

HEARTMOVES

Heartmoves

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Executive summary

Longitudinal studies have shown that physical activity participation is associated with reductions in all cause mortality and has a specific protective effect in reducing coronary heart disease. Physical inactivity whilst being an independent risk factor for cardiovascular disease (CVD), also affects other modifiable risk factors for CVD including type II diabetes, blood pressure, HDL cholesterol and obesity. Rehabilitation programs involving exercise training and provided by health professionals (eg cardiac rehabilitation) have been shown to be cost effective interventions in reducing mortality, however the transition after rehabilitation to an independent exercise routine is often difficult for patients to maintain in the long term. In addition to this group of clients, the increasing rates of obesity, diabetes, and falls in the elderly highlights the need for low to moderate exercise options, which are safe and appropriate for a significant proportion of the adult population who may also have underlying heart health risk factors. These exercise options also need to be attractive for those who may be sedentary and for whom the perceptions of fitness centres being for 'the young, the fit and the beautiful' may present a barrier to entry.

The **Heartmoves** model was designed as an innovative intervention that provided accessible low to moderate intensity exercise programs for the general population, but which could be safely utilised by those who have risk factors for CVD or with existing stable CVD or type II diabetes. Further, the **Heartmoves** model endeavoured to link health professionals and the fitness industry by promoting integration. Health professionals, in particular general practitioners (GPs), were identified as a key stakeholder group due to their responsibility for CVD prevention and chronic disease management.

Fitness leaders were chosen as they:

- possess current cardio-pulmonary resuscitation accreditation
- are registered with a state authority (fitnessnsw)
- are covered by professional indemnity and public liability insurance
- are required to complete accredited continuing education courses to retain registration
- are available and accessible throughout regional and metropolitan NSW.

A comprehensive evaluation of **Heartmoves** was undertaken to evaluate the safety, quality, reach and acceptability of the program to clients, health professionals and the fitness industry. The evaluation also aimed to determine the program's ability to increase the proportion of low to moderate exercise classes offered by fitness centres, and the proportion of fitness centre clients with CVD risk factors. Baseline and follow-up surveys of both fitness centre managers and clients were undertaken, in addition to a survey of **Heartmoves** participants, and an audit of fitness centre records.

The **Heartmoves** intervention incorporated quality assurance and safety guidelines. The **Heartmoves** Fitness Leader Training Workshop gained accreditation from fitnessnsw (15 Continuing Education Credits) and the content was approved as accurate by the National Heart Foundation of Australia NSW Division (NHFA). **Heartmoves** workshops were well attended by fitness leaders, with 63% of those trained going on to establish **Heartmoves** classes. Additionally, the GP continuing medical education (CME) workshops attracted over 71 GPs and a further 66 Allied Health Professionals attended information workshops. The exercise classes were well received by participants, attracting 400 participants with 80% retention rate at six months

during the intervention. The **Heartmoves** programs successfully attracted the target audience with clients being significantly more likely to be over 60 years, retired, obese, and insufficiently active, than usual fitness centre clients. The program was also well received by fitness centre managers with **Heartmoves** being adopted by 72% of fitness centres in the Hunter. However, the random survey of fitness centre clients showed that despite the uptake of **Heartmoves** within the fitness industry, there was no evidence of a subsequent increase in the proportion of fitness centre clients with CVD risk factors. It was successful however, in increasing the proportion of low to moderate intensity exercise classes offered by fitness centres in the Hunter.

Heartmoves programs were found to be acceptable to health professionals, with 10% and 14% of **Heartmoves** clients having attended cardiac rehabilitation (CR) or diabetes education respectively, in the last 12 months (all requiring medical clearance). The audit of **Heartmoves** records in the fitness centres showed that 26% of **Heartmoves** clients had a GP clearance to exercise (5% proactively referred by their GP and 21% responding to the patient's request for clearance). Further engaging GPs and Allied Health Professionals in the use of **Heartmoves** as a safe physical activity referral option may also strengthen the financial viability of low to moderate intensity programs targeting older adults within the fitness industry.

