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## Telerehab II: Preliminary results of a study that evaluates the effectiveness of a telerehabilitation program in coronary artery disease patients

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The purpose of the study was to evaluate whether the addition of a motion sensor with automated feed-back by email or SMS to cardiac rehabilitation (CR) could result in improved health conditions of coronary artery disease (CAD) patients. 80 CAD patients in phase II of the CR program were included in this RCT after admission for PCI or CABG. The patients in the intervention group (n = 40) were asked to wear the motion sensor continuously during the day for 18 weeks. Each week patients received new step goals. The feedback program was designed to gradually increase the patients' activity level. In the control group (n = 40), the patients wore an unreadable motion sensor three times for one week for measurement purposes only (week 1, 6 and 18). All patients performed a maximal cardiopulmonary exercise test at week 1, 6 and 18 to determine their VO2 peak.

In the intervention group, the increase in VO2 peak (285.89  $\pm$  385.44 ml/min) was significantly higher, than in the control group (26.88  $\pm$  220.33 ml/min) (P= 0.014) at 18 weeks of follow-up (Wilcoxon Signed Rank test). A significant correlation was found between the daily step count and the improvement in VO2 peak (P= 0.030) with a correlation coefficient of 0.473 (Spearman test). The Kaplan-Meier curve showed a trend toward fewer rehospitalisations for patients in the intervention group (P=0.167)

The addition of a telerehabilitation program to conventional CR resulted in a larger improvement in the patient's physical fitness (VO2 peak), that correlated with the increase in daily step count. Also the intervention group showed a trend toward fewer rehospitalisations

## Biography

Ines Frederix is currently completing her Masters in Medical Science at the Catholic University of Leuven (Belgium) and received her Bachelor in Medicine degree in 2010 at the University of Hasselt with congratulations of the examination board. she is engaged in cardiac rehabilitation research and was as junior researcher active in the Telerehab II study that evaluated the value of a telerehabilitation program for cardiac patients, from January 2011 until December 2012, at the Jessa Hospital, Belgium. She was selected to show her work at the Belgian Society of Cardiology conference and at the Europrevent conference 2012 (Ireland).

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