

## A NEW CONCEPT IN HEALTH CARE E-HEALTH

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*Abstract: One of the most recent concepts in health care is a rather controversial one, i.e. e-health. In most recent years, there have been many efforts to improve the quality of medical care, especially since the online technology seemed to offer so many opportunities. Indeed, the use of technology in health care has brought major transformations starting with the immense possibilities of storing patient information and simplifying the whole administrative processes involved in medical care. According to the World Health Organization, e-health should have an impact upon the health system by making health services more effective and improving patient's access to care. Undoubtedly it is equally important to address the challenges that come together with the benefits. It is important to develop strategies that would really improve the system providing products for patients that would reduce the cost of services, designing applications that are user friendly for all categories of patients and eventually to improve the patients' health and wellbeing.*

*Keywords: e-health, health care settings, internet, online technologies.*

We live in an era when specialists belonging to all fields are searching for new opportunities offered by the online technology. These opportunities are meant to help them in their work. The medical field is still reluctant to make use of all the possibilities offered by the online opportunities. The use of the Internet in health care settings has been controversial from the very beginning. It is true that against all this reluctance, the use of the Internet is quite common today even in this field. Nonetheless, the perspective is more complex because, definitely, the use of the Internet in health care settings is not limited only to information and communication purposes among health care professionals, but it is also seen as an opportunity to develop public health. According to the Report of the World Health Organization (WHO) published in December 2004, "the strengthening of health systems through eHealth reinforces fundamental rights by improving equity, solidarity, quality of life and quality of care" (E-Health Report 2004). Health organizations throughout the world have tried, during the last 15 years, to develop strategies that would improve health policies: "e-Health may be expressed in terms of digitalized products, systems, and services for health. These technologies hold great promise for both low- and high-income countries, and some are already realizing the benefits. These benefits apply not only to healthcare delivery, but also to public health, governance, finance, education, research and health-related economic activities [...]. E-Health should have an impact on health systems by making health services more efficient and improving access to care, especially in remote areas, for people with disabilities and for the elderly. It should benefit health care providers, professionals, and final users through higher quality of care and health promotion. It should also affect the cost of care by reducing redundancy and duplication of examinations and making possible economies of scale (E-Health Report 2004). All the above-mentioned ideas

already give us enough ideas to consider the implementation of e-Health into our everyday life a necessity. Communication among health care professionals or among patients suffering from the same diseases is possible without any barriers, the cost of services may actually become cheaper, in the case of epidemiological outbreaks, things may be kept under control more easily. However, as it is expected, all these advantages come with their disadvantages. But in order to see all these, we have to understand this new concept that has penetrated the medical field. The term, though alluding to medicine immediately, covers a much larger area, because when we speak about e-Health we speak about *health, technology and people*. Thus we understand from the very beginning the multidisciplinary fields that are brought together. All these will have to function coherently in a specific context that is determined by the social, economic and cultural values a specific people or group of people has. We shall see that the context in which e-Health is going to be used will become determinant in its success. In order to improve the system, we definitely need professionals from various field of expertise: “Such a team should consist of a wider constituency of disciplinary experts including social, management and legal scientists, all of whom have a stake in the field, and a number of disciplinary perspectives, incorporating theories of epidemiology, sociology, economics, and system science; and applies critical theory to health care evaluation” (van Gemert 2011). The authors of the study entitled **A Holistic Framework to Improve the Uptake and Impact of eHealth Technologies** make thus the implicit mention that the infrastructure of an eHealth program consists of these three major components: *human, technical and medical*.

It is not such a new thing nowadays to see how online services offered by every domain has facilitated many things, the most important one being probably the fact that we no longer waste so much time to get the things we need. The same things happen in health care settings. Online services will make it easier for patients to establish an appointment with their health care provider. Sometimes information is more easily transmitted and people no longer need to travel to a specific place to get this information as everything may be sent electronically in real time. Consequently communication between patients and health care provider is more accessible, many patients preferring this way of communication which will help them overpass nervousness and anxiety. Health care professionals will work with their patients to improve the quality of these services in order to solve or to improve some minor problems. Patients’ medical records can securely be kept online, the doctor having thus immediate access to the information he / she needs to know about the patient. The education of the patient regarding various aspects of medicine becomes easier, consequently people are expected to become better informed and to lead a healthier life. Moreover, with e-Health we can actually see how the patient becomes more involved in his / her own health, being able to take decisions more easily. In other words, patients become more responsible when it comes to the management of their own health. Up to a certain extent this is true. The development of all these web-based applications or even the more user-friendly mobile applications that people may use today have definitely brought about many changes in the behavior of patients and, why not, of people in general. Patients are definitely more informed today than they were 50 years ago. And partly this is because of the presence of online technologies in our everyday lives. It is quite common nowadays for patients to look for health-related information regarding certain medical problems before they actually see a doctor. They look information on websites, sometimes without the involvement of any health care professionals. Today people can find websites where they may introduce some details about themselves, including the symptoms they have, and they may get some hints on what they may be suffering from. People can easily find forums where patients suffering from similar symptoms