A concurrent study of cardiac rehabilitation programs conducted during the intervention indicated that while 40% of patients are interested in **Heartmoves**, 29% were advised (by either GP, CR nurse or Cardiologist) to attend and few (7%) participated in the programs. Again, the role of health professionals in referral and encouraging participants to exercise was highlighted. Similarly, in a concurrent

study of walking program participants, few had received referral from their doctor, and self reported participation decreased by 66% over the 12 month period. These findings indicate the need for further investigation into barriers to attendance, and identification of strategies to increase referrals and to translate referrals into attendance.

The results of this study suggest that **Heartmoves** has the potential to become a core program within the fitness industry and that combined with the other dissemination components, can provide a capacity building model for delivering safe, appropriate and accessible physical activity resources to the local community. The acceptability of **Heartmoves** to health professionals suggests that **Heartmoves** has the potential to be utilised as an appropriate referral option for area health service rehabilitation programs as well as in GP developed Enhanced Primary Care plans. However, further work is required to identify the barriers to 'transition' from medically supervised to community based non-medically supervised exercise programs among clients. There is also a need to develop tools and resources to enable health professionals, particularly GPs, to take a more proactive role in referring clients to appropriate and safe exercise options.

Heartmoves provides a safe community based exercise program, available at low cost to the public, delivered by registered, specially trained and accredited fitness leaders, and can potentially link with health professionals. Numerous opportunities to further promote and increase participation in physical activity programs such as **Heartmoves** exist. Further investigation is required into strategies to engage health professionals in physical activity promotion, beyond existing strategies such as workshops and script pads.

From the evaluation of **Heartmoves** and the concurrent studies, the following recommendations are made:

- 1 Fitness centres are an appropriate setting for the provision of specialist physical activity programs, however, marketing strategies to engage the fitness industry should focus upon the financial viability and potential of such programs in fitness centres.
- 2 Further strategies, aside from workshops and script pads, to engage health professionals in the promotion of, and referral to, physical activity programs need to be investigated, particularly the development of eligibility guidelines and streamlined referral and clearance tools.
- 3 The linkages between **Heartmoves** and other health professional programs (such as Enhanced Primary Care planning, Chronic Disease Management Programs, diabetes education and falls prevention initiatives) need to be explored.
- 4 Social marketing strategies to promote safe low to moderate intensity exercise programs should be multi-component to ensure wide coverage and include a centralised listing of locations of such programs.
- 5 Collecting data about participants' reasons for 'dropping-out' of programs would provide valuable information to inform future programs.
- 6 Collecting data about fitness centres, or other provider organisations and the successful launches of the program as well as the reasons for discontinuing such programs would provide valuable information to inform future programs.

Introduction

1.1 Background

Cardiovascular disease (CVD) accounted for 42% of all deaths in Australia in 1996 and 12.5% of the problems managed by General Practitioners (GPs).¹ Eighty percent of Australians have at least one modifiable risk factor for CVD, such as diabetes mellitus, hypertension, hyperlipidaemia, overweight or obesity, and tobacco dependence. At highest risk of further cardiovascular events (stroke and heart attack) are those with existing heart disease. The most prevalent population risk factor for CVD however, is insufficient physical activity, with almost 50% of the population failing to meet recommended levels.²

During the past five years, new epidemiological data have stimulated a strong interest in the promotion of physical activity as an achievable public health strategy for improving health and well-being. There are clear recommendations for moderate physical activity from the NSW Chief Health Officer and key professional bodies such as the Centres for Disease Control, American College of Sports Medicine³ and the American Heart Association.⁴

For coronary heart disease and stroke, there is strong evidence of the benefits of regular exercise.⁵ There is also a strong relationship between increased physical activity and decreases in other risk factors for CVD (ie hypertension, hyperlipidaemia and obesity or overweight).⁶ There is also overwhelming evidence that regular exercise is beneficial in the post rehabilitation phase of CVD and there is mounting evidence for health benefits in relation to type II diabetes, osteoporosis, and arthritis.⁷ Physical activity can be a successful adjunctive, non pharmacological treatment for these conditions.

