ACTIONABLE RECOMMENDATIONS FROM THE
EIT HEALTH THINK TANK ROUND TABLE SERIES

Rethinking education, skills and investment in new roles and talent

A key driver of change needed for the introduction of AI in healthcare noted in the EIT Health and McKinsey & Company report was the need to rethink the provision of education and skills development for the healthcare workforce. Ensuring they are informed and competent concerning AI will enable preparedness for the forthcoming transformation in healthcare.

Round Table participants in all countries were in agreement that opportunities for education about AI and its clinical potential were key, and should be accessible to all those involved in AI implementation in the healthcare sector, including clinicians, other HCPs and healthcare managers.

As a consequence, Round Table participants agreed that AI concepts should form part of the training and ongoing education components of all HCP courses.

This is something that can be driven at a Member State level through universities and other educational institutions.

In order to make room in the already overcrowded curriculum, a shift of priorities has to be supported by legislation and will require updates to certification requirements, which were developed decades before the current digital transformation occurred and put limitations on the addition of extra content, however urgent.

A suggestion from the Round Table in France was to create university Professorships specialising in biostatistics, data science and AI medical solutions, which can help provide these elements as part of overall HCP education.

The Round Table Meetings put forward some good examples of graduate and postgraduate educational courses being implemented. Participants considered that the move to online learning as a result of the COVID-19 pandemic could be an opportunity to encourage flexibility in the curriculum, allowing the adoption of AI, data science and digital health content into professional education to help build knowledge and skills.

Case studies:

Building HCP knowledge and skills in AI

In Ireland, the University of Limerick has developed and implemented an online Masters degree in AI in under a year, sponsored by Skillnet Ireland.

The AGH University of Science and Technology in Krakow, Poland, has implemented a successful one-year postgraduate education programme: 'AI in diagnostics and medical practice'.

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Case study:

Developing interdisciplinary competency

> A good example of a project that focuses on interdisciplinary competencies which includes knowledge of AI and AI-based solutions is Inno X, established at Aarhus University in Denmark. Inno X has an interesting approach to education and research based on a curriculum that creates value for the health sector, for the benefit of patients and society as a whole. It is an ambitious project that strives to make companies better at developing and commercialising products, whilst at the same time preparing HCPs for the integration of needs-driven innovation in their daily lives.

