Flanders' Care

YORBODY HEALTH COACH

Hartcentrum Hasselt

Telerehab III

Ziekenhuis Oost-Limburg

jessa ZIEKENHUIS

SF+Z SINT-FRANCISKUSZIEKENHUIS

Telerehab III studie

Lange termijn effecten van telerevalidatie op QOL, CV RF'en en fysieke conditie

(No conflict of interest)

Pilootstudie coördinator:
Prof. Dr. Paul Dendale, Cardioloog-revalidatiearts

Ines Frederix
Master Geneeskunde
Onderzoekster binnen telerevalidatie

Niels Van Driessche
Bachelor Biomedische wetenschappen

Hartcentrum Hasselt

Inhoud

1 Concept van telerevalidatie
2 Waarom telerevalidatie?
3 Resultaten uit de literatuur
4 Aanleiding tot Telerehab III
5 Hypotheses
6 Studie ontwerp
7 Studieverloop
8 Conclusie

1 Concept van telerevalidatie

2 Waarom telerevalidatie?

- Hartrevalidatie is effectief

MAAR
BIJ CONVENTIONELE REVALIDATIE (CR)

- transportmoeilijkheden
- agenda

RESULTAAT

- inclusie percentage (10%–25%)
- FU op lange termijn (27%)

Hansen et al. 2010

3 Resultaten uit de literatuur

Study protocol

Highly accessed | Open Access

A mobile phone-based care model for outpatient cardiac rehabilitation: the care assessment platform (CAP)

Darren L Walters[1*], Antti Sarela[2], Anita Fairfull[3], Kylie Neighbour[3], Cherie Cowen[3], Belinda Stephens[3], Tom Sellwood[3], Bernadette Sellwood[3], Marie Steer[3], Michelle Aust[3], Rebecca Francis[3], Chi-Keung Lee[3], Sheridan Hoffman[3], Gavin Brealey[3] and Mohan Karunanithi[2]

* Corresponding author: Darren L Walters lah10@optusnet.com.au

▸ Author Affiliations

For all author emails, please log on.

BMC Cardiovascular Disorders 2010, **10**:5 doi:10.1186/1471-2261-10-5
Published: 28 January 2010

Abstract

Background

Cardiac rehabilitation programs offer effective means to prevent recurrence of a cardiac event, but poor uptake of current programs have been reported globally. Home based models are considered as a feasible alternative to avoid various barriers related to care centre based programs. This paper sets out the study design for a clinical trial seeking to test the hypothesis that these programs can be better and more efficiently supported with novel Information and Communication Technologies (ICT).

Methods/Design

We have integrated mobile phones and web services into a comprehensive home- based care model for outpatient cardiac rehabilitation. Mobile phones with a built-in accelerometer sensor are used to measure physical exercise and WellnessDiary software is used to collect information on patients' physiological risk factors and other health information. Video and teleconferencing are used for mentoring sessions aiming at behavioural modifications through goal setting. The mentors use web-portal to facilitate personal goal setting and to assess the progress of each patient in the program. Educational multimedia content are stored or transferred via messaging systems to the patients phone to be viewed on demand. We have designed a randomised controlled trial to compare the health outcomes and cost efficiency of the proposed model with a traditional community based rehabilitation program. The main outcome measure is adherence to physical exercise guidelines.

Discussion

The study will provide evidence on using mobile phones and web services for mentoring and self management in a home-based care model targeting sustainable behavioural modifications in cardiac rehabilitation patients.

Trial registration

The trial has been registered in the Australian New Zealand Clinical Trials Registry (ANZCTR) with number ACTRN12609000251224.

***RCT : CAP model vs CR**

***CAP: ↑ therapietrouw**

***CAP: helpt pt doelen te bereiken**

3 Resultaten uit literatuur

Telephone Support Oriented by Accelerometric Measurements Enhances Adherence to Physical Activity Recommendations in Noncompliant Patients After a Cardiac Rehabilitation Program

Thibaut Guiraud, PhD, Richard Granger, MSc, Vincent Gremeaux, MD, PhD, Marc Bousquet, MD, Lisa Richard, MD, Laurent Soukarié, MD, Thierry Babin, MD, Marc Labrunée, MD, Frédéric Sanguignol, MD, Laurent Bosquet, PhD, Alain Golay, MD, Atul Pathak, MD, PhD

published online 18 July 2012.

