



**HORIZON 2020**

**PHC-26-2014**

**Self management of health and disease: citizen engagement and mHealth**

**Grant agreement number: 643694**

**Project Title:**

**A co-operative mHEALTH environment targeting adherence and management of patients suffering from  
Heart Failure**



**Newsletter Digest**

**01.01.2017 – 31.03.2017**

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### **Paper at International Conference on Biomedical and Health Informatics (BHI2017)**

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The paper is entitled "Estimation of New York Heart Association class in Heart Failure Patients Based on Machine Learning Techniques" and presents an automated method for the early identification of New York Heart Association (NYHA) class change in patients with heart failure using classification techniques.

### **HEARTEN Cloud Platform places its security on OVH infrastructures and solutions**

[https://www.facebook.com/permalink.php?story\\_fbid=966859023444305&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=966859023444305&id=605460052917539)

The HEARTEN Cloud Platform is physically located in Roubaix, a very recent data center built with advanced technologies and innovation!

### **HEARTEN saliva and breath biosensors are to be finalised**

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UCBL just submitted a paper to the Sensors & Actuators: B. Chemical Journal presenting the electrochemical biosensor platform for TNF- $\alpha$  cytokines detection in both artificial and real human saliva.

### **HEARTEN has launched the behavioral online survey, for collecting information from more than 3,000 heart failure patients**

[https://www.facebook.com/permalink.php?story\\_fbid=976050192525188&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=976050192525188&id=605460052917539)

The main goal is to discover patients' preferences and expectations from HEARTEN platform.

### **The LoopBack framework is used to develop the APIs for integrating the HEARTEN applications into the dedicated Cloud platform**

[https://www.facebook.com/permalink.php?story\\_fbid=976231142507093&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=976231142507093&id=605460052917539)

Fast, easy, extensible, protects data with Access Control Lists. Devices and browsers are connected to data and services. Focus immediately on custom logic without the need of lower level development.

### **Despite concerns, caffeine is OK for patients with heart failure**

[https://www.facebook.com/permalink.php?story\\_fbid=976387819158092&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=976387819158092&id=605460052917539)

Concerns about caffeine consumption in patients with heart failure are largely unfounded, based on a recent study that found no link between caffeine intake and increased risk of abnormal heart rhythms.

### **Poster at Medical Informatics Europe Conference**

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A communication about HEARTEN project, prepared by SAS & EVERIS, called "Integrating a mHealth application into the EHR Ecosystem of Andalusian Health Public System", has been accepted to present as a poster in the 27th Medical Informatics Europe Conference, conference that will be held in Manchester on 24-26 April 2017.

## **The HEARTEN cloud applications are integrated with Google Firebase Cloud Messaging, a message solution that allows to deliver messages at no costs.**

[https://www.facebook.com/permalink.php?story\\_fbid=984972064966334&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=984972064966334&id=605460052917539)

The doctors and the experts are able to send messages to the patients and between themselves; also the applications are able to send alerts, reminders and motivational messages to the patients for example when medication are forgotten or biological variables reach critical thresholds.

## **The integration of HEARTEN with the Electronic Health Record in the Andalusian Health Service**

[https://www.facebook.com/permalink.php?story\\_fbid=986040198192854&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=986040198192854&id=605460052917539)

The solution provided to integrate the SAS EHR and HEARTEN includes a dashboard and executive report generation features for Coordinators and Managers of the Hospital as part of the follow-up of the integration status during the pilot.

## **Design and Evaluation of a Web-Based Symptom Monitoring Tool for Heart Failure**

[https://www.facebook.com/permalink.php?story\\_fbid=989043074559233&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=989043074559233&id=605460052917539)

Web based monitoring tools for Heart Failure are gaining ground!

## **7.1M patients use remote monitoring, connected medical devices**

[https://www.facebook.com/permalink.php?story\\_fbid=989896241140583&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=989896241140583&id=605460052917539)

7.1M Patients Use Remote Monitoring, Connected Medical Devices! More patients than ever are using connected medical devices to engage in remote monitoring and virtual healthcare.

