



DIGITAL SKILLS FOR HEALTH PROFESSIONALS

**COMMITTEE ON DIGITAL SKILLS FOR
HEALTH PROFESSIONALS**
EUROPEAN HEALTH PARLIAMENT 2016



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HEALTH PARLIAMENT**




EXECUTIVE SUMMARY

Digital technology, including mHealth and eHealth, is an inevitable part of the future of European healthcare. But are health professionals prepared? **The Digital Skills for Health Professionals Committee of the European Health Parliament surveyed over 200 health professionals about their experience with digital health solutions, and a large majority reported to have received no training, or insufficient training, in digital health technology.**


To equip health professionals for the digital health future, our committee recommends that greater emphasis is placed on the needs and abilities of the end-users, the health professionals. This should be done through better incentives and improved training:

1. Widening digital literacy in healthcare depends on sufficient demand for digital healthcare. This can be achieved through reimbursement schemes that encourage the use of digital solutions in healthcare.
2. Continuous education of health professionals in the knowledge, use and application of digital health technology should be central to the European agenda for digitizing healthcare. We recommend that the European Union and Member States take the following actions:
 - a. **Establish mandatory tailored training programs on digital skills for health professionals** from early education to professional development programs.
 - b. **Launch a joint action on digital skills for health professionals** to agree among the Commission and Member States on the key issues and determine a common approach
 - c. **Update clinical guidelines to include mHealth and eHealth solutions** that enable healthcare professionals to deliver mHealth and eHealth solutions to their patients.
 - d. **Make healthcare professionals co-developers of mHealth and eHealth solutions**

We consider digital literacy among health professionals paramount for the successful, effective and ethical implementation of digital solutions in healthcare.



INTRODUCTION



You can have the most technologically advanced device in the world, but if you don't know how to operate it, it will be as useful as jumbo-jet without a pilot.

The digitization of healthcare has long been on the European agenda to modernize and improve healthcare across Member States. The focus has recently shifted from developing the technology to implementation of digital healthcare and eHealth. To explore the results of this shift, the Digital Skills for Health Professionals Committee of the European Health Parliament sur-

veyed over 200 health professionals. It discovered that no change has yet resulted in the education of health professionals to prepare them for this implementation. The EU risks spending time and resources on implementation strategies that will have little effect because attention to the front-line ability to adopt this change has been insufficient.



DIGITAL HEALTHCARE

People are increasingly demanding better quality healthcare. Patients want to be more autonomous and empowered to manage their own health. Digital solutions could provide the necessary tools to help make this possible. However, to benefit from these digital solutions and services, people need to understand them and how to use them. Health professionals also have a role to play in assisting the patient and explaining the use of digital solutions. The digital skills that health professionals will need consequently extend beyond understanding how digital services work, and include the ability to instruct patients in their use.

Patients are also becoming increasingly mobile, sometimes traveling across Europe in search of better and faster healthcare. This resulting increase in cross-border healthcare will oblige health professionals to increasingly rely on health data from other EU countries, interpreting the data to determine how to best treat

the patient. This glimpse of the further digitization of health systems across Europe explains why much of the discussion at European level is focused on interoperability and standardization that will facilitate the exchange of information.

However, **what is consistently lacking is the inclusion of end-users in the development of eHealth, despite the obvious need for** the end-user to be able to use the service. The obvious answer is to allow the users - who best know their needs - to be part of the service development, so making it more fit-for-purpose and user-friendly.



THE STATE OF DIGITAL SKILLS IN THE HEALTH PROFESSIONS

There is a special need for digital skills across all the health professions due to the growing demands of a rapidly aging population¹. Shortages of practitioner skills in information and communication technologies (ICT) have been endemic across many sectors, because the rapid pace of technological innovation and ICT activity has been exacerbated by low availability of employees and entrepreneurs with relevant educational qualifications. In the healthcare sectors, this has particularly slowed the uptake of the internet.

