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On 21 November 2020, the CPME Board adopted the 'CPME Policy on Digital Competencies for Doctors' (CPME 2020/100 FINAL).

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### CPME Policy on Digital Competencies for Doctors

*The Standing Committee of European Doctors (CPME) represents national medical associations across Europe. We are committed to contributing the medical profession's point of view to EU and European policy-making through pro-active cooperation on a wide range of health and healthcare related issues<sup>1</sup>.*

#### Policy Summary

Digital health technologies are changing the way health and care are delivered, reshaping medical practice and the patient-doctor relationship. Digital health literacy (DHL) of healthcare professionals is a crucial component of efficient and effective transformation of health care.<sup>2</sup> With this policy paper, CPME intends to highlight that doctors should possess strong digital skills framed and adapted to their medical specialty. At present, neither the practicing health professionals nor the generation in training are adequately prepared. To benefit from the opportunities offered by digital solutions, in particular due to educational shortcomings during the COVID-19 pandemic, doctors need to understand how digital solutions will support or augment their capabilities. They need to be involved in the early stages of their development and understand technologies' limitations as to form realistic expectations and reduce misconceptions about their role and usefulness. They need to ensure appropriate professional oversight over clinical validation, while remaining cautious on the overreliance of technology.

#### Introduction

The digital transformation of health and care is one of the major priorities set out in the Commission's Digital Single Market Strategy.<sup>3</sup> The New Skills Agenda for Europe acknowledges the digital skills deficit

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<sup>1</sup> CPME is registered in the Transparency Register with the ID number 9276943405-41. More information about CPME's activities can be found under [www.cpme.eu](http://www.cpme.eu)

<sup>2</sup> According to the World Health Organization, "digital health literacy (or eHealth literacy) is the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem.", in Digital Health Literacy, First Meeting of the WHO GCM/NCD Working Group on Health Literacy for NCDs (2017), <[https://www.who.int/global-coordination-mechanism/working-groups/digital\\_hl.pdf](https://www.who.int/global-coordination-mechanism/working-groups/digital_hl.pdf)>, last accessed on 18 September 2020.

<sup>3</sup> European Commission, [Communication from the Commission on a Digital Single Market Strategy for Europe](#), COM(2015) 192 final, May 2015.



in health care,<sup>4</sup> and this major topic<sup>5</sup> has also been addressed in the Joint Action Supporting the eHealth Network (eHAction).<sup>6</sup> More recently, the thematic network on ‘Digital Skills for future-proof doctors’ under the EU Health Policy Platform, also known as ‘Digital Doc’, to which CPME is a member, is exploring ways to better integrate digital skills in the education and training of doctors.

The lack of preparedness and knowledge on applied digital tools, and tools’ poor design can fail to take account of the actual workflow and time management in a doctor’s practice, and can have an adverse effect to the doctor’s working environment. Indeed, the digitalisation of procedures or the implementation of complex software and advanced medical devices, if not embedded in the doctor’s care pathway, can be deeply unsettling, increase workload, reduce efficiency and, most troubling, result in spending less time with patients.

CPME is committed to contributing to the debate of preparing future and current doctors for the digital healthcare transformation. Appropriately applied, digital health technologies can empower patients and doctors at every stage of healthcare delivery. From health promotion to disease prevention, from integrated health and social care to diminishing geographical barriers to healthcare access.<sup>7</sup> Emerging technologies have the potential to support decision-making and outcome prediction, to guide or semi-guide surgery interventions, to detect and delineate lesions, to enhance the accuracy of diagnosis and increase the safety of health care services. They may support in administrative and bureaucratic tasks, optimising workflows and, consequently, contributing in the long-term to more sustainable health systems.

However, digital technologies must not replace the cornerstone of medicine represented by the direct and unmediated relationship between the patient and doctor. Maintaining patients’ trust and comfort while using innovative digital tools is a key requirement.

### New digital skills for doctors

Academics, healthcare professionals and policymakers should work together to identify the competences (knowledge, skills, attitudes, values and ethics) needed in increasingly digitalised health care settings. These new skills should be reflected in the future curricula of medical faculties, in

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<sup>4</sup>European Commission, [Communication from the Commission on a New Skills Agenda for Europe](#), COM(2016) 381 final, June 2016. Contributing to this acknowledgement was the report of a survey conducted by the European Parliament Committee on Digital Skills for Health Professionals in 2016 which concluded that a large majority of health professionals felt having received no training or insufficient training in digital health technology, <<https://www.healthparliament.eu/wp-content/uploads/2017/09/Digital-skills-for-health-professionals.pdf>>, last accessed on 18 September 2020.