Abstract | Full Text | PDF | Images | References | Supplemental Materials

Abstract

Guiraud T, Granger R, Gremeaux V, Bousquet M, Richard L, Soukarié L, Babin T, Labrunée M, Sanguignol F, Bosquet L, Golay A, Pathak A. Telephone support oriented by accelerometric measurements enhances adherence to physical activity recommendations in noncompliant patients after a cardiac rehabilitation program.

Objective

To assess the efficacy of a strategy, based on telephone support oriented by accelerometer measurements, on the adherence to physical activity (PA) recommendations in cardiac patients not achieving PA recommendations.

Design

Prospective and randomized study.

Setting

A cardiac rehabilitation program (CRP) at a clinic.

Participants

Stable, noncompliant cardiac (coronary artery disease, heart failure, post–cardiovascular surgery) patients (weekly moderate-intensity PA <150min) were randomly assigned to an intervention group (n=19) or a control group (n=10).

Interventions

The intervention group wore an accelerometer for 8 weeks. Every 15 days, feedback and support were provided by telephone. The control group wore the accelerometer during the 8th week of the intervention only.

Main Outcome Measures

Active energy expenditure (EE) (in kilocalories) and the time spent doing light, moderate, or intense PA (minutes per week).

Results

In the intervention group, the time spent at moderate-intensity PA increased from 95.6±80.7 to 137.2±87.5min/wk between the 1st and 8th week (P=.002), with 36.8% of the sample achieving the target amount of moderate-intensity PA. During the 8th week, the EE averaged 543.7±144.1kcal and 266.7±107.4kcal in the intervention group and control group, respectively (P=.004).

Conclusions

Telephone support based on accelerometer recordings appeared to be an effective strategy to improve adherence to PA in noncompliant patients. This intervention could be implemented after a CRP as an inexpensive, modern, and easy-to-use strategy.

Key Words: Exercise , Patient non-compliance , Physical activity , Rehabilitation

***Accelerometer + telefonische ondersteuning**

***↑ compliantie aan fysieke activiteit**

Guiraud et al. 2012

3 Resultaten uit literatuur

Randomized trial of an internet-based computer-tailored expert system for physical activity in patients with heart disease

Abstract

Background: The CardioFit internet-based expert system was designed to promote physical activity in patients with coronary heart disease (CHD) who were not participating in cardiac rehabilitation. Design: This randomized controlled trial compared CardioFit to usual care to assess its effects on physical activity following hospitalization for acute coronary syndromes.

Methods: A total of 223 participants were recruited at the University of Ottawa Heart Institute or London Health Sciences Centre and randomly assigned to either CardioFit (n = 115) or usual care (n = 108). The CardioFit group received a personally tailored physical-activity plan upon discharge from the hospital and access to a secure website for activity planning and tracking. They completed five online tutorials over a 6-month period and were in email contact with an exercise specialist. Usual care consisted of physical activity guidance from an attending cardiologist. Physical activity was measured by pedometer and self-reported over a 7-day period, 6 and 12 months after randomization.

Results: The CardioFit internet-based physical activity expert system significantly increased objectively measured (p = 0.023) and self-reported physical activity (p = 0.047) compared to usual care. Emotional (p = 0.038) and physical (p = 0.031) dimensions of heart disease health-related quality of life were also higher with CardioFit compared to usual care.

Conclusions: Patients with CHD using an internet-based activity prescription with online coaching were more physically active at follow up than those receiving usual care. Use of the CardioFit program could extend the reach of rehabilitation and secondary-prevention services.