The need for digital skills for health professionals is acknowledged at EU level, and several initiatives take it into account. The Commission's eHealth Action Plan 2012-2020 (eHAP)² provides a roadmap to empower patients and health workers, and includes actions to promote skills and digital literacy. The Commission also supports the CAMEI-project³, which aims to increase IT skills in the curricula of healthcare workers by developing and renewing educational materials and programs of the healthcare workforce in the EU and the USA.

The Joint Action Health Workforce Planning and Forecasting⁴, coordinated by Belgium and funded by the third EU Health Programme, brings together expertise from across Europe in an analysis of the health sector designed to define the skills needed in education and training policies. This notes that digital skills are an important future skill for healthcare workers.

Recently, the European Commission (DG CONNECT in collaboration with DG SANTE) and the United States Department of Health and Human Services (HHS) joined forces for a public consultation⁵ on a roadmap to guide cooperation on eHealth/Health IT. **The Digital Skills for Health Professionals Committee** supported this initiative and contributed to the public consultation with the following suggestions:

All health professionals should be familiar with available e-Health and mHealth solutions, and know how to use them in an effective, responsible, and ethical way, with the interests of the patient at the centre:

- **Health professionals** including physicians, nurses, dentists, pharmacists and midwives should possess skills and aptitude for communication, data analysis, computer literacy, medical devices compatibility, data protection programs, mobile applications, cloud storage, surfing internet, and the ability to read, understand and forward information using a smart device.
- **Health informatics professionals** should acquire skills in information security, interoperability, analysing data, design and implementation of tools to measure data, software development, data-driven solutions development, 3D Image processing, project management and communication.
- **Non-clinical and administrative staff** should possess skills in project management, communications, computer literacy, information security, and the use of clinical software.
- **IT professionals working in the healthcare environment** should possess skills in data privacy, information security, ethics, software engineering and database development.

1 OECD Labour Force Statistics 2015: <http://www.data.oecd.org/pop/elderly-population.htm>

2 eHealth Action Plan 2012-2020: Innovative healthcare for the 21st century: <https://ec.europa.eu/digital-single-market/en/news/ehealth-action-plan-2012-2020-innovative-healthcare-21st-century>

3 CAMEI EU project: <http://www.camei-project.eu/>

4 EU Joint Action on Health Workforce: <http://healthworkforce.eu/>

5 Public stakeholder consultation on next phase of EU-US cooperation in eHealth/Health IT: <https://ec.europa.eu/digital-single-market/en/news/public-stakeholder-consultation-next-phase-eu-us-cooperation-ehealthhealth-it>



Despite the many initiatives underway to improve digital literacy among healthcare professionals and drive the implementation of digital healthcare solutions, our committee has identified some important gaps and shortcomings:

- The need for digital skills is widely acknowledged, but there is limited reference to the health professions. Most current national medical guidelines do not include digital skills, and the Commission and Member States did not propose to help medical societies to update these guidelines. Guidance on digital skills for health professionals is included in only one project, Ens4Care⁶, which produced five guidelines for European nurses and social workers on using eHealth – in promoting healthy lifestyles and prevention, in clinical practice, in skills development for advanced roles, in integrated care, and in nurse ePrescribing.
- Existing health professional curricula are inadequate. There is a need to strengthen the educational curricula of health professionals (Directive 2013/55/EU1) and use continuous professional development (CPD) programs to provide them with useful digital skills training.

- eHealth solutions do not always reflect the existing healthcare pathways, nor the needs of patients and health professionals.
- The patients and health professionals who are the end-users of eHealth are not involved in the development of these solutions.
- Member States differ in their readiness to implement eHealth solutions in their health systems, as well as in the structure of their training curricula for health professionals.

To get a better picture of the current state of digital health technology in healthcare, our committee launched an eSurvey (part 3).

⁶ eHealth guidelines for nurses and social workers:
<https://ec.europa.eu/digital-single-market/en/news/new-ehealth-guidelines-nurses-and-social-workers>



eSURVEY ON THE STATE OF DIGITAL SKILLS IN THE HEALTH PROFESSIONS

AIM

eHealth and mHealth, ranging from electronic patient records to patient-reported outcomes in mobile apps, are increasingly used in healthcare. However, **are health professionals trained for this paradigm shift?** Based on the observed lack of involvement of the end-users in ongoing EU initiatives and implementation plans, our committee, in collaboration with the University of Antwerp, initiated an eSurvey among physicians, nurses, midwives, dentists, health assistants, technicians, students and all others involved in European healthcare delivery. Our goal was to identify their experience with digital health and in digital health education.

