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Development of an Internet-Based (electronic) Outpatient Cardiac Rehabilitation Program: *e*OCR

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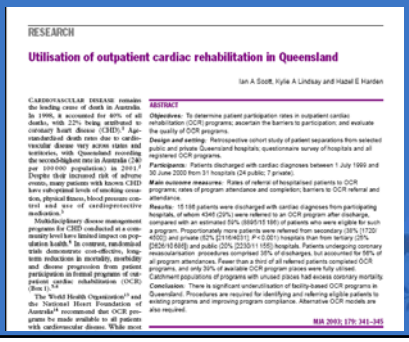
Cardiac Rehabilitation in Regional, Rural and Remote locations



RESEARCH

Utilisation of outpatient cardiac rehabilitation in Queensland

Ian A Scott, Kylie A Lindsay and Hazel E Harden

CARDIOVASCULAR DISEASE remains the leading cause of death in Australia. In 1998, it accounted for 40% of all deaths, with 22% being attributed to coronary heart disease (CHD).[1] Age-standardised death rates due to cardiovascular disease vary across states and territories, with Queensland recording the second-highest rate in Australia (240 per 100 000 population) in 2001.[2] Despite their increased risk of adverse events, many patients with known CHD have sub-optimal levels of smoking cessation, physical fitness, blood pressure control and use of cardioprotective medication.[3]

Multidisciplinary disease management programs for CHD conducted at a community level have limited impact on population health.[4] In contrast, randomised trials demonstrate cost-effective, long-term reductions in mortality, morbidity and disease progression from patient participation in formal programs of outpatient cardiac rehabilitation (OCR) (Box 1).[5,6]

The World Health Organisation[7,8] and the National Heart Foundation of Australia[9] recommend that OCR programs be made available to all patients with cardiovascular disease. While most

ABSTRACT

Objectives: To determine patient participation rates in outpatient cardiac rehabilitation (OCR) programs; ascertain the barriers to participation; and evaluate the quality of OCR programs.

Design and setting: Retrospective cohort study of patient separations 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 2000 from 31 hospitals (24 public, 7 private).

Main outcome measures: Rates of referral of hospitalised patients to OCR programs; rates of program attendance and completion; barriers to OCR referral and attendance.

Results: 15 108 patients were discharged with cardiac diagnoses from participating hospitals, of whom 4345 (29%) were referred to an OCR program after discharge, compared with an estimated 59% (8995/15 186) of patients who were eligible for such a program. Proportionately more patients were referred from secondary (38% [1720/4500]) and private (52% [2116/4031]; $P < 0.001$) hospitals than from tertiary (28% [826/10 649]) and public (30% [2229/11 155]) hospitals. Patients undergoing coronary revascularisation procedures comprised 35% of discharges, but accounted for 58% of all program attendances. Fewer than a third of all referred patients completed OCR programs, and only 39% of available OCR program places were fully utilised. Catchment populations of programs with unused places had excess coronary mortality.

Conclusion: There is significant underutilisation of facility-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.

MJA 2003; 179: 341–345

Our previous forays…

Journal of Science and Medicine in Sport

ELSEVIER

ORIGINAL PAPER

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

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KEYWORDS
Web-based intervention;
Health promotion;
Pedometer

Summary This paper describes the use of a web-site for the dissemination of the community-based '10,000 steps' program which was originally developed and evaluated in a randomised trial in 1998–1999. The web-site provides information and interactive activities for individuals, and promotes resources and programs for health promotion professionals. The dissemination activity was assessed in terms of program adoption and implementation. In a 2-year period (Sep 2004–March 2006) more than 10,000 people registered as users of the web-site (logging more than 8.5 billion steps) and almost 100 workplaces and 13 communities implemented aspects of the 10,000 steps program. These data support the use of the internet as an effective means of disseminating ideas and resources beyond the geographical borders of the original project. Following this preliminary dissemination, there remains a need for the systematic study of different dissemination strategies, so that evidence-based physical activity programs can be translated into more widespread public health practice.

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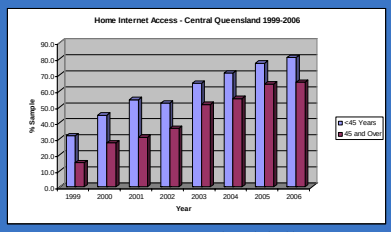
Web-based dissemination/promotion of 10,000 Steps

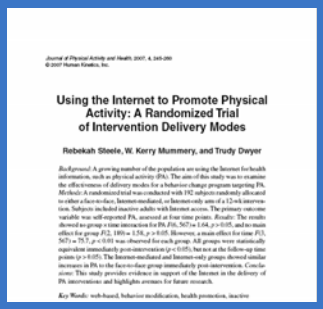
Interactive Individual Website Features

Home Internet Access in Regional Queensland 1999-2006



Source: Central Queensland Social Surveys 1999 - 2006

Health Behaviour Change using the Internet…



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

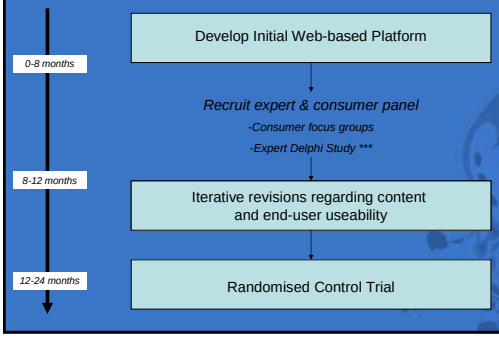
Rebekah Steele, W. Kerry Mummery, and Trudy Dwyer

Self-management Approach to Behavioural Skill Development

Outpatient Cardiac Rehabilitation Program: *e*OCR

- 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

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