Physical activity interventions in 'at-risk' individuals, including those discharged from hospital with a cardiovascular diagnosis, and those

with risk factors for CVD but not yet manifest disease, have the potential to reduce mortality and morbidity from cardiovascular disease. In the Hunter region of NSW, there is an estimated 2,500 CVD discharges per year from public hospitals.

Currently in the Hunter region of NSW, patients who have been hospitalised with a cardiac event have the opportunity to participate in a Phase II rehabilitation program, which is usually conducted in the outpatient setting over a five to six week period. However, despite the evidence that regular exercise is beneficial in the post rehabilitation phase of cardiovascular disease, there are limited safe community based, non-medically supervised exercise programs to assist patients in maintaining their participation in regular physical activity.

People in these at-risk groups are often cautious about exercise; believing that it might put them at further risk. Indeed, almost half the respondents in a small Australian survey of retired adults stated that they had been told by a medical practitioner to restrict their physical activity.⁸ Most of these respondents cited hypertension, arthritis, and angina as reasons for not exercising, when in fact all of these conditions could be improved with regular exercise.⁹

Seventy percent of patients discharged after a cardiac event are classified as low risk of future events and therefore do not need ongoing medical supervision to exercise. Many of these patients are not compliant with recommendations to continue with an exercise program without the ongoing support from a group leader. An opportunity therefore exists for low to moderate physical activity programs to be offered in the community which would be available to everyone, but which would be specifically safe for clients with stable CVD or with risk factors for CVD, including diabetes (especially those who had participated in Phase II cardiac rehabilitation).

1.2 Project Development

Fitness industry involvement

After considering issues of access, equity and sustainability, fitness centres were identified as an appropriate community setting to provide a low to moderate intensity exercise program, such as **Heartmoves**. Fitness centres have an acknowledged role in the provision of physical activity programs, with the advantages of central location and being serviced by public transport. Fitness leaders were considered appropriate **Heartmoves** leaders, due to their distribution in the community, established expertise in delivering exercise programs, and their current cardio-pulmonary resuscitation accreditation. Additionally, fitness leaders are registered with a state authority (fitnessnsw) that provides professional indemnity insurance and requires accredited continuing education courses to retain registration.

Barriers to exercise participation in fitness centres

Older adults targeted by programs like **Heartmoves** may perceive a number of barriers to physical activity participation in fitness centres. For example, community perceptions and certain marketing formats within the fitness industry concerning the type of programs being offered (eg ‘go hard or go home’) and the type of participants utilising fitness centres (ie ‘the young, the fit and the beautiful’) are potential barriers. Further, programs could be perceived as high intensity and requiring high levels of fitness with potentially lethal consequences for those with CVD or diabetes. These perceptions are likely to act as barriers to participation among the at-risk target group and to health professionals seeking to refer clients to safe and appropriate physical activity.

The fitness industry has shown interest in altering this image so that ‘ordinary’ people would feel comfortable exercising in their facilities. Although some centres have broadened their focus to include programs for groups such as pregnant women or young mothers, the industry has not yet fully explored the potential of niche marketing for special populations.

