

Editorial

Pelayo Vilar-Puig

Corresponding author: School of Medicine, Universidad Nacional Autónoma de México, Ciudad de México, México. E-mail: vilar@unam.mx

The Impact of Technology on the Medicine of the 21st Century. Does It Alter Medical Professionalism?

El impacto de la tecnología en la Medicina del siglo XXI. ¿Altera el profesionalismo del médico?

Since the end of the 20th century up to now, technology has had many important accomplishments in its implementation for diagnosis and treatment of diverse illnesses. Thirteen years ago I published an article on a journal¹ based on the available information at that time, analyzing how in a few decades ahead health care would suffer important changes with the advancement of digital information systems, telecommunication, tele-surgery, telemedicine, genetics, epigenetics, molecular biology and immunology.

I wondered back then how medicine would be like in the next 50 years; I found different points of view, Professor Richard Kitney, from Imperial College London², predicted that future investigations that would link engineering, robotic technology, informatics and medicine, would achieve unsuspected attainments on diagnostics field and treatment of disease in a near future. I also found divergent opinions with those voices who affirmed that medicine of the 20th century had been disappointing. The World Health Organization² considered that advances in technology had only made a modest impact and concluded that the improvements in health were more likely linked to sanitary services (sewers and clean drinking water), nutrition, housing and refrigeration systems.

For whichever reason, we should not ignore that the doctor before the patient and his or her disease cannot be circumscribed to the diagnosis and treatment. Our vision must be widened to consider population health and preventive medicine, where technology can be a very useful and unique tool in a certain way.

Today, the medical practice rests on the relationship between the doctor, the patient and the family in crisis. This is due to the agents who plan the health care delivery and decide directly and indirectly the role of medicine (the state, insurance companies, pharmaceuticals and equipment industry, and medical supplies). Considering the latter, which is the role of the physician in the society today? Without any doubt, professionalism is an indeclinable topic. The patient continues to find in physicians something else that technology, regulation or law cannot offer; that said, what is the meaning of professionalism? Many definitions have been proposed but I can summarize it as the medical actions and attitudes, conducted at the right moment, for the right reasons, to a specific person, and in the correct way. In addition, several elements must be present, such as: compassion and empathy; responsibility and sense of duty; respect for the right of timely and veracious information; team work; respect for patients' values and integrity; unrestricted will to learn, and integrity and adherence to the best ethical principles.

Recently it was published a note by Richard Horton on The Lancet Journal³ about a book by Mambisa Moyo (Edge of Chaos, 2018) questioning the degree of commitment of health care staff in the society we live in today. From this question, concludes that democracies will collapse if we stop caring for public health-care attention. In conclusion, there's no alternative that can substitute the physician as a figure who cares, listens, perceives, analyze and understand human emotions and diseases. Luckily, sick patients will continue to look for a figure that is capable to fill individual's emotional needs.

It is evident that technology will not resolve the profound human elements we just described. Nevertheless, it is true that new technologies might help reaching remote areas and most needed populations for better access to healthcare; however, this technology needs to be economically affordable and universally accessible to all.

Despite the fast and enormous medical and technological advancement, if governments and the society do not fully address social and economic disparities with a high degree of responsibility and ethics, in order to improve access to healthcare, technology will be useless to alleviate or cure diseases.

REFERENCES

1. Vilar-Puig P. Tecnología y Medicina. *Este País. Tendencias y Opiniones*. 2005; 173.
2. Wayke A. A Whirlwind Tour. In: Wayke A, editor. *21st Century Miracle Medicine*. Plenum Trade, Nueva York; 1997: 1-20.
3. Horton R. Offline: "The world has been warned". *Lancet*. 2018; 391 (10135): 2092.