Translating the evidence: What works for physical activity?
Sharing evidencebased practice
About us

The BHF National Centre for Physical Activity and Health (BHFNC) was established in 1999 and is funded by the British Heart Foundation. We are also part of the prestigious School of Sport, Exercise and Health Sciences at Loughborough University.

The BHFNC is well recognised across the UK for its leadership in the promotion of physical activity and health. We are committed to developing and translating research evidence to improve and extend the practice of promoting physical activity in the UK.

We do this by supporting professionals across a range of sectors including health care, education, transport, sport and leisure with practical tools to promote physical activity.

To find out more about the work we do visit our website www.bhfactive.org.uk
Contents

About this booklet 4
Sharing practice 5
Case study selection process 6
Case studies 7
  Fit Kids in Lincolnshire 7
  Get Walking, Keep Walking 11
  Growing old, staying active: Extra Time - supporting independence and wellbeing for older people 14
  Hamara Active Lifestyle Referral Scheme 18
  StreetGames: Building a Participation Legacy from the London 2012 Olympic and Paralympic games in Disadvantaged Areas 21
  Walking for Health Expansion Programme 25
  Effectiveness of Physical Activity brief intervention (Let’s Get Moving) in Northamptonshire 29
  More Active MuMs in Stirling (MAMMiS) Study: A randomised controlled trial of a physical activity intervention for postnatal women. 33
  Welsh National Exercise Referral Programme 36
  A review of the effectiveness of adult cycle training in Tower Hamlets 40

Top tips for translating the evidence into high quality delivery 42
Appendix 1: List of recognisable sources of evidence 44
Glossary of terms 45
About this booklet

This booklet includes examples of evidence-based physical activity projects and programmes displayed at the 11th BHFNC annual conference, *Translating the evidence: What works for physical activity?*

The case studies summarised in this booklet are examples of practice which are either:

- Interpreting and using research and public health guidance to develop and deliver evidence-based physical activity programmes and/or
- Contributing to the evidence base for physical activity.

This information sharing booklet contains details of health and wellbeing initiatives and projects developed and or managed by all manner of organisations, companies, firms and individuals (participating parties), in relation to which the British Heart Foundation (BHF) and the BHF National Centre for Physical Activity and Health (BHFNC) have not had any input and do not exercise any control.

Accordingly, the BHF and BHFNC confirm for the avoidance of any doubt that they do not accept any legal liability relating to, or arising from any initiatives and/or projects, that they are not recommending any such initiatives or projects and that they are not endorsing products or services offered by any of the Participating Parties.
Sharing practice

The BHFNC believes there is a benefit in sharing information about different physical activity projects and programmes as it enables professionals working in a variety of sectors to learn from others’ successes and challenges in developing and delivering physical activity interventions.

Sharing practice has the potential to promote replication of good practice, reduce duplication of mistakes and enable professionals and organisations involved in the planning and commissioning of physical activity programmes to make informed decisions about which initiatives to adopt or develop.

Each year the BHFNC captures examples of physical activity projects and programmes which reflect the theme of the annual conference. This year the BHFNC has sought examples of physical activity projects and programmes that are directly based upon, and linked to:

- evidence of effectiveness
- evidence of need
- evidence of value for money.

In addition the call for case studies aimed to capture examples of projects which are helping to build the evidence base for physical activity public health interventions.
Case study selection process

Eighteen case studies were submitted to the BHFNC for consideration. Each case study was independently assessed to determine whether the project met the following submission criteria.

- The project has been developed from a recognised evidence base of effectiveness.¹
- The project has taken into account local evidence of need.
- The project has identified success measures for the short, medium and long term and has identified the tools to undertake measurements.
- The project is outcomes focused and these are linked to the evidence base.
- The project documents evidence of how the evaluation and monitoring is used.
- The project identifies how it delivers value for money and cost effectiveness.

Following the initial appraisal all case studies were then considered by an assessment panel.

Ten projects met the criteria outlined above. The projects included in this booklet have been recognised by the assessment panel for the way in which they are translating evidence and using public health guidance to inform the delivery of physical activity interventions and/or contributing to the evidence base for physical activity public health interventions.

¹ Professionals and organisations submitting case studies were asked to identify which sources of recognisable evidence have been translated into their project and highlight how they had stayed true to the evidence in developing the project or programme. Sources of recognisable evidence are identified in appendix 1.
The following case studies are interpreting and using research and public health guidance to develop and deliver evidence-based physical activity programmes.

Fit Kids in Lincolnshire

**Location** England, Lincolnshire

**Target group** Families with children aged 8-11 years old, who are overweight or obese

**Evidence underpinning the intervention**

**Evidence base**

The project draws upon a range of public health guidance and research evidence regarding multi-component, multi-level behavioural lifestyle interventions for families with overweight children and adolescents.

The guidance and evidence used in the development of this project includes, but is not limited to:

- NICE public health guidance 17: Promoting physical activity, active play, and sport for pre-school and school age children and young people in family, pre-school, school and community settings.
- NICE public health guidance on the prevention of cardiovascular disease recommendations relating to promoting and facilitating healthy eating and physically active lifestyles.
- Cochrane review recommendations regarding combined behavioural lifestyle interventions to aid clinically meaningful reduction in overweight children and adolescents.
- A series of journal articles relating to parents being the exclusive agents of change in the treatment of childhood obesity.