OUTREACH

The eSurvey was launched on April 4 2016 to European health students and professional organizations in Member States and the public domain through social media touch points such as Twitter, Facebook, LinkedIn, Google+ and blogs displayed as a link or QR code as shown in Figure 1. The survey closed on May 1 2016.

RESULTS

Total participation was **207** health professionals of distinct backgrounds and age categories, living in **21** Member States (**Figure 1**). Most reported using some digital skills in their practice more than once a week, and basic IT skills and electronic patient records were used daily by more than 50% of the participants (**Figure 2**).

FIGURE 1: OCCUPATION (LEFT) AND GEOGRAPHICAL (RIGHT) DISTRIBUTION OF THE PARTICIPANTS

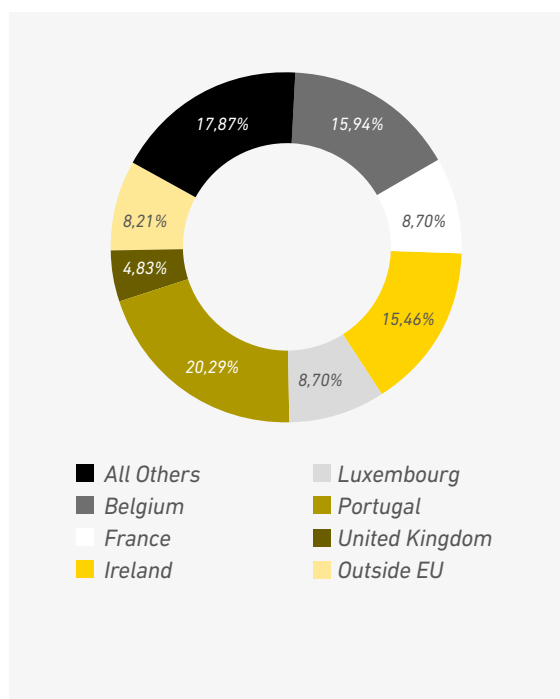
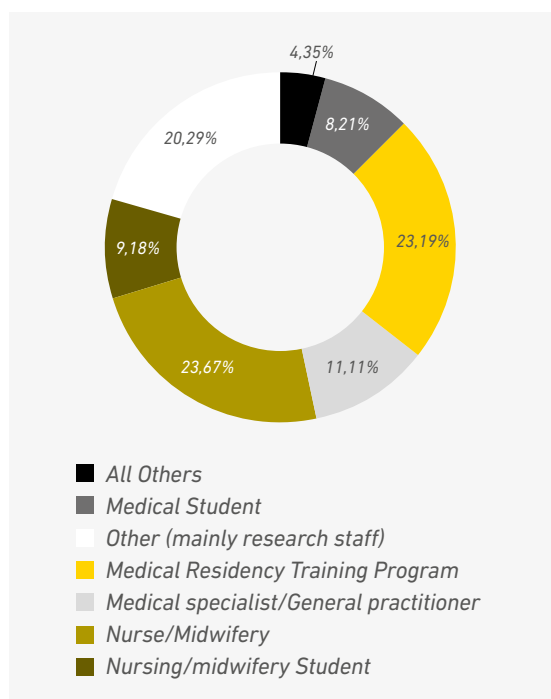
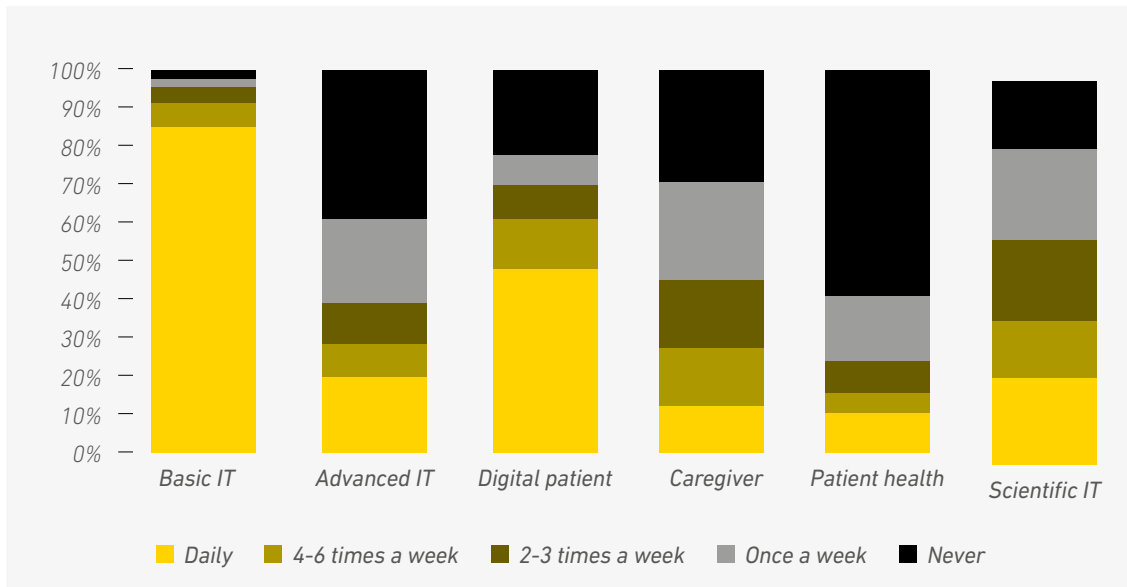


