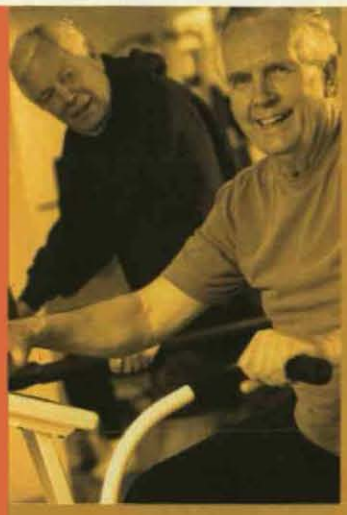
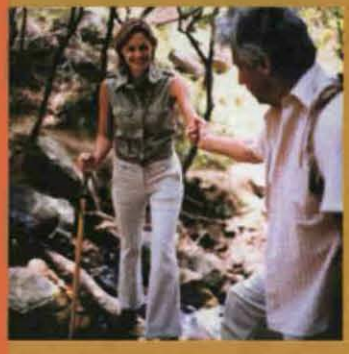
The National Framework for Developing General Practice Exercise Referral in Ireland





Ireland needs a Change of Heart

Minister's Forward

Regular physical activity is one of the most important choices people can make, along with not smoking and a healthy diet, to enhance their health and help in preventing and managing the effects of many chronic conditions.

The recommended advice to achieve health benefits is to build up to at least 30 minutes of moderate intensity physical activity most days of the week. It is estimated that about 6 out of every 10 Irish people do not take enough physical activity for health benefits.

Clearly, given these levels of physical inactivity many innovative strategies are required to encourage regular physical activity in the population. The Government's Health Strategy, Quality and Fairness - A Health System for You and the Cardiovascular Health Strategy identify the role of the GP, as a member of a primary care team, in promoting health messages.

The essence of this approach lies in the fact that patients are often more concerned about their health when visiting their GP and thus are more responsive to the information they receive. This is reflected in the Slán survey, which indicates that GPs are the main source of health information for 44-75% of the population. The reported practical application of GPs providing advice on physical activity varies and thus represents an untapped resource in the health promotion domain. The pilot GP exercise referral programmes completed in the Southern and Mid Western Health Boards demonstrate the merit of this approach.

As a first step to addressing the infrastructure necessary for the development of GP exercise referral in Ireland my Department established a Working Group to address the training needs for exercise co-ordinators. In completing its work the Group also addressed the framework through which GP exercise referral could be developed in Ireland.

I am delighted to endorse the Group's report and I am committed to implementing its recommendations within available resources.

Micheál Martin

Micheál Martin T.D.
Minister for Health and Children

The National Framework for Developing General Practice Exercise Referral in Ireland

1. Background

Regular physical activity is one of the most important choices that people can make, along with not smoking and a healthy diet, to enhance their health and help in preventing and managing the effects of many chronic conditions.

Depending on an individual's lifestyle, being physically active means different things to different people. However physical activity is defined as 'any bodily movement produced by skeletal muscles that results in energy expenditure'.

The recommended advice to achieve health benefits is to build up to at least 30 minutes of moderate intensity physical activity most days of the week. Physical activity therefore includes daily activities such as walking, housework or gardening and the key to developing a more 'health enhancing' active lifestyle can be achieved through putting the appropriate effort into these activities during the normal course of the day.

It is estimated that about 6 out of every 10 Irish people do not take enough physical activity for health benefits. Men and older people in particular are the least active groups of people who do not take sufficient activity to achieve physical and mental health benefits. For those who are active the challenge is staying motivated.

2. Promoting Physical Activity

Given the prevalence of physical inactivity internationally, research has recognised that more innovative strategies are required to encourage regular physical activity in the sedentary population. There has been increasing interest in promoting physical activity through Primary Health Care, based on the view that the physician is a powerful source of health advice. The national Slán survey[1] indicates that General Practitioners are the main source of health information for up to 75% of the population.

Referral to physical activity is an important part of preventing chronic illness and the onset and management of medical conditions. Primary Care - A New Direction which is part of the Government's Health Strategy, Quality and Fairness: A Health System for You[2], Building Healthier Hearts[3] and the Health Promotion Strategy 2000-2005[4] recognise the key position General Practitioners have towards influencing the health related behaviour choices of their patients.

3. Background to General Practice Exercise Referral in Ireland

3.1 Existing Schemes

To date in Ireland, two Health Boards (the Mid Western and Southern) have piloted schemes for the referral by General Practitioners of patients with low risk medical conditions to specially designated exercise professionals. While details of these schemes are set out in **Appendix 1**, an overview is presented below.

In the Southern Health Board, nine General Practitioners were recruited. Participants joined at any time and completed a twelve-week programme assisted by an exercise co-ordinator who was based at a Leisure Centre. The agreed exercise programme was either leisure centre, home and/or community based depending on the participant's circumstances. The programme included people aged from 18 years to 84 years.

Each participant under the pilot in the Mid-Western Health Board completed a 9-month programme with four assessments at four time points (baseline, 3 months, 6 months and 9 months). Participants were aged between 30 and 50 years. Eight General Practitioners were initially recruited which increased during the pilot to ten. Both private and community based centres were invited to participate (three community centres and one private leisure centre were used for the programme). Both home and leisure centre based programmes were provided, with interventions tailored to individual needs based on behavioural change strategies.

