

Revolutionising UK Healthcare: Perspectives on Using AI-based Technologies



A workshop hosted jointly by the Academy of Medical Sciences and the Royal Academy of Engineering, and held on 17 March 2023, discussed several actions that could address the main barriers to adopting AI in the UK healthcare system.

DM Schedules is an AI technology currently being piloted, with significant potential to benefit patient health in the UK. The technology helps to identify patients at high risk of missing hospital appointments and providing them with tailored reminders and support. This technology aims to address the issue of missed appointments, which is a significant challenge for the National Health Service (NHS) in the UK.

The workshop collected representatives from academia, industry and the health and social care sector, along with patients and regulators to share their perspectives on the main barriers and solutions to help the UK healthcare system adopt AI.

Several measures can be considered:

Better communication and stronger confidence

Addressing the lack of confidence in the way AI is used in healthcare requires a multi-faceted approach that involves education, communication, and transparency. The lack in confidence stems from a lack of time or incentive, concerns about health data privacy, and/or not enough awareness of the limitations of the current standard of care.

To address the concerns, all those who make, use and benefit from AI technologies should be involved in the development stage.

Improved NHS digital infrastructure

Improving and standardising digital infrastructures in the healthcare system is essential to harness the potential of AI technologies. The digital systems that do exist in NHS trusts and other healthcare bodies are often not compatible with each other.

Digital infrastructure in the healthcare system should be improved and standardised so that systems can communicate to one another.

Ensuring diversity and representation in datasets is crucial to avoid introducing biases and inequalities that could adversely impact certain groups of the population. It also helps build public trust in how health data is used.

Effective AI Regulation

AI-based technologies introduce specific challenges that regulators need to account for, especially when assessing effectiveness and value for money.

One of the key advantages of AI-based technologies is their ability to learn and adapt from the data they process, leading to potential improvements in performance over time.

A technology designed to enhance the accuracy of patient referrals from a GP will also benefit staff time at the specialist clinic where the patients are referred to.

Assessing the true economic value of AI-based technologies, especially when they have multiple positive impacts across different stakeholders, can be complex.

Having a robust system for monitoring, evaluating, and updating AI-based technologies after adoption is crucial for ensuring their continued effectiveness, safety, and compliance with regulations.

Coordination

To fully realise the potential of AI and revolutionise healthcare, a strategic direction at the national level is crucial to encourage coordination across the fragmented healthcare system.

Professor Lionel Tarassenko CBE FREng FMedSci, Professor of Electrical Engineering, University of Oxford, and Co-Chair of the workshop, said,

“AI has the potential to make healthcare more inclusive, if implemented and managed safely and effectively”.

“The workshop highlighted the importance of strategic direction, thorough monitoring and evaluation, and of clear communication when adopting new technologies to increase public confidence about changes that may affect many of us”.

Source: [Royal Academy of Engineering](#).

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