**Evidence of need**

National Child Measurement Programme (NCMP) data from 07/08 indicated higher than national average rates of obesity in children aged 11, with the rates growing more rapidly than average. Local research revealed no other project was offering a similar...
programme. Parents receiving letters from NCMP were upset and disappointed that there was no opportunity to address the problem.

Service users were consulted, with specific reference to the preferred times and days of service provision. Children were also asked what kind of activities they would like to try, and these have been sourced locally with exit routes for beyond the 12 week programme.

**Intervention aims**
The project aims to implement a standardised physical activity, nutrition and behaviour change programme across the county to tackle childhood obesity. The programme aims to improve self confidence in children and to increase water consumption, physical activity and fitness levels.

**Objectives of the intervention**
The programme focuses on:
- reducing the number of children aged 8-11 that fall between the 85th and 95th percentile curve for their BMI
- increasing fitness levels, self-efficacy and healthy behaviours
- enabling more children to reach government guidelines of 5 a day, 60 minutes a day and
- reducing the risk of long term disease and ill health.

**Nature of intervention**
A 12-week tailored multi-component and educational programme to families of children who are overweight or obese. The intervention is initiated by a professional or through self referral and involves a tailored, family-focused physical activity, nutrition and behaviour change programme to aid weight management. Family attendance is compulsory with measurements being taken at baseline (week 1), week 12 and at 6 months. Children set their own goals and take part in a wide range of activities and challenges. Each of the 12 weeks has a theme such as 5 a day, screen time, 60 active minutes and various nutrition topics. Sessions are interactive and encourage children to challenge their family.

A 12 week toolkit was produced to guide the local areas towards a structured delivery approach. This includes four weeks of nutrition based topics, including water consumption, two weeks on behaviour change including screen time, bullying and family meal times, and four weeks on the importance of physical activity, with specific reference to local opportunities for long term participation. In week 12 evaluations are carried out during a party session, which includes setting a date to meet again for follow-up data to be collected.

**Evaluation**
The pilot intervention has been evaluated by the University of Lincoln. The National Obesity Observatory (2010) Standard Evaluation Framework was used to ensure Fit Kids could be evaluated efficiently.
Measurement
Data was collected for every child at week 1 and week 12, which includes BMI, percentile curve, age, fitness score and a survey of lifestyle behaviours, attitudes and self perception.

Children are invited back at 6 months, 9 months and 12 months. Focus groups and interviews have also been carried out by the University of Lincoln.

In addition to the above measures, childhood attendance is recorded every week.

Outcomes
In a study of 206 children that attended the scheme in 2010/11, 95% completed the programme.

Children self-report:
- increased physical activity levels (reaching 60 minutes per day)
- increased water intake
- increased fruit and vegetable consumption
- reduced junk food consumption
- increased self-confidence
- they spend more time together as a family.

Parents have independently confirmed these changes through surveys and consultation.

At 12 weeks the evaluation has shown that average BMI dropped by 1 point, and 86% of the children either maintained or reduced their BMI. As tolerance levels change with age, BMI maintenance is regarded as a positive outcome. Physical activity has increased in children aged 8-11. 100% of participants who completed the programme increased fitness levels.

To date 54 out of 206 children have returned for 6 month follow-up, of these 70% have continued to improve their BMI score. As some programmes have run until summer 2011, the 3 month and 6 month mark have not yet been reached, so further data is yet to be collected.

More evaluation is under way to determine whether or not the programme has a long term impact upon families.

Use of the evaluation
Recommendations from the evaluation have been implemented to improve programme delivery. For example, the evaluation recommended Fit Kids should develop stronger partnerships with health professionals and increasing the support from other partners. Consequently, school nurses have been instructed to refer into the programme. Other health professionals have also been contacted and are now supporting the programme, including children’s links and children’s services.
The evaluation has been used to secure further funding for the University of Lincoln to examine the effect of the programme on families, especially with regards to long term change, and the barriers and enablers to change.

The lessons learned are being used to help develop further services for families with children aged 5-8 years.

**Key learning**

- Findings echoed success where the evidence base had been followed most closely, it is therefore recommended that programmes follow the evidence base from the outset.
- Evidence has shown that family involvement increases outcomes, especially in the long term, it is therefore recommended that professionals do not attempt weight management programmes for children without parental attendance and buy in.
- Embed a long term action plan early on, using local exit routes to enable long term activity levels.
- Use photos, videos and case studies to recruit families into the programme.

**For further information about the project contact:**
Sarah Ferneyhough
sarah.ferneyhough@lincolnshiresports.co.uk
Get Walking, Keep Walking

**Location** Initially five projects, Birmingham, Manchester, Sheffield and two in inner London with additional locations added

**Target group** Inactive people particularly in deprived inner city areas, BME communities and families with young children

**Evidence underpinning the intervention**

**Evidence base**
The project draws upon a range of public health guidance and research evidence regarding normalising walking, reaching ‘tipping points’ in behaviour, removing barriers and peer support.

