

Chapter 11


Telemonitoring in Heart Failure Patient Management

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ABSTRACT

Heart failure is a highly prevalent clinical syndrome, associated with high costs to the national health system and with a negative impact on patients' quality of life. In order to reduce mortality, the rate of hospitalisations and improve quality of life, the empowerment of the patient for self-care from self-monitoring of signs and symptoms, taking medication, education about the disease, is a pillar of the treatment so that they can recognise signs of exacerbation of the disease in time and resort to health services early. Mobile health apps (mHealthh) have shown promise as a tool to engage and promote patient self-care, decreasing mortality and hospitalisations. However, to improve outcomes, more robust studies are needed on the development of the applications with regard to their contents, functions and usability, so as to overcome the obstacles to their use and ensure greater evidence of the benefits of their use.

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INTRODUCTION

The sustainability of the national health system is one of the biggest challenges for health policy makers. With increased life expectancy, an ageing population and medical advances, the prevalence of chronic diseases has seen an exponential increase worldwide, leading to increased consumption of health resources.

Digital health emerges as a tool to support the increased demand for healthcare, namely in chronic illness, increasing efficiency and access to healthcare and reducing healthcare costs.

Heart Failure is a chronic syndrome, considered to be a serious public health problem all over the world. In Portugal, according to the EPICA study (Fonseca et al., 2018), the overall prevalence of chronic heart failure in the adult population was estimated at 4.36%, increasing to 12.67% in the population aged over 70 years.

Based on the expected socio-demographic evolution for Portugal, associated with population ageing, an increase in prevalence of 30% is expected in 2035 compared to 2011, with a number of 479 921 affected individuals (Fonseca et al., 2018).

The financial burden with heart failure is associated to the hospitalisations, that are usually followed by episodes of readmissions after thirty days, in about 24% of cases and 50% after six months (Fonseca et al., 2018).

There is a strong belief that it is necessary to invest in prevention programmes to hospital readmissions for heart failure, as well as in multidisciplinary patient management programmes, which have shown evidence of reducing mortality, (re)hospitalisations and also improving quality of life (McDonagh et al., 2021)

Technological development has brought new tools, namely telemonitoring, which can be an important tool to support the management of heart failure patient, allowing self-monitoring of signs and symptoms, self-vigilance and the promotion of literacy about the pathology, improving the capacity for self-care.

DIGITAL HEALTH

The development of technologies in general and information technologies has in recent years given rise to new management concepts and models, particularly in health services management.

Digital Health is a health and wellness management model that aims to maximise resources by providing and optimising flexible electronic options for citizens based on information and communication technologies. It is a broad concept still evolving, but with several examples of application in all phases of healthcare delivery (Matos et al., 2014).

Telehealth is one of the tools of digital health that aims to use information and communication technologies to manage, monitor and support health at a distance, in the different aspects of care provision, organisation of health services and training of professionals and users, encompassing e-learning, telemonitoring, structured telephone support, telerehabilitation, teleconsultation and m-health applications.

As the centralization of care in citizens is becoming increasingly urgent, the use of telehealth contributes to overcome geographic and time barriers in order to improve access to health care, as well as to promote greater coordination, integration and continuity of care, contributing to the integration of the various levels of health care provision.

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