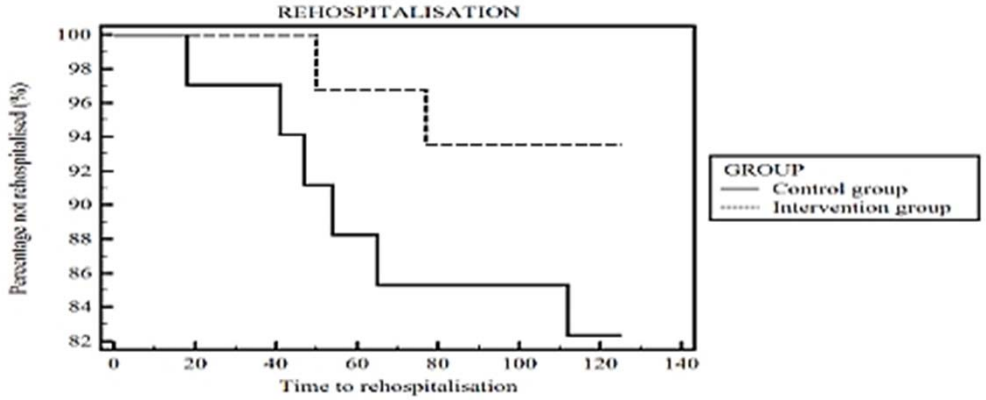
*** CardioFit vs CR**

*** CardioFit: ↑ fysiek actief na 6 en 12 maanden FU**

Reid et al. 2011

4 Aanleiding tot Telerehab III

- Resultaten Telerehab II hoopvol
  - ↑ VO_2 peak interventiegroep > controlegroep (P=0.014) op 18 weken
  - correlatie tussen dagelijkse fysieke activiteit en ↑ VO_2 peak (P=0.030)



5 Hypotheses

- Primaire hypothese:

  Telerevalidatie geeft ↑ gezondheid en fysieke conditie op lange termijn

- Secundair:

  evaluatie effect van telerevalidatie op

  CV risicofactoren

  QOL

  kosten-effectiviteit analyse

6 Studie ontwerp

- Multicentrische RCT

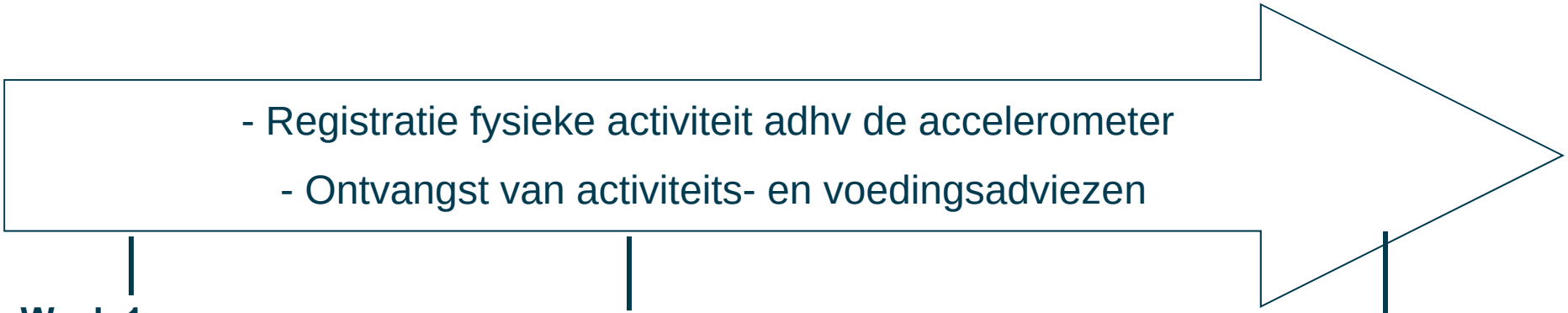
- 140 geïncludeerde patiënten
  - Pt'en met coronair lijden
  - Pt'en met systolisch/diastolisch hartfalen

- 6 maanden opvolging

6 Studie ontwerp

- Recrutering patiënt
  - week 6 van fase II revalidatie
- Inclusie en exclusie criteria
- Randomisatie

7 Studieverloop (interventiegroep)



Week 1

- Bloedanalyse
- Fietsproef
- Informed consent
- 2 vragenlijsten
- Praktische opstart

