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Caradigm™ Intelligence Platform

CASE STUDY

Achieving the electronic healthcare vision

Caradigm solution helps East Lancashire Hospitals NHS Trust automate pre-operative assessment process.

Introduction – Achieving a Paperless NHS

It is predicted that the proposed paperless NHS goal for 2018 could potentially save the NHS billions[1] and as a result, trusts are being encouraged to use innovative technology to increase efficiencies and ultimately improve patient safety and outcomes.

Supporting the paperless vision are initiatives such as the 'Safer Hospitals, Safer Wards' Technology Fund, designed to better equip trusts to realise the potential technology has to offer. East Lancashire Hospitals NHS Trust (ELHT) is one such organisation who has taken advantage of this funding and used technology to improve its performance to meet key government targets.

The Challenge – Improving Care and Efficiencies

Like many trusts, ELHT are actively working towards improving care while delivering greater efficiencies. Treating over 600,000 patients a year, from the most serious of emergencies to planned operations, there was an increasing need to review existing processes to deliver high quality care.

To help meet this challenge, ELHT made it a priority to become paper-light across the trust and, as part of its eHealth strategy, is deploying eForms, ePrescribing, ePortal and eCasenotes. However despite having a number of embedded IT systems in place, none of them provided a solution which could enable the full realisation of its eHealth strategy and therefore the trust engaged with its existing suppliers to highlight where improvements could be made.

The Solution – Enabling Tomorrow's NHS

ELHT identified the Caradigm® Intelligence Platform as an option for delivering the eForms element of its strategy. The platform adds value to existing processes and IT systems, as well as bringing together separate elements that support ELHT's eHealth strategy. The solution works by aggregating clinical and operational data from systems across the trust, presenting it in one view, allowing better management of information and patients in the system.

ELHT opted to trial the solution within the orthopaedic outpatient clinic, which enabled the ideation to automate the paper-based pre-operative assessment process (pre-op), with a plan to deploy the system across all surgical outpatient clinics within the trust.

Emma Birchall, Associate Director of Informatics for ELHT, explained: "The solution works by digitising previously paper-based processes, providing the trust with the ability to obtain an overall view of pre-operative assessment caseload."

Clinicians are able to access patient data, making it easier to undertake patient listings, and the clinic also benefits by having the clinic work-list automated. Previously handwritten processes led to issues, especially with assigning codes (OPCS) to each procedure. For example,

East Lancashire Hospitals NHS Trust

Customer: East Lancashire Hospitals NHS Trust
No. of beds: 971
No. of employees: 7,000
No. of annual patients: 600,000 approx.
Country: United Kingdom
Website: www.elht.nhs.uk

"We needed to ensure the technology would address our key challenges and that it complemented our existing systems before committing to a trust-wide deployment. The pilot has been very well received by clinicians and other service users. As well as helping us to move a step closer to improving efficiencies and achieving our eHealth strategy, we are also expecting improvements in quality and financial savings"

Emma Birchall
Associate Director of Informatics
East Lancashire Hospitals NHS Trust

Citations

1. *Department of Health, 'NHS challenged to go paperless by 2018' (Department of Health, 16 January 2013) https://www.gov.uk/government/news/jeremy-hunt-challenges-nhs-to-go-paperless-by-2018--2 accessed 17 March 2014*

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a procedure might have had the wrong code assigned, the procedure name may have been misinterpreted, and similar names led to confusion. Furthermore, the manual paper-based process meant delays could be possible and there was a risk that patients may not have their pre-op assessment completed in time.

"Caradigm's solution now provides clinicians with a database of procedures and associated code mappings, replacing the existing paper forms, therefore significantly reducing the chance of error" explained Birchall.

The solution not only interacts with the ELHT's Patient Administration System (PAS) which records the patient's demographics but also with the Intouch with Health touch screen kiosk, enabling patient input. When a patient arrives for their pre-op appointment, they are directed to a kiosk where they can answer a number of routine questions prior to consultation. Once completed, the information is sent to the platform via HL7 messages which then stores information from different sources to its database and automatically populates parts of the digitised pre-op assessment form. This new process negates the need to ask for patient details multiple times and gives the patient a greater sense of involvement in their own care.

This allows clinicians to focus on the clinical portion of the pre-op assessment such as the VTE (venous thromboembolism) assessment, surgical and medical history and medication. The completed form and clinician's decision on whether the patient is fit for surgery is then securely stored on the platform, ensuring that records across the trust are kept up to date.

Impact – Reducing Errors and Saving Time

As well as providing ELHT with the necessary support to achieve national government targets, such as a paperless NHS, the solution has had more immediate benefits. The successful trial is expected to result in a reduction in the number of delayed or cancelled operations, which are due to the elimination of inconsistencies in data and by streamlining the transfer of information electronically, and will allow for greater visibility into the patients that are coming to the clinic. ELHT anticipates this alone could result in a saving of approximately £75,000 per year just in Orthopaedics.

Clinicians find the solution easy to use and are actively engaged as it helps reduce the time taken to complete administrative tasks for every patient they see in clinic. The electronic transfer of information between clinicians, pre-op teams and elective admissions has led to improvements to workflows, with consultants now assigning the codes directly.

According to Jim Barrie, Orthopaedic Consultant Surgeon, the solution has the potential to improve pre-coding of procedures, plus with the provision of more accurate information, this also supports final coding and resource management. "On completion of the form there is an electronic record which can be forwarded to pre-op immediately. This becomes part of the electronic patient record and is available for analysis, avoiding the costs and environmental impact of paper forms."

The Future – a Trust-Wide Roll Out

The Caradigm solution provides considerable flexibility due to its interoperability with existing third party IT systems at the trust, as well as a platform for future development on projects to improve clinical pathways. The development toolkit and training provided by Caradigm, will enable ELHT IT and clinical staff to design, develop and deploy this technology themselves to improve other processes within the trust.

"With a firm business case and clear evidence of success, our plan is to roll it out across the whole orthopaedic clinic. This will be followed by other surgical outpatient clinics with the aim to deploy this trust-wide in the near future," concluded Birchall.

Customer Profile

East Lancashire Hospitals NHS Trust was established in 2003 and is a major acute Trust located in Lancashire in the heart of the North West of England. The trust provides high quality healthcare services primarily to the residents of East Lancashire and Blackburn with Darwen, and employs a staff of 7,000 - some of whom are internationally renowned and have won awards for their work and achievements. Over 600,000 patients are treated a year, from the most serious of emergencies to planned operations and procedures.

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Jim Barrie
Orthopaedic Consultant Surgeon
East Lancashire Hospitals NHS Trust

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