**Identifying different levels of risk to patients waiting for treatment**

The Cheshire and Merseyside health economy has the most NHS providers in England. As part of its elective recovery and waiting well programmes, Cheshire and Merseyside ICB is supporting a programme to roll out software, which makes it possible to identify possible risk to patients whilst they wait for their treatment.

The software that makes it possible to both identify the different levels of risk to patients on waiting lists, pool data to get an extremely detailed picture of each patient’s health condition and wider social factors and intervene where necessary to prevent waiting patients from getting worse.

Clinicians at St Helens and Knowsley Teaching Hospital Trust were an early adopter and have used the system to identify patients at high risk of chest infection from their planned surgery using the software from tech firm C2-AI, and then refer them to a local health coaching company, which helps them prepare for the operation in order to avoid complications.

From a cohort of 130 patients, the result was an average reduction in length of stay of two to three days; and no post-operative harm events reported where they would usually expect a pre-operative risk of chest infection of more ten per cent. Patients were put on a programme of respiratory physio at home and received diet coaching, as well as pre-surgery support. The impact for those highest risk patients was a reduction in two days off their length of stay and a saving £1,000 per patient in terms of avoided cost.

C2-AI’s solution works by assimilating hospital episode data, often going back two to three years to get information about a patient’s comorbidities, with Trust waiting lists and primary care data.

By linking this to the ICS’ shared care record, clinicians can see whether there are other risk factors or if the patient has reported other health issues by accessing data held by other trusts, GPs and local authorities.

This means clinicians can track, in near real-time, their patients’ movements through primary and secondary care because the information about the patient is not just their age and procedure, but also their history and co-morbidities.

The software has improved the categorisation of patients into P-codes 2,3, and 4 – which describes their level of risk.

The work on chest infection reduction is part of wider work by the ICS on risk stratification and intervention in the area, with 11 trusts in the ICS now working on the same model. Clinicians can see if a patient lives in a cold home, with known COPD or asthma, is on antibiotics and had multiple emergency admissions – and you can go and do something about it.

The success of the project, which has been highlighted by NHS England’s Getting It Right First Time programme.