

Australian Cardiovascular Health and Rehabilitation Association  
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### Development of an Internet-Based (electronic) Outpatient Cardiac Rehabilitation Program: eOCR

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### Cardiac Rehabilitation in Regional, Rural and Remote locations

#### RESEARCH

#### Utilisation of outpatient cardiac rehabilitation in Queensland

Jan A. Scott, Kylie A. Lindsay and Hazel E. Harkin

**OBJECTIVES:** To determine patient participation rates in outpatient cardiac rehabilitation (OCR) programs, ascertain the barriers to participation and measure the quality of OCR programs.  
**DESIGN AND SETTING:** Retrospective cohort study of patient registrations from selected public and private Queensland hospitals; questionnaire survey of hospitals and all registered OCR programs.  
**PARTICIPANTS:** Patients discharged with cardiac diagnoses between 1 July 1999 and 30 June 2005 from 31 hospitals (24 public, 7 private).  
**MAIN MEASUREMENTS AND MAIN RESULTS:** Rates of referral of hospitalised patients to OCR programs, rates of program attendance and completion; barriers to OCR referral and attendance.  
**RESULTS:** 11 188 patients were discharged with cardiac diagnoses from participating hospitals, of whom 4348 (39%) were referred to an OCR program after discharge. Proportionately more patients were referred from secondary (38%, 1722/4348) and private (20%, 814/4348) inpatient hospitals than tertiary (22%, 958/4348) inpatient hospitals. Fewer than a third of all referred patients completed OCR programs, and only 30% of available OCR program places were fully utilized. Catchment populations of programs with unutilized places had access consistently mortality. Conclusions: There is significant underutilization of heavily based OCR programs in Queensland. Procedures are required for identifying and referring eligible patients to existing programs and improving program compliance. Alternative OCR models are also required.

BMJ 2006; 333: 943-945

### Our previous forays...

Journal of Science and Medicine in Sport (2006), 9, 451-455

ORIGINAL PAPER

### Dissemination of a community-based physical activity project: The case of 10,000 steps

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**KEYWORDS:** Dissemination, Implementation, Health promotion, Physical activity

**Summary:** This paper describes the use of a website for the dissemination of the community-based 10,000 steps program which was initially developed, evaluated and implemented in Australia. Objectives: To describe the website and its use for dissemination and implementation in a 3 year period (July 2004–June 2006) using 10,000 steps program as a case study. Methods: The website was developed and implemented in a 3 year period (July 2004–June 2006) using 10,000 steps program as a case study. Results: The website was used by 10,000 users in 3 years. The website was used by 10,000 users in 3 years. The website was used by 10,000 users in 3 years. The website was used by 10,000 users in 3 years.

### Web-based dissemination/promotion of 10,000 Steps

10,000 STEPS

There are many benefits of being active. Being active helps you feel better, live longer and be healthier.

Visit the 10,000 Steps website for more information and to see how you can get started.

Visit the 10,000 Steps website for more information and to see how you can get started.

Visit the 10,000 Steps website for more information and to see how you can get started.

### Interactive Individual Website Features

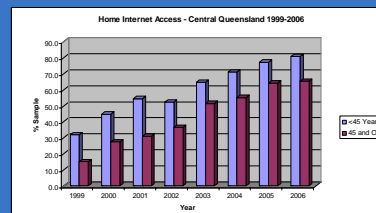
10,000 STEPS

Today's Steps Summary (August 2007)

Steps: 10,000

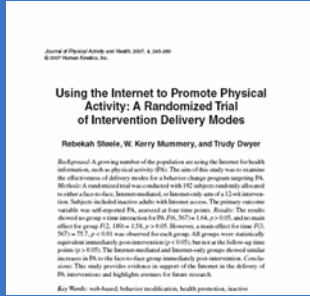
Week	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
2007-08-06	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-08-13	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-08-20	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-08-27	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-09-03	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-09-10	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-09-17	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-09-24	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-10-01	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-10-08	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-10-15	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-10-22	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-10-29	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-11-05	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-11-12	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-11-19	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-11-26	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-12-03	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-12-10	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-12-17	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-12-24	10,000	10,000	10,000	10,000	10,000	10,000	10,000
2007-12-31	10,000	10,000	10,000	10,000	10,000	10,000	10,000

### Home Internet Access in Regional Queensland 1999-2006



Source: Central Queensland Social Surveys 1999 - 2006

## Health Behaviour Change using the Internet...



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### Using the Internet to Promote Physical Activity: A Randomized Trial of Intervention Delivery Modes

Rebekah Steele, W. Kerry Mummary, and Trudy Dwyer

**Background:** A growing number of the population are using the Internet for health information, such as physical activity (PA). The aim of this study was to compare the effectiveness of delivery modes for a behavior-change program targeting PA. Methods: A randomized trial was conducted with 102 urban, middle-aged, sedentary, middle-income, non-smoking, non-drinking, non-medicated, or biomedically unfit of a 12-wk intervention. Subjects included inactive adults with Internet access. The primary outcome variable was self-reported PA, assessed at four time points. Results: The results showed no group × time interaction for PA. PA, 50% at 1 wk,  $p < 0.05$ , and no main effect for group  $F(2, 189) = 1.38, p = 0.05$ . However, a main effect for time  $F(3, 597) = 7.7, p < 0.01$  was observed for each group. All groups were statistically equivalent immediately post-intervention ( $p > 0.05$ ). Net use at the follow-up time points ( $p < 0.05$ ). The Internet-mediated and biomedically unfit groups showed similar increases in PA to the face-to-face group immediately post-intervention. Conclusion: This study provides evidence in support of the Internet in the delivery of PA interventions and highlights areas for future research.

**Key Words:** web-based, behavior modification, health promotion, inactive

## Self-management Approach to Behavioural Skill Development

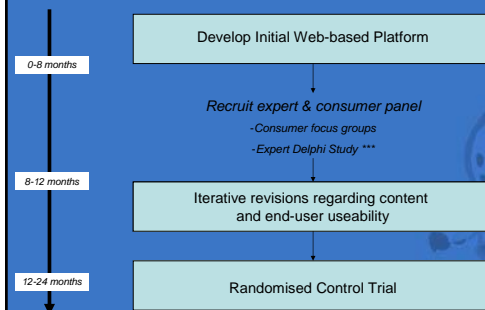


## Outpatient Cardiac Rehabilitation Program: eOCR



- Web-based delivery of recommended cardiac rehab phase II program content
- Electronic case manager functionality
- Behavioural change modules (physical activity)

## Project Timeline/Approach



## Initial Platform Development



## My Topics (content delivery)



## My Records (Self-monitoring/Case Management)



## The Next Steps

- Recruitment and completion of Delphi Study\*\*\*
- Iterative modification of the Health-in-Check web-based platform
- End-user usability testing
  - Patients
  - Case managers
  - Spouse/partners
- Randomised Control Trial (2008)

## Thank You

*Thanks to MBF Living Well Foundation for funding the development and testing of the electronic outpatient cardiac rehabilitation program (eOCR)*