The 177 participants in the pilot schemes were monitored and their progress was evaluated throughout the course of the programmes. The evaluations measured activity levels and qualitative measurement of participant's mental health benefits from being more active. Results highlight that positive changes in attitude and perception of physical activity and participants' perception of their own mental, physical, general health and vitality resulted from increased activity. Participants felt that there was a positive change in their health related behaviour, and reported that they would continue with their exercise programme after the course finished.

3.2 Existing Structures

The partnership approach between the General Practitioners, the leisure centres and the health boards worked very well in both pilots and is considered to be central to the success of any future development of the programme.

The co-ordinators are vital to any referral system. Their individual expertise is recognised and they hold a position of trust with the General Practitioner and participants alike.

3.3 Government Policy

The Government is committed to putting in place the infrastructure necessary for developing and implementing a General Practice Exercise Referral Programme in each health board. In that regard, in 2001 a Working Group was set up by the Department of Health and Children to look specifically at the training requirements for Exercise Co-ordinators of GP Exercise Referral Schemes. The terms of reference and a list of the membership of the Group are attached at **Appendix 2**. To achieve this task, the Group had also to address the appropriate national framework through which GP Exercise Referral could be developed in Ireland. The recommendations from the Working Group are contained in this document.

4. Conditions Appropriate for Inclusion in Exercise Referral Programmes

Referral to the exercise co-ordinator must be subject to GP assessment and take account of each individual's circumstances. Patients presenting with the following conditions are considered appropriate for inclusion in the referral scheme. See **Appendix 3** for detailed standards.

- Deconditioned through age or inactivity
- Diabetes
- Hypertension
- Hyperlipidemia
- Osteoarthritis
- Overweight/Obese
- Stress/Anxiety
- Depression
- Asthma
- Osteoporosis
- Chronic Obstructive Pulmonary Disease
- Backpain

5. Role of Co-ordinators

It is considered that two distinctly different co-ordinators are required:

- co-ordinators to operate the scheme at local level; and
- co-ordinators to manage and evaluate the service at regional level.

The respective roles of each can be summarised as follows:

5.1 The functions of the Local co-ordinator will include:

- planning and tailoring an exercise programme to meet individual needs,
- assessing and monitoring participants progress,
- providing support and encouragement to participants, and
- reviewing and monitoring the programme.

5.2 The functions of the Regional co-ordinator will include:

- supporting and advising local co-ordinators,
- managing and monitoring all programmes in the area,
- evaluating all programmes in the area,
- planning further development of services, and
- liaising with the Health Promotion Department, the Primary Care Unit and other relevant departments of the health board.

6. Training Needs for Co-ordinators

GP exercise referral programme training should form part of continuing professional development. Each co-ordinator needs specific training in a *stand-alone* course outlined in **Appendix 4** on top of their current training and experience. While it is a person's overall current training/experience that distinguishes their suitability for being a local or regional co-ordinator, minimum levels of training and experience are required for entry to the GP exercise referral course. Levels above these will **not** provide any exemption for any student to complete the full course.

It is considered that people with training/experience in exercise and fitness as well as healthcare experience are the most suitable people to be GP Exercise Referral Co-ordinators.

To be admitted to the GP exercise referral course persons are required to have achieved the following minimum level of training and experience.

6.1 Qualifications required for Local Co-ordinators

- At least 300 hours training and six months relevant experience in health and fitness, leisure and recreation.

6.2 Qualifications required for Regional Co-ordinators

- Primary, relevant or recognised qualification where exercise or sports medicine or physiotherapy or nursing has formed a major component, and
- Suitable project management experience in the health or exercise field.

7. GP Exercise Referral Training Course Content

Having attained the minimum entry requirements set out above, further specific training is necessary for local and regional co-ordinators. International experience shows that there are many desired components to a recognised training course for co-ordinators. The GP exercise referral course should include key elements such as rationale, design of programme, delivery mechanisms and education about key illnesses. In addition, a specific module would be required to cover management issues for regional co-ordinators.

It is also desirable that the same course should be delivered at a number of locations around the country, where practicable. It is envisaged that distance learning would encompass a significant part of the course work for students and that a maximum of 7 days or 14 half days contact work would be part of the course delivery. The preferred option is that participants would attend a course for a maximum of two days per week over a period of time.

The modules for inclusion in the course, to be designed, are set out in **Appendix 4**.

8. Roles of Health Boards and Leisure Centres

Regional co-ordinators will be employees of health boards and local co-ordinators will be leisure centre employees. Health boards and ILAM Ireland will identify suitable leisure centres to participate in the scheme and the health boards will provide an appropriate grant to those leisure centres towards the cost of training in the GP exercise referral course and their participation in the programme. A service agreement between the health board and leisure centres should reflect this. Regional co-ordinators will oversee the system at regional level and monitor the programme.

Facilities wishing to provide GP Exercise Referral Programmes will be licensed /accredited by ILAM Ireland / Health Boards. Participating facilities will be open to audit by independent auditors appointed by the National Steering Committee (see para. 10 below.)

