

HEARTMAN

Issue 5 - Dec. 2018

Personal Decision Support System for Heart Failure Management

MONITORING PHYSICAL AND PSYCHOLOGICAL STATE

INDEX

- Finalisation of the trial in Belgium
- Events
- Italian trial



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 689660.

Trial experiences in Belgium and Italy

Finalisation of the trial in Belgium

The pilot trial in Belgium has now come to its conclusion. During the last months of the trial, follow-up and technical support was given to patients working with the HeartMan system. In addition, the end-of-study visits were prepared and the usability evaluation was conducted.

End-of-study visits

The end of trial visits took place between 22nd and 13th of November. The majority of the patients, both those who were randomized in the intervention and control group, visited the hospital to perform their final tests and to fill in the required questionnaires. Used study material was collected and prepared for shipping to the technical HeartMan partners for further analysis. Meanwhile, all collected data from the baseline and end-of-study visits were processed in Ghent and prepared for integration with the Italian trial data. The first results are expected by the end of April 2019.

User experience evaluations

In addition to the end-of-trial visits, user experience evaluations were done at the end of the trial between October 8th and 23th. These evaluations were done with a sub sample of the intervention group for the trial. Ten patients - three females and seven males with an average age of 56 years - were visited at home for an interview of 1 - 1,5 hours.

The user experience evaluations focused on the experiences of the patients with the HeartMan system and the socio-technical aspects of technology usage such as people, resources, places, routines, knowledge, control and motivation. With this approach we aimed to provide a holistic perspective to evaluating home-based health monitoring.

Overall, the results illustrate the potential of the HeartMan system: the questions and tips about diet were interesting to read; the system encouraged patients to be physically more active and it reminded them of taking their medications at set time points.

Also, keeping track of their weight and heart rate led to patients feeling more in control in some cases. Tracking weight helped patients to keep their weight at the same level and monitoring heart rate helped them to recognize when they exceeded their limits and act upon it by taking a rest.

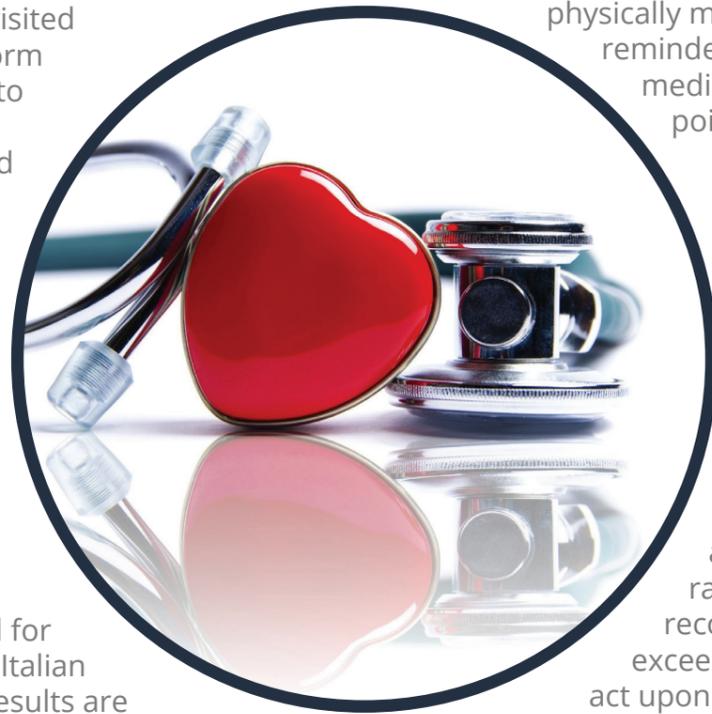
The HeartMan system did show great potential. While some patients were unable to go outside for a bike ride and do their exercises, others had found their own way to fit the HeartMan system into their lives and increase their levels of physical activity, for example by doing their cycling exercises at home while sitting on a chair and using a mini home trainer. Those patients regretted that the trial had come to an end and they were looking forward to the possibility to

using the HeartMan system after it would come out on the market.

However, during the trial patients experienced technical difficulties and therefore some were unable to use the system to its full potential. And in some cases, technical issues led to patients experiencing stress.