The guidance and evidence used in the development of this project includes, but is not limited to:
- NICE public health guidance 2: Four commonly used methods to increase physical activity
- Learning from the Local Exercise Action Pilots: A report on LEAP, Department of Health
- The Tipping Point: How little things can make a big difference, Ipsos MORI
- Promoting Walking in High Deprivation Communities: Research study conducted for the Ramblers’ Association
- Active People Survey, Sport England
- A range of journal articles.

**Evidence of need**
The evaluation of Walking the way to Health, another Ramblers’ walking initiative, indicated the potential of walking in promoting everyday activity and in reaching socially disadvantaged audiences. Consultation with local community groups in South London and Birmingham indicated that an outreach-focused, time limited, intervention may be successful. Market research by Ipsos MORI was also commissioned using a focus group approach. This determined the barriers to walking among the target groups and potential ways to overcome them.

**Intervention aims**
The project aims to promote everyday walking, targeting inactive people particularly in deprived inner city areas, Black and Minority Ethnic communities, families with young children and people with mental health issues.
Objectives of the intervention
The programme focuses on:

- increasing the number of previously inactive people participating in everyday independent walking, with associated mental and physical health benefits
- increasing the number of people with common mental health problems participating in everyday independent walking, with associated health benefits
- increasing the number of people actively involved in their community promoting everyday independent walking
- increasing the number of people informed of the ease and benefits of walking, and of local walking opportunities.

Nature of intervention
A 12-week time-limited programme with led walks and periods of peer-supported independent walking with support from staff and trained volunteers. Participants receive a walking plan with a logbook to record their progress, as well as a step counter and signposting to other walking opportunities. A website is also available with online versions of the walking routes and an interactive walking plan.

The programme uses specially designed routes developed by trained volunteers who highlight the best way to explore their local area on foot. The led-walks are supported by walking ambassadors, some of whom were recruited from among walking participants.

Evaluation
The project is independently evaluated by CLES Consulting using a variety of methods including:

- analysis of registration and follow up questionnaires (including the Outdoor Health Questionnaire single question)
- follow up interviews
- focus groups
- cost benefit analysis.

Measurement
Participants are monitored at three and 12 months using a standard activity question. Activity levels are sub-divided for a better view of changes in activity. Independent evaluation including questionnaire analysis, control group, focus groups, interviews and cost benefit analysis is carried out by CLES Consulting.

Outcomes
Evidence of sustained activity:

- 43% of all face-to-face contacts had increased their weekly activity at three month follow up and sustained this at 12 months.
- Participants walk on average at least one day a week more than previously.
Change was greatest among the inactive, those on 12-week programmes and those in deprived communities. While 43% of all face-to-face participants had increased activity at three months, this rose to:

- 70% of the most inactive
- 50% in the 20% most deprived communities
- 49% of those on 12-week programmes.

Increased social and mental wellbeing:
- 88% reported improved mental wellbeing and 51% reported improved social wellbeing.

Benefits for children:
- increase in children enjoying walking from 82% to 90%
- increase in regular journeys
- increase in children walking with family, friends and teachers.

Use of the evaluation
The evidence has been submitted to the group developing the current NICE guidance on walking and cycling. Results have also been presented at a series of stakeholder workshops and are being incorporated into other Ramblers literature and materials.

Key learning
- Think critically about past or existing projects, even if by many measures they were successful. Where are the gaps and opportunities to ‘add value’? Take account of the evaluations of those projects and consider the problems they highlighted.
- Pilot or otherwise test possible solutions in the real world if you can.
- Be clear about your target audience and how the evidence base identifies them and suggests you might reach them. There is no point in simply delivering if you are not hitting the right audience. Build in responsiveness and flexibility to their needs.
- Take lessons from other disciplines in identifying and filling the gaps. Many of the people who pioneered the Get Walking approach were not physical activity/health specialists but community development workers by background.

For further information about the project contact:
Des de Moor
des.demoor@ramblers.org.uk
Growing old, staying active: Extra Time - supporting independence and wellbeing for older people

**Location** England, national programme

**Target group** Adults aged 55+ years

**Evidence underpinning the intervention**

**Evidence base**
The project draws upon NICE public health guidance and NICE clinical practice guidelines which focus on physical activity and older adults. In addition the project draws upon research and policy which advocates football as a key vehicle for addressing wider social issues, including health, social inclusion and regeneration.

Recommendation 2 of the NICE public health guidance 16: Occupational therapy interventions and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care forms the core of the Extra Time Programme. This recommendation suggests that professionals with the qualifications, skills and experience to deliver exercise programmes appropriate for older people should work in collaboration with older people and their carers to offer tailored exercise and physical activity programmes in the community. These should focus on a range of exercise programmes of moderate intensity; include strength and resistance exercise, especially for frail older people and toning and stretching exercise. It is also recommended that exercise programmes reflect the preferences of older people and projects invite regular feedback from participants and use it to inform the content of the service and to gauge levels of motivation.

**Evidence of need**
The UK has an ageing population and the prevention of ill health and promotion of wellbeing and independence are fundamental issues as indicated in the Government white paper *Our Health, Our Care, Our Say*.

