

Transforming Through Data

STRATEGY - IMPLEMENTATION - STANDARDS - AI - CYBERSECURITY

European Federation for CANcer IMages – Using Technology to Improve Cancer Care

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Healthcare's Digital Transformation with HIMSS: Challenges, Innovations, and the Road Ahead

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Unlocking the Potential of AI in the NHS: A Path Forward

Leveraging the full potential of AI and technology at the NHS and setting out an action plan that maximises benefits for patient care and staff satisfaction.



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key points

- Harnessing AI to expedite patient access to care and optimise resource allocation can achieve significant improvements in healthcare delivery.
- AI algorithms and data-driven decision support tools to predict patient demand, optimise scheduling, and allocate resources efficiently can reduce waiting times and enhance patient satisfaction.
- Seamless integration of AI into standard processes requires a comprehensive overhaul of existing workflows, ensuring that technology augments rather than disrupts established practices.
- The NHS must fund the time and effort required to achieve this transformation, supporting Trusts in finding the budget to run the necessary change programme.

The recent announcement of increased funding for AI within the NHS by the Chancellor in his 2024 Spring Budget has been met with widespread approval, marking a crucial step in stabilising our healthcare system and ensuring its ongoing status as a global leader in healthcare provision.

However, while the injection of cash is a much-needed catalyst, it represents just the beginning of a transformative journey. To leverage the full potential of AI and technology, the NHS needs to set out an action plan that maximises benefits for patient care and staff satisfaction.

Step 1: Focus on the Right Priorities

While the temptation to implement AI in high-profile clinical processes, such as radiology scan reporting, is understandable, it is like diving into the deep end of the pool without mastering the basics. There are many high impact use cases which directly address systemic challenges - such as waiting list management - and avoid many of the ethical

and clinical concerns of AI becoming part of a clinical decision chain. By harnessing AI to expedite patient access to care and optimise resource allocation, we can achieve significant improvements in healthcare delivery.

The perennial issue of maximising expensive hospital resources, such as operating theatres and radiology scanners, is one area where AI can have significant impact. Our research has shown that CT and MRI scanners in the NHS stand empty 10-20% of the time - despite there being almost half a million people on the waiting list for a scan (NHS Digital 2023). By deploying AI algorithms and data-driven decision support tools to predict patient demand, optimise scheduling, and allocate resources efficiently, hospitals can significantly reduce waiting times and enhance patient satisfaction. Our work with NHS Trusts has shown that the deployment of AI-driven scheduling tools resulted in an increase in patient throughput within imaging departments and through operating theatres within just three months.

AI can also play a pivotal role in augmenting back-office services. At a time when the finances of the NHS are at critical levels, and every Trust and ICS needs to find significant savings in 2024/5, AI could be used to ensure the thousands of contracts run by every hospital are effectively managed. Our work has shown a significant reduction in the time to review a contract using AI contract management support.

Step 2: Cultivate Staff Buy-In

Critical to the success of any AI initiative within the NHS is the cultivation of trust and buy-in from frontline clinicians. Clinicians, who have dedicated their careers to refining their clinical judgment and providing personalised care, understandably approach the integration of AI with caution. Overcoming this scepticism requires a concerted effort to demonstrate the efficacy and reliability of AI-driven solutions through rigorous testing and evidence-based implementation.

Moreover, the pervasive ‘not made here syndrome’ within the NHS presents an additional hurdle, necessitating individual Trusts to actively engage and persuade their clinical communities of the tangible benefits of AI adoption. Building a culture of collaboration and transparency where the clinical community is leading the way will be essential.

One approach to fostering staff buy-in is through deep engagement from the very start in the design of the programme. We have found the use of the ‘Net Promoter Score’, which measures staff enthusiasm for a particular technology, is a strong

driver for engagement. If staff know that technology is supported by their peers, for example, following a pilot programme, they are more likely to want to engage. Another helpful approach where prediction is involved is to present the clinician’s own prediction alongside any AI prediction, allowing the staff to see instantly how the AI compares. Using this method, we were able to show that an AI algorithm was more

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predictive of the day a patient would be ready to leave the hospital than the clinician’s own estimate.

Step 3: Integrate Technology into Standard Processes

The mere deployment of cutting-edge technology is insufficient without a corresponding redesign of

clinical workflows to accommodate and optimise its use. Seamless integration of AI into standard processes requires a comprehensive overhaul of existing workflows, ensuring that technology augments rather than disrupts established practices. Until such redesigns are thought through, implemented, and validated, AI will have next to no impact on patients or staff.

In our experience, the technology side of this change is the easy part. People are naturally resistant to change, and clinical pathways are complex. Taking a user-led approach to process redesign has the dual impact of bringing those impacted – for example, staff, patients and carers - along on the journey while also helping to ensure the change is not just a digitisation of existing processes.

The NHS must fund the time and effort it takes to get this transformation right, supporting Trusts to find the budget to run the necessary change programme. If we do this properly, we will reap the benefits for years to come.

Looking Ahead: A Collaborative Imperative

As we embark on this journey towards AI-driven healthcare transformation, collaboration between the government, NHS leadership, frontline staff, and technology partners will be paramount. Our recent [research](#) has shown that 74% of organisations recognise that AI can make their operations more efficient, and a stunning 84% do not believe they are equipped to make this a reality. While the



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Chancellor's investment in AI represents an important moment, its true impact will be contingent on our ability to navigate the complexities of implementation effectively and provide frontline organisations with the support they need. By focusing on the right priorities,

cultivating staff buy-in, and effectively integrating technology into standard processes, we start to make a rapid and substantial impact on patient outcomes right now.

Conflict of Interest

None.

references

NHS England (2023) Monthly Diagnostics Data 2023-24. Available at <https://www.england.nhs.uk/statistics/statistical-work-areas/diagnostics-waiting-times-and-activity/monthly-diagnostics-waiting-times-and-activity/monthly-diagnostics-data-2023-24/>