In our last newsletter we have already highlighted that CHF patients vary considerably in terms of technology literacy: some patients are experienced with using a

smartphone or tablet and they are confident technology users in their everyday life; others are less experienced with technology and some patients have received their first smartphone during the HeartMan trial. This had implications for how they experienced the technology: Patients wanted to use the system correctly, but some of them were unable to do so and ended the trial prematurely. Also, for patients that were not experienced technology users it was harder to cope with technical problems. They were sometimes unable to identify the cause of issues and started to doubt themselves.

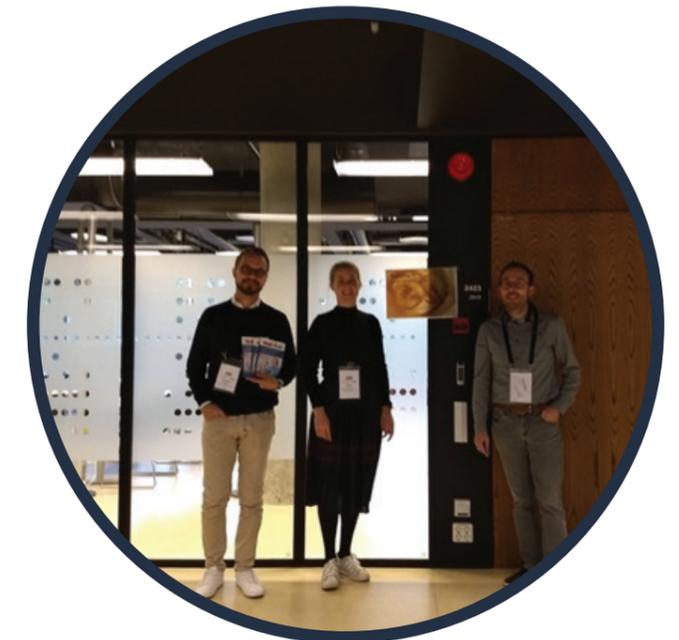


Events

In the past months we presented the HeartMan project at several events:

Workshop at NordiCHI

We organized a workshop at NordiCHI in Oslo on September 29. The NordiCHI conference addresses the field of Human Computer Interaction and is aimed researchers from academia and industry, designers, practitioners, and educators. Constant access to detailed health data and information can interfere with mental wellbeing, as an overwhelming amount of health data can induce stress and anxiety. The aim of this workshop was to address some of these challenges associated with the combination of self-monitoring and mental health and mindfulness goals. We discussed these challenges with researchers working on similar projects in the context of mHealth and psycho-physical wellbeing.



ICT 2018 in Vienna

The HeartMan project was also presented at ICT 2018 in Vienna 4-6 December. ICT 2018 is the latest in the series of events organised biennially by the EC to present ongoing ICT research and innovation and upcoming calls for project proposals, as well as facilitate networking. This year it boasted over 6,000 participants. HeartMan had a stand at the event, where we presented posters and a video, and demonstrated the applications and the wristband. While our stand did not feature any drones or robots (as some did), many people stopped by and found the HeartMan system quite interesting. By the visitors' questions, it was evident that e- and m-health are still perceived as focusing on monitoring. We therefore had to explain that the HeartMan system is focused on helping the patients themselves manage their disease, rather than helping carers monitor them.



In Italy enrolment started in May, and currently 9 controls (all males) and 12 treated (10 males and 2 females) with an average age of 68 are enrolled. At first, participants were recruited by their general practitioners and by the cardiology department, which resulted in only 4 patients by September. After September, patients were therefore also recruited via other departments (medicine, nursing clinic), and we have enrolled another 17 patients.

In Italy it seems harder than expected to recruit participants for the trial. Overall, 164 patients have been screened so far, but many could not participate because of their digital literacy, unwillingness to participate, orthopaedic or other problems, having passed away being hospitalized, being too old (born before 1940) or because we were unable to contact them.



While the holidays season is approaching we are looking back at a great year with many ups and downs. Now we are preparing for a well-deserved break to recharge our battery for the next year.

We wish you a wonderful Christmas and all the best for the new year!
 - The HeartMan consortium -

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