

Case Study: AI tool for proactive CVD prevention

The HN tool was developed in London, using data available at the time. The approach outlined in the London Life Sciences Strategy would accelerate development, deployment and reimbursement of the tool as well as building the evidence base and health economic research for national and international spread

Starting point

- Cardiovascular Disease (CVD) remains a **leading cause of disability & premature death in London. ~80% of CVD is preventable**¹
 - The **Million Hearts and Minds programme has been agreed as the focus for 2026-27** by NHSE London highlighting that around 650,000 Londoners live with CVD and requires deployment of prevention tools²
 - Many prevention tools are platform based and address CVD alongside other conditions
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- The HN predict tool **Identifies people at highest risk of needing hospitalisation using AI and supports them using proactive outreach**³ (combining machine learning, proactive whole person outreach, coaching across health, social and family needs, and data insights)
 - The evidence base for HN predict indicates a large benefit in CVD alongside other common conditions

How the HN tool was developed 2020-26

Stage	What happened	Time
Problem definition	Development of an approach combining analysis data to predict admission risk with proactive coaching to prevent it	2.5 years
Proof of concept	Pilots tested prediction accuracy and delivery feasibility, engaging ~1,500 patients across multiple sites	1.5 years
Evidence generation	Structured multi-site evaluations ³ , showed reductions in UEC admissions, bed days	2 years
Adoption	Initial commissioning by local systems, mainly linked to UEC demand management and winter pressures, but limited in scale	3 years
Replication	An NHSE-funded at scale pilot across NEL ICB with UCLPartners, screening all health records and delivering coaching to 10,000+ people	4 + years
Route to recurrent commissioning	Exploring multiple scale-up routes, including organic growth across ICBs, regional / national commissioning on outcomes-based contracts	1.5 + years

The tool has been through a long period of development and validation - the **current challenges (2026) are around procurement, and funding double running costs of deployment** (benefits are usually seen in the second year of use)

How the London Life Sciences strategy would help tools like these...

- London Health Innovation Fund:**
 - NHSE transformation funding** (urgent and emergency care) led to development and testing of the tool
 - Deployment of the tool requires the **working capital fund** – first-year costs release savings in future years in different organisations
- Procurement & MHRA sandbox:**
 - Procurement of platforms /strategic partners for deployment of future tools is important
 - Outcomes/value-based procurement approaches would support deployment of multiple tools and use of the most effective based on real-world evidence
 - MHRA sandbox would accelerate the development for additional tools and support evidence generation for use beyond London
- OneLondon Integrated Health Data:** Is the new core dataset to develop such tools and to demonstrate effectiveness (informing reimbursement in value-based contracts)
- Piloting / Sharing learning:** Piloting evidence has been developed for sharing by UCLPartners (one of London's adoption hubs)