FIGURE 2: USE OF DIGITAL SKILLS IN CURRENT PRACTICE



A large majority (**79%**), irrespective of their occupation or digital competence, said that eHealth/mHealth has, or will have, a significant impact on their career. There was a significant consensus on positive benefit for patients and professionals: 'more time with patient, less time with 'paper-work'; 'this would really help women in their daily lives and contribute to their care;' 'optimizing medical care;' 'increased efficiency;' 'simplify my daily work;'; 'I expect to find information much faster, more detailed and improve communication with other caregivers'. The digital skills most highly rated as useful were basic IT skills, digital patient records and health apps; both patient and caregiver-oriented (**Figure 3**).

However, in response to questioning on whether any digital skills training had been received, the majority (**61%**) replied "no". Additionally, of the participants that received digital skills training, **54%** rated it as insufficient. **More than 80% of participants indicated that the currently available eHealth/mHealth training is inadequate.** This need is reflected across the entire educational spectrum, ranging from pre-university to workplace learning (**Figure 4**).

When asked about suggestions for digital skills training, health professionals favoured tailored training modules, ranging from general basic training to more advanced subjects, with ongoing training as the digital world evolves: 'Specific enough so that healthcare professionals could implement it directly, but general enough so that it could be used over several e-health and m-health tools'.

Education through training is seen as the way forward: 'Start early in education;' 'Basic training needs to be taught at schools;' 'Make it compulsory at schools and then refresher courses provided for each stage of education and then refresher courses provided for each stage of education and clinical practice'. Training - whether on-line or face-to-face - was welcomed by the survey participants.

CONCLUSION (eSURVEY)

Our survey demonstrates that eHealth and mHealth in various forms are already in use in daily practice. However, the uptake of eHealth and mHealth apps could be increased, as the health professionals themselves believe that it could benefit their profession and, ultimately, the patient. **Despite this current use and great promise, a vast majority of health professionals feel insufficiently trained to deal with the digital revolution.** Health professionals ask for education from early on, but believe that training should continue all through their careers. This training should be practical and hands-on, leading to direct patient benefit.

