to a head when The Rotherham Trust received funding for two more X-ray rooms. “It wasn’t an easy decision, but we appreciated the clear efforts Agfa had made, and we believed in the benefits of the DR 600. So, we took a

‘leap of faith’ and purchased DR 600s for both of the X-ray rooms – and we were delighted! Our feedback had been heard and acted on. Based on that very positive experience, when we were selecting a new system for our final X-ray room in 2022, the choice was obvious: we installed our fourth DR 600,” Rachel Bell describes.

Consistency, speed and safety

Having the same DR 600 system across all of the X-ray rooms provides some clear benefits to the Trust. Rachel explains that this set-up reduces the amount of equipment training the radiographers need. “The national shortage of radiographers means we have more newly qualified radiographers on our staff. With only one system to learn, they are up to speed very quickly. This also makes it easier for all of the radiographers when moving from one room to another: all of the workflows, functionalities, software settings, buttons, etc., are the same in each of the rooms. Not only does that speed up the work, but it reduces the risk of errors and enhances patient care.”

The Trust’s radiologists also benefit from the all-Agfa environment. As a former reporting radiographer, Rachel Bell explains, “Firstly, the quality of the images is top-notch: the radiologists and reporting radiographers are very pleased. Furthermore, the consistency of the images is higher because they all come from

the same type of X-ray room. So if a patient gets X-rayed one day in Room 2, and the next time is in Room 3, the images are very comparable.”



Increased throughput

“The DR 600 in the A&E room boosted our capacity and enabled us to keep up with the continuing increased workload from UECC (urgent and emergency care centre). In the first year we had it, we were able to do 3,352 more images than the previous year,” says Rachel Bell.

Greater patient and staff satisfaction

The ease of use of the DR 600 itself has played a key role in increasing departmental productivity, while improving the experience of both patients and radiographers.

“The DR workflow has significantly changed the patient experience. With CR imaging, the patient would undress, come into the X-ray room, get X-rayed, then go to the waiting area while the radiographer ran the cassettes to the processor to make sure they were OK. Now, it all happens right then and there, in the room. The patient changes in a cubicle, is invited into the X-ray room, has their X-ray, the X-ray is checked while the patient is in the

room, the patient then dresses and leaves. This increases our departmental productivity, while also improving the patient's privacy and dignity,” describes Rachel Bell.

The fully automated operation of the DR 600 increases the safety and satisfaction of the radiographers as well. “Radiographers very often have shoulder and back pain, due in large part to moving heavy equipment, X-ray tubes, etc. around all day. But the DR 600 is fully automated, so it puts less physical stress on the operator. Plus, even if you are manually positioning the tubes, they are so light that you don't have to use any pressure to move them.”

Lower dose, for better patient care

Patient care is at the top of the Trust's priorities, and that includes minimising exposure to radiation dose from X-rays. Agfa's DR solutions support ALARA (as low as reasonably achievable) principles thanks to the combined use of the MUSICA® image processing and Cesium Iodide detectors, while the excellent image quality helps reduce retakes.

This is all the more important for paediatric patients. “We have automated paediatric dose settings. So, if we have a baby who needs a chest X-ray, the DR 600 will automatically set an appropriate exposure rate, which the radiographer checks and adjusts as needed. This simplifies and speeds up the radiographer's work, while enhancing patient safety.”



“Agfa is always very responsive. The engineers get back to us quickly, and they are approachable. They check in with us, and ask ‘Is there anything else I can do for you?’ The application specialists are also very knowledgeable: they are radiographers themselves, so they understand our needs.”

Rachel Bell



Manoeuvrable bedside imaging, on the wards

In addition to the four DR 600 fixed rooms, Rotherham Hospital has three mobile Agfa units, including two DR 100s systems and a DX-D 100. These are used in the wards throughout the hospital. “They are very manoeuvrable, even in tight spaces like the SCBU (Special Care Baby Unit) or children’s ward. The tube head is flexible, so it can be easily moved and angled, and then holds the position. The arm is long enough that we don’t have to park the unit right up against the bed. The screen isn’t diagnostic quality, of course, but it is big enough that the radiographer and the clinician can check that the image shows all the needed areas, before they leave the patient’s side. And its very useful for checking catheter positioning, especially in the intensive therapy unit, when you don’t want to move the patient too much.”

Getting ‘smart’ about imaging, with Artificial Intelligence

This focus on dose and patient safety has encouraged Rachel Bell and the Trust to support Agfa’s development of its SmartXR® intelligent digital radiography tools for dose, alignment, patient positioning and more. The most recent DR 600 at the hospital will soon be upgraded with SmartXR tools, enabling the Trust’s radiographers to try them out and provide their feedback to Agfa.

“Our good relationship with Agfa goes both ways, so if we can help them perfect what they do, everyone is a winner. The SmartDose™ tool, for example, anticipates exposure parameters based on the patient’s size. It doesn’t remove the radiographer from the equation, but it gives them a guide on finding appropriate doses. Dose optimisation can be a challenge with DR systems, especially for less experienced radiographers. SmartDose™ will assist the radiographers to ensure that they are choosing appropriate exposures for every patient. I will be working with the RPA (Radiation Protection Advisor) to see what effect SmartDose will have for our patients.”



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Rachel Bell

Relationships that build trust

While the technology and functionality of Agfa’s solutions provide tangible benefits to everyone involved in patient imaging, Rachel Bell is clear that service, support and trust are equally important. “The relationship with a vendor is much more than an afterthought. We need to be able to rely on our equipment: if an X-ray room goes down, for instance, that has repercussions for everyone. Agfa is always very responsive. The engineers get back to us quickly, and they are approachable. They check in with

us, and ask “Is there anything else I can do for you?” The application specialists are also very knowledgeable: they are radiographers themselves, so they understand our needs.”

The Trust is so pleased with their Agfa solutions and service, that they have become an important reference site for Agfa in the UK. “I am always honest with our visitors, but in fact our experience has been very positive and I am delighted to share that with other hospitals. And if, somehow, I had another room to equip, I would choose Agfa again,” Rachel Bell concludes.



Did you know:

- The Rotherham NHS Foundation Trust operates a large number of services from sites across Rotherham, including Rotherham Community Health Centre and Rotherham Hospital.
- It was one of the first 35 Trusts in England and Wales to achieve NHS Foundation Trust status, making it an independent body, free from government control.
- The Trust performs almost 88,000 radiography examinations a year for in-patients and out-patients.

Agfa solutions



The high-performing, ceiling-suspended **DR 600** delivers a streamlined workflow, increased patient throughput, excellent image quality, and potential for dose reduction. It maximises operator and patient comfort, in a complete and integrated solution offering maximum versatility.



The ground-breaking mobile **DR 100s**, designed in collaboration with users around the world, combines fast, high-quality direct radiography (DR) imaging with excellent manoeuvrability and ease of use.



Like all of Agfa's DR systems, the DR 600 and mobile solutions are powered by **MUSICA®**. The MUSICA Imaging Workstation enhances workflow and productivity, with a single, intuitive interface for smooth, efficient DR imaging. Agfa's gold-standard MUSICA image processing software provides "first time right" imaging, supporting ALARA (as low as reasonably achievable) principles for radiation dose.

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