UK-wide medical imaging sharing system expands beyond hospitals to 500 institutions

The UK's globally unique deployment of a medical imaging sharing system called the Sectra Image Exchange Portal has expanded to a record reach, easing the flow of important patient information beyond hospitals and supporting the pandemic response.

A UK-wide digital medical imaging sharing system, the largest of its kind anywhere in the world, has expanded to cover 500 institutions – enabling the secure sharing of essential medical imaging across the NHS and with other healthcare providers. NHS trusts say the system has proven vital during the COVID-19 pandemic as many patients have been seen in alternative locations, and it is also helping them to work with computer-aided diagnosis specialists, teleradiology providers and even forensic investigators.

The Sectra Image Exchange Portal, or IEP, first launched more than a decade ago as a means to allow NHS hospitals to share patient x-rays, ultrasounds, CTs, MRIs, PET scans and other important diagnostic images from one site to another, without having to rely on burning and sending compact discs to each other via couriers.

Now used to share around 47 million images each week across the UK, IEP has been key for patients who move across geographical boundaries, or are referred to specialist centres, and has been particularly valuable during the pandemic as patients have been seen at alternative hospitals and COVID secure sites.

Susan De Four, radiology systems administrator at Chelsea and Westminster Hospital NHS Foundation Trust, which was one of the first hospitals to start using IEP in 2009, said: "IEP has gone from being a local image sharing tool to becoming the predominant way we share images institution to institution, even changing how we share images with patients. It has replaced the need to share using optical media which has unavoidable security risks, with a secure system where an image can be captured at one hospital and become available within minutes to specialists and multi-disciplinary teams in another organisation. This is especially important for critically ill patients so that we can get them on the right pathway without delay.

"COVID has also seen additional capacity provided to the NHS – patients have been imaged by private hospitals or the military to minimise COVID-related delays and maintain COVID-secure pathways. Effectively managing the patient journey through imaging while using this additional capacity would have been almost impossible to manage without IEP, which has allowed us to swiftly obtain images back from those providers and make them available for our healthcare professionals to act on.

"The system continues to develop. Our orthopaedics and plastic surgery teams use companies connected to IEP that make prosthetics or customised tools for operations. It means we can easily share images with the right experts so the next steps of patient care can happen."

Now the cloud based system has grown substantially beyond its original remit, with the NHS accounting for around 50 per cent of institutions. Other organisations that have joined the network include teleradiology providers, private hospitals, and organisations that focus on areas such as 3D reconstruction and AI supported diagnostics.

Hospitals have even been able to use the system, where appropriate, to securely share images that help inform forensic investigations.

The latest user, Innersight Labs, a surgical planning platform, specialises in creating 3D models that help NHS surgeons to prepare for theatre, reduce the risk of complications and even make decisions on whether patients should undergo procedures.

Dr Eoin Hyde, co-founder of Innersight Labs, said: "It's all about the ease of bringing in CT and MRI images that we then use to create 3D virtual models for surgeons to inform important decisions for patients. I've yet to come across a hospital not using IEP, which is an important arrow in our quiver in connecting to the people we can help. Even if a hospital hasn't worked with us before or we haven't yet set up a direct integration, they still have a convenient, secure and safe way to share images and that reassures their information governance team. That makes it easier for us to work with hospitals and ultimately help them to improve patient care."

Jane Rendall, managing director for Sectra in the UK and Ireland, the company that provides IEP, said: "IEP has been an important system in helping healthcare professionals to review medical images that might not be otherwise accessible from their own imaging system. Hospitals no longer need to rely on sending images via CDs, which might get lost or delay important decisions. But it has become much more than that, and even though more and more parts of the NHS are taking regional approaches to imaging technology, IEP has evolved considerably over the last decade to remain relevant and support patient care in new ways. I'm really excited to see how it will develop in the future."

ENDS

About Chelsea and Westminster Hospital NHS Foundation Trust

Chelsea and Westminster Hospital NHS Foundation Trust is one of the top ranked and top performing hospital trusts in the UK. We employ more than 6,000 staff over our two main hospital sites, Chelsea and Westminster Hospital and West Middlesex University Hospital, and across 12 community-based clinics within North West London.

We pride ourselves on providing outstanding care to a community of over 1.5 million people.

About Innersight Labs

Innersight Labs Ltd, a UK-based surgical planning software company, have developed state-of-the-art software, called Innersight3D, that generates interactive virtual 3D models of the patient anatomy to provide a detailed roadmap for the surgeon to devise the optimal treatment and surgical plan, and help them to explain the surgical risks to patients. The model generation relies on the extraction of the patient's anatomical structures such as bones, organs and vessels from standard-of-care CT scans. Surface representations of these structures allow the surgeon to view the patient anatomy in 3D prior to the operation, thereby enhancing their understanding of their patient's unique anatomy, and potentially minimising the chances of a surgical complication.

Innersight3D has been CE marked since 2019 and is routinely assisting with surgical decision making tasks at 14 UK sites (mixed public and private surgical centres) and selected sites in the Netherlands, Germany and France. Innersight3D has assisted with >700 operations. In a retrospective study, Innersight3D has been shown to affect the surgical decision made in 1 out of 5 cases. Funded by the National Institute of Health Research, Innersight Labs and King's College London are leading the world's largest Randomised Controlled Trial investigating the clinical outcome and cost-saving effectiveness of virtual 3D models in real-world clinical practice via a study that compares the current planning method to planning with the addition of Innersight3D.

About Sectra
With more than 30 years of innovation and approaching 2,000 installations worldwide, Sectra is a leading global provider of imaging IT solutions that support healthcare in achieving patient-centric care. Sectra offers an enterprise imaging solution that provides a unified strategy for all imaging needs while lowering operational costs. The scalable and modular solution, with a VNA at its core, allows healthcare providers to grow from ology to ology and from enterprise to enterprise. Visit Sectra's website to read more about Sectra and why it's top-ranked in 'Best in KLAS'.