# Great Ormond Street Hospital’s ambitious three-year AI transformation aims to revolutionise paediatric care



Great Ormond Street Hospital for Children NHS Foundation Trust (GOSH) is embarking on a landmark journey to embed artificial intelligence (AI) deeply across its clinical care, operational workflows, and research activities. This ambitious strategy, crafted by Chief Digital Information Officer Mark Coker alongside Director of Innovation Andrew Taylor, aims to transform paediatric healthcare delivery over the next three years through real-world AI applications designed to improve outcomes for children and young people.

Central to GOSH’s AI blueprint is an integrated approach that harnesses AI for a range of tasks—from managing operating theatre schedules and predicting intensive care unit (ICU) demand and bed occupancy, to providing clinical staff with concise summaries ahead of clinic visits and ward rounds. The hospital is also exploring AI-driven tools to assist in responding to messages from patients, reducing administrative burdens and enabling clinicians to prioritise direct patient care. This aligns with findings from a London-wide NHS trial involving the TORTUS ambient scribing technology—scheduled for wider rollout this autumn at GOSH—which leverages ambient voice recognition and generative AI to automate clinical note-taking, boosting face-to-face time with patients and improving workflow efficiency.

GOSH’s in-house Data Research, Innovation and Virtual Environments (DRIVE) unit—created in partnership with NHS Digital, University College London (UCL), and tech industry leaders—acts as a dynamic innovation hub where data scientists and clinical teams co-develop bespoke AI solutions, including natural language processing and advanced imaging techniques. This collaborative environment has already stemmed from GOSH’s earlier pioneering partnership with Microsoft, announced in 2018, which focused on developing AI-powered machine learning, decision support, and chatbot technologies to elevate personalised child healthcare.

Safety and ethics underpin the hospital’s approach. The AI strategy commits to rigorous governance frameworks aligned with the UK government’s AI Playbook, ensuring lawful, responsible, and transparent AI integration with maintained human oversight. An ethics committee will continuously review deployments, and all AI tools must meet stringent safety and efficacy standards before adoption. Mark Coker emphasises the importance of embedding trust and accountability in AI use: “Safety, ethics and governance are core to this strategy. Clinicians will retain decision-making authority, and we aim to build a workforce that understands when to trust AI and when to challenge it.”

To this end, GOSH is investing heavily in upskilling its staff across nursing, allied health professions, and clinical teams through webinars, workshops, technical training, and live demonstrations, with a goal of cultivating a fully AI literate workforce. This human-centred approach recognises that technology must meet the practical needs of frontline staff while supporting better clinical decisions and streamlined hospital operations.

The three-year roadmap is divided into phases: the first year focuses on establishing robust monitoring and governance structures, while subsequent years will scale AI solutions across the hospital, optimising both clinical and non-clinical workflows. By improving resource planning and scheduling through AI-driven efficiency gains, the hospital expects to maximise cost-effectiveness while enhancing personalised treatments.

Further reflecting GOSH’s commitment to innovation in complex paediatric healthcare, the hospital has also partnered with Roche UK to use AI and machine learning on routinely collected data to accelerate the development of new treatments for rare and complex diseases. This collaboration forms part of GOSH’s broader vision to position itself as a UK leader in responsible AI-driven healthcare innovation, ensuring that children’s care advances in tandem with technological progress.

GOSH’s AI strategy stands as a beacon of positive progress in the NHS’s broader digital transformation agenda. It recognises the unprecedented opportunities AI presents to enhance patient care, operational excellence, and medical research—all while navigating ethical imperatives and strengthening human expertise. As Mark Coker noted, “We must ensure that care for children and young people is not left behind” as the NHS shifts from analogue to digital. With clear leadership, governance, and a collaborative innovation ecosystem, GOSH is setting a standard for how AI can responsibly revolutionise paediatric healthcare.