Barriers to exercise participation are not limited to fitness centres. Surveys have repeatedly shown that large groups of the population do not exercise because they have ‘nowhere to exercise’ and ‘no-one to exercise with’.¹⁰ Additionally, safety is a particular concern for women, who seem to prefer ‘aerobics’ type activities rather than walking or jogging, because these activities are offered in a safe environment.¹¹ Among the insufficiently active population, poor health, fear of injury, being too fat and having no equipment have also been identified as barriers to engaging in physical activity.¹⁰

In the promotion of physical activity, research suggests that marketing of specific exercise programs is more successful than offering general encouragement to participate in activity.² Programs that involve low travel time, low expenditure and little disruption of other activities are more likely to facilitate maintained participation in physical activity.²

General practitioner involvement

General practitioners (GPs) were identified as one of the key stakeholder groups for **Heartmoves** due to their responsibility for managing secondary prevention of CVD and increasing involvement in chronic disease management (including appropriate advice and prescription of physical activity). Currently, there is under utilisation of fitness centres as a referral option for physical activity by GPs. This may be due to a history of poor perceptions in both sectors, which have impeded the useful flow of expertise, referrals and communication.

The **Heartmoves** GP Working Group of the Advisory Team identified a number of issues associated with GP referral to fitness centres. In particular, concerns were raised about the lack of:

- GP awareness of low intensity options in the fitness industry
- information resources (eg a pamphlet) to distribute to patients about local programs
- feedback from fitness leaders about any adverse reactions or symptoms experienced by the client during exercise
- GP knowledge about which categories of cardiovascular conditions were unsuitable for exercise prescription, even at a low to moderate intensity.

Further issues identified with GP referral of clients to fitness centres included:

- concerns about fitness leader accreditation and training to provide specific programs for participants with or at risk of heart disease or diabetes
- concerns about pre-activity screening
- the increasing requests for GPs to remember and deliver an increasing number of health messages.

Since 80% of the population visit their GP at least once a year, well-informed GPs have the potential to opportunistically screen for physical inactivity among patients and prescribe physical activity. Recent research has shown that patients who receive a written prescription for physical activity and some patient information material from their GP, are 1.6 times more likely than controls to increase their total physical activity by 60 minutes per week at six to ten weeks.¹²

Research exploring how best to engage GPs in the prescription of physical activity is now being explored. General practitioners appear to be effective in initiating physical activity participation, but other strategies such as the development of appropriate programs is needed to capitalise on this initial change and enable sustained behaviour in the longer term.

1.3 Project management

The **Heartmoves** project was managed by a multidisciplinary team, which reflected a collaborative partnership between the health and fitness industries (see Appendix A). Funded by a NSW Health Physical Activity Demonstration Research Grant, the initiative built on the strong partnership already established between the Hunter Area Health Service and the National Heart Foundation of Australia (NHFA) (NSW Division, Hunter Branch).

The project manager was based at the Heart Foundation along with one of the project staff, whilst another project officer was based at John Hunter Hospital. The project management team (see Appendix A) met fortnightly, while the larger advisory team (see Appendix A) met three times during the project.

Ethics approval for the project was granted by the Hunter Area Health Service's Ethics Committee.

1.4 Project aim and objectives

Aim

The aim of the **Heartmoves** project was to develop and implement an innovative and sustainable exercise program that met the needs of older clients, particularly those with, or at risk of CVD, which was acceptable to both the fitness industry and referring health professionals.

Objectives

The objectives of the **Heartmoves** project were to:

- 1 Evaluate the **Heartmoves** intervention in terms of its:
 - quality and safety
 - acceptability
 - reach
 - retention.
- 2 Determine the intervention's effectiveness in increasing the proportion of fitness centre clients with CVD risk factors by 5% from baseline to follow-up.
- 3 Determine the intervention's effectiveness in increasing the proportion of low to moderate intensity exercise classes offered by fitness centres in the Hunter region from baseline to follow-up.

Concurrent studies

In addition to the **Heartmoves** intervention, two concurrent studies were undertaken in parallel. The first followed a cohort of clients participating in cardiac rehabilitation for nine months to determine participation in physical activity, and the second study examined the extent and nature of participation in structured walking programs in the Hunter during the intervention period. The results of these concurrent studies are reported in Sections 5.3 and 6.3.

