

## Cost reduction by an internet-based telerehabilitation program in coronary artery disease patients after the acute rehabilitation phase

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Purpose: The Telerehab II trial run over 24 months in the Jessa Hospital revealed that coronary artery disease patients receiving an internet-based telerehabilitation program after the acute in-hospital rehabilitation phase show a trend toward fewer rehospitalisations during the study follow-up period (P=0.09). We investigated the related cost savings.

Methods: 80 patients were included in the randomised, controlled trial after admission for PCI or CABG during phase II of the cardiac rehabilitation programme. Patients with a defibrillator, important arrhythmias or severe heart failure (NYHA class III and IV) were excluded. Patients in the intervention group (n=40) did wear a motion sensor continuously during the day for 18 weeks and received weekly feedback via SMS or e-mail designed to gradually increase their activity level. Patients in the control group (n=40) wore the motion sensor in week 1, 6 and 18 for measurement purposes. They could not monitor their activities and did not receive feedback. The hypothesis was that the reduction in rehospitalisation rate seen in the intervention group, could translate in associated cost savings. The Mann Whitney U test was used to compare the mean cost per patient per day for rehospitalisations for cardiovascular diseases for the intervention group and the control group.

Results: Figure 1, illustrates the mean ( $\pm$  SD) cost per patient per day for the patients in the intervention group and those in the control group during the study follow-up period. The mean cost per patient in the intervention group 1.20 ( $\pm$  5.20) €, was smaller than the mean cost per patient in the control group 4.19 ( $\pm$  11.89) € (P= 0.14).

Conclusion: The addition of an internet-based telerehabilitation programme can reduce the costs associated with rehospitalisations.