Source: [Noah Wire Services](https://www.noahwire.com)

## Bibliography

1. <https://www.digitalhealth.net/2025/09/gosh-will-harness-ai-to-improve-care-for-children-says-cdio/> - Please view link - unable to able to access data
2. <https://www.gosh.nhs.uk/about-us/our-strategy/our-ai-strategy-for-2025-2028/> - Great Ormond Street Hospital (GOSH) has outlined its AI strategy for 2025-2028, aiming to enhance patient care, streamline hospital operations, and support medical research. The strategy focuses on integrating AI into clinical care, operations, and research, with plans to develop real-world AI solutions over the next three years. Key initiatives include using AI for operating room scheduling, predictive models for ICU demand, and providing summaries of care ahead of clinic visits. The strategy also emphasizes the safe and ethical use of AI, aligning with national directives and ensuring that care for children and young people is not left behind.
3. <https://www.gosh.nhs.uk/press-releases/great-ormond-street-hospital-partner-microsoft-transform-healthcare-using-artificial-intelligence/> - In May 2018, Great Ormond Street Hospital (GOSH) announced a partnership with Microsoft to develop artificial intelligence (AI) tools aimed at transforming child health. The collaboration focuses on areas such as machine learning, assisted decision-making, and the use of medical chatbots to provide safer, more effective, and personalized care. The partnership also involves working with academic partner UCL and has led to the creation of a dedicated Digital Research, Informatics and Virtual Environments unit at GOSH to explore and implement these technologies.
4. <https://htn.co.uk/2025/09/15/gosh-ai-strategy-outlines-roadmap-for-ai-implementation-and-priorities-around-enhancing-clinical-decision-making-enhancing-efficiency-and-optimising-non-clinical-workflows> - Great Ormond Street Hospital (GOSH) has released its first AI strategy, highlighting the unprecedented opportunity AI presents for revolutionising healthcare delivery and enhancing clinical outcomes. The strategy outlines a roadmap for AI implementation, focusing on enhancing clinical decision-making, improving efficiency, and optimising non-clinical workflows. GOSH plans to develop real-world AI solutions over the next three years, including using AI for operating room scheduling, predictive models for ICU demand, and providing summaries of care ahead of clinic visits. The strategy also emphasises the safe and ethical use of AI, aligning with national directives and ensuring that care for children and young people is not left behind.
5. <https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/digital-research-informatics-and-virtual-environments-drive-partnership> - The Digital, Research, Informatics and Virtual Environments (DRIVE) partnership is a collaboration between NHS Digital, Great Ormond Street Hospital (GOSH), University College London (UCL), and leading industry experts in technology, AI, and digital innovation. The DRIVE unit, located at GOSH, serves as a technology innovation centre aimed at transforming the use of technology, including AI, in healthcare to improve patient outcomes. It acts as a hub for exploration, allowing technologists to work alongside industry and academic colleagues to develop and implement new technologies in clinical settings.
6. <https://htn.co.uk/2024/11/15/great-ormond-street-hospital-to-expand-trial-of-ambient-ai-to-5000-patients-across-healthcare-settings/> - Great Ormond Street Hospital (GOSH) plans to expand its pilot of ambient AI to 5,000 patients across various healthcare settings in London. The TORTUS assistant automates note-taking during patient appointments using ambient voice technology and generative AI to draft clinical notes and letters. After thorough safety checks and initial testing with clinicians and 100 real patients, GOSH aims to increase face-to-face time during appointments, supporting staff and delivering improved outcomes for patients. The AI tool helps clinicians focus more on patient care by streamlining administrative tasks.
7. <https://www.gosh.nhs.uk/news/gosh-and-roche-uk-partnership-using-ai-to-bring-personalised-healthcare-to-children/> - In May 2023, Great Ormond Street Hospital (GOSH) and Roche UK partnered to harness data by co-developing digital tools aimed at improving care for children and young people with rare and complex diseases. The collaboration focuses on using AI and machine learning to better utilise routinely collected data, enhancing patient care at GOSH and beyond. The partnership does not involve sharing patient data but aims to optimise the development of innovative new treatments for rare and complex diseases, bringing them from research labs to patients more quickly.