About one-third of adults over the age of 65 suffer a fall each year costing the NHS an estimated £4.6 million a day, exercise programmes can significantly reduce the likelihood of these happening. Physical activity plays an important part in preventing diseases and conditions which contribute to loss of function in later life and it can also help maintain independence in later life.
Intervention aims
The project aims to use the power of professional football club brands to engage people over 55 in physical activity and social inclusion projects across the country. In addition, the project aims to strengthen the evidence base for the role that professional football club community schemes can play in engaging with older people, improving the health and well-being of communities and tackling social issues.

Objectives of the intervention
The project focuses on:
- increasing the number of Football in the Community (FITC) schemes applying for funding to deliver the Extra Time project
- increasing the number of older adults engaged in physical activity through the Extra Time project
- improving the health and wellbeing of older adults
- decreasing health service use by the target group
- capturing data on Social Return on Investment (SROI).

Nature of intervention
The Extra Time project provides grant funding and support to football club community schemes to set up social and physical activity programmes for older people. Each football club delivering an Extra Time project receives a grant to offer local people over the age of 55 the opportunity to take part in weekly physical activity and social activities. The target group and the activities on offer varies between clubs and ranges from five-a-side football for younger older people to chair-based exercise for individuals in care homes who may be unable to stand.

Each project has a steering group which is made up of the football club, local statutory and non-statutory organisations with experience of working with older people. The role of the club level steering group is to support the construction and development of the project and ensure the aims of the project target local priorities effectively.

Evaluation
Year one of Extra Time was evaluated by external researchers and subsequent years have been evaluated by researchers based at Liverpool John Moores University.

Measurement
Individual social return on investment analyses were carried out on five of the twenty FITC schemes. Outcome data was measured via entrance and exit participant surveys. In addition ethnographic research techniques (including participant observations, informal interviews and personal reflections) were employed across several of the FITC schemes.

Outcomes
The programme has reached 985 participants in the phase one pilot and so far engaged 1,200 participants in phase two.
Four hundred and twenty-two participants completed both the entrance and exit participation surveys after approximately eight months engagement with Extra Time.

- 41% of participants were male.
- 90% were over 60 and 23% were over 80.

The evaluations revealed the success of Extra Time in attracting and engaging older men which has led to a wider range of health and social care partners supporting the programme and using it as a vehicle to deliver healthy living messages.

Positive changes in physical activity were observed in both men and women through the ethnographic research.

The evaluation not only details how involvement in Extra Time has resulted in significant benefits to the individual, including feeling more supported and specific physical benefits, but also how the programme has resulted in savings to the state in the form of reduced use of health services:

- 21% of participants reported using health services less
- 50% of participants said they felt healthier after the programme
- 75% of participants made friends and had fun
- 70% of participants said they found everyday tasks easier
- 89% of participants felt they now had more people looking out for them
- 81% of participants stated the football connection made Extra Time more appealing.

The Social Return on Investment (SROI) analysis shows that the total value of the benefits accruing to the Extra Time programme from its activities in the second year of the pilot phase is estimated to be £1,128,252. Given input costs of £216,160 this results in a ratio for the programme of 1:5.22. That means that for every £1 invested in the programme, £5.22 is created in social value. The value of benefits to the state, at a local and national level, is estimated to be £14,279. This is the result of reported reduced use of medical services and medication.

**Use of the evaluation**

The first year of the project was evaluated by an external agency which explored the key success factors of the programme this report was shared with all existing and new projects.

The evaluation of the second year was conducted by the Football Foundation’s Evaluation Analyst with support from Just Economics LLP and Liverpool John Moores University (LJMU). The findings have been fed back to the projects as well as to the sector more widely through accessible publications and presentations at a variety of events including the LJMU Institute for Health Research Conference, the Annual Congress of the European College of Sports Science, and London funding forums. A journal article is due to be submitted to Soccer and Society in October 2011. In addition, the SROI report has been assured by the UK SROI Network.
Key learning

- To effectively translate the evidence strategic partners need to work closely with community deliverers and schemes in order to ‘skill-up’ managers and practitioners to ensure projects are informed and able to adopt best practice.
- The development of new social networks (or social capital) should be the focus of projects for older people. Many of the benefits experienced by participants, ie, increases in physical activity can be attributed to the development of positive social networks.
- Participants who reported feeling out of their ‘comfort zone’ experienced the greatest benefits; therefore practitioners should encourage participants to ‘push’ themselves.
- Football clubs or FitC schemes offer a vehicle to engage typically hard to reach older people, specifically men.

Funding acknowledgement
The Extra Time programme was launched out of a partnership between Sport Relief and the Football Foundation, with Age UK as a strategic partner.