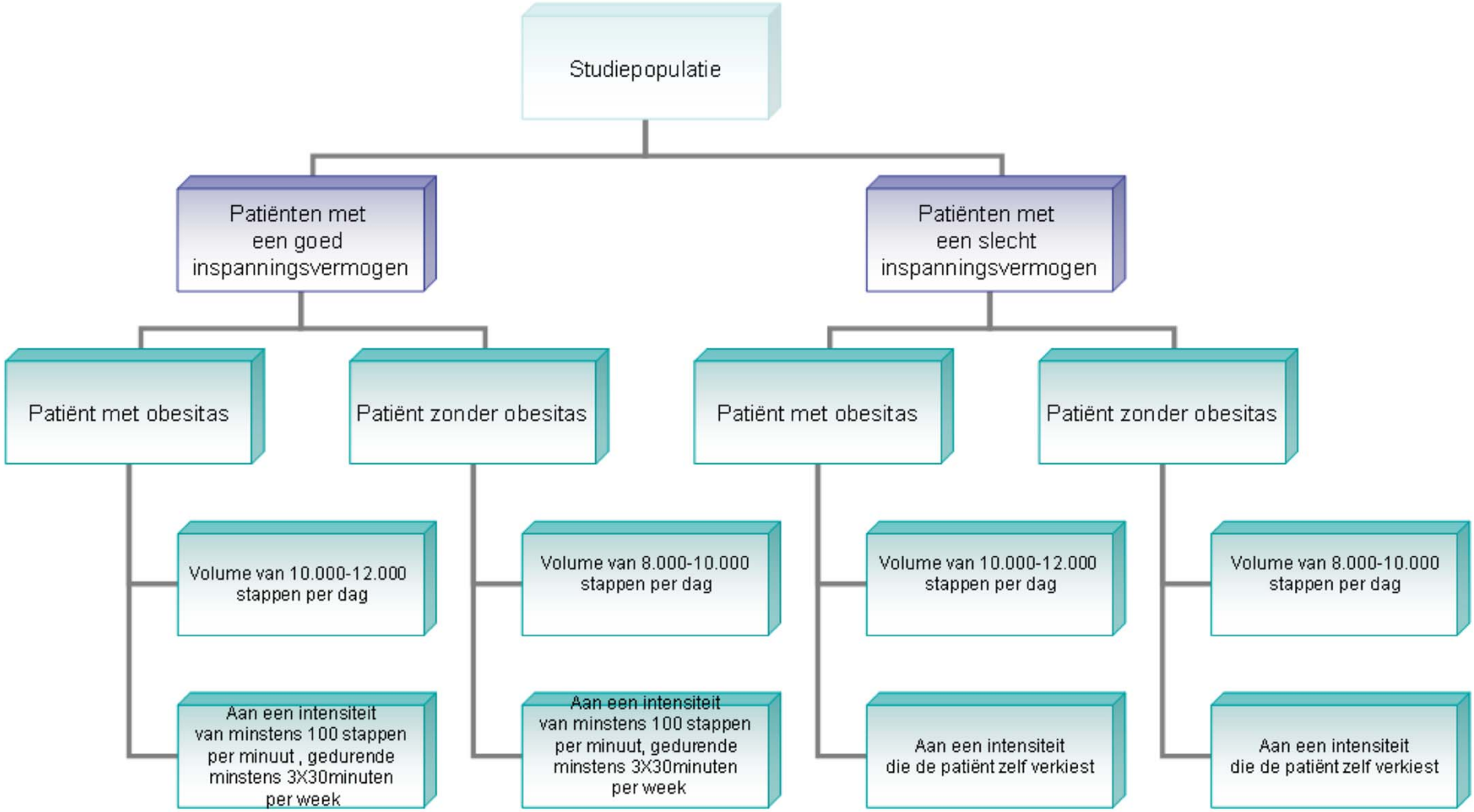
Week 6

- Fietsproef
- 2 vragenlijsten

Week 24

- Bloedanalyse
- Fietsproef
- 2 vragenlijsten

7 Studieverloop
Doelstelling interventiegroep



7 Studieverloop (controlegroep)

ENKEL op week 1, 6 en 24: 9 dagen afgeplakte stappenteller dragen

Week 1

- Bloedanalyse
- Fietsproef
- Informed consent
- 2 vragenlijsten
- Praktische opstart
- Binnenbrengen stappenteller

Week 6

- Fietsproef
- 2 vragenlijsten
- Binnenbrengen stappenteller

Week 24

- Bloedanalyse
- Fietsproef
- 2 vragenlijsten
- Binnenbrengen stappenteller

8 Conclusie

- **Telerevalidatie** biedt oplossing voor problemen, eigen aan CR
- Telerevalidatie: ↑ **fysieke conditie** van de pt
- **Therapietrouw** aan telerevalidatie groter dan aan CR
- Telerevalidatie is potentieel een **kosten-effectief alternatief** voor CR
- **Telerehab III** onderzoekt lange termijn effecten van telerevalidatie op fysieke conditie, QOL, CV RF'en

Hartcentrum Hasselt

Vragen?

ines.frederix@gmail.com

BEDANKT VOOR UW AANDACHT!