



WEB OF SCIENCE

GARANTATE ANALITICE

BY-NC-ND

Balneo and PRM Research Journal

DOI: <http://dx.doi.org/10.12680/balneo.2021.452>

Vol.12, No.3 September 2021

p: L33

## IS ONLINE CARDIAC REHABILITATION AN ALTERNATIVE TO CLASSIC REHABILITATION?

PANĂ Maria, JERCĂLĂU Cosmina, CALANGEA Irina  
BUSNATU Ștefan, ANDREI Cătălina, SINESCU Crina

Editor: Constantin MUNTEANU, E-mail: [office@bioclima.ro](mailto:office@bioclima.ro)

Corresponding author: Maria Alexandra Pana E-mail: [maria.alexandra.pana@drd.umfcd.ro](mailto:maria.alexandra.pana@drd.umfcd.ro)

University of Medicine and Pharmacy Carol Davila, Bucharest

### Abstract

**Introduction.** Cardiac rehabilitation programs have an important role in strengthening recovery after a cardiovascular event and in establishing the secondary prevention management. Despite its empirical evidence, only a third of patients attend such programs.

**Materials and Methods.** Virtual coaches represent individualized continuity of care in the home environment. Apart of being an improver of patient's life quality, they optimize the economics of medical treatments. We are currently researchers in the development of a virtual coach, designed to personalize and adapt goals according to the progress achieved by the patient in the impairment's recovery. The system aims to guide and encourage the patient to perform the medical preset clinical pathways in order to increase his adherence to the therapy prescribed. During Living Lab phase of the project, we have conducted also an evaluation of the patient's perception of virtual coaches in the home environment.

**Results.** Studies conducted so far show an equivalence between online and classic cardiac rehabilitation in terms of health, economic and social benefits. However, home based cardiac rehabilitation is more suitable for individuals with moderate and low risk of cardiovascular complications. One of the most important findings we encountered is the cardiac patients' motivation and interest of participation when encountered with the opportunity of cardiac rehabilitation.

**Conclusion.** The virtual assistant we are currently developing has the underlying base of a machine learning approach. The final version of the product is desired to adapt to patient's needs and necessities in order to provide an efficient secondary prevention management of his cardiovascular disease.

**Acknowledgements.** This project vCare has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 769807.