Browne Jacobson

Understanding AI: A guide for healthcare professionals

27 January 2025   👤 Heather McKay and Rahul Chohan

As the Prime Minister recently announced, opening healthcare data to Artificial Intelligence ('AI') is an initiative that will facilitate the creation of new AI models to support the NHS.

Heather McKay, Senior Associate specialising in data protection and Rahul Chohan, a Trainee Solicitor at UK and Ireland law firm Browne Jacobson explore the challenges faced by health and care professionals in understanding AI, demystifying common concerns and providing a foundational understanding and exploring its potential applications within the healthcare sector.

What is artificial intelligence?

AI refers to machines or systems designed to simulate human intelligence performing tasks such as learning, problem-solving and decision making.

Here are some key concepts to look out for when discussing AI.

1. Machine learning

This is a sub-set of AI where computer systems are designed to learn patterns from data. By analysing large amounts of data such as medical images, lab results or patient histories, AI can use machine learning to diagnose conditions or streamline administrative tasks.

2. Algorithms

These are intricate step-by-step instructions that AI will follow when processing data and making decisions. Algorithms are written by humans which means the AI will always be working towards the specific goal defined by its creators. For example, an algorithm might be used to prioritise patient appointments based on urgency and severity of conditions. This will be done by analysing health records and current patient symptoms.

3. AI models

Often mentioned in AI discussions, these refer to AI models or constructs that are created for a specific task, whether detecting abnormalities or diagnosing issues optimising administrative tasks such as staffing needs during busy periods or emergencies to assist in planning the rota.

4. Automation

This refers to the use of technology to perform tasks automatically reducing the need for human interaction, an example of this would be doing scheduling.

AI stands apart from standard or traditional software in its ability to adapt based on the information that the system receives and processes making it an invaluable dynamic resource in the busy and changing environments of the health and care sectors.

It is important to understand these terms, but at its core, AI is a computer system which can perform tasks at a very high and quick level that typically require human intelligence.

Potential benefits and uses of AI in healthcare

1. Healthcare system performance

AI harbours the potential to significantly improve the performance of the healthcare system, supporting a move towards the goal of better patient care and more efficient processes.

2. Improved diagnostics

With faster data analytic capabilities, AI models can offer quicker and more accurate diagnoses as well as at a faster pace.

3. Cost effective processes

Creating cost effective processes by automating routine tasks, AI can reduce the administrative burden of healthcare professionals such as automating repetitive tasks such as billing and scheduling, allowing them more time to focus on patient care as well as making key decisions about a patient. In this context AI is there to support staff in doing the most important jobs and letting an AI model do the admin, which would be especially helpful at busy times.

Potential challenges of using AI in healthcare

1. Engagement

With talk of AI dominating the news, understanding and embracing can feel daunting for many. With technology moving faster and growing more every day it is easy to get lost in all the content available, especially for patients and health care professionals alike struggling to understand AI and its role in society. Recognising some common concerns is an important step in effectively explaining and addressing them, fostering a more informed and comfortable engagement with AI.

2. Loss of trust and rapport

Concerns range from loss of human connection, loss of trust and rapport such as patients concerned that AI will replace personal interactions that they value, especially those with nurses or therapists that they rely on.

3. Data privacy and security

Data privacy and security with users concerned about how their data is collected, and used, especially personal often sensitive medical information that they have shared with a trusted professional.

4. Impersonal or unreliable

Trust in technology with those unfamiliar with AI viewing it as impersonal or unreliable. Furthermore, that mistrust can be heightened by stories of AI "taking over", which could make vulnerable patients feel very anxious, especially when considering algorithmic bias, where AI systems produce unfair outcomes due to biased data or flawed programming. This can increase concerns about the decisions that AI makes. It is important for this to be considered in the new health care plan from the Government.

Explaining AI to patients and/or healthcare users

When discussing AI with patients and other users of the healthcare system, it is important to use clear and relatable language and avoiding technical jargon where possible.

Emphasising partnership, by explaining that AI is still a tool just like all other tools we use in our lives. Its job is not to replace people but to assist people in everyday life. Addressing privacy concerns by reassuring patients that their data is handled securely and in compliance with laws such as the UK's GDPR. Gently explaining to users how AI exists in forms such as streaming service recommendations, or mobile tools. Using examples of helpful real-life uses of AI will show that it is a part of their lives and they may use it and benefit from it greatly already.

Addressing 'doomsday' fears about AI

There is a lot of fear about AI and often shown through media or movies. These fears can feel very real to anybody, but in understanding AI healthcare professionals are able to dispel fears by doing the following:

1. Clarify AI actions

Clarifying that actions undertaken by AI are done following a specific set of rules created by humans. It is as much of a machine as regular work tools in this perspective. It doesn't act independently.

2. Humans control AI systems

Understanding that humans control AI systems. AI systems are designed by people, and safeguards are put in place to ensure AI that affects people will be providing safe information.

3. Differentiating between fiction and reality

Explain that in fiction there is a massive exaggeration of AI and its capabilities, which is unlike the more mundane examples of AI in current use such as using it to sort through emails to hide junk emails that will clog up your mailbox or autocorrecting on your mobile phone.

The role of healthcare professionals in embracing AI

In the coming years healthcare professionals will have a big role in the adoption of AI. It will be important to embrace AI but also understand its powers and limitations.

It is vital that AI is seen as a tool that is there to help rather than obstruct. Using it correctly will free up much time in healthcare professionals' day to day lives to focus on more important tasks.

Management should promote responsible use of AI, and encourage staff to attend any training sessions to further understand AI and how best to use the systems.

Conclusion

AI has the power to truly revolutionise healthcare by enhancing accuracy of diagnosis, personalising treatment plans and making administrative tasks a lighter burden on healthcare professionals.

The full potential of AI will be shown through the opening of health data to AI researchers. This will unlock the option to use data to figure out ways to build AI models which will support healthcare professionals and the NHS generally.

As AI continues to develop and the government continues its plans to integrate both AI and the NHS, there is a lot of potential for success. This will only happen if we understand how AI can be used responsibly and it is used as a tool to accompany human expertise thus keeping patient welfare at the forefront.

Contact

Heather McKay

Senior Associate

heather.mckay@brownejacobson.com

+44 (0)330 045 2232

Rahul Chohan

Trainee Solicitor

rahul.chohan@brownejacobson.com

+44 (0)330 045 1010