



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

01.07.2016 – 31.12.2016

INDEX

Compensation and decompensation in heart failure	4
Major breakthrough against heart failure after scientists use stem cells in 'astonishing' trial which could help millions	4
Two new drugs added to heart failure guidelines	4
5 things a nurse wants you to know about heart failure.....	4
Heart failure experts Q&A: Mental health	4
How long do people live with congestive heart failure?	4
12 surprising ways drugs and supplements can cause heart failure	4
Stem cell implants could be the key – reversing heart failure breakthrough	5
Warning signs of heart failure	5
Study shows proof of dogs helping lower heart disease	5
New heart failure report recommends blood test developed by BHF researchers.....	5
How smartphones and apps may change the face of healthcare	5
Healthcare's digital future	5
MHealth: how apps are helping the healthcare sector	5
YourDATA team talks about HEARTEN during SINNOVA press event	6
The integration of HEARTEN with the Electronic Health Record in the Andalusian Health Service	6
A flexible electrochemical micro lab-on-chip: application to the detection of interleukin-10.....	6
Heart failure: A disease Europe cannot afford to ignore.....	6
OVH Receives Global Service Provider Partner Innovation Award at VMware Partner Leadership Summit 2016 ...	6
Long-term exposure to air pollution and traffic noise affects blood pressure.....	6
The HEARTEN Project will present a poster in the I Congress on Coordination and Management of EU-funded Health Research Projects, in Valencia, Spain, on November 8th	6
Medication Adherence Clinical Reference.....	7
Things to know before deciding on a patient notification system	7
Poster at Congress on Coordination and Management of EU-funded Health Research Projects	7
What is an ECG?.....	7
EU e-Health projects' dedicated round table	7
Heart failure self-management education: a systematic review of the evidence.....	7
Turning data into insight: Event-based notifications drive improved outcomes	7
Publication in Computational and Structural Biotechnology Journal.....	7
The integration of HEARTEN with the Electronic Health Record in the Andalusian Health Service	8
Cardiac patients show high interest in technology enabled cardiovascular rehabilitation	8
Mediterranean diet has several benefits for the HF patients	8

Infographic: Mobile delivers healthcare	8
HEARTEN takes care of the patients with security, protection, easy but supervised access to the system	8
HEARTEN Consortium is completing the questionnaire to submit to more than 3,000 European HF patients	8
HEARTEN will be present in the conference for clinical management	9
HEARTEN flyer in Spanish was disseminated at the Spanish conference	9
The integration of HEARTEN with the Electronic Health Record in the Andalusian Health Service	9
10 ways digital could transform healthcare	9
HEARTEN flyer was disseminated during the Active and Healthy Ageing Summit 2016	9
Heart failure and the holidays	9
Discharge education improves clinical outcomes in patients with chronic heart failure	9
The security of the cloud provider (OVH) is the base over which we are building HEARTEN platform	10
HEARTEN project was presented to health engineers students in the workshop titled "Bridging the gap between companies and students"	10

Compensation and decompensation in heart failure

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When the heart cannot pump enough oxygen and nutrients to meet the body's needs; it tries to adapt. The chambers of the heart stretch to hold more blood to pump through the body with each heartbeat.

Major breakthrough against heart failure after scientists use stem cells in 'astonishing' trial which could help millions

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Heart attack patients who were not expected to live are fit and healthy after scientists regenerated their hearts with stem cells in a ground-breaking trial which could help millions of people with heart failure.

Two new drugs added to heart failure guidelines

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A pair of heart failure drugs approved last year by the Food and Drug Administration have made their way into new treatment guidelines. The American College of Cardiology, American Heart Association and Heart Failure Society of America on Friday released updated guidelines that add Corlanor (ivabradine) and Entresto (sacubitril/valsartan).

5 things a nurse wants you to know about heart failure

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Nearly six million. According to the American Heart Association (AHA), that's the number of people in this country who are currently living with heart failure.

Heart failure experts Q&A: Mental health

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How can a person live well with heart failure? Julie Bartlett (heart failure patient and educator) and Dr Alex Lyon (consultant cardiologist) answer your heart failure questions. In this segment: Is there any support for patients dealing with the stress that heart failure diagnosis may bring?

How long do people live with congestive heart failure?

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People with mild to moderate congestive heart failure (CHF) could potentially live many years; it needn't be a death sentence. Congestive heart FAILURE is really a misnomer -- think of it as congestive heart inefficiency!

12 surprising ways drugs and supplements can cause heart failure

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You may know that heart failure is a condition in which the heart can't pump enough blood to meet the body's needs. But did you know that certain dietary supplements and over-the-counter drugs may actually cause heart failure?

Stem cell implants could be the key – reversing heart failure breakthrough

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In a 'astonishing' new trial, eleven heart attack patients with stage 3 heart failure, and expected to die within two years, are today fit and healthy after scientists regenerated their damaged hearts with stem cells, in a ground-breaking, heart failure breakthrough, phase IIa, trial which could help millions of people. The trial was published in the Journal of Cardiovascular Translation Research* after its remarkable success for heart failure.

