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Improving the management of patients with chronic diseases with e-health

Paris, May 27, 2019 - *Chronic diseases are the leading causes of death around the world with 41 million people dying every year. However, their health impact can be significantly reduced by detecting early risk behaviors in the patient. Thanks to the daily collection of data, e-health can be a powerful tool to anticipate these behaviors and provide solutions for the prevention and management of chronic diseases. Alcimed, a consulting company specialized in innovation and new businesses, has looked into this issue.*

Chronic diseases, the leading causes of death worldwide

That is the observation made by the World Health Organization (WHO) which states that 71%¹ of deaths each year result from diseases such as cardiovascular diseases, cancers, respiratory diseases or diabetes. In addition to human losses, economic losses are also significant. It is estimated that the cost of the associated treatments and the cost of reduced patient productivity due to symptoms amount from 0.22% to 6.77% of a country's GDP².

The risk factors for these diseases are well identified and include, among others, smoking, physical inactivity, harmful alcohol consumption, and poor nutrition. A change in these risk behaviors would significantly reduce the incidence of chronic diseases and that, together with their effective management, is crucial to achieving the WHO target of reducing the impact of chronic diseases on premature mortality by 25% by 2025.

E-health as an aid to prevent and manage chronic diseases

There are gaps between the quality of life improvement advices provided by general practitioners and their actual implementation by patients³. This gap, whether due to a lack of regular follow-up or a lack of motivation/understanding on the patient's side, needs to be addressed to ensure the best possible outcomes.

E-health, defined by the WHO as "digital services for the well-being of an individual", has many areas of application that can help in the management of chronic diseases. These fields range from real-time physical activity measurement to personalized support in the management of a particular disease, for example by defining tobacco reduction objectives.

In short, e-health makes it possible to enhance doctors' consultations by overcoming some of their shortcomings: it makes it possible to collect and integrate everyday life health data, so that they can then be shared with a health professional to more quickly identify pain points and propose an action plan to remedy them. Aggregating the data makes it possible to provide the patient with personalized support for both preventing and managing chronic diseases. In order to ensure effective treatment, it is important that the solution is sized according to the patient's objectives and abilities. Thus, e-health not only makes it possible to establish regular monitoring points but also to verify that the treatment is well followed, in its duration and application, which can, in turn, lead to a better control of the disease.

The challenges of e-health development

To regularize the use of e-health in Europe, certain important development considerations need to be taken into account. The main challenge is data security. The regulatory framework to access such data has yet to be established, in particular in the light of the 2016 General Data Protection Regulation (GDPR).

The other issues concern the collection of data. Firstly, it is a question of facilitating access to e-health. Evidence shows that 85% of premature deaths due to chronic diseases occur in poor or developing

¹ <https://www.who.int/en/news-room/fact-sheets/detail/noncommunicable-diseases>

² Marc Suhrcke, Rachel A. Nugent, David Stuckler and Lorenzo Rocco, Chronic Disease: An Economic Perspective, London: Oxford Health Alliance 2006

³ Carey, Mariko et al. "The Role of eHealth in Optimizing Preventive Care in the Primary Care Setting." Journal of medical Internet research

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countries¹. And it is precisely in these countries that Internet coverage is the least robust. The development of the Internet is, therefore, a key success factor in the development of e-health. Furthermore, the more comprehensive the data, the more consistent the patient's commitment and the better the follow-up will be. To ensure the exhaustiveness of the data, an important point to consider will be its aggregation at a scale sufficient to integrate all sources of data collection. It is, therefore, necessary to ensure that all information is compatible and consistent (this is called interoperability). Moreover, by placing e-health at the heart of the treatment, the patient will be more likely to provide the information sought. In France, the French High Authority of Health issued a positive opinion concerning the reimbursement of a diabetic patient monitoring application⁴. The patient will indeed be more willing to use an application if it is recommended by his doctor and covered by Social Security. Finally, the proper use of the collected data is the last challenge in the development of e-health, and this will surely require training of health professionals.

An example of how to manage chronic diseases: Israel

Having adopted an electronic medical record system on a large scale as early as 1995 (nearly 98% of the population is covered), Israel is one of the leading figures in e-health. For chronic diseases, in particular, these medical records allow early detection of risk behaviors in the general population, and thus effective incidence management across the country. Subsequently, the continuous monitoring of health indicators makes it possible to improve the provision of care, for example by regularly alerting health professionals when a follow-up should be done with the patient, or simply by sending messages directly to the patient. The result? Beyond being among the most advanced countries in terms of e-health, Israel is among the countries with the lowest probability of premature death due to chronic diseases⁵.

"Today, the regulatory framework still needs to be set for e-health applications: both on data security and on the place that e-health applications will occupy in the patient's health journey. Once this framework is established, e-health will be an asset on which doctors will rely for the follow-up of their patients," concludes Delphine Bertrem, Head of Alcimed's healthcare business unit in Paris. Meanwhile, at the 2nd inter-ministerial committee meeting held on 25 March 2019, Minister of Health Agnes Buzyn reaffirmed the need to make active prevention a priority. It remains to be seen what role will be given to e-health...

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Alcimed is a member of CroissancePlus and the ACI (Association des Conseils en Innovation – Association of Consultants in Innovation).

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⁴ Haute Autorité de Santé - Avis n°2016.0055/SEAP du 7 Septembre 2016

⁵ Global Health Observatory data repository, <http://apps.who.int/gho/data/view.main.2485?lang=en>