

## **mHealth in cardiology**

Mario Ivanuša<sup>1\*</sup>

<sup>1</sup> Institute for Cardiovascular Prevention and Rehabilitation, Zagreb, Croatia

\* Corresponding author phone: +385 (1) 461-23-46, e-mail: [mivanusa@gmail.com](mailto:mivanusa@gmail.com)

### **Abstract**

The development of mobile telecommunications and multimedia technologies has resulted in providing one segment of medical services when a patient and a physician are at remote locations. Mobile health (mHealth) is a system of remote monitoring the health status during the 24/7 and is primarily designed for patients with chronic diseases, but also those who are at home care after acute events and/or emergency medical intervention, patients involved in programs for the improvement of health status or for clinical trials.

The basis of the mHealth is supported by enthusiasm of a growing use of technologies in the community that keeps up with the 21st century developments and medical equipment that gathers information from the body (the sensor for a patient, communication device, medical application), and accessories. Blood pressure, heart rate, electrocardiogram, blood glucose, oxygen saturation and other variables are collected by sensors and can be simultaneously or in a certain period of time transmitted to the server, enabling the option of integration with electronic medical record and signaling in case of any disorders.

In addition to the unequal development of broadband communication networks, the main problems of mHealth are:

- Lack of technical skills of medical professionals, particularly middle-aged and elderly ones;
- Technical problem of sensors — devices dependent on the size, design and battery life;
- The need for interoperability — linking diverse technologies for the purpose of exchanging and using information (from textual to complex multimedia messages), technology (WLAN, Bluetooth, satellite communications, etc.) and connectivity (wireless, wired, PC, PDA devices);
- Necessity of certifying the devices — the credibility of procedure (information of mobile monitoring are credible medical information or additional indicators), data protection, lack of standards and unclear legislation;
- Lack of financial incentives for the application of mHealth technology.

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Telecardiology and mHealth principles and technology in cardiac rehabilitation can be used as a tool for promoting ever greater involvement of patients with coronary heart disease, which, in addition to the availability and price is the global problem for the mentioned cardiovascular activity. Mobile technology has proved to be potentially useful in intervention programs that detect and modify risk factors in psychosocial support, physical activity programs and therapeutic education. Time will show whether this mHealth potential will increase availability, participation and outcomes of patients with coronary heart disease.

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**Keywords** mHealth • Telecardiology • Coronary heart disease

## Literature

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