For further information about this project contact
Femina Makkar
femina.makkar@footballfoundation.org.uk
Hamara Active Lifestyle Referral Programme

Location The Hamara Centre, Leeds

Target group Inactive adults with a Body Mass Index (BMI) greater than 27

Evidence underpinning the intervention

Evidence base
The health problems associated with inactive lifestyles have been well documented in the published literature, and the evidence base for the health benefits of increasing physical activity is compelling. For example, studies have demonstrated the impact of physical activity on reduced levels of obesity and reduced risk factors for many chronic health conditions, in addition to its effects on mental wellbeing. In development the Hamara Active Lifestyle Programme was mindful of both the health-related evidence and a number of NICE practice briefings, position statements and clinical guidance. It has also drawn upon a range of NICE public health guidance and research evidence regarding exercise referral programmes and stages of behaviour change, including, but not limited to:

- NICE public health guidance 6: Behaviour change at population, community and individual levels’ - relating to proper assessment, evidence based interventions and considering barriers to change
- NICE public health guidance 2: Four commonly used methods to increase physical activity
- NICE public health guidance 8: Physical activity and the environment
- NICE public health guidance 16: Mental wellbeing and older people
- NICE public health guidance 35: Preventing type 2 diabetes: population and community-level interventions in high-risk groups and the general population

Evidence of need
The Hamara Centre is based in Beeston, south Leeds; an area with a large south Asian population, high levels of social deprivation and a population who are known to experience a number of health inequalities. The evidence of need was identified following a study by researchers at Leeds Metropolitan University. This demonstrated that, in particular, Beeston’s South Asian population experienced high levels of morbidity and highlighted language, service access and the lack of cultural and religious sensitivity as major barriers to utilising available health services. The study also acknowledged that local systems and resources could provide a holistic range of services to reduce health inequalities for the local population, as also recommended within the publication Tackling Health Inequalities: A Programme for Action (2003).
**Intervention aims**
The programme aims to reduce the known health inequalities associated with physical inactivity by raising physical activity levels for inactive adults with a BMI greater than 27, who are registered with one of five GP practices in Leeds.

**Objectives of the intervention**
The Active Lifestyle Programme focuses on:
- promoting healthy eating
- raising physical activity levels
- improving awareness of the causes and management of chronic conditions
- providing individually tailored advice on local services, in consideration of cultural, environmental and social issues
- reducing barriers to lifestyle change.

**Nature of intervention**
This is a primary care initiated intervention comprising a 12-week behaviour change and education programme. Individuals referred to the programme are given an initial half hour assessment within their GP practice. During this assessment, key clinical measurements including blood pressure, weight and waist circumference are taken. Time is then spent identifying social and environmental barriers to behaviour change and determining individuals’ stage of change before formulating individualised health related objectives. Participants are then encouraged to attend weekly, participant-led educational sessions at the Hamara Centre and have free access to exercise equipment. Participants attend the programme for at least 12 weeks.

**Evaluation**
Researchers from the University of Leeds, funded by the National Institute of Health Research, are working alongside Hamara to evaluate the programme. The research forms part of the Leeds, York and Bradford (LYB) Leadership in Applied Health Research and Care (CLAHRC) vascular research theme, studying the barriers to behaviour change in populations at high-risk of cardiovascular events.

**Measurement and outcomes**
**Quantitative** To date, a variety of demographic and clinical outcome data have been collected alongside participant satisfaction questionnaires. The analysis of this data is ongoing and the results will be used to develop key indicators of impact and sustainable methods of monitoring and evaluation.

**Qualitative** A focus group was conducted with eight participants of the Active Lifestyle Programme. Emergent themes suggested their attendance had led to a number of psychological and social improvements, as well as physical improvements including weight loss and improved mobility. Participants attributed such improvements to a number of factors, including the
geographic accessibility of the programme, the mode in which it was delivered and positive relationships formed with other participants and staff. Currently, individual interviews are being conducted with existing and previous participants, as well as people who chose not to attend. It is hoped this will increase understanding of individuals’ rationale for choosing, or not choosing, to participate and further explore the perceived impact of the programme on their lifestyles.

**Use of the evaluation**

Preliminary results of the quantitative data and focus group analyses were presented at the British Heart Foundation National Centre for Physical Activity and Health conference *Translating the Evidence: What Works for Physical Activity?* in November 2011 and the Birmingham and Black Country (BBC) CLAHRC dissemination event *Using Sociology to Help Prevent Cardiovascular Disease* in March 2012. Results will also be used to develop participant summaries, a report for clinical commissioning groups and be presented as journal articles within peer reviewed journals. They will also be presented at the World Congress on Active Ageing (Glasgow, August 2012) and the Centre for Ageing International Conference (Lancaster, September 2012).

**Key learning**

- be user-led within a supportive, structured environment
- build relationships with service users and commissioners to design services that meet their needs and provide them with feedback on outcomes
- be credible by ensuring staff are trained to an accredited standard.

**Funding acknowledgement**

This study is funded by the National Institute for Health Research (NIHR) and being undertaken as part of the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) for Leeds York and Bradford.

**For further information about the project, please contact**

Mr Starr Zaman  
[starr@hamara.co.uk](mailto:starr@hamara.co.uk)

Dr Kate Hill  
[k.m.hill@leeds.ac.uk](mailto:k.m.hill@leeds.ac.uk)

Dr Grania Fenton  
[g.fenton@leeds.ac.uk](mailto:g.fenton@leeds.ac.uk)
StreetGames: Building a Participation Legacy from the London 2012 Olympic and Paralympic Games in Disadvantaged Areas

**Location** Newport (Wales), Pendle, Birmingham, Newcastle and Newham (London)

**Target group** Young people aged 11-25 years who live in the most disadvantaged areas in the UK

**Evidence underpinning the intervention**

**Evidence-base**
The programme draws upon a range of public health guidance and research evidence regarding multi component physical activity programmes for young people.

