

A Medicina Torna-se Digital, ou Já o É?

Medicine Goes Digital or Is it Already?

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As far as 2009, a time lapse which in terms of computing its of geological significance, the prestigious *The Economist* issued an Especial Edition entitled Medicine goes Digital. Fifteen years ago, the special report stated that “The convergence of biology and engineering is turning health care into an information industry”. They went further on saying “The coming convergence of biology and engineering will be led by information technologies, which in medicine means the digitization of medical records and the establishment of an intelligent network for sharing those records”.¹

It’s an incredible journey, which probably is one of the most transforming revolutions in the history of humanity. The theories in Turing’s seminal paper, “On Computable Numbers, with an Application to the Entscheidungsproblem,” supported his invention of the universal Turing Machine, an abstract computing machine that provoked the creation of digital computers.² It’s impossible to trace one sole responsible for the digital revolution, but Turing has for sure the same legitimacy as Gutenberg had five centuries ago on starting a big change.

Currently prestigious Medical Journals as *New England* or *JAMA* have already editions specialized in Digital Medicine.

We ourselves, at *Revista Medicina Interna*, also had our Digital transition, even though we took yet small steps. So, in this special issue we will not cover all the potential of the digitalization of medicine. However, we hope that it provokes reflection in you, on a topic that is not a projection of what the future will be, but that is already common and needs to be thought of as a de facto reality. We address it from the ethical implications, and as our Associate Editor, Professor Nadine Santos, says, “it becomes imperative to critically examine the concept of digital exceptionalism”.³ We count on the contribution of the Center for Digital Medicine P5, (Braga, Portugal) and Liliana Amorim *et al* describe us a pilot project which is already being done in Portugal in Digital Medicine.⁴ Juliana Sá and Henrique Martins expand and contextualize the potential of Digital Medicine in Internal Medicine (which applies as follows to Health Systems in general).⁵ Michael Blaivas, neither more nor less, one of the greatest international experts in ultrasound imaging and artificial intelligence (AI) applied to ultrasound, offers us a fascinating new world that really changes the way we see medicine.⁶ And patients, thanks to the digitalization of information, know more about the diseases they unfortunately suffer from, and there is no better example

than the experience on diabetes *mellitus* where R. Nortadas *et al* show us how patients “become much more capable themselves and self-sufficient to manage their own condition” with the help of Digital Medicine.⁷ We also have an article that shows that many health problems already require “Call an engineer!”, and L. F. Coelho from the INESC TEC (Instituto de Sistemas e Computadores and ISEP / P.Porto – Instituto Superior de Engenharia do Porto / Instituto Politécnico do Porto, Porto, Portugal) shows his research into “Speech as an Emotional Load Biomarker in Clinical Applications”.⁸

We have so much to learn in this special issue beyond Medicine itself, that to read the article of our Technical Editor, Helena Donato, is to highlight what we humans should do about good practices in publishing medical research, and to “talk about the use of AI in publishing, we have to distinguish between generative AI and discriminative AI”. And also that the “creation of text and images from little input information, which can lead to the creation of fake and deceptive content, and that can be dangerous”.⁹ Really good stuff for thought.

Therefore, digitalization should not replace us as human beings, and every day, we are reminded of how easily humanity could be lost, how digits can destroy meanings that transcend people’s computation.

The search for knowledge should not be confused with technology, nor should we neglect that there are ethical limits to the progress in knowledge acquired through the use of technology. ■

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