or disease describe how they feel or how they cope with different situations. Just by looking at these examples that give us only some hints on how technology can be used in medicine, we understand that while on the Internet, patients do not only need to have the ability to *exchange information*, but also *to use that information* ([https://www.cms.gov/ehealth/downloads/Accelerating\\_HIE\\_Principles.pdf](https://www.cms.gov/ehealth/downloads/Accelerating_HIE_Principles.pdf)). Indeed we speak here about the increase of the patient's possibilities to self-manage his / her own health: "People can be helped to manage their health on day-to-day basis and take more active role in their own health care" (<https://www.futurelearn.com/courses/ehealth/2steps/120767>). As we have already said, this is probably the biggest change and challenge at the same time that was brought about by the use of online technologies: the patient becoming more aware and more involved in self-care and in taking decisions about his / her health. Nonetheless, it is also here that we also notice the disadvantages that come with all these. The lack of the professional supervisor (the actual absence of the physician) may lead to unwanted outcomes. Indeed we have today all sorts of applications and websites that offer advice on lifestyle, health and wellbeing. They give patients the possibility to contact health care providers, but basically a patient can search for conditions and treatment on his / her own: <https://www.patientslikeme.com>. These sites are not only about downloading and using these applications. They are also educational sites that speak about various things, attempting to raise awareness of various health-related issues. On these sites one can find blogs where specialists in the field speak about various problems (from drinking alcohol to mental health problems). On such websites such as MyDrinkaware, <https://www.drinkaware.co.uk>, patients may find personalized support by getting help in various locations where they may be. Another example we should mention is MoodGYM, <https://moodgym.anu.edu.au/welcome>, which is a website developed by the Australian National University, where we can learn cognitive behavior therapy skills for preventing and coping with depression (source: <https://www.futurelearn.com/courses/ehealth/2steps/120772>). A lot of people may argue that the fact that the patient is not under the direct guidance of a professional supervisor may have negative effects upon people. Surprisingly enough, studies show that a large percentage of people who actually completed such programs experienced less problems, proving thus the effectiveness of such programs (Kelders 2015). These attempts show promising effects. However, studies still show that human support is needed and, eventually, costs aren't that low. By and large conclusions are optimistic: "We conclude that an automatic supported web-based intervention for treatment of depression with persuasive technology may achieve similar adherence and effectiveness as the same intervention with human support" (Kelders 2015) (<https://www.ncbi.nlm.nih.gov/pubmed/26196078>). Methods are, after all, effective and applicable (Pots 2016) (<https://ncbi.nlm.nih.gov/pubmed/26250745>).

In the beginning of our paper we mentioned the fact that all these technology, along with the medical aspect of the problem and the human factor have to be used in a specific context. As we start to think about the disadvantages that all these processes may have, we have to think about the context in which everything is developed. Something that works very well in the Western society may not have the same effectiveness in Eastern Europe, for instance. Therefore all health organizations are interested in studying their users' perspectives before they design a product. Such products need to take into account people's need. People need to be comfortable with the applications they use. People are different so diversity should be taken into account even at this level. Those in charge with the implementation of such programs would definitely have to think about all these from a higher perspective. This requires money and effort and most of the times this kind of research is time consuming. The products, in order to be used, have to have

that important quality of offering some benefits that outweigh the risks. The truth is that, no matter the progresses that have been made in the field, we still live in an era when things are expected to establish in themselves, one way or the other. Some people may enjoy the benefits offered by e-Health, but some other may still be reluctant to use them or may simply have not access to the products. We could mention various reasons for that: from the lack of Internet connections up to the lack of skills to use such products. Among all the categories of patients we may easily find a less favored one, if we judge things from this perspective: the elderly. As far as they are concerned, though, in most areas, they are the category of patients with the biggest need to use such products and applications. For some of them distance is a barrier when it comes to health services, and, above all, the category of diseases that are best managed via the online technologies are the chronic diseases which are more likely to be developed exactly by this category of patients. So, from this point of view, things are still expected to change or at least to be thought from a perspective that would take the needs of the elderly from a better standpoint. But disadvantages do not come only from the patients' side. There may be doctors who are reluctant to use the products offered by e-Health (many studies show that doctors complain about the lack of human interaction which remains essential in the medical act; the lack of touch or physical examination or the lack of nonverbal cues during the consultation may lead to wrong diagnosis. Who is to blame in such cases, if an application misleads the patient toward a wrong path? From this point of view, things are still controversial.

Nonetheless, people are expected to change. Technology advances at full speed and we have to keep the pace with it. Likewise if the new technology is an improvement as compared to the old one, people will start using it provided their needs, values and routines are taken into consideration. People will see other people use technology and, as long as applications are user friendly there will be no barrier in stopping people from using them (<https://futurelearn.com/courses/ehealth2/todo/779>). There are still many issues to be taken into account, but it is evident that the process cannot be stopped. Undoubtedly, as we study the phenomenon, it is equally important to address the challenges that come together with the benefits. It is necessary to develop strategies that would really improve the system providing products for patients that would reduce the cost of services, designing applications that are user friendly for all categories of patients and eventually to improve the patients' health and wellbeing.

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