



# Applied intelligence, for better patient care

## WHO/WHERE

The Alexandra Hospital  
Redditch, UK  
320-bed hospital  
specializing in urology  
orthopedics and GI surgery

Dr. Chris Phillips  
Julia Worrollo

## CHALLENGE

Simplify the production of  
better images, to work more  
quickly and to better focus  
on the patient's needs

## SOLUTION

Philips IQX  
Intelligent Exposure

*Radiographers at the Alexandra Hospital in Redditch, Worcestershire, UK, value technology that helps them work more quickly and consistently with their varied spectrum of applications and patients. IQX Intelligent Exposure uses 'in pulse control' to dynamically adapt exposure to the object. By ensuring optimal image quality during series acquisitions, without intervention and with lower overall radiation dose, the savings in operator effort mean increased time for compassion and responsiveness to the patient's needs.*

Special thanks to The Alexandra Hospital, Redditch, Worcestershire, UK

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# PHILIPS

The Alexandra Hospital in Redditch, Worcestershire, UK, is a busy 320-bed hospital specializing in urology, orthopedics and GI surgery. At the heart of the radiology department are 2 URF (Universal Radiography/Fluoroscopy) systems from Philips Medical Systems, the MultiDiagnost 4 and the OmniDiagnost. IQX was installed on the MultiDiagnost 4 system in 2001, and already Ms. Julia Worrollo, Senior Radiographer in charge of the URF area, can see the positive impact that IQX Intelligent Exposure has had on the daily work in the department.

For the team in Redditch the benefits of IQX extend beyond an obvious improvement in image quality. IQX enables radiologists to work more quickly and consistently, in addition to bringing both technical and economic benefits. But most importantly, because they do not need to be as concerned with the settings of the system, they can better focus on the patient's needs, making the examination easier for the patient. As Julia Worrollo puts it "To me this is what makes IQX 'intelligent'".

*“Faster, easier acquisition, optimized clinical images and improved readability”*

**ADAPTABLE TECHNOLOGY**

The challenge facing radiologists and radiographers today is to produce high quality diagnostic images with an increasingly varied spectrum of applications and patients. IQX makes this possible with minimal effort. Philips, already world leader in X-ray technology, has recently released IQX Intelligent Exposure, a unique, Philips patented technology that uses 'in pulse control' to adapt the exposure kVp dynamically - within the first millisecond - to an object-specific value. This ensures optimal image quality without

requiring operator intervention, eliminates the need to perform fluoroscopy to find the appropriate settings for the generator, and means that the individual exposure parameters are adapted dynamically during a series acquisition, cutting exposure times and ensuring image quality regardless of changing object thicknesses. As Dr. Chris Phillips, Clinical Director and Consultant Radiologist at the Alexandra Hospital, says, the bottom line is "faster, easier acquisition, optimized clinical images and improved readability." All of which is achieved with less stress for the users.

"For example," says Julia Worrollo, "when we perform a barium swallow, we can now perform the imaging of the entire esophagus in a single series." Traditionally, they would have to perform at least two serial acquisitions, one for the upper and one for the lower esophagus. In addition to this, they would also have to take great care positioning the patient, and always perform fluoroscopy before starting. Indeed, it took no more than a simple explanation of IQX, for other radiologists in the department to acquire sharp images with excellent contrast and density for the entire length of the esophagus in a single series - because the kVp adapted to the thickness of the object constantly.



Julia Worrollo, Senior Radiographer

*“Philips not only makes things better, but with IQX it makes life easier!”*

**FOCUS ON THE PATIENT**

For another common examination, the barium enema, the trick to performing a successful examination has always been ensuring an optimal coating of the bowel with the barium, putting the radiologist or radiographer under pressure to get the best possible results in the shortest possible time. Having to carefully position the patient and adjust kVp during lengthy pulsed fluoroscopy prior to exposure meant that progress was slow. IQX guarantees consistently high image quality with flash on and off fluoroscopy, making the radiologist's job easier, and perhaps more importantly, reducing the examination time, lowering the dose, and simplifying the process for the patient. This simplification is particularly helpful for elderly patients who have difficulty following a doctor's instructions. For many applications it is no longer even necessary for the patient to hold their breath. It is taking the team in Redditch time to trust how much easier the process had become, but the final result should be increased productivity without the need for special training.

In addition to shortening examination times, IQX lets the radiologist or radiographer concentrate on aspects of the examination other than what the system is doing. Obviously the most important focus is the patient. For the team in Redditch an examination or procedure of the very highest standard doesn't just mean great image quality but also a demonstration of compassion and an understanding of, and responsiveness to the patient's needs. Intelligent exposure makes this easier. Julia Worrollo agrees that "IQX is like having another member of staff in the room with you to look after the generator."

**MAKING IT EASIER**

The radiology department in Redditch has been using GCF (Grid Controlled Fluoroscopy), another



Dr. Chris Phillips, Clinical Director and Consultant Radiologist

Philips patented technology, for several years now and Julia Worrollo describes IQX to her colleagues as GCF for digital exposures, justifying the comparison by pointing out that both systems excel at what they do by controlling exposure in real time. IQX has convinced the team in Redditch with its simple use, consistent and excellent image quality and better overall results for both the patients and the users. Or in Julia Worrollo's words "Philips not only makes things better, but with IQX it makes life easier!"

