

Strategy 1.2: Fund and commission research

Pedometer-based telephone coaching program for supporting heart disease patients to increase physical activity and achieve healthy weight

Cardiovascular disease (CVD) is the leading cause of death and disability in NSW. Many people with CVD are physically inactive, overweight, and have an unhealthy diet. Exercise-based cardiac rehabilitation can reduce CVD mortality by 31%¹ and physical activity interventions have been shown to be cost-effective in reducing hospitalisations and repeat revascularisations.²

In the Illawarra Shoalhaven Local Health District (ISLHD) less than half of eligible patients referred to a cardiac rehabilitation (CR) program start a program and less than half complete a program. Cardiac patients who do not attend a CR program are more likely to be physically inactive, have a higher risk-factor profile and poorer risk-factor knowledge and are more socioeconomically disadvantaged than those who do attend a CR program. Patients' barriers to attendance at a CR program include work commitments and travel time. Alternative models of CR are needed for people who are unable to attend a CR program.

The Health Promotion Service (ISLHD) conducted innovative pedometer-based telephone coaching interventions aimed at increasing physical activity and reducing weight among cardiac patients in ISLHD and replicated elsewhere in NSW.³⁻⁵ The randomised controlled trials showed that the interventions were feasible, low cost and effective for people who did not attend a CR program, and also for those who did attend a program. These interventions could complement existing CR programs which usually operate at full capacity.

The projects were funded through the Health Promotion Demonstration Research Grants Scheme (NSW Ministry of Health) in 2004 and 2008, and thus provide an example of *Population Health Research Strategy 1.2 (Fund and commission research)*. The project partners included: University of Sydney; Heart Foundation (NSW Division); University of Technology, Sydney; Health Promotion Service Murrumbidgee LHD; George Institute for Global Health Sydney; Illawarra and Shoalhaven Cardiac Rehabilitation Services; cardiac rehabilitation services at Wagga Wagga Base Hospital, St George Hospital, Sutherland Hospital and Goulburn Base Hospital; and NSW Office of Preventive Health.

The pedometer-based telephone coaching interventions could be translated into a state-wide program through the NSW Get Healthy Information and Coaching Service (GHS). The GHS provides telephone coaching and support on healthy eating,

physical activity, and weight management for NSW residents. A tailored program for people with heart disease that includes telephone coaching, a pedometer and step recording calendar which replicates the components of the pedometer-based telephone coaching interventions³⁻⁵ would provide an effective model of care at a population health level.

Engaging management and clinicians, combined with embedding referral pathways in clinical practice, has been shown to be key drivers in successful referrals from LHDs to the GHS. LHDs could refine referral pathways to eliminate barriers for clinicians and improve the ease and efficiency of referrals. This could include embedding referrals into clinical software, pathways and practice. Setting key performance indicators around referrals of patients in the LHD could also improve accountability.

Further reading

1. Jolliffe J, Rees K, Taylor RS, Thompson DR, Oldridge N, Ebrahim S. Exercise-based rehabilitation for coronary heart disease. *Cochrane Database Syst Rev* 2001; (1): CD001800.
2. Hambrecht R, Walther C, Möbius-Winkler S, Gielen S, Linke A, Conradi K, et al. Percutaneous coronary angioplasty compared with exercise training in patients with stable coronary artery disease: a randomized trial. *Circulation* 2004; 109(11): 1371-8.
3. Furber S, Butler L, Phongsavan P, Mark A, Bauman A. Randomised controlled trial of a pedometer-based telephone intervention to increase physical activity among cardiac patients not attending cardiac rehabilitation. *Patient Educ Couns* 2010; 80(2): 212-8.
4. Sangster J, Church J, Haas M, Furber S, Bauman A. A comparison of the cost-effectiveness of two pedometer-based telephone coaching programs for people with cardiac disease. *Heart Lung Circ* 2015; 24(5): 471-9.
5. Sangster J, Furber S, Phongsavan P, Redfern J, Mark A, Bauman A. Effects of a pedometer-based telephone coaching intervention on physical activity among people with cardiac disease in urban, rural and semi-rural settings: a replication study. *Heart Lung Circ* 2017; 26(4): 354-61.