Warning signs of heart failure

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By themselves, any one sign of heart failure may not be cause for alarm. But if you have more than one of these symptoms, even if you haven't been diagnosed with any heart problems, report them to a healthcare professional and ask for an evaluation of your heart. Congestive heart failure is a type of heart failure which requires seeking timely medical attention, although sometimes the two terms are used interchangeably.

Study shows proof of dogs helping lower heart disease

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Vicky Rogne comes to the north Fargo dog park every day. "We're all crazy about our dogs," Rogne said. These dog-lovers are a special kind of group and Rogne would know, she's grown up with one her whole life.

New heart failure report recommends blood test developed by BHF researchers

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A report published today makes ten recommendations to improve the diagnosis, treatment and care of heart failure patients, following a parliamentary inquiry.

How smartphones and apps may change the face of healthcare

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The proliferation of smartphones in the pockets of most patients and clinicians may offer a common link between for true patient engagement.

Healthcare's digital future

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Insights from our international survey can help healthcare organizations plan their next moves in the journey toward full digitization.

MHealth: how apps are helping the healthcare sector

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Full adoption of mobile health services cannot happen soon enough. The provision of health services over mobile devices has the potential to cut costs while maintaining or even improving the quality of care on the NHS and expanding workforce.

YourDATA team talks about HEARTEN during SINNOVA press event

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The project raised curiosity among journalists and general public.

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

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HEARTEN will be piloted by the Andalusian Health Service (SAS) at the "Virgen del Rocío" University Hospital, Seville, Spain.

A flexible electrochemical micro lab-on-chip: application to the detection of interleukin-10

https://www.facebook.com/permalink.php?story_fbid=910806649049543&id=605460052917539

In a recent paper in *Microchimica Acta* we report a method to manufacture a micro lab-on-chip for the detection of interleukin-10 (IL-10) of patients suffering from heart failure. We were able to detect the IL-10 biomolecule in the concentration range of 1–15 pg/mL, which is within the medically relevant range for heart failure applications.

Heart failure: A disease Europe cannot afford to ignore

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One in five of us risk developing heart failure in our lifetimes, and currently, the condition affects 15 million Europeans. And yet, awareness of the symptoms is worryingly low. For example, only three per cent of the general public can correctly identify all three 'red flag' symptoms - extreme breathlessness, fatigue and swollen ankles.

OVH Receives Global Service Provider Partner Innovation Award at VMware Partner Leadership Summit 2016

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HEARTEN project is based on a OVH dedicated cloud infrastructure. OVH received the Global VMware Partner Innovation Award in the Service Provider category.

Long-term exposure to air pollution and traffic noise affects blood pressure

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Long-term exposure to air pollution is linked to a greater incidence of high blood pressure, according to the largest study to investigate the effects of both air pollution and traffic noise.

The HEARTEN Project will present a poster in the I Congress on Coordination and Management of EU-funded Health Research Projects, in Valencia, Spain, on November 8th

https://www.facebook.com/permalink.php?story_fbid=920701754726699&id=605460052917539

The main objective of this workshop consists of sharing good practises and previous experiences about how to promote, to manage and to coordinate successfully a European project. We expect to gather an interesting group of different stakeholders that are enrolled in international projects, such us: researchers, R+D managers and companies among others.

Medication Adherence Clinical Reference

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A very interesting study from the American College of Preventive Medicine: http://www.acpm.org/?MedAdherTT_ClinRef. Let us think how useful an application can also be!

Things to know before deciding on a patient notification system

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Meaningful patient engagement and activation requires careful consideration, strategic thinking and a long-term view. HEARTEN project is covering all important aspects!

Poster at Congress on Coordination and Management of EU-funded Health Research Projects

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HEARTEN members have presented a poster concerning the scope of the HEARTEN Project during the I Congress on Coordination and Management of EU-funded Health Research Projects held on November 8th, 2016 at the “Fundación para la Investigación del Hospital Clínico de la Comunidad Valenciana” in Valencia, Spain.

What is an ECG?

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All you always wanted to know about ECG and never dared to ask!

EU e-Health projects' dedicated round table

<https://www.facebook.com/605460052917539/photos/a.605462249583986.1073741827.605460052917539/926915000772041/>

HEARTEN presentation at 6th EAI International Conference on Wireless Mobile Communication and Healthcare.

Heart failure self-management education: a systematic review of the evidence

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The objective of this systematic review is to identify educational content and techniques that lead to successful patient self-management and improved outcomes in congestive heart failure education programs.

Turning data into insight: Event-based notifications drive improved outcomes

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HEARTEN is supporting event-based notifications which drive improved outcomes for patients.

Publication in Computational and Structural Biotechnology Journal

<https://www.facebook.com/605460052917539/photos/a.605462249583986.1073741827.605460052917539/930516253745249/>

Publication in Computational and Structural Biotechnology Journal: “Heart Failure: Diagnosis, Severity Estimation And Prediction Of Adverse Events Through Machine Learning Techniques”.