The guidance and evidence used in the development of this programme includes, but is not limited to:

- NICE public health guidance 17: Promoting physical activity, active play, and sport for pre-school and school age children and young people in family, pre-school, school and community settings, recommendations relating to developing physical activity plans, responding to young people’s needs and providing leadership, training and continuing professional development for staff
- NICE public health guidance 6 recommendations for assessing need, developing programmes to meet individual’s need, training staff, supporting behaviour change and robust evaluation
- Active Celebration research recommendations to capitalise on the demonstration and festival effects that can be created by the London 2012 Olympic and Paralympic Games.

**Evidence of need**
Evidence from the Active People Survey and the Health Survey for England indicates that young people living in areas of high deprivation are half as likely to participate in sport compared with those from better off families. The areas selected for the intervention are some of the most disadvantaged areas in England and Wales and also have higher than average rates of childhood overweight and obesity and lower than average rates of physical activity.

Locally, Joint Strategic Needs Assessments have been used to identify where physical activity levels are lowest. Surveys, consultations and tasters have informed programming choices. Discussions with partners revealed that, at the time, mainstream services for physical activity had not successfully reached the target audience. However, local
research indicated that there were high levels of demand for physical activities in the right style, at the right time and in the right place.

**Intervention aims**
The project aims to support the delivery of the national Olympic and Paralympic legacy pledges to increase participation in grassroots sport and physical activity. The programme aims to meet local needs through training and supervising local volunteers to run sessions in their own communities, thereby supporting behaviour change at an individual level, utilising public space and creating a sustainable change to the infrastructure at community level that aids sustainability and creates cohesive communities.

**Objectives of the intervention**
The programme focuses on:
- more young people in disadvantaged communities regularly participating in physical activity
- more young people understanding the importance of being active and eating well
- more young people experiencing greater self-esteem and personal confidence
- more locally trained and qualified volunteers, coaches and leaders
- more young people not in education, employment or training (NEET) completing structured training and getting jobs.

**Nature of the intervention**
A community-based behaviour change intervention that uses the tested StreetGames delivery method of ‘doorstep sport’ - sport at the right time, in the right place, right style and at the right cost to increase activity levels and develop inclusive, cohesive communities. The ‘doorstep sport’ sessions are locally owned, volunteer-led and designed to support long-term behaviour change towards more active lifestyles.

StreetGames provides the national co-ordination and strategy. Local project managers employed in the public and third sectors consult with young people about what to put in the programme. A programme typically comprises weekly multi-sport, dance and physical activity sessions in parks, car parks and in the heart of housing estates. Activities are adapted to suit venues and in some cases new Multi Use Games Areas have been created. A choice of activities chosen by participants and variety of session content help to cater for the needs of all young people.

The programme also focuses on developing the workforce to ensure sessions are safe, fun and developmental and a Training Academy for Doorstep Sport has been created. Community networks and partnerships are used to help sustain the activity with youth services, police community support officers, health authorities, housing associations and the sport sector all involved. By training and supervising local volunteers to run sessions in their own communities the intervention not only supports behaviour change at an individual level, but also creates a sustainable change to the infrastructure at community level.
Programmes work with commissioners and policy makers to bring about lasting change to mainstream services and the physical environment for sport and health.

Research compiled over four years from 120 projects has revealed that the essential ingredients for successful sports sessions with high retention rates are:

- **PLACE** No dependency on private or public transport
- **STYLE** Coach appears ‘laissez faire’
- **PRICE** No or very low cost to participant
- **BUDDIES** Welcoming sessions with social time built in
- **REWARDS** Loyalty cards and incentives (T-shirts, wristbands)
- **CHOICE** Variety of gender-friendly activity chosen by participants
- **PROGRESS** Opportunities to compete or volunteer
- **KNOW-HOW** Participants acquire skills and knowledge to make their own way

**Evaluation**
The intervention is being independently evaluated by Brunel University.

**Measurement**
A variety of methods for collecting data include baseline and follow-up surveys, questionnaires, structured interviews, focus groups, objective measures (pedometers), reflective diaries and researcher observations. The tools used have been developed by the evaluation team.

**Outcomes**
The delivery of this project does not end until September 2012 with the final report due in December 2012.

However, to date, the project has led to an increase in participation and retention rates. More coaches and volunteers have been trained in evidence-based approaches and there has been an increase in both the variety of sports and activities and the accessibility of these activities. In addition, the project has been successful in encouraging a variety of community partners to work together with inputs in terms of staff, funds, venues and promotion coming from multiple sources.

Over the project lifetime to date there have been:
- 380 sessions
- 2500 participants, 85% of whom are from deprived areas
- 18000 attendances
- 60 volunteers deployed
- 50% female participation
- 60% of participants more active at 6 months and 50% at 12 months.

