

# Physical activity promotion through primary health care in England

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## SUMMARY

**Background.** There is increasing research supporting the argument for a beneficial link between physical activity and health maintenance and, in the past five years, this has led to a growth in physical activity promotion schemes involving primary health care.

**Aim.** To document and critically examine the extent and nature of physical activity promotion in general practice in England.

**Method.** A postal survey to all family health services authorities and primary care facilitators was conducted to identify existing and planned activity promotion schemes involving primary health care. Telephone interviews with leaders from 50 selected schemes and further detailed case studies of 11 schemes provided descriptive information of the nature of physical activity promotion.

**Results.** The initial phase revealed 157 existing schemes and a further 35 planned schemes. Two basic models of physical activity promotion were identified that were distinguishable by the primary location of the management of the patient. Practice-managed interventions (32%) involve on-site counselling to change the behaviour of patients. Leisure centre-managed projects (68%), sometimes termed 'exercise by prescription' or 'general practitioner referral for exercise' schemes, involve the identification of suitable patients and their referral to 10- to 12-week-long leisure centre based exercise induction courses. The projects in the planning stage were all of the latter type, indicating this as the favoured model. Although such schemes were generally successful in attracting patients, in all cases they involved less than 1% of the patient base from which they were drawn.

**Conclusion.** There is evidence of successful recruitment, increased short-term physical activity and fitness, and improvements in the well-being of patients. However, schemes are inadequately resourced for rigorous long-term evaluation; therefore, conclusions regarding the cost-effectiveness of the two models are not possible.

**Keywords.** physical activity; exercise prescription; primary health care.

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## Introduction

NATIONAL health policy has recently placed greater emphasis on the primary care setting for the prevention of several diseases. The latest preventive vehicle to be highlighted is physical activity.<sup>1,2</sup> The importance of regular physical activity in the maintenance of good health is now well established.<sup>3-6</sup> However, the Allied Dunbar National Fitness Survey<sup>7</sup> has revealed that only a small percentage of people in England are sufficiently active for there to be any health benefit. Public health could be improved if effective strategies for physical activity promotion were devised and implemented, and several agencies are now actively supportive of such moves.<sup>2,8,9</sup>

As a response, there has been a rapid growth in 'exercise by prescription' schemes involving the referral of patients by general practitioners (GPs) to leisure centre based programmes. These have attracted considerable media attention and comment in professional journals.<sup>10-12</sup> However, little is known about the characteristics of this significant development in health service provision, as no detailed audits or randomized controlled trials have been undertaken.<sup>13</sup>

To provide a basis for future planning, an investigation into the extent and nature of physical activity promotion in primary care and evidence of cost-effectiveness was commissioned by the Health Education Authority and conducted by researchers from the University of Exeter.

## Method and procedures

The research was conducted in three phases. The purpose of phase 1 was to estimate the extent of physical activity promotion in primary health care (PHC) through the identification of all substantial physical activity interventions in England either in operation or in advanced stages of planning. Schemes were identified by contacting all family health services authorities (FHSAs) in England, all known primary care facilitators ( $n = 283$ ), agencies likely to be aware of physical activity promotion, and existing health care databases, as well as through requests in professional journals.

Phase 2 was designed, using a 30- to 40-minute telephone or postal survey, to determine the nature of physical activity promotion in PHC. Specifically, the objectives were to identify the types and range of intervention models in operation, the nature of locations and profiles of patient target groups, factors related to successful recruitment and behaviour change in patients, means of finance, and the degree and rigour of evaluation. A sample of 50 schemes operating in different types of locality (inner city, suburban and rural), using different models of intervention (GP managed, practice managed or leisure centre managed), was selected.

The purpose of phase 3 was to facilitate a deeper understanding of how different models operated, and the elements that were critical for successful recruitment and retention of patients. This was achieved using case studies of schemes selected to represent the range of settings and models identified in phase 2, and involved site visits and thematic interviews with key personnel.

## Results

### *Extent of physical activity promotion in primary care in England*

By the end of the research period (April 1994), almost 200 schemes had been identified (Table 1). Over half the schemes had been operating for less than one year and 35 were in the advanced stages of planning. It is likely that several new schemes were not identified, as the information from some FHSAs was restricted to those providing first-year evaluative data. The figures should therefore be taken as an underestimate and indicative of a trend. Our further involvement with health authorities indicates that there has been a continued rapid growth in numbers of schemes during the past two years.

