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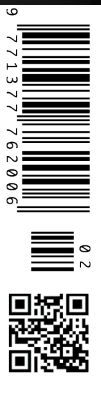
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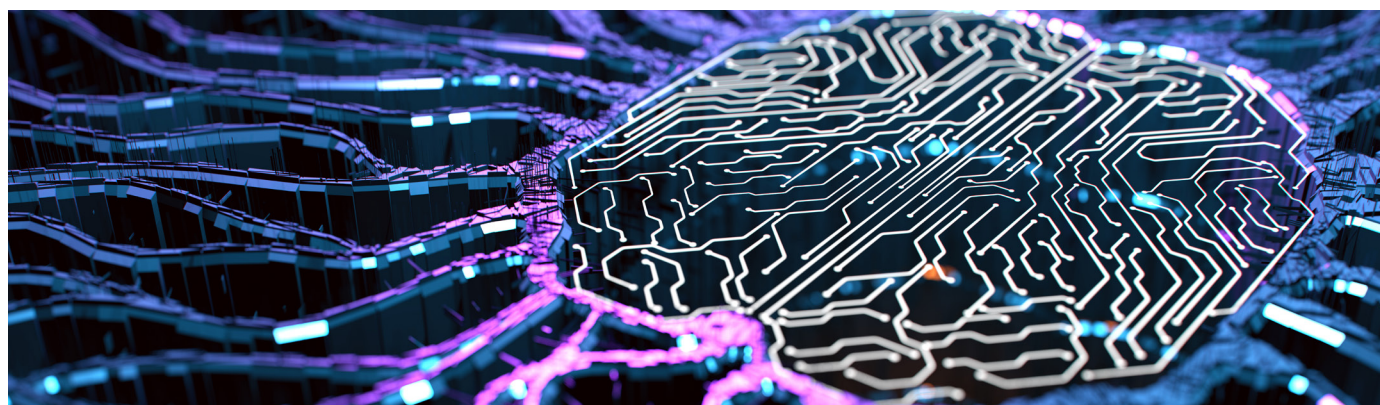
◆ Author: [Sameena Conning](#) | Director of External Affairs | EIT Health | Munich | Germany

Implementing AI technologies in the healthcare setting has been a priority interest for many in the field, from clinicians to investors. EIT Health, being at the forefront of health innovation in Europe and bringing stakeholders together to advance the progress, has focussed on the topic within its Think Tank, aimed at facilitating AI-driven transformation in European healthcare.



Key Points

- AI is already being used in healthcare, but its applications remain limited. Addressing it at systematic level will lead to the realisation of its full potential.
- EIT Health has been working with various partners to explore the possibility of translating AI-driven technology into practice and identified several key barriers and enablers.
- Integrating AI into the clinical settings will change the very nature of work and require new skills and knowledge.
- AI adoption must be supported by strong leadership.
- Financing of AI for healthcare faces many issues including reimbursement challenges and the need to invest in the broader ecosystem.



Artificial intelligence (AI) has the potential to revolutionise healthcare in Europe by augmenting a range of clinical activities and driving productivity and efficiency across almost every facet of care delivery.

Although AI is already being utilised in many healthcare settings, demonstrating its broad applicability, from online symptom checkers to prediction of the risk of hospital admissions, the scale of such solutions remains small. The potential

to fully embrace the real benefits of AI can only be realised when it is embedded at systematic level – across disease areas, clinics, geographies and disciplines. Whilst the rate of adoption at the health system level is increasing, moving to widespread adoption of AI requires the consideration of financial, ethical, regulatory and operational factors, which could all make or break its success both at the European and national level.



In March 2020, a [joint report](#) between EIT Health and McKinsey & Company, 'Transforming healthcare with AI: the impact on the workforce and organisations,' was launched, which aimed to go a step further in the AI debate by helping define the impact of AI on healthcare practitioners, and the implications of introducing and scaling AI for healthcare organisations and healthcare systems across Europe. As the report takes a broad pan-European perspective, the EIT Health Think Tank Roundtable Series set out to explore how the report's findings and recommendations could be translated at the national level with input from subject matter experts.