The unit cost of engaging participants is approximately £40 per year which is well within quality adjusted life year (QALY) guidelines.
Use of the evaluation
Quarterly reports are developed by project managers and Brunel University researchers. The collated reports, comprising narrative and graphs, are given to an Expert Advisory Board who comment on the effectiveness of the approach and suggest improvements. The five areas come together quarterly in action learning groups and use the monitoring reports as the basis for discussion.

At the end of the project, a set of topical briefing papers will be created and a national dissemination event will take place to share the findings within the sport and health sectors. In addition, learning will be disseminated via case studies, the StreetGames website, new courses from the Training Academy and via national and regional conferences and networking events.

On completion of the project, it is anticipated that learning on the following aspects will be disseminated:
- how to build a physical activity legacy in disadvantaged areas
- what strategies, processes and relationships create lasting local structures
- how to increase participation, retention and healthy lifestyle behaviour.

Key learning
- It is important to understand the cause of the inequality to be addressed, by reference to the literature and to the expressed needs of the target group.
- Set realistic objectives and ensure that the expectations of all stakeholders, including the target group, are included.
- Create a theory based on evidence, participants’ views and, above all, practitioner expertise, and put it to the test.
- Establish a clear outline of how and why your intervention will work.
- Run your activity right in the heart of the community.
- Make the activity fun and friendly.
- Invest in volunteers.

For further information about the project contact
Paul Jarvis
paul.jarvis@streetgames.org
Walking for Health Expansion Programme

**Location**  England - National Programme with over 600 local schemes

**Target group**  Sedentary individuals and groups where there was a strong health benefit to be gained from walking (eg, over 65s and hard to reach groups)

**Evidence underpinning the intervention**

**Evidence base**
The main evidence used in the development of this project is NICE public health guidance 2: Four commonly used methods to increase physical activity (2006). In particular, programme development was underpinned by recommendation 6 - practitioners, policy makers and commissioners should only endorse pedometers and walking and cycling schemes to promote physical activity that are part of a properly designed and controlled research study to determine effectiveness and measures should include intermediate outcomes such as knowledge, attitude and skills, as well as a measure of physical activity levels.

Additional evidence included an independent review into walking that concluded Walking for Health (WfH) is an effective intervention and an evaluation of WfH in 2005 that reported low drop-out rates and success in targeting inactive people.

**Evidence of need**
Evidence indicates that only 40% of men and 28% of women meet the recommended levels of physical activity (5 x 30 minutes per week), with even smaller percentages amongst the older age groups traditionally attracted to WfH. It is estimated that the cost of physical inactivity is more than £8 billion per year.

**Intervention aims**
WfH and the schemes it supports have the common aim of helping people become more active by taking part in short, led health walks in their local community.

**Objectives of the intervention**
At a national level, the WfH expansion programme hopes to:
- achieve 130,000 walkers regularly taking part
- contribute 200,000 new people achieving 3 x 30 (the Legacy Action Plan target of two million)
- support local schemes to become sustainable
- provide a robust evidence base for the effectiveness of community walking schemes in increasing physical activity levels.
**Nature of the intervention**

WfH started in 1996 and has been with Natural England since 2007. This case study relates to the period April 2009 to March 2011, over which time the Department of Health provided £5.2 million of funding as part of an expansion programme.

WfH is a large scale, community-based walking programme that focuses on the delivery of short, led walks to meet local need. The national programme provides support and structure to local schemes and focuses on delivering a robust evaluation plan to determine the effectiveness of walking programmes at increasing physical activity levels, including a longitudinal survey of participants.

Working in partnership with walk scheme deliverers (primary care trusts, local authorities, county sport partnerships, voluntary bodies etc) WfH offered a comprehensive range of support services including evaluation and monitoring, accreditation, insurance, networking, publicity advice (eg, funding and governance), volunteer walk leader training, volunteer recognition, a central website and online ‘walkfinder’ as well as a common identity under the WfH umbrella.

**Evaluation**

The evaluation for this programme was developed with the Department of Health and NICE.

**Measurement**

The programme uses short, medium and long term measurements at a national and local level to determine the success of the programme. These include:

- **Short term measures**
  - Number of walks, number of walkers/profile of walkers (eg, gender, ethnicity, GP referred) and attendance on walks (all tracked via the WfH database).

- **Medium term measures**
  - Number of walkers trained as walk leaders and leading walks, percentage of walk schemes accredited (for example, set by a PCT that funds local schemes) and number of walk schemes using the database (national measure).

- **Long term measures**
  - National surveys tracking changes in physical activity levels, local surveys measuring, for example how many walkers now feel healthier, or walk when they used to drive.

In addition, the programme studies the frequency and patterns of attendance, carries out a detailed cost/benefit analysis and captures data on participant demographics.

Two key tools are used to evaluate WfH, the Outdoor Health Questionnaire (used by over 400 schemes) and an online monitoring database (for local and national use). The Outdoor Health Questionnaire completed by walkers on their first walk, collects demographic and health information and asks a validated single item physical activity metric to establish levels of
physical activity. The data from this questionnaire is entered by walk leaders/co-ordinators onto the WfH online database which is used by walk schemes to monitor local success measures and informs delivery at local, regional and national level.