### *The nature of physical activity promotion*

*Physical activity promotion models.* Two major types of scheme emerged that could be distinguished by the principal management of the patient.

1. Leisure centre managed schemes. This category includes those based in private health clubs and represented 67.6% of all schemes identified. All schemes in the planning phase were leisure centre managed schemes, indicating this model as the more popular approach. At least 74 of these alliances were initiated by leisure services and involved the canvassing of GPs to provide patients through referral. However, in some settings GPs had sought a partnership or the district health authority (DHA)/FHSA had assigned a health promotion officer. Leisure centre managed schemes were consistent in their design, with a typical programme offering subsidized 'induction to exercise' classes operating over a 10- to 12-week period. Classes usually involved a combination of aerobic exercise, light resistance training, calisthenics and sometimes swimming, which was tailored for the needs of this less active population. Most involved a battery of tests to assess fitness and biomedical parameters on entry and conclusion. On completion, some schemes offered patients the opportunity to re-enrol. In others, patients were expected to join the leisure centre/club as a normal customer. Few schemes implemented long-term behaviour change strategies that have featured in the exercise psychology and promotion.<sup>14,15</sup>
2. Practice-managed schemes. Practice-managed schemes made up the other third (32.4%) of all reported interventions, and indicated greater variety in structure and complexity. The simplest schemes took the form of opportunistic

advice from the GP or practice nurse. A more common and sophisticated model involved GPs referring patients to a practice-based clinic. An activity counsellor (a trained practice nurse, exercise specialist or physiotherapist) provided fitness assessment, technical information, support and advice to patients that was sometimes linked to other lifestyle issues, such as weight management. This role was usually taken by the practice nurse (but in some cases by physiotherapists, exercise specialists or health visitors). Patients were directed to attend exercise classes in the local community or start their own physical activity programme, which usually involved walking. We found six practices in which specialist classes were run on site, and a small number of larger health centres had developed broader community-based approaches involving schools, youth and community centres.

*Locations and patients.* Schemes were found in all types of locations, including inner cities, redevelopment estates, middle-class suburban and rural areas throughout the country. There were few examples of strategic targeting of patient groups, and participants tended to be middle-aged, with no coronary heart disease symptoms, but often with risk factors such as being overweight, smoking or mild hypertension. Generally, more females than males were attracted to leisure centre managed interventions, partly because of the facilities being available at reduced rates only during working hours. Some schemes had been very successful in recruiting certain groups, including minority ethnic patients who would not generally use leisure or sports facilities.

### *Effectiveness of physical activity promotion schemes*

Many schemes operated their own evaluation systems. These indicated few problems with the recruitment of patients. However, this was dependent on the cooperation and advocacy of GPs. Where good records were kept, adherence and completion rates to the induction programmes were high and generally ranged between 60% and 70%. Furthermore, patients tended to evaluate schemes very positively.

However, the design of evaluation packages was unsophisticated. With the exception of one example, in which a university research team was collaborating with the exercise prescription team, these evaluations did not involve randomization or control groups. Most schemes focused on short-term changes in biomedical and fitness parameters, although measures of psychosocial and well-being measures were sometimes attempted. It became clear that schemes are inadequately resourced to conduct long-term rigorous evaluation, and no data were available on sustained physical activity or health change. It was therefore impossible to determine long-term cost-effectiveness at this point.

Although leisure centre based schemes appear to be recruiting successfully and achieving short-term success, a major drawback is their capacity. Given existing contracts, schemes were typically enrolling 100–250 patients per year, and many regarded this as close to their capacity. In public health terms, this is a small impact, as we could not find schemes that drew on more than 1% of the patient base of the practices referring. There seemed to be greater scope for practice-managed schemes to affect a greater percentage of patients, although reliable information was rarely available.

### *Indicators of successful practice*

Given the absence of hard evidence of cost-effectiveness, the case studies conducted in phase 3 of the research provided some insight into critical factors associated with the successful initiation and operation of schemes.