## **Seven simple heart-healthy habits that could save the US \$41 BILLION in healthcare costs**

[https://www.facebook.com/permalink.php?story\\_fbid=990435871086620&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=990435871086620&id=605460052917539)

Did you know how much money simple healthy habits could save in healthcare costs?

## **The scientific community is searching for enhancement of the patient engagement in heart failure treatment**

[https://www.facebook.com/permalink.php?story\\_fbid=993716610758546&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=993716610758546&id=605460052917539)

"The community-focused heart failure initiative promotes self-health awareness through a patient app and by encouraging regular checkups, educating about the signs and symptoms of heart failure, providing information on diet and exercise, and stressing the importance of regular screenings."

## **Are you a cardiologist? A symposium for cardiologists**

[https://www.facebook.com/permalink.php?story\\_fbid=993949684068572&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=993949684068572&id=605460052917539)

Practical approaches to the management of patients with HF!

### **Publication in Procedia Engineering**

<https://www.facebook.com/605460052917539/photos/a.605462249583986.1073741827.605460052917539/996533173810223/>

Publication in Procedia Engineering: "Highly sensitive Electrochemical BioMEMS for TNF-a detection in human saliva: Heart Failure".

### **The HEARTEN cloud platform and the mobile app integrate the most comprehensive monitoring system on the market: the WinPack product**

[https://www.facebook.com/permalink.php?story\\_fbid=997859923677548&id=6054600529175396533173810223/](https://www.facebook.com/permalink.php?story_fbid=997859923677548&id=6054600529175396533173810223/)

WinPack is comfortable to wear, easy to use, lightweight and allows a better and safer hospital experience for Patients in low-acuity areas who are able to move freely while wearing it. The reduction of manual checks improves their comfort and rest.

### **Survey: Chronic care patients want an mHealth connection with their doctor**

[https://www.facebook.com/permalink.php?story\\_fbid=1008336539296553&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=1008336539296553&id=605460052917539)

A recent survey shows that almost 90 percent of patients surveyed by West say they can't manage their health on their own, and want a digital health connection with their doctor outside the doctor's office.

### **Why HEARTEN platform?**

[https://www.facebook.com/permalink.php?story\\_fbid=1008883642575176&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=1008883642575176&id=605460052917539)

Are you a patient with HF? Do you want to be more safe and secure in your home? See how can HEARTEN platform help you.

### **How is the medication adherence influenced by the saliva and breath biomarkers?**

[https://www.facebook.com/permalink.php?story\\_fbid=1013383408791866&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=1013383408791866&id=605460052917539)

FORTH has recently submitted a Conference paper in the CBMS Conference. The aim of this work is to estimate the medication adherence of patients with heart failure through the application of a data mining approach on a dataset including information from saliva and breath biomarkers.

### **Patient Similarity in Prediction Models Based on Health Data: A Scoping Review**

[https://www.facebook.com/permalink.php?story\\_fbid=1017230761740464&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=1017230761740464&id=605460052917539)

The predictive modeling has been growing in health care; each medical area is getting benefit from the analysis of patient similarity-based modeling.

### **Abstract has been accepted to Colloquium Spectroscopicum Internationale**

<https://www.facebook.com/605460052917539/photos/a.605462249583986.1073741827.605460052917539/1017873668342840/>

Another abstract from UNIPI on HEARTEN preliminary results has been accepted to Colloquium Spectroscopicum Internationale XL - June 11-16, 2017, Congress Palace, Pisa, Italy.

## **HEARTEN has been present in the XX National Congress of Hospitals and Healthcare Management**

[https://www.facebook.com/permalink.php?story\\_fbid=1018225598307647&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=1018225598307647&id=605460052917539)

HEARTEN has been present in the XX National Congress of Hospitals and Healthcare management celebrated in Seville from March 29th to 31st. Flyers, a new poster and TV material has been presented in an event oriented to healthcare stakeholders.

## **Exercise a great prescription to help older hearts**

[https://www.facebook.com/permalink.php?story\\_fbid=1018231978307009&id=605460052917539](https://www.facebook.com/permalink.php?story_fbid=1018231978307009&id=605460052917539)

Emphasizing physical function as a fundamental part of heart failure therapy can improve older patients' quality of life and their ability to carry out activities of daily living.