9. Payment for Courses

It is envisaged that health boards should make provision towards the cost of training for local co-ordinators, through the grant and service agreement referred to above.

10. National Structures and Course Ownership

A National Steering Committee should be established and be responsible for overseeing all aspects of the development of GP Exercise Referral in Ireland.

Training materials, examinations and accreditation will be overseen by the National Steering Committee. The Department of Health and Children will have copyright on all materials and modules. Trainees successfully completing the course will be awarded a joint Department of Health and Children/ILAM Ireland certificate.

The National Steering Group should comprise of representatives from:

- the Department of Health and Children (Chair),
- the Health Boards,
- ILAM Ireland,
- Irish College of General Practitioners,
- Irish Sports Council,
- Local Sports Partnerships,
- Exercise and Sports Science Association of Ireland, and
- Recreation Education Forum.

The Steering Group's terms of reference should include:

- Oversee the development of the programme and related course materials,
- Oversee the delivery of the programme and the related training course, ensuring availability on a nationwide basis,
- Establish minimum criteria for the selection and monitoring of leisure facilities to the programme,
- Advise on the allocation of available resources towards the development of the programme, and
- Undertake an evaluation of the programme at the end of the first year.

11. Course Delivery and Assessment

ILAM Ireland supported by the Health Promotion Unit of the Department of Health and Children will commission the development of the course materials. ILAM Ireland will recruit and appoint an experienced and qualified team of experts to deliver all modules of the programme.

Continuous assessment and final examination, including a practical element are considered desirable. Qualifications would be valid for 3 years and would require a one-day refresher course every 3 years.

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Current Exercise Referral Schemes

Mid Western Health Board Exercise Referral Scheme

Introduction

Given the prevalence of physical inactivity internationally and the wide scope of the determinants research, it has been recognised that more innovative strategies are required to encourage regular physical activity in the sedentary population (Illffe 1994). Health promotion initiatives globally have focused on the role of the GP and have targeted this influential factor in promoting certain health messages (Building Healthier Hearts 1999). Accordingly, the promotion of physical activity has become an important issue, with the prescription of physical activity by the GP being currently extremely popular (King, 1998). This approach has been endorsed in the US with both Healthy People 2000 and 2010 including an objective on Physician counselling for physical activity. While in the UK three extensive reviews have been conducted outlining the need for the quantification of the effect of this type of intervention given that some 400 schemes are in operation. (Biddle, 1994, Hillsdon, 1995, Riddoch, 1998).

The essence of this approach lies in the fact that patients are often more concerned about their health when visiting their GP and thus are more responsive to the information they receive (Neale, 1991). This is reflected in national statistics, which indicate that GP's are the main source of health information for 44-75% of the population (Slán, 1999). However the role of physical activity in the prevention of NCD (Non communicable diseases) is a relatively new concept and reported practical application of GPs providing advice on physical activity varies. Wilford, 1992 reported that 91% of GPs encouraged their patients to engage in regular physical activity. In contrast Friedman, 1994 and Harper, 1994 reported that only 15% and 7% respectively of sedentary adults who had visited a GP in the past year reported being advised to exercise more. These results would indicate that the promotion of physical activity is not widespread and thus represents an untapped resource in the health promotion domain.

Background: Exercise Adoption/Adherence

The available evidence indicates that the most dramatic reduction in risk can be seen between the most sedentary individuals and the next highest activity category (Blair, 1996). However strategies to bring about lifestyle change in this group need to be very comprehensive given that the consensus of research on adherence, even within supervised programmes, shows that approximately 50 % of individuals that engage in an exercise programme dropout within 3-6 months (Dishman, 1988). Exercise programmes in the past have predominately been designed for people who have decided to begin or continue an exercise programme, yet a large proportion of the population lie outside these margins, outlining the need for tailoring of interventions (Dishman, 1988).

The transtheoretical model (TM) originally developed by Prochaska & DiClemente 1983 has been successfully applied to tailoring interventions in the domain of addictive behaviours and its effectiveness in guiding the design of successful exercise intervention has been proven (Marcus 1992, 1996, 1998). The TM offers a comprehensive approach to behavioural change (Prochaska 1994), which delineates the individual into one of 5 stages with specific implications in the type of intervention applied to each stage (Nigg, 1998). Interventions based on the TM utilise the core constructs of stage of change, processes of change, decisional balance and self efficacy (Marcus and Emmons 1998). In both cross sectional (Marcus & Simkin 1993) and longitudinal (Marcus & Emmons 1998) studies progression in motivational readiness for physical activity adoption is significantly and positively associated with increases in self reported time spent in physical activity.

Methods Design

The purpose of the overall study was to test the efficacy of introducing a GP exercise referral method under "ideal conditions" on sedentary individuals. Therefore only GPs and Leisure Centres that were interested in the promotion of physical activity within a sedentary population were recruited. Strict criteria for patient selection was agreed with all GPs prior to referral, the basis of which was focused on attracting those who would benefit most from a physical activity intervention.