FIGURE 3: RELEVANCE OF DIGITAL SKILLS FOR CURRENT AND FUTURE PRACTICE

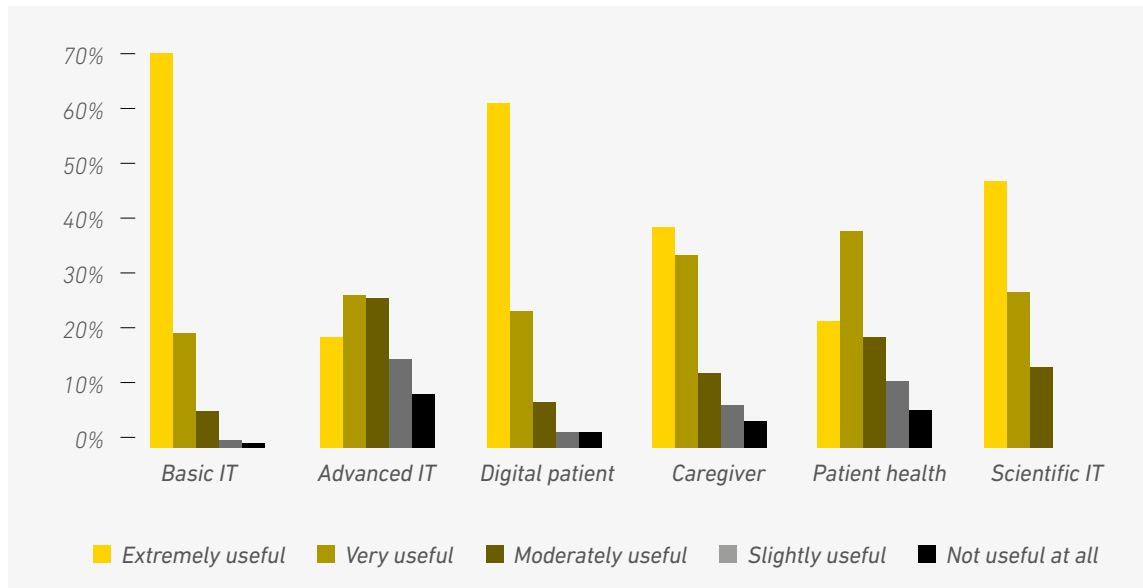
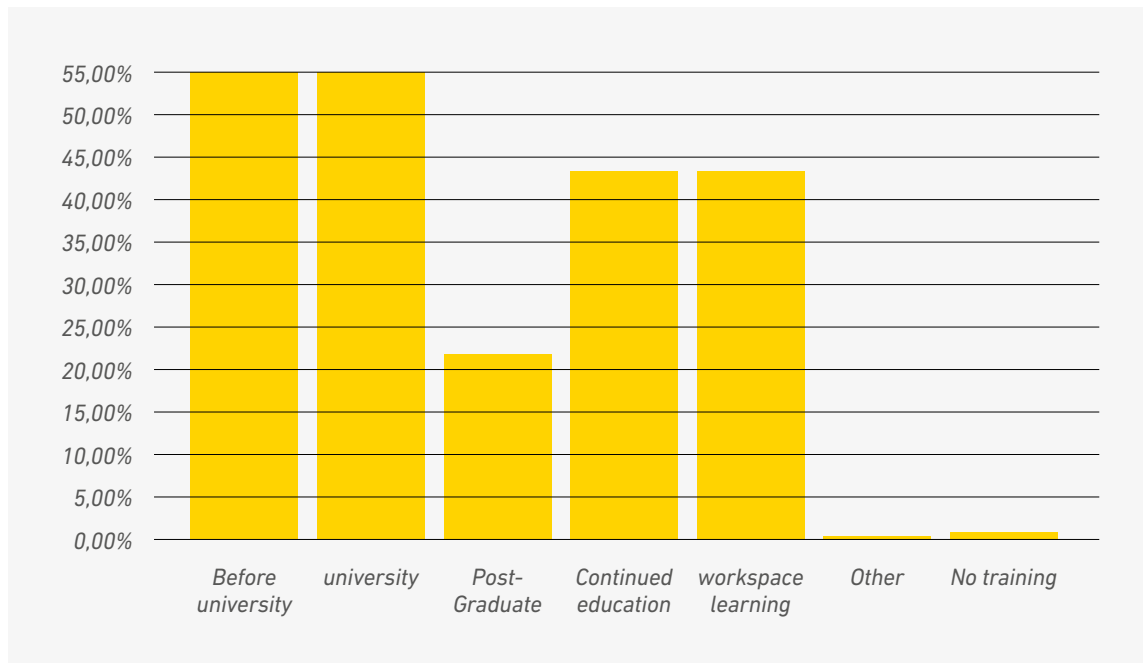