Other tools used to collect data include longitudinal surveys which include a focus on participant physical activity levels (n=4,500), telephone interviews and focus groups. Statistics are collated quarterly.

**Outcomes**
The evaluation programme has over 400 walk schemes using the Outdoor Health Questionnaire and the associated monitoring database. The following trends have been observed to date:

- 75,000 walkers each quarter
- over 600 walk schemes (over 400 accredited)
- a positive effect on physical activity levels, the longitudinal study of 4,500 WfH participants found that the programme delivered modest activity increase amongst the most inactive, and prolonged an active life for others
- walkers attend on average five weeks out of every thirteen
- 15% walk on 10 or more weeks out of every 13
- One in two new walkers are still walking three months after the first walk
- over 12 months the number of original walkers halves
- as compared to lapsed walkers (not walked in WfH in 6 months prior to survey), current walkers are more likely to move from participating in physical activity 0-2 days a week up to 3+ days and are more likely to maintain this level of activity
- 7 in 10 walkers are female, 1 in 20 is from a non-white ethnic group, 1 in 10 is disabled, 4 in 10 are aged 65 or over, and 1 in 10 comes from the most deprived Index of Multiple Deprivation (IMD) quintile
- there are more women walkers, but men attend more frequently
- 1 in 7 walkers are referred by their GP, while 1 in 3 had a medical condition
- 1 in 2 walkers already achieved 3 x 30 minutes activity per week at the point of joining
- an average of 14 people attended every walk
- 10,000+ active volunteer walk leaders
- local self-sustaining scheme networks have been set up
- 2009 cost effectiveness model predicted a cost-benefit ratio £1: £7 and a cost per QALY of around £4,000.

Further studies into cost-benefit, attendance patterns and perceptions of green space are underway.

**Use of the evaluation**
Regular internal reports are developed from the national database to aid the delivery of the programme; these reports are shared widely with staff and stakeholders. The information sourced from schemes is used to support academic research studies (eg, De Montfort, Leeds Metropolitan). In addition, a large bank of case studies has been collated and made available.
WfH was included in *Be Active Be Healthy* and formed part of the Department for Health’s contribution to the Legacy Action Plan target of two million more people active by 2012.

**Key learning**

- Before starting a project it is important to consider how to maximise the number of inactive participants recruited. Targeting and recruiting inactive people is not straightforward, over half of those joining WfH were already participating in physical activity 3 x 30 minutes a week or more. Attracting people who are already active may yield higher numbers for your project but may not give you the outcomes you want.
- Be realistic with your expectations. No physical activity can achieve a step change on its own, so think about other activities you offer and how they can complement each other.
- Set the right baselines and targets making sure these are accurate, clearly defined, manageable and measureable. Ensure you have the time, budget and tools to track progress.

Following Government and funding changes, WfH transferred to a new host and Macmillan Cancer took over the programme in 2012.
The following case studies are contributing to the evidence base for physical activity

Effectiveness of Physical Activity Brief Intervention: Let’s Get Moving in Northamptonshire

**Location** Northampton, England

**Target group** Inactive, depressed (including low mood and anxiety) patients based at a health practice in Northamptonshire. Opportunistic, where the health professional thought the Let’s Get Moving (LGM) intervention would benefit the patient. Patients from the Chronic Obstructive Pulmonary Disease (COPD) register.

**Evidence underpinning the intervention**

**Evidence-base**
This study predominantly draws upon the NICE public health guidance 2: Four commonly used methods to increase physical activity (2006). It specifically responds to recommendations 1 and 2 which suggests primary care practitioners should identify inactive adults using a validated tool, eg, General Practice Physical Activity Questionnaire (GPPAQ), consider individual needs, preferences and circumstances and set agreed physical activity goals with follow up at appropriate intervals over a 3-6 month period.

A range of other public health guidance and research evidence has been used in the development of this project. For example, recommendations relating to the planning of behaviour change services and staff training:

- NICE public health guidance 6: Behaviour change at population, community and individual levels (2007).
- NICE public health guidance 16: Occupational therapy interventions and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care (2008)
  - recommendation 1 (participant feedback and motivation)
  - recommendation 2 (tailored support)
  - recommendation 3 (promoting walking) recommendation 4 (person centred approaches).
Evidence of need
The initial feasibility study of LGM suggests further research is warranted to assess the effectiveness of the physical activity care pathway (Bull et al., 2008). Also Breckon and colleagues (2008) recommended that fidelity is assessed in physical activity brief intervention research design.

Local evaluation of the Activity On Referral scheme (AOR) from October 2009 to January 2010 highlighted low exit interview rates and limited follow up data. Interviews with non-attendees of the AOR scheme established the need for support and continued motivation at the right level when starting the scheme.

The researcher had explored the literature and intended to explore the impact of motivational interviewing on physical activity brief interventions in primary care. The LGM physical activity care pathway met the needs of both the PCT commissioner and researcher; hence the pilot study was approved. Following liaison with service user groups and all interested parties in delivering the brief intervention, the LGM Northampton Pilot care pathway review was established.

Intervention aims
This study aims to implement and evaluate the effectiveness of Let’s Get Moving.

Objectives of the intervention
- To explore the impact of motivational interviewing on physical