<sup>5</sup> The [eHealth Network Multiannual Work Programme 2018 – 2021](#) identifies as a main priority area ‘Overcoming Implementation Challenges: addressing transversal enabler issues crossing the abovementioned categories’ and therein a topic on e-skills for Professionals.

<sup>6</sup>In eHAction, Work Package 6 included a specific ‘Task 6.3 - e-Skills for Health Professionals’ which looked at how competence frameworks can be used as a common language to describe the knowledge and skills required for a role in an organisation or across a sector.

<sup>7</sup> For example, the responsible and secure use of telemedicine should be designed to reduce patients’ costs and increase comfort of medical care, while enabling a data-driven approach to personalised care.

particular during specialist medical education, and integrated into continuous professional development (CPD) to keep doctors up-to-date with digital innovations.

Current and future doctors should be provided with new possibilities for interdisciplinary education (e.g. engineering, computer science, law, ethics). Developing a multi-professional core curriculum for specialist medical training and CPD would improve design, implementation and application of new technologies in health and care.

Courses should be hands-on, taking place during working time to facilitate implementation, and benefit from new online methods for learning. As they are continuously updated, they should be regularly assessed on their implementation and effectiveness. Their impact should be monitored to ensure they are fit for purpose. Organisational encouragement and financial support for innovation are therefore vital.

Potential resistance to change can be a barrier to technologically-assisted medical progress. Doctors' attitudes, values and ethics as well as motivation and openness to digital solutions have a direct impact on the successful outcome of the digital health transformation. The identification and role of digital leaders in healthcare environments is essential. Digital leaders should be capable of understanding the importance of health data, innovation and technology and have the insight, energy and impetus to drive change. They could map digital competence gaps, assist healthcare professionals with sufficient skills and support, identify risks, as well as become mentors and provide examples for others to follow. An effective culture of innovation and learning in healthcare settings is therefore necessary.

CPME summarises in Table 1 below the necessary digital competencies for current and future doctors.

Table 1 – Digital competencies for doctors

<b>Digital competencies for Doctors</b>		
<b>General digital skills</b>	<b>Technical digital skills</b>	<b>Patient-doctor relationship</b>
Data protection and ICT safety	Telemedicine	Digital communication
Problem-solving with ICT tools and software	Health apps and smart devices	
Legal and ethical considerations of health data and of using digital tools	Artificial intelligence and clinical decision support	Digital collaboration
	Data literacy/analytics and bioinformatics	Promoting digital health literacy
	Virtual and augmented reality	
	Robotics	



### Profile of the future doctor

The future doctor should increase his/her awareness about the capabilities of eHealth solutions, understand his/her limitations, remaining cautious on the overreliance of technology. He/she should understand the terminology and definitions in the context of eHealth, developing new communication skills with patients and other healthcare professionals. He/she should be conscious of the digital literacy of their patients, recognising a role in empowering patients to better manage their own health through digital tools. He/she should be aware of the ethical, legal and safety implications of using digital tools in medical practice and adhere to the same professional standards as they would apply in other professional settings. He/she should perceive that the effectiveness of digital transformation of medicine depends on their approach to digital health technologies.

### Recommendations

The digital transformation of medicine is a dynamic, long-lasting process of change and innovation that will modify structures, processes and cultures of healthcare systems. It will significantly alter roles, competencies and cooperation of doctors with other healthcare professionals. Proper training and sufficient guidance, interoperability and respecting as much as possible current working processes are key for success.

CPME believes that:

- Doctors should be involved in the development of eHealth tools to ensure that these tools can be handled intuitively and are user-friendly, providing an actual support for doctors and patients in day-to-day healthcare scenarios;
- Independent bodies should evaluate the actual usefulness of eHealth tools and the effectiveness of their implementation in medical practice;
- The existence of an effective culture of learning and organisational encouragement are indispensable for doctors' commitment to acquiring new digital skills;
- Medical education and CPD should reflect the changing roles of doctors and the new skills they require. These skills include data analytics in healthcare, genomics and bioinformatics, AI in health, telemedicine, smart health devices and mHealth, training with digital health technologies, such as virtual reality (VR) and augmented reality (AR), ethical considerations, communication skills with patients, relatives and healthcare team, and legal implications of digital health tools;
- Digital skills education programmes should be systematically monitored and assessed for their effectiveness;
- Interdisciplinary and interprofessional collaboration should be taken into account, in particular when developing a core curriculum for digital competences for specialist medical training and CPD;
- Digital leaders should be identified in healthcare settings and become mentors, providing examples for others to follow.



CPME calls on Members States to:

- Assume the financial responsibility for the digital health transformation;
- Promote investment in eHealth solutions that improve patient safety, quality of care and efficiency; and,
- Invest in programmes to enhance digital health literacy skills for patients.

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