Appendix 1

Intervention was based on the individuals' stage of change with assessments carried out at four time points (baseline, 3 months, 6 months, and 9 months) Results were compiled on an intention to treat basis. Training provided to GP and Leisure Centre personnel addressed the core components of the programme including criteria for patient selection, concepts of behavioural change intervention and the ethical issues of importance in such an intervention. Prior to commencement of the intervention ethical approval was obtained from the Irish College of General Practitioners and the University of Limerick.

Patient Selection

Healthy sedentary men and women (n=26) were recruited opportunistically through GP practices (N=10). Sedentary was defined as belonging to the first three stages of behavioural change (precontemplation (PC), contemplation (C), preparation (Prep)). Exclusionary criteria included age <30 and >50 years, orthopaedic problems, or any of the signs and symptoms associated with cardiovascular or metabolic conditions as outlined in the ACSM guidelines (ACSM 1999). The patients were contacted within 1 week of receiving the referral to arrange an initial meeting, which took place either in a private room within the Leisure Centre or in the local offices of the Mid Western Health Board. All patients prior to the commencement of the intervention completed consent forms. Of the 26 patients referred 20 were recruited, 14 completed 4 assessments while all 20 completed 3 assessments. Six patients were excluded based on information being contrary to that outlined in the inclusion criteria. The measures used in this study include assessment of psychological constructs of stage of change, processes of change, self efficacy and decisional balance; self reported physical activity assessment (Scottish Physical Activity Questionnaire) and physiological measurements. The main outcome measures were the psychological constructs and the self reported physical activity while the physiological measurements were used as a motivational tool.

Validity and reliability for psychological constructs are documented elsewhere (Marcus & Selby 1992, Marcus & Owen 1992, Marcus, Rakowski & Rossi 1992, Marcus & Rossi 1992, Marcus & Simkin 1993), while the Scottish physical activity questionnaire has been shown to be reliable with a test retest correlation coefficient of r=.998 (Lowther 1999).

Intervention

The intervention consisted of individually tailored programmes, which were based on the participants' stage for physical activity adoption and physical activity preferences. The reports consisted of three types of feedback;

- An assessment of participants stage of change,
- An assessment of the individuals self efficacy, decisional balance, cognitive and behavioural process use and how the profiles compare to what has been presented in the literature (expert generated normative feedback), and
- Reports generated after baseline assessments provided feedback regarding progress made on the psychological constructs and changes in actual minutes physical activity participation since the previous assessment (Expert system ipsative feedback).

Information provided was based on recommendations from manuals developed and validated by Marcus and Emmons (1998) and factors outlined in "Changing for Good" (Prochaska 1995). Additionally physical activity recommendations were based on individual preferences with optional home and facility-based alternatives. The Leisure Centres provided reduced rate incentives for a period of 12 weeks.

Results

At the initial consultation with the GP, patients were classified as PC (n=7, 35%), C (n=8, 40%) and Prep (n=5, 25%). A further breakdown indicated that males were more likely to be classified as PC, (42% vs. 25%) and less likely to be in the C stage (33% vs. 50%) with no gender difference observed in the Prep stage. Baseline assessments conducted within 1 month, illustrated a shift in the stage profile 15% PC, 50% C and 35% in the Prep stage. Thus there was a strong indication of progressive stage movement as a result of the GP consultation and subsequent referral to the intervention programme.

Effect of the Intervention

Stage of change

Baseline to three months represented the time frame of greatest progressive stage movement with 75% of the group progressing 1 or 2 stages. Across the assessments all PC at baseline moved forward on the stage of change continuum with no relapse to their baseline stage recorded. Those classified in the C and Prep stage at baseline showed clear indications of forward stage movement throughout the 4 assessment points however there was some indication of recycling.

Processes of Change

The greatest changes are observed in the baseline-3 month stage regardless of baseline stage of change. At 3 months there was heightened use of cognitive processes with PC stage showing the largest changes from baselines values. Behavioural process score increase progressively across stages from 3-6 months and from 6-9 months.

Decisional Balance

The overall trend was a progressive increase in pros scores corresponding with a decrease in cons scores with the most significant change observed from baseline to 3 months. Analysis by baseline stage indicated that those in the Prep stage had the lowest recorded cons scores across all the assessment points.

Self Efficacy

Those in the PC stage score lowest on self efficacy in the baseline assessment follow by contemplators and then preparators. There was a progressive increase in self efficacy scores for each group across the 4 time points.

Physical Activity

Total physical activity increased across the assessment points with the greatest change observed from baseline-3 months (12% increase) and 3-6 months (8%) periods. Increases in the 6-9 month period were less significant (2% rise). The observed changes in total physical activity were primarily due to changes in leisure time physical activity, which reached a maximum level at 9 months of 145 minutes per week while occupational physical activity during the same time period showed negligible, increases.

Discussion

The development of the programme followed key recommendations outlined in the research primarily the review by Riddoch, 1998. The strengths of this study include the fact that all efforts were made to attract the most sedentary section of the population through opportunistic recruitment within the GP surgeries with both the referral and the intervention having a strong theoretical basis. In addition the intervention was carried out for 9 months which is a considerable strength given that 10-12 week programmes dominate the literature (Lord & Green 1995) which merely demonstrate efficacy (i.e. level of adoption) not effectiveness (i.e. adherence).