The Round Table Series meetings took place across the seven EIT Health regional hubs in Europe, and while the final report, consolidating the insights generated from each of the meetings, is yet to be published, we have some immediate perspectives to share. In this early stage of AI evolution, it is hard to predict all the ways in which healthcare delivery will change, but to do so successfully will require new roles in training, remodelling workflows and communication.

Rethinking Education and Skills

The impact of AI on the healthcare workforce through the integration of AI will be much more than jobs lost or gained – the work itself will change. New activities and skills will be brought into the sector, changing healthcare education – shifting the focus away from memorising facts and moving to innovation, entrepreneurship, continuous learning and multi-disciplinary working.

The biggest leap of all will be the need to embed digital and AI skills within healthcare organisations – not only for clinicians to change the nature of consultations, but for all frontline staff to integrate AI into their workflow. Multiple roles will emerge at the intersection of medical and data-science expertise. Yet, traditional medical curricula do not incorporate digital skills into clinical training. This creates a gap in medical education, and such a gap is widened when also considering the existing workforce and ongoing learning needs. The speed of innovation significantly outpaces the speed with which education – training, upskilling and reskilling, can correspond.

To make the most of the opportunities AI offers to improve patient care, healthcare practitioners need to start changing their approach to education, lifelong learning and teamwork, and integrate new categories of professionals, with hybrid 'clinical+data' profiles, or entirely new profiles, such as data scientists. However, it is not yet clear how exactly that should be achieved through human resources.

Leadership and Collaboration

The adoption of AI in clinical settings demands changes in processes, ways of working and crucially, the mindset of healthcare teams. Strong leadership is required to champion AI and create positive associations with the move to digital technologies. But the key question is who should be driving such change in an area that crosses many disciplines. This is the reason why

leadership and interdisciplinary collaboration are closely linked for this topic – we certainly need leadership in order to spearhead, but we equally need collaboration in order to actualise.

Educating existing leadership about the benefits of AI and enabling them to become well-versed in both digital skills and biomedical and data science, will support them to effectively communicate these benefits to their clinical staff. In doing so, these leaders become advocates that will catalyse change. Likewise, we must recognise that clinical staff are already extremely time-pressured, and so leadership must make space (i.e. with formal frameworks) for clinical teams to dedicate to digital innovation. Whilst clinical leadership is key to effectively manage such a transformational change, ensuring end-users understand the context, strengths and limitations of AI upfront, is critical to implementation.

Funding

In the healthcare setting there are some unique financial hurdles to widespread adoption of AI, spanning investment in the development of solutions to the reimbursement frameworks in existence for AI tools.

Part of the difficulty in securing investment in the healthcare sector is demonstrating the full value and possible return on investment. This may partly relate to the black box nature of AI (i.e. being unable to see or fully understand its inner workings), which can make investors uneasy and increase perceived risk. A solution could involve the consolidation of funding to support rapid testing and scaling of AI solutions in critical areas.

Of course, investing in AI for healthcare goes beyond financing the development of AI tools. Funding is also needed to create an ecosystem of innovation in which the advantages of AI can be best exploited. For example, there must be investment in infrastructure that can support the digitisation of healthcare systems, in education and training to enable healthcare professionals to use AI in their practice, as well as in scientific research to test new AI solutions within the clinical setting.

On a more practical level, it can also be challenging to secure reimbursement for an AI solution once the technology has been developed, to enable its deployment. Clear criteria for the potential reimbursement of AI applications will be crucial for its adoption at scale, alongside creative funding models that ensure the benefits are shared across organisations.

A full overview including the recommendations made by national decision makers who have a role to play in developing and implementing AI approaches will be presented in the aforementioned report. In the meantime, however, please visit the [AI hub](#) on the EIT Health website to read more and sign up to our newsletter to receive alerts about when new content is published.

Conflict of Interest

None. ■