

Artificial intelligence to improve remote patient management for heart failure patients

Heart failure is a chronic disorder, the medical care of which could potentially benefit from a remote patient management (RPM) approach.

In 2018, the results of the TIM-HF2* trial showed for the first time the superiority of RPM in terms of mortality and morbidity.

The RPM intervention consists of

- a daily transfer of vital signs such as heart rate and body weight,
- a 24/7 treatment by physicians and nurses in a telemedical center and
- patient education in handling the home devices and their own chronic disease.

* Koehler F et al. Lancet 2018





Technical innovations using artificial intelligence to achieve scalability are required:

- Development of machine learing algorithms based on the annotated data set from the TIM-HF2 trial (> 2 million measurements)
- Implementation of algorithms to support the clinical decision process
- Wearables and smartphones to integrate new vital parameters
- Voice analysis to diagnose a hydropic decompensation using deep neural networks
- Physical activity as a marker for mortality and morbidity

PROJECT PARTNERS



on the basis of a decision by the German Bundestag

IMPRINT

Charité – Universitätsmedizin Berlin Charité Center 11 for Cardiovascular Diseases Medical Department | Division of Cardiology and Angiology Center for Cardiovascular Telemedicine Charitéplatz 1 | 10117 Berlin | Germany

www.telemed5000.de

printed: 09/2019 photo credit: LIV/Berger