Central to the success of the programme was a change in physical activity participation, which was achieved with the greatest increase observed in leisure time physical activity in agreement with Lowther 1999. These results support the view that individuals find it easier to incorporate changes in leisure time activity whereas occupational activity is more standardised and less responsive to stage of change movement. This maybe due to validation issues, which are currently been addressed in relation to occupational physical activity (Lowther 2001 personal contact).

There was a positive stage of change movement between the referral and the baseline assessment, which indicates the ability of the GPs within a brief intervention to positively affect the health of their patients. Furthermore the intervention resulted in a positive stage of change movement across the assessment time points, with 50% of the group in the action stage after 6 months while at 9 months 25% were in action and maintenance with a further 40% in the Prep stage. These results are in agreement with Dishman (1994) however it must be stated that at the 9 month stage there were a high percentage still involved in the programme but due to strict classification criteria were classified in the Prep rather than the Action stage.

Processes of change, self efficacy and decisional balance scores showed expected trends which indicates that despite relapse in stage movement the intervention succeeded in enhancing the tools necessary to bring about change in an individual's

Appendix 1

attitudes to physical activity. Decisional balance emerged as particularly relevant for those in the PC stage.

Observational Data

A key finding in this research is the difficulties encountered in getting referrals through the GP surgeries, which has been previously outlined by Hillsdon 1998. Although efforts were made to overcome problems in the referral process, from an observational viewpoint the main factors that were impeding the process were time constraints and limited training. The motivation level of the GP to promote physical activity must be a consideration also, given that all of the referrals came from 50% of the GP practices (male: 2 females: 3) with a higher individual response rate from female GPs. McKenna (1998) reported that both GP and practice nurse (PN) stage of change for physical activity is directly related to their ability to promote it within general practice with GPs in the latter stages of action and maintenance three times more likely to promote physical activity while for PN the same difference quadruples.

Other researchers have expressed concern on relying on GPs only for referral patients with a review by Fox 1997 finding no schemes that drew on more than 1% of the patient base of participating GPs. Alternative methods suggested include contacting the patients directly as outlined in the "Move It" study and the "Prescription for Exercise Study" (Hillsdon 1998) with preliminary results indicating positive findings. However the role of the GP is important, with numerous other studies (King 1991, Riddoch 1998) showing that frequent contact with their patients, limits dropouts and that perhaps at least six months of professional contact is needed before the increased physical activity pattern becomes incorporated into behaviour.

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2. Southern Health Board

GP Exercise on Referral in Cork

The rationale for the GP Exercise on Referral Scheme in the Southern Health Board region involves a partnership between the Health Promotion Department, Southern Health Board, Leisureworld leisure centre, Bishopstown, Cork and 9 General Practitioners from 5 practices in Cork City, to enhance participation in active lifestyle, to a wider and more needy proportion of the community. In this respect, exercise referral schemes in Primary Care can result in sustainable improvements in physical activity and indicators of health, and in so doing so, they can have a significant part to play in the national physical activity strategy.

The scheme was piloted between February 2000 and December 2000 and was launched by Mr. Micheál Martin, T.D. Minister for Health and Children. The protocol and design of the scheme are based on evidence and reviews of schemes that have been operating for a number of years in the U.K.

Aims and Objectives of the scheme

- To pilot a programme for referral of suitable patients for exercise participation in a controlled and safe environment.
- To agree categories for referral with participating General Practitioners, based on conditions commonly presenting in general practice, for which there is scientific evidence of the beneficial effects of physical activity.
- To pilot and formalise communication links between general practices and a designated leisure facility to which patients can be referred for exercise.
- To encourage and facilitate sedentary individuals, attending general practitioners, to increase exercise participation, towards the targets set in the then national health strategy, Shaping a Healthier Future.
  - a 30% increase in adults doing 30 minutes light exercise per day.
  - a 20% increase in adults doing 20 minutes moderate exercise three times a week.
- To provide objective evidence of improved physical health of participants.
- To encourage changes in lifestyle and attitudes to physical activity by reinforcing the benefits of long-term adherence.
- To increase the use of leisure facilities by groups currently poorly represented as leisure industry customers.
- To create a database of local physical activity opportunities to increase and encourage follow-on choices for participants.

The ultimate goal is to facilitate and encourage long-term participation in a healthy and active lifestyle.

Operation of the Scheme

The scheme co-ordinator for the duration of the pilot at Leisureworld was Johann Hoey, a qualified R.G.N. with a Master of Science Degree in Sports Medicine.

Appendix 1

On referral by the G.P., the participants attended Leisureworld, with a referral form that provided details of medical conditions and precautions where Johann carried out a full health and lifestyle screening prior to commencement of the exercise programme

Programmes were individually tailored according to ability, by the co-ordinator and the staff at Leisureworld, and involved a combination of group and individual sessions. The facilities at Leisureworld are of the highest standard and afford scheme participants the opportunity to exercise in the gym or the pool. Classes were run 5 days per week and included circuit training, aqua fit, group gym and aerobics. Participants were encouraged to attend at least 3 times a week. Approx. 15% of those who have been assessed were unable to attend the centre, but commenced programmes which included walking etc. They were free to contact the co-ordinator at any stage and did so. The co-ordinator also contacted participants on a regular basis via telephone to monitor their progress and answer any questions they may have had. This community element of the scheme was an outcome that merits attention.

