HEALTH AT YOUR FINGERTIPS

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Summary: There are more than 97,000 mobile apps available related to health and fitness, mostly helping users track specific health parameters, as well as providing basic information and guidance. Health care professionals should seriously consider the possible impact of these apps and see this new channel of communication as a promising tool in the area of preventive medicine. However, in its report of May 2012, the eHealth Task Force stressed that although tens of thousands of health and wellbeing apps are already available on the market, there are no quality criteria for these applications or standards for data management and for provision of information to consumers. To enhance legal clarity, the European Commission is now considering the legal, policy and knowledge management framework for health and wellbeing apps.

Keywords: mHealth, Health and Wellbeing Apps, Preventive Medicine, European Union

Introduction

Mobile health (mHealth) is considered to be a subset of eHealth and can be defined as “medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices”. mHealth offers the promise of giving patients easier access to their health information, increasing efficiencies across the continuum of care, and enabling more accurate diagnosis and treatment. Furthermore, it allows the collection of a great deal of medical and also physiological, lifestyle and daily activity data.

Currently, there are more than 97,000 mobile apps available related to health and fitness, mostly helping users track specific health parameters as well as providing basic information and guidance. The mobile health app marketplace is expected to grow significantly over the next few years. According to a recent market research report, the mobile health market will be a mass market within five years, with a reach of more than 3.4 billion smartphones and tablets with access to mobile apps. The report demonstrates that consumers are increasingly using health and wellbeing apps, with the top ten mobile health apps generating up to four million free and 300,000 paid downloads per day. By 2017, it is expected that 50% of mobile users will have downloaded mobile health apps. Experts believe that mobile health apps could change the way health care is practised and also could influence people’s behaviour. Potentially, the emphasis could shift from people having to manage multiple chronic diseases in their later stages to receiving their doctor’s advice on healthy lifestyles, performing regular medical check-ups and treating diseases discovered in the early stages of their development.
Different apps

Among the apps available, it is important to draw a distinction between apps targeted towards health care professionals and apps targeted towards citizens. The first group includes apps which support doctors’ everyday work by facilitating research of medical information and supporting remote consultations with experts. A study by QuantiaMD in June 2011 revealed that the top professional activities undertaken by US physicians when using mobile devices are looking up drug and treatment reference material, learning about new treatments and research, and diagnosing and choosing treatments for patients.1 In addition, these apps can help support the prevention of disease or establish a diagnosis or treatment outside of health care settings.

However, serious concerns have been raised about the safety of medical apps if targeted towards patients for the purposes of diagnosis and monitoring, particularly if such apps have been marketed without prior authorisation by competent authorities. For example, Ferrero and colleagues have demonstrated the need to regulate medical apps by analysing the sensitivity of an app detecting melanoma.2 In a survey of 93 cases, the app classified 88.2% (82/93) of the melanomas as medium-risk lesions and 1.2% (1/93) were reported to be low-risk lesions. In addition, the app was frequently “unable to analyse” lesions despite repeated attempts. The analysis showed that the potential for harm from delays in medical treatment is substantial because patients are advised to refer “suspect” lesions for further analysis.

In addition to the apps described above, there is a huge market (with equally good potential) for ‘health and wellbeing apps’ – apps that do not diagnose or monitor a disease but which help to maintain good health. Health care professionals, particularly public health specialists, should seriously consider the possible impact of these apps and see this new channel of communication as a promising tool in the area of preventive medicine, i.e. as an excellent opportunity to convey health messages to wide groups of people and, in particular, to reach those groups in society who may be difficult to reach to or who do not respond to standard health education methods such as lectures, information leaflets or articles in newspapers.

Patient empowerment

The role of these apps cannot be underestimated from the perspective of patient empowerment – a process to help people take the initiative, solve problems and make decisions concerning their own health. New approaches, such as using games or collecting the results of physical exercise and comparing them with earlier results or with other people’s results using social networks, is a good opportunity to potentially improve the level of health education, encourage healthy lifestyles, and as a result, improve overall public health outcomes. This approach would also help to design messages that are tailored for special population groups and which are able to take gender, age and cultural differences into account. The World Health Organization (WHO) has already demonstrated good results with using mobile apps for tobacco control in some of its programmes such as mSmoke-free, mCessation, and mAwareness.3

Safety and legal clarity

In its report of May 2012, the European Commission’s eHealth Task Force1 stressed that although tens of thousands of health and wellbeing apps are already available on the market, there are no quality criteria for these applications or standards for data management and consumer information. One of the challenges will be to establish knowledge management systems to analyse and compile the data collected by apps on an individual’s health and activities so that such information could be integrated with that person’s electronic health record – to be utilised by the person him or herself, health professionals and/or public health monitoring authorities with the appropriate privacy safeguards. Following the eHealth Task Force report, the European Commission recognised in its eHealth Action Plan 2012–20204 the wide variety of actual and potential functions of health apps, the rapid pace of innovation in this field, and the potential benefits and risks to public health. The Action Plan underlines the importance of tackling clarity on legal and other issues around mobile health and wellbeing applications.

Moreover, it is essential to clarify the regulatory framework applicable to mHealth as it is considered the biggest barrier impeding mHealth deployment in Europe, according to a WHO survey on mobile health.4 To enhance legal clarity, the European Commission is now considering the legal, policy and knowledge management framework for health and wellbeing apps. The US Food and Drug Administration has started a similar process with the Federal Communications Commission addressing the relevant legal framework.

Conclusion

In her speech at the informal ministerial conference in Dublin during eHealth Week in May 2013, the European Commission’s Vice-President Neelie Kroes said: “apps prevent citizens from becoming patients”. With this aspiration in mind, it is paramount that we use the opportunities accorded by health and wellbeing apps in the most efficient way while not forgetting about consumer safety and the protection of privacy.

References


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