

A fresh pair of eyes to unlock medical equipment efficiencies and reshape cancer service processes for improved patient care



Even before Covid-19, frontline healthcare services were under increasing constraints from growing patient numbers, capacity pressures and workforce shortages. Whilst a positive of the global pandemic has been a promise of more funding and increased equipment provision, will this come fast enough to help boost the energies of hospital staff and catch up on the mounting numbers of patients waiting to be seen?

Understanding the utilisation rates of diagnostic imaging equipment and gaining new ideas from a specialist partner has been hugely helpful at St Helens and Knowsley Teaching Hospitals NHS Trust, located in the Merseyside region of the North West of England. This insight has helped to reshape its Imaging and Upper Gastrointestinal (GI) cancer services.

Making the most of imaging resources already in place

Working in collaboration with GE Healthcare, the radiology team has gained a fresh perspective to generate efficiency gains by extracting valuable equipment use data to see where additional patient throughput can be created in the heavy workload areas of MRI and CT. This has helped to develop strategies to smooth the peaks and troughs of imaging workload and create a calmer, more productive working environment. This, in turn, has numerous benefits for the delivery of care to patients in the region.

“Our imaging workload is increasing 5-10% year on year, and across our acute and cold site hospitals we typically perform 320,000 examinations per annum. We are one of the busiest A&Es in our area, in addition to also handling inpatient imaging demands. Like all hospitals, we urgently needed to make the most of our current equipment resources to help balance the capacity versus demand conundrum,” states Sue Conroy, Operational Departmental Lead for the Radiology Service at St Helens and Knowsley Teaching Hospitals NHS Trust.

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She continues: “In radiology we often feel like we are on a hamster wheel – so busy we can’t stop to look around us. The tools and techniques that GE Healthcare introduced, such as utilisation data dashboards, assisted us to take a step back and look at the way we work in detail. This has helped create a calmer environment for our staff and helped more patients to be seen.”

Balancing every minute of imaging capacity and patient demand

The imaging equipment utilisation project commenced by looking at CT and MRI data. It calculated the average time for a patient to go onto a scanner, the procedure time, and then the time to take the patient off again. It very soon highlighted opportunities for time efficiencies. This included some examinations that only took 10 minutes in total but were booked into 15-minute slots, and some MRI exams conducted on a



1.5T that should be booked onto the 3T to increase the throughput speed.

“The detailed knowledge of how we use the systems has generated new ideas of how we can make our equipment work harder and more efficiently. It has highlighted the areas we need to improve or reshape. For example, it showed us that the way we structure the scanner diaries needs to change. At present, everything is booked into 15 minutes slots, even if it might be a head examination that takes 10 minutes. Procedures that may take 20-25 minutes go into a 30-minute slot and so on. Losing five minutes here and 10 minutes there really adds up during the working day. By resetting the diaries, we can maximise efficiency from the equipment we already have to help bring patient waiting lists down,” expands Conroy.

Creating a more predictable day for the wellbeing of staff

At a time when the subject of health staff morale and radiology burnouts feature heavily in the headlines, utilisation management is not just about getting more patients seen during the working day, but also about the positive effect on radiology workforce wellbeing.

“If appointments are not booked efficiently throughout the day, 20 patients can feel like 100 patients to working radiographers. Better management of appointments with less waiting around between patients and a smoothed

workflow without the adrenaline peaks and troughs, helps alleviate stress to create a much calmer working environment,” explains Conroy. “Creating predictability to the imaging day is much better for our staff and for our patients.

“An understanding of how we work and equipment usage patterns also helped with managing imaging backlogs and the recovery of services after Covid-19 lockdowns. We had the data to look at a typical pathway of a patient to work out the additional time needed for extra cleaning between patients and social distancing measures. This meant we didn’t lose capacity, but used our capacity better,” adds Conroy. “The partnership with GE Healthcare is part of a 20-year Managed Equipment Service in year 13 – it has been invaluable in making our department work more smoothly and making it a desirable place to work.”

Specialist project management skills introduced to improve cancer care quality

In addition to equipment utilisation, the GE Healthcare team also provided quality improvement project management skills to the Upper GI cancer care teams to speed up patient diagnosis and access to palliative care.

“Upper GI is a complex speciality with three distinct and separate oncology teams in different hospitals. Our workload has been increasing over the years at the same time as staffing shortages, and outcomes for this group of patients is universally

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poor with low rates of operability and survival. Overall, about 75-80% of patients need palliative care,” states Anil Kaul, Consultant Surgeon and Lead Clinician Upper GI Services at St Helens and Knowsley Teaching Hospitals NHS Trust. “We had identified multiple issues to improve our pathways, for example earlier patient diagnosis and access to palliative care, so we started our own comprehensive internal improvement process plan – when GE Healthcare joined in, it really boosted the focus and drive to achieve our goals.”

Delivering quicker MDT decision making

The Upper GI cancer care process overhaul involved setting up a weekly 30-minute clinical prioritisation and optimisation (CPOM) meeting prior to the scheduled multidisciplinary teams (MDT) meeting. This multi-professional meeting ensures that all patient cases are ready to be productively discussed in the MDT forum for swift care planning decisions. This includes checking that scans are reported on and that biopsy results are in to prepare for clinical discussion. Should anything be missing, it can be chased up in time so that participants in the MDT have the complete picture to make patient care decisions.

Caroline Dawn, Assistant Director of Operations, Clinical Support Services at St Helens and Knowsley Teaching Hospitals NHS Trust states: “The number of patients receiving decisions on treatment earlier in their care pathways has increased significantly. This is very positive, meaning that our patients are having a better experience by being seen quicker, and that smarter decisions are being made about their care.”

The value of partnerships to deliver improved ways of working

“Quality improvement of any hospital project requires a specialist skill set,” concludes Kaul. “What GE Healthcare is able to do is unlock the professionalism of our clinical teams and streamline our processes whilst keeping the patient at the very heart of the objective – this is hugely valuable to improve patient care.”