Clients were encouraged to build physical activity into their daily lives and attend group talks on healthy eating and physical activity during their 12 week programme, planned and delivered by Johann and Linda Hogan, Health Education Officer, Southern Health Board. During the course of the scheme, patients received reduced cost use of the facility.

On completion of the 12-week monitored exercise programme, participants were reassessed both in terms of physical improvement, and in their own subjective general well being. They were given details and encouragement for continuation of their activities either at the leisure centre or at other locations in the area. Full reassessment details and a report on participant's progress was sent to the referring GP on completion of the programme.

Participants were welcome to contact the scheme co-ordinator for information or advice at any stage during and after completion of the programme to help them to maintain their new active lifestyle. All scheme participants were contacted by post six months and one year after the scheme to ascertain their ongoing activity levels and general health.

The pilot programme is supported by a steering group which includes Ms. Catherine Murphy, Health Promotion Manager, Southern Health Board (Chair), Mr. Patsy Ryan, General Manger, Leisureworld, and President, I.L.A.M., Dr. Eddie O' Sullivan, Chair, I.C.G.P., Cork, Dr. Norman Murphy, GP /Primary Care Unit, Southern Health Board and Dr. Kathy Fulcher, Health, Fitness and Nutrition Consultant.

Staff at the leisure centre have undergone training and participated in the design and monitoring of both individual and group programmes under the supervision and guidance of the co-ordinator.

Evaluation

The pilot programme ran for 9 months (3 cohort x 12 weeks). Independent evaluation of the scheme was undertaken by the Department of Public Health, Southern Health Board and has been completed.

The evaluation included process and outcome evaluation which focused on short and medium term outcomes.

Aims of Evaluation

- To determine the success/failure of the scheme, and
- To determine the feasibility of expanding the scheme.

Objectives

- To describe the scheme,
- To profile participants on the scheme,
- To examine health and lifestyle status, and see if the scheme had any influence in altering these,
- To explore participants future intentions with regard to physical activity, and
- To document experiences of those involved in the scheme, in both the setting up and operation of the scheme.

Evaluation of Process

It was decided that it would be important to evaluate programme uptake with regard to a few different parameters.

These were: Age,
Sex,
Socio-economic group, and
Diagnostic category/reason for referral.

Evaluation of Outcome

Both qualitative and quantitative changes were explored in the evaluation. Qualitative changes were changes in attitude and perceptions of physical activity, and the participants' perception of their own mental, physical, general health and vitality.

Quantitative changes were those in exercise/physical activity habits, smoking and alcohol consumption and physiological changes, e.g. Weight, Blood Pressure, and Body Mass Index.

Results

Age: The mean age for attending the scheme was 54 years, participants ranging from 22-84 years. Female participation was 65.4% and male participation was 34.6%.

Referral Categories

12 referral categories were agreed prior to commencing the scheme. Only 10 are present in the list below, suggesting that the other 2 (other CHD risk factors and smoking) categories were not represented in the population used for evaluation purposes. It can be clearly seen that many participants had multiple reasons for a referral onto the scheme.

Condition	Number
Weight reduction	54
Hypertension	27
Osteoarthritis	25
Hyperlipidaemia	19
Inactivity	16
Diabetes	6
Osteoporosis	6
Depression	6
Asthma	5
Anxiety/stress	4

Occupational Status

Most participants in the scheme were housewives, accounting for 28 of the 78 people used in the evaluation. 14 were professional, 11 were manual workers, and a further 11 were retired. 9 were employed as clerical workers, and 2 were unemployed.

Programme Completion

Completing at least 75% of the programme was indicative of a successful participant. 77.2% of those questioned completed 75% of the programme. This question was completed by the Co-ordinator.

Perception of Programme

Most participants either rated the programme in general as good or very good, accounting for 96% of all replies. 3.9% found the scheme either average or poor.

Enjoyment

Over 93.3% of those questioned reported enjoying the GP Exercise Referral Scheme greatly of moderately. 75.6% of these enjoyed it greatly. 6.4% of those questioned only enjoyed the programme a little or not at all.

Favoured Programme Elements

The most often cited reasons for programme enjoyment was individual attention (35%) and the opportunity to socialise (35%). Following this 23% of participants enjoyed classes most, 20% enjoyed water-based activity and 15% enjoyed gym-based activity, 13% valued the programme flexibility, and 10% reported that the specific qualification of the Co-ordinator was an important element in their enjoyment of the programme.

Perceived Benefits

87.2% of those questioned reported having benefited greatly or moderately as a result of the programme. 12.8% felt that they either benefited only a little or not at all from participating in the programme. Of those who perceived benefits, 65% reported feeling fitter, 35% reported mental improvements and 35% reported improvements in their medical condition. 23% reported being more health conscious.

Appendix 1

Intentions to Exercise

Approximately 95% of those questioned claimed that they would continue to exercise as they had been shown during the scheme.

