UK AI receives widespread recognition for NHS waiting list impact

NHS technology provider C2-Ai has been recognised at four high-profile UK healthcare and technology awards on a single night, after surgical teams across dozens of hospitals delivered significant impact for patients on waiting lists.

Surgeons say they are revolutionising how NHS waiting lists are managed with the help of the UK company's technology, which is providing staff with an unprecedented understanding of the risks facing every individual patient.

Designed in response to requests from NHS professionals, the system provides augmented intelligence to help busy staff, hospitals and integrated care systems make important decisions, allowing them to prioritise patients for procedures, according to real-time changing clinical needs.

Peri-surgical teams have also used the technology to identify previously hidden high-risk patients and provide them with personalised relevant support before and after surgery, to prevent them deteriorating as they wait for hospital treatment, with notable reductions in complications recorded.

With strong evidence of positive impact in helping NHS organisations clear the backlog more quickly and reduce other pressures, the system was recognised at multiple awards in June. This included:

- **Health Service Journal Digital Awards** – won by integrated care system NHS Cheshire and Merseyside and C2-Ai. Awarded for the supporting elective recovery through digital category in HSJ's first ever digital awards, which celebrate excellence in the sector. Clinicians at NHS Cheshire and Merseyside played a key role in the development of the predictive waiting list model, applied to the C2-Ai system.
- **AbilityNet Tech4Good awards** – won by C2-Ai in the AI For Good category - which celebrate organisations that use digital technology to improve lives and enhance the world.
- **Digital Leaders 100** – the company was named for a second year on the Digital Leaders DL100 list, which celebrates teams and individuals delivering achievements in UK digital transformation. C2-Ai was also highly commended in the AI and Data Initiative of the Year category.
- **The North West Coast Research and Innovation Awards** – C2-Ai chief medical officer Graham Copeland was named as a finalist in the NHS Unsung Hero category for the awards, hosted by the Academic Health Science Network for the North West Coast. The company was also shortlisted for the Patient Safety and Care Improvement Award.

The AI system, which has been built on data from more than 450 million records, works by analysing data held in multiple care settings to provide clinicians with an accurate and real-time understanding of the evolving individual risks facing their patients, and what will happen if specific action is not taken.

Surgeons, who have saved many thousands of hours in prioritising waiting lists, or around five minutes for each triage, have been highly positive about time released to focus their time on carrying out more procedures, and about the reliability, credibility and clinical effectiveness of the decision support system.

An NHS England analysis of Cheshire and Merseyside's use of C2-Ai, a region which now triages 250,000 each week through the system, revealed a 66% reduction in the need for ICU for the highest risk patients, 125 bed-days saved per 1,000 patients, and an 8% reduction in emergency admissions. The same study also saw reductions in avoidable harm and mortality, and a 27% reduction in long-waiters within six weeks of deployment.

Additionally, the first patient cohort to benefit from targeted prehabilitation triggered by the system's identification of risk, saw more than a 70% reduction in surgical complications, an average five-day reduction in length of stay, and zero post operative deaths.

Dr Mark Ratnarajah, UK managing director for the company, and a practising NHS paediatrician for more than 25 years, said: "NHS organisations have been seeking new intelligence to better manage the complexities of growing waiting lists, rising demand, and supply challenges. We are proud to work in close collaboration with genuinely pioneering clinicians, who have driven us to develop the tools needed to help address some of the most pressing and pervasive operational and clinical challenges the NHS has ever faced, as it turns 75 years old.

"The surgical and clinical teams who have embraced and acted on this new intelligence on the risks facing their patients, fully deserve the recognition of the accomplishments for patient care, and new thinking in healthcare service design, that these awards represent. This really is technology for good."

Use of the C2-Ai RiskTriage system has seen significant attention elsewhere, which has supported uptake in around a third of England's ICS regions. In addition to June's awards, the system has received many other industry awards during the past two years.

High levels of accuracy in predicting risk of mortality and complications for patients, has been the subject of multiple peer reviewed studies on the system. It has been best practice endorsed by the Getting it Right First Time (GIRFT) initiative. The Royal College of Surgeons of England has funded a detailed economic health analysis. And additional awareness will soon be created after an acceptance to present on the system at the World Congress of Prehabilitation Medicine in London in July.

Steve Barnett, executive vice president for C2-Ai, which is headquartered in Cambridge, said: "I've worked with cutting edge technology companies for more than four decades, but I've never seen such a focussed team delivering such results and recognition. As a life-long technologist, it is immensely rewarding to see such positive impact from a genuinely unique system that is generating a new kind of intelligence on a scale and accuracy that the NHS has never before had access to. As a positive response to some of the challenges created by the pandemic, I hope that the awards raise awareness so that we can scale this opportunity even further – both in the NHS and around the world."

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About C2-Ai
C2-Ai is a trusted NHS digital partner. The company has provided national support and its technology is used in a wide number of NHS trusts and across 11 countries.

C2-Ai provides an AI-backed suite of hospital care quality/efficiency improvement tools developed from more than 30 years of research, ten years of development and the world's largest and geographically broadest patient data set (from 46 countries). In the UK these systems have a track record for delivering demonstrable improvements in care.