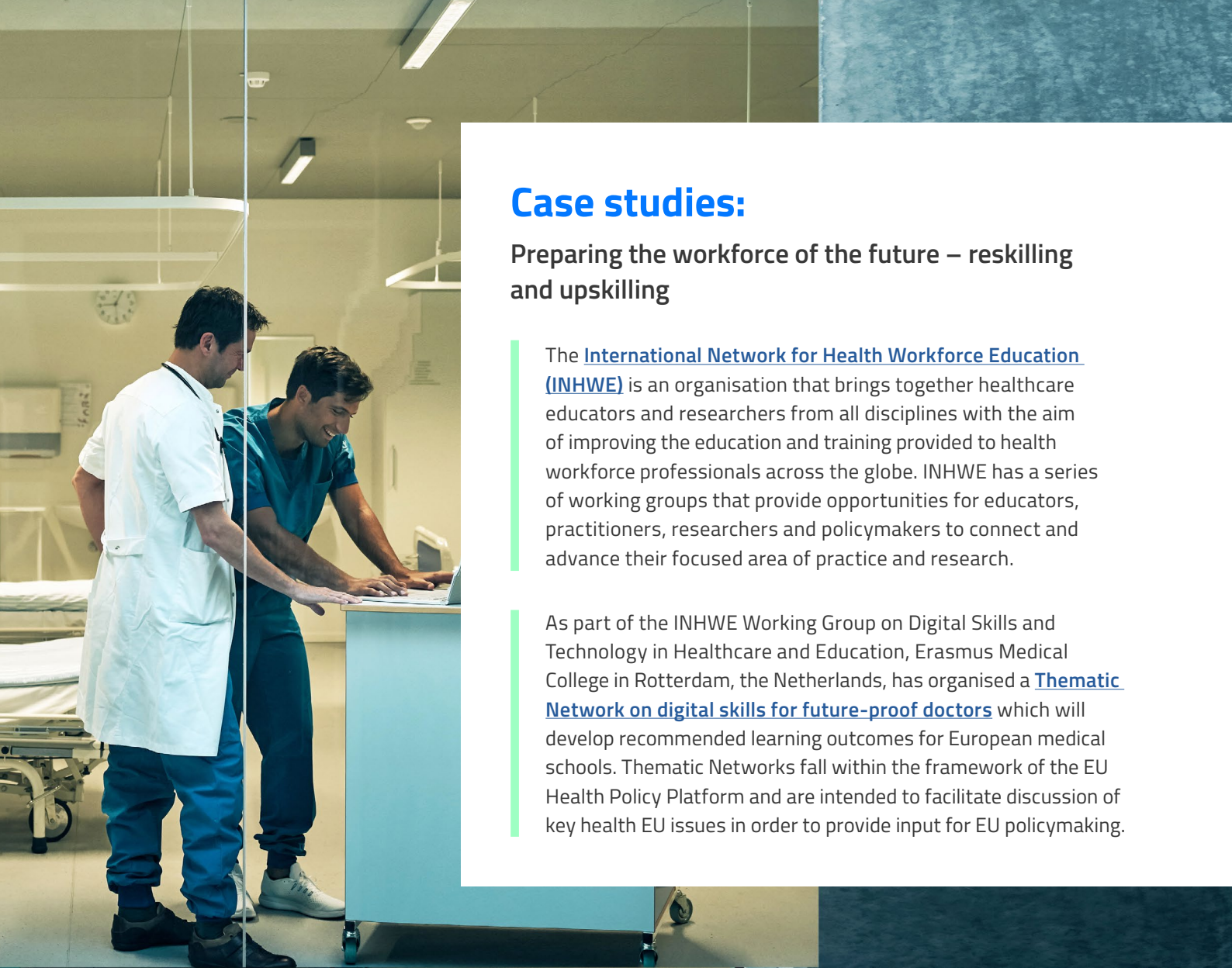
Many doctors of the future will need a fundamental knowledge of mathematical concepts and data science, the basics of AI and machine learning, as well as knowledge of the regulatory and ethical aspects of the implementation of these technologies in healthcare. Similarly, data scientists, data engineers, and innovators in AI will need to understand the clinical context in which their innovations will be deployed in order to be able to develop meaningful solutions. Therefore, developing interdisciplinary competences is a key factor in skills development, so there is a need to create opportunities to achieve this.

The EIT Health and McKinsey & Company report highlighted how implementing AI in healthcare will require new organisational structures that allow cross-professional working and the creation of new roles and job profiles.

The healthcare sector has traditionally been very hierarchical whereas multidisciplinary collaboration and flat organisational structures will be crucial moving forwards in the context of AI.

The Round Table Meeting feedback acknowledged the challenge of this transformation and the need to integrate new digital and AI-related skills into the existing workforce as well as incorporating new, specialised roles into existing structures.

Participants highlighted various initiatives ongoing at a Member State level to help upskill and 'future-proof' the healthcare workforce.



Case studies:

Preparing the workforce of the future – reskilling and upskilling

The International Network for Health Workforce Education (INHWE) is an organisation that brings together healthcare educators and researchers from all disciplines with the aim of improving the education and training provided to health workforce professionals across the globe. INHWE has a series of working groups that provide opportunities for educators, practitioners, researchers and policymakers to connect and advance their focused area of practice and research.

As part of the INHWE Working Group on Digital Skills and Technology in Healthcare and Education, Erasmus Medical College in Rotterdam, the Netherlands, has organised a Thematic Network on digital skills for future-proof doctors which will develop recommended learning outcomes for European medical schools. Thematic Networks fall within the framework of the EU Health Policy Platform and are intended to facilitate discussion of key health EU issues in order to provide input for EU policymaking.

Citizens and patients need to be involved in the development of AI solutions as well as having access to educational initiatives about AI so they clearly understand the societal benefits

Whilst education about AI is needed within healthcare institutions, specific initiatives should also be developed for patients and citizens.

Ultimately, AI tools in healthcare are patient-focused innovations that aim to improve diagnosis, treatment quality and effectiveness.

Therefore, citizens and patients need to be involved in the development of AI solutions as well as having access to educational initiatives about AI so they clearly understand the societal benefits. Not everyone needs to become an AI expert, but awareness of what the technology is, its limitations, and the safeguards needed to protect citizens is important.

Case study:

Creating opportunities for citizens and patients to learn about AI

> Elements of AI is a series of free online courses created by Reaktor and the University of Helsinki, Finland, to encourage a broad target audience to learn about what AI is and what it can do.