Factors to Aid Programme

Participants felt that 4 main points would help them maintain their healthy lifestyle.

These were:
- -a follow up programme
- -increase in their self-motivation
- -a leisure centre nearby
- -a crèche facility

Factors Which Prevent Exercise

Many barriers, both physical and psychological were voiced during the evaluation. These were health concerns, family and work commitments, difficulties with transport, weather, cost involved and security concerns.

Activity Levels

Activity levels when compared to baseline reports showed statistically significant increases both at 12 weeks and at 16 weeks, 4 weeks after completion of the programme. The majority of those interviewed reported taking 3 occasions of moderate physical activity per week.

Lifestyle Factors

With regard to alcohol consumption, mean alcohol consumption was reduced after the programme. Smoking status remained unchanged.

Physiological Measurements

Blood pressure signaled the most change within the physiological measurements. Both systolic and diastolic blood pressure readings were lowered in a statistically significant manner. The changes in Body Mass Index readings were approaching statistically significant reductions. There was no change with overall body weight.

GP's Perceptions

80% of GP's reported noticing an appreciable change in their patients overall well being after participation on the programme. 10% reported very little change. GP's were very happy to have been part of the programme, and all pledged to increase the participation of their patients should the scheme continue. 90% reported that they could have referred more patients, and 90% found the GP Exercise Referral Scheme a feasible way of increasing physical activity and exercise levels. 80% consider it applicable to other practices should the scheme be expanded.

Some of the problems cited by the GP's with regard to referrals were that many of their patients were not receptive and on occasions there was insufficient time to recommend the programme to patients. Most GP's felt that a follow up programme would be necessary to help maintain current physical activity levels.

Conclusions

Overall it was found that GP Exercise Referral Scheme is an effective means of increasing physical activity levels of a population group.

Most participants enjoyed the programme, and benefits were both perceived and measurable. Participants felt that there was a positive change in their health related behaviour, and they felt motivated to continue being physically active and exercising.

Participants enjoyed the individual attention and opportunity to socialise as opposed to the gym facility or medicalisation of the co-ordinator. The latter two points were deemed less important.

Amongst GP's there was a very high level of satisfaction, and it is believed that such means of referral is sustainable in Irish GP practices.

Terms of reference and Membership of Working Group on Training for Co-ordinators of GP Exercise Referral Schemes

Terms of reference

1. To identify the existing GP Exercise Referral Schemes in Ireland, how they are structured and operate, the number of co-ordinators and the training qualifications of existing co-ordinators.

2. To identify entrance requirements as well as the range and content of the major training courses available to regional and local co-ordinators in Ireland and Internationally.

3. To assess the training needs of regional and local co-ordinators for GP Exercise Referral Schemes.

4. To identify what body or bodies can service those needs.

5. To identify how appropriate training for regional and local co-ordinators can be made more easily accessible in the future through an agreed delivery mechanism.

Membership

Chairman

Mr. Brian Brogan
Assistant Principal,
Health Promotion Unit,
Department of Health and Children

Secretary

Ms. Patsy Carr
Higher Executive Officer,
Health Promotion Unit,
Department of Health and Children

Ms. Catherine Murphy
Director of Health Promotion,
Southern Health Board

Alternate: *Ms. Shirley O'Shea,*
Physical Activity Co-ordinator,
Southern Health Board

Mr. Brian Neeson
Director of Health Promotion,
Mid Western Health Board

Ms Biddy O'Neill
Director of Health Promotion,
South Eastern Health Board

Alternate: *Ms. Catherine O'Loughlin,*
Physical Activity Co-ordinator,
South Eastern Health Board.

Mr. Michael Harrison
Exercise and Sports Science Association of Ireland

Dr. John O'Riordan
Irish College of General Practitioners

Mr. Patsy Ryan
President,
Institute of Leisure and Amenity Management

(Mr. Killian Fisher, CEO, Institute of Leisure and Amenity Management also attended for one meeting)

Ms. Marguerite Clancy
Co-ordinator, Mid Western Health Board
Pilot GP Exercise Referral Programme

Ms. Johann Hoey
Co-ordinator, Southern Health Board
Pilot GP Exercise Referral Programme

Dr. Ann Hope
Health Promotion Unit,
Department of Health and Children

Appendix 3

Patient Referral Categories

This list is not intended to be exhaustive and a participant's individual circumstances should be taken into account when deciding to refer him/her as suitable for an exercise programme.

LOW RISK

Deconditioned through age or inactivity	
CHD Risk Factors	- overweight or obese - current smoker - family history of heart disease but asymptomatic - hypertensive - high cholesterol levels - signs or symptoms of stress
Diabetes (Type II)	- controlled through dietary restriction alone
Hypertension	- mild (less than 160/100)
Hyperlipidemia	
Osteoarthritis	
Overweight/Obese	
Family history, Ischaemic heart disease	
Stress/Anxiety/ Depression	- mild to moderate
Asthma	- mild
Osteoporosis	- provided that the condition is not so advanced as to cause severe risk of fracture
Backpain	- degenerative disease of the spine appropriate for leisure centre activity.