FIGURE 4: PREFERRED EDUCATIONAL LEVEL FOR DIGITAL SKILLS TRAINING





OUR RECOMMENDATIONS

Based on the conclusion of our eSurvey, and the observed shortcomings of ongoing EU initiatives, our committee has developed the following recommendations:

1. GENERATING DEMAND FOR DIGITAL HEALTHCARE

Widening digital literacy in healthcare depends on sufficient demand for digital healthcare. Statistics suggest increasing uptake of digital tools in healthcare; however the picture varies across the EU. Moreover, even in countries where digital healthcare is spreading rapidly, much of the population is not included simply because they are unfamiliar with digital technologies.

The EU and Member States should create a basis for improving demand for “digital healthcare goods”. A solution might be more advantageous reimbursement schemes for the use of digital tools for medical treatment, especially in the monitoring and treatment of chronic disease.

At European level, the European Commission should provide a platform for better cooperation between healthcare systems to promote the exchange of information and best practices. A European label based on a set of minimum standards could also strengthen trust amongst health professionals and patients, and increase uptake of digital technology in the European health sector.

2. RAISING AWARENESS OF THE USE OF DIGITAL TOOLS AMONGST HEALTHCARE PROFESSIONALS

Continuous education of health professionals in the knowledge, use and application of digital health technology should be central to the European agenda to digitize healthcare. Otherwise, ongoing initiatives may prove ineffective, as the successful implementation of digital technology in healthcare is entirely dependent on the ability of the end-users (and notably the health professionals) to adopt the technology. This can be achieved through coordinated initiatives:

a. Mandatory tailored training programs on digital skills for health professionals should be established in Europe. These programs should aim to train health professionals according to their occupation, their needs for digital skills, their frequency of using digital technology, their competence in digital skills etc. The training programs should be continuous, starting from an early stage of education, and continue in work place learning and professional development programs. Additionally, the EU should define program content by determining the digital skills every health professional must possess to use eHealth/mHealth solutions to their full potential

b. The European Commission and Member States should launch a joint action to agree on the key issues related to digital skills **for healthcare professionals**. This could promote a single approach, centralizing all existing national initiatives, in close collaboration with medical societies and professional organizations. To respect national differences and speed of adoption, an “option-in” with reimbursement benefits could be applied, where Member States adhering to European recommendations would benefit from the support and experience from the EU. As Member States start recognizing the benefits of these recommendations, the penetration of digital skills solutions in the health sector will increase.

c. Update clinical guidelines to include mHealth and eHealth, so that healthcare professionals are able to deliver mHealth and eHealth solutions to their patients. This would require close partnership with the associations that produce yearly guidelines, which could accelerate adoption of digital skills solutions in Member States.

d. Make healthcare professionals co-developers of mHealth and eHealth solutions by placing them at the centre of the development process. The role of end-users, the health professionals, is essential in accelerating the adoption of digital solutions. End-users are aware of the challenges facing them, and are well-placed to contribute to solutions tailored to real needs.



CONCLUSION

21st century challenges require 21st century solutions. Health professionals are the gatekeepers of healthcare. They determine how healthcare is delivered to patients. The potential benefits of digital skills in the health sector, including improved efficiency, effectiveness, disease prevention, and patient empowerment, are well established. As stated by one of the participants in our e-survey, 'eHealth and mHealth will empower the patients and change the working environment'. However, a responsible health professional will utilize and recommend treatment solutions to their patients only if they understand and trust them. The Digital Skills for Health Professionals Committee of the European Health Parliament recommends greater emphasis on the perspectives and readiness of healthcare professionals in the transition to a digital healthcare future, as a part of our common goal to create a more efficient and better healthcare system for all.



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DISCLAIMER

The views and opinion expressed in this article reflect the perspective of the European Health Parliament Committees collectively. It does not reflect the views of the individual EHP members, nor the views of their respective employers or partner organizations supporting the project.

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