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

<https://www.facebook.com/605460052917539/photos/a.605462249583986.1073741827.605460052917539/933514110112130/>

During the pilot at the "Virgen del Rocío" University Hospital, Seville, Spain, the different data, both the one collected by the sensors used by patients and the one introduced by the clinical staff that take care of these patients, will be picked up from the HEARTEN platform and sent to the SAS Electronic Health Record (EHR) as an external report, thus allowing the clinical staff of the Hospital to access these valuable data using their own EHR system and thus transforming HEARTEN into a departmental information system.

Cardiac patients show high interest in technology enabled cardiovascular rehabilitation

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E-cardiology, eHealth and digital solutions for physical activity uptake and monitoring have evolved rapidly, they also have potential in cardiovascular disease management. A survey among 310 cardiac patients made it clear what the current technology usage is of these patients, and their needs and interests for technology enabled cardiovascular rehabilitation.

Mediterranean diet has several benefits for the HF patients

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For every 100 people who ate the highest amount of healthy Mediterranean foods, there were three fewer heart attacks, strokes or deaths compared with 100 people who ate the least amount of healthy foods. HEARTEN monitors and empowers HF patients on following the Mediterranean diet. HEARTEN mobile application & KMS are the key components behind this.. How? Stay tuned.

Infographic: Mobile delivers healthcare

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HEARTEN delivers healthcare via text communication and remote patient monitoring which leads to cost saving.

HEARTEN takes care of the patients with security, protection, easy but supervised access to the system

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In HEARTEN project, data collection is achieved by the usage of two kind of databases, a relational one for vital statistics and personal details, a NoSQL one for measures coming from sensors. The whole data repository is exported to the applications with e REST API to ensure data protection, data integrity, secure and monitored access, minor complexity in the client side. The whole collaborative platform is hosted on a cloud, reachable from everywhere in the world and protected with multi-level security.

HEARTEN Consortium is completing the questionnaire to submit to more than 3,000 European HF patients

<https://www.facebook.com/605460052917539/photos/a.605462249583986.1073741827.605460052917539/939672319496309/>

It has been produced in English, Italian, Spanish, Portuguese, Greek and German and will be distributed very soon. It will allow to analyze patients' characteristics, habits and willingness to use HEARTEN platform, boosting exploitation analysis with a powerful dataset.

HEARTEN will be present in the conference for clinical management

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Objective: Contact with the experts, present our platform & receive suggestions and their feedback.

HEARTEN flyer in Spanish was disseminated at the Spanish conference

<https://www.facebook.com/605460052917539/photos/a.605462249583986.1073741827.605460052917539/940317622765112/>

HEARTEN flyer in Spanish was disseminated at the Spanish conference: XXXVII Congreso Nacional de la Sociedad Española de Medicina Interna.

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

<https://www.facebook.com/605460052917539/photos/a.605462249583986.1073741827.605460052917539/941141049349436/>

An integration monitor has been designed in order to manage the different messages exchanged between HEARTEN and SAS EHR, including the traceability of data. This tool will be used as part of the SLAs measured during the SAS pilot and will be exported in different deployments of the HEARTEN platform where an integration between HEARTEN and an EHR is required.

10 ways digital could transform healthcare

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Much has been written and spoken about how software-based technology, data analytics and connected devices can work together to transform every aspect of business. But now the process of digital transformation is set to have an enormous impact on our health and fitness too. Not only will these advances affect the quality of life for millions, they could also have far-reaching implications for the healthcare sector and employers in general.

HEARTEN flyer was disseminated during the Active and Healthy Ageing Summit 2016

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The 2016 Summit will build on the achievements of the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA), the Active and Assisted Living Programme with Member States (AAL P) and the EIT-KIC on Health and Active Ageing.

Heart failure and the holidays

https://www.facebook.com/permalink.php?story_fbid=946488242148050&id=605460052917539

Studies suggest increased cardiac morbidity and heart failure exacerbations during winter months with a peak around the holiday season. Major sporting events and intense encounters in sports have been shown to affect cardiovascular outcomes amongst its fans.

Discharge education improves clinical outcomes in patients with chronic heart failure

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Although interventions combining patient education and post-discharge management have demonstrated benefits in patients with chronic heart failure, the benefit attributable to patient education alone is not known. We hypothesized that a patient discharge education program would improve clinical outcomes in patients with chronic heart failure.

The security of the cloud provider (OVH) is the base over which we are building HEARTEN platform

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OVH has been hosting your data for 15 years and special attention is paid to keeping it safe and secure. In order to guarantee you the highest level of security, we have carefully set up effective equipment, as well as an arsenal of best practices at all levels of our organisation and infrastructure, so that the availability, integrity and confidentiality of your content is fail-safe.

HEARTEN project was presented to health engineers students in the workshop titled "Bridging the gap between companies and students"

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Mates of IWT2 group manage the ADAE (Acortando Distancias entre Alumnos y Empresas) Journeys. In this Journeys you will be able to find out what the real needs are in the companies and receive the necessary advice to develop a success end-degree work in all branches of Computer Engineering (ISa, IS, TI e IC).