**Table 1.** Total physical activity promotion schemes identified by types (as at 31 March 1994).

Type of scheme	Total
<b>Leisure centre managed</b>	
Established schemes	35
Pilot schemes (1–12 months old)	71
Total	106
<b>Practice managed</b>	
Individual GP	26
Primary health care team	25
Total	51
Total	157
Planned schemes (all leisure centre based)	35

**Personnel.** Three key roles were identified. These were the scheme *champion*, the *physical activity counsellor* and the *exercise leader*. The scheme champion, who was a GP, health promotion officer, practice nurse or leisure centre administrator, provided the motivational drive to initiate the scheme and overcome major hurdles. The counsellor usually operated within the health practice and was a practice nurse or a part-time specialist in exercise, such as a physiotherapist or sports science graduate. The exercise leader was usually a leisure services employee with appropriate expertise and qualifications, and a particular interest in working with this population. All three roles were critical in the eventual success of the scheme. It was also critical to the success of the schemes to have enthusiastic and knowledgeable personnel in these roles; where this was not the case, schemes were not very successful. All schemes were also dependent on the support and advocacy of the GP for ensuring a supply of patients.

**Psychosocial factors.** Almost all leisure centre schemes had found ways of overcoming the sporty and high-fitness image that typically deters this type of patient. One advantage of leisure schemes was their potential for developing a social club atmosphere, which was frequently reported as important in the attraction and adherence of women to the scheme. Practice-managed schemes tend to rely on patients to develop individual exercise programmes, which may be less motivating. Psychosocial benefits, such as enhanced mood, sense of achievement and improved body image and self-esteem, were frequently reported as reasons for adherence to programmes.

**Finance.** Long-term success was accompanied by the establishment of financial viability, and this was achieved in a variety of ways. Practice-managed interventions did not generally obtain additional funding and had to meet the cost of staff time from existing budgets, or physical activity promotion was given a higher priority over other services. A range of means of financing was identified among leisure centre programmes, with most schemes supported in the first instance by short-term funding from leisure services. In all of these schemes, patients made a contribution to the cost of classes they attended, and this did not appear to be prohibitive for the patient, even in deprived areas.

Overall, the costs of leisure centre schemes do not seem to be high, with many already self-financing through increases in annual memberships.

## Conclusions and discussion

There has been a rapid expansion in physical activity promotion involving primary health care, with leisure centre managed GP referral for exercise schemes providing the most popular model. Among the advantages of this type of intervention are the relative ease with which GPs can contribute, the willingness of the leisure centre to take on responsibility, the availability of exercise expertise and facilities, their popularity among patients, the motivational effect of group exercise, and their financial viability. However, they have limited potential for influencing a large percentage of the patient base, and may be better directed towards targeting patient groups who are responsive to treatment and who require specialist assistance.

Practice-managed schemes appear to have the potential to influence a larger proportion of their patients. They are in a better position to develop alliances with other local community ventures for promoting physical activity. They are also better placed to market the more holistic lifestyle-oriented prescription of moderate physical activity currently being advocated by national campaigns. However, they make greater demands on the resources of the health practice than the leisure centre managed scheme and, in their present form, may lack the motivational and social support

provided by exercise groups. In terms of future developments, the dichotomy between practice- and leisure centre managed schemes may be counterproductive. A stepped and integrated community approach with 'add-on' units may be more effective.

In summary, the experimental and epidemiological research base indicating both the short- and long-term mental and physical health benefits of physical activity is substantial.

Although schemes are demonstrating success in recruitment and short-term improvements in patients, we do not know how cost-effective they are in establishing either long-term behaviour or health change. Randomized controlled trials accompanied by process-oriented research methods are needed for the comparison of the long-term effectiveness of different *types* of physical activity intervention in primary health care, and their effectiveness for different patient groups. It is significant that the National Health Service Research and Development initiative has recently called for proposals for such an evaluation. Furthermore, public health approaches to physical activity promotion should be considered in other settings, such as schools and the workplace.

Until reliable evidence becomes available, this research has enabled critical issues to be identified for informing authorities that are considering initiating such schemes. These are discussed in more detail in a fuller research report<sup>16</sup> and a guide produced by the Health Education Authority.<sup>9</sup>

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