MODERATE RISK

Chronic Obstructive Pulmonary Disease	- mild to moderate
Hypertension	- mild to moderate (less than 180/100)
Asthma	- well controlled moderate severity
Diabetes (Type II)	- controlled by oral medication
Diabetes (Type I or Type II)	- well controlled insulin dependant

HIGH RISK (EXCLUSIONS)

Patients with Angina, CHD, uncontrolled hypertension or uncontrolled diabetes.

Modules for GP Exercise Referral Training Course

Module 1 - Rationale, Design and Delivery

Interelationships in physical activity, fitness and health

- Introduction
- Background

Summary of evidence linking physical activity and health

- Evidence from epidemiological studies
- Evidence from experimental studies
- Role of physical activity in the prevention of health problems
- Role of physical activity in the management of health problems
- Physical activity and mental health - nature of the exercise benefits

Theory of paradigm changes

- Dose response issues in exercise prescription
- Intensity Vs Volume
- Minimum exercise necessary for specific change

Measuring intensity and volume (practical session)

- Uses and limitations of heart rate as a measure of exercise intensity
- Exercise intensity and walking
- Intensity/ Volume and resistance training

Module 2 - Behavioural Change and Health Promotion

- Motives for change and barriers to change
- Stages of change model
- Factors affecting adherence and dropout
- Role of self-efficacy
- Attribution theory and adherence
- Goal setting
- Social support in exercise adherence
- Personal skills development
- Motivational issues
- Health promotion education including alcohol, diet, smoking and stress management

Module 3 - The Exercise Referral System

- The Health Screen
- Data and recording Forms
- Screening of clients
- Equipment requirements
- Motivational issues
- Involving other staff in supporting patients
- Legal issues
- Options for sustaining physical activity

Appendix 4

Module 4 - Clinical Issues

Medical

- Cardiovascular System
- The Cardiovascular System and Exercise
- Specific Exclusions to Exercise
- Basic understanding of conditions of patients being referred
- Basic Anatomy
- Basic Physiology
- Homeostatic mechanisms

Respiratory System

- Basic Physiology
- Mechanics of Ventilation
- Lung Ventilation and Exercise
- Common Lung Diseases

Metabolics

- Energy Production during exercise
- Metabolic changes produced by Aerobic Training
- Diabetic Module
- Exercise and Obesity
- Eating for Health

Locomotor Module

- Posture and Gait
- The Spinal Column
- Joints
- Common diseases affecting the Locomotor System

Pharmacology

- Common Drugs
- Side Effects
- Effects on Exercise response

Module 5 - Exercise Prescription

- Exercising for Cardio-respiratory Fitness - including dose response relationships
- Exercising for Hypertension
- Exercising for a Healthy weight
- Exercising for Arthritis (osteoarthritis and rheumatoid arthritis)
- Exercising for Osteorporosis
- Exercising for Peripheral Vascular Disease
- Exercise for Patients with Pulmonary Disease
- Exercise and Diabetes
- Exercise and Stress management
- Exercising for Flexibility (including arthritis)
- Exercising for Muscular Strength and Endurance

Module 6 - Managing Risks and Health and Safety

Risks of exercise

- Acute risks (Musculoskeletal injuries, Cardiac events)
- Chronic risks (Exercise addiction)
- Minimising risks
- Benefits of Exercise

Special Exercise Considerations

- Older adult
- Hypertensive client
- Obese client
- Depression

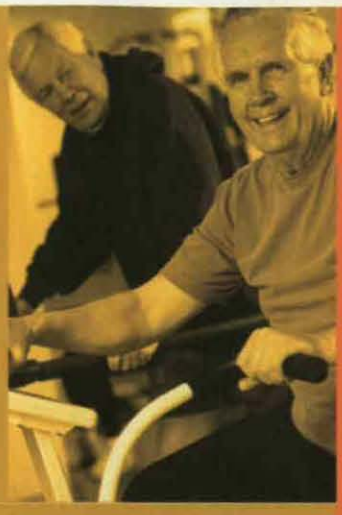
Health and Safety

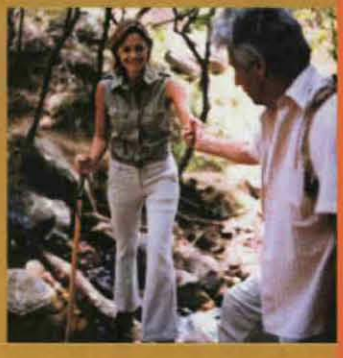
- Accidents/Events
- Emergency procedures
- Health and Safety plan

Module 7 - Management for Regional Co-ordinators

- Management skills
- Audit and Evaluation
- Supporting others
- Planning and prioritisation

The Health Boards should provide additional management training for regional co-ordinators as required.





Health Promotion Unit
Dept. of Health and Children
Hawkins House
Hawkins Street
Dublin 2

Tel: (01) 6354000
Email: hearthealth@health.irlgov.ie
www. healthpromotion.ie

HEALTH PROMOTION UNIT

MID-WESTERN HEALTH BOARD

Southern Health Board
Bord Sláinte An Deiscirt

icgp

South Eastern Health Board

ESSAI
Exercise & Sport Science Association of Ireland

ILAM IRELAND
Institute of Leisure and Amenity Management