

Modern Healthcare, the Medical Profession and Big Data

We know that the digital revolution is here to stay in the healthcare sector, as it is the case for all other areas of modern life. In recent years, we have witnessed a real explosion in the development of electronic platforms that offer remote healthcare services. These modalities are also gradually improving and reflect the really dizzying evolution of technological developments. Currently, there are some 350,000 healthcare applications on the market worldwide (90,000 of them added only in 2020) and they grow rapidly — although they are not always of adequate quality that poses a risk for potential users and can make them eventually obsolete.

For many years, experts have warned that Big Data had become an integral part of other sectors and that it was not a fashion. It was just a matter of time before Big Data and their multiple practical applications would be transferred to and be part of the world of medicine and healthcare.

As a sign that the medical profession cannot remain oblivious to this paradigm shift, digital transformation is one of the axes of the Collegial Medical Organisation's 2020-2024 strategic plan. Our goal is to respond to the needs of our colleagues in all areas that affect professional practice and daily life in health centers, which means that we prepare to adapt our professional practice to the needs of the digital era.

We have become fully aware of this need in the pandemic, which forced us to accelerate the process of digitalization and digital transformation. This was so that we will be able to care for patients by establishing new care environments and applying new modalities to create more sustainable healthcare services, which were fit for purpose for dealing with new challenges in health provision in the context of a major crisis like the pandemic.

This adaptive process to the new reality requires the active participation of the medical profession, based on some essential principles: a) digital tools should be facilitators and not masters of our professional practice; b) training in the use of those digital modalities is complex and requires time and preparation so that doctors and other healthcare professional can evolve into efficient and safe users; c) the use of advanced digital technologies have enormous potential benefits for society and professionals but harbors really great risks that must be acknowledged and mitigated .

In that regard, , we would like to emphasise that we always need to comply with the essential values of our profession and, above all, we have to be able to guarantee excellence in medical

practice and the safety of our patients and the management of their data, in any digital environment and through any platform, complying with our Code of Ethics.

This is a massive task but we are not alone. Big Data applied to healthcare is a crucial issue for all the nations of the European Union. The European Health Data Area proposed by the European Commission would be a key element in giving citizens control over their health data and facilitating their use towards better healthcare; ensuring semantic, legal and technical interoperability and security in the flow of data throughout the European Union; and providing us with a solid, safe and quality framework for — also — the research and development of health policies and regulation.

The proposal for this European Health Data Area is an opportunity for patients, who will be able to monitor their health data and make it available to professionals readily and efficiently regardless of the time and place of healthcare provision. It will also be an opportunity to promote the protection of health and research, always under proper regulation and rapid implementation despite the different speeds of digitalization with which each member state of the European Union progresses; the digital skills of each healthcare professional; and the different attitudes of each society for the use and exchange of health data.

The possession and processing of masses of information implies that more data will be available and therefore require risk management and protection against possible uses or misuses in favor of interests outside the healthcare sector. The medical profession must remain vigilant and safeguard appropriate and ethically sound use of the data.

Big Data will change healthcare care and the doctor-patient relationship. It is possible that in the not so distant future, the patient arrives at the consultation with a device that includes a database coordinated in real time with the information regarding their medical history, tests, genomes, etc. All this, connected to a computer that will generate answers about their best diagnostic and therapeutic options. Big Data can change the healthcare model and it is key to ensure compliance with ethical requirements regarding the use of data in health, such as the duty to obtain patient consent or involve ethics committees that can robustly and holistically appraise complex and challenging scenarios.

Furthermore, it is essential that Big Data do not lead us to unequal access to health care and that no patient feels obliged to share health data due to financial pressure or incentives or because, by sharing their data, they will have priority in receiving medical treatment. There should be no discriminatory treatment of patients who are unwilling to share health data.

The digitalization of societies altogether, imposes a change of paradigm in healthcare as well, to which we must adapt at a national and European level. The beast of Big Data is here to stay

and, with the right preparation and safeguards, can be a precious ally in our objective of improving healthcare services, the safety of medical professional practice, and the quality of care we provide to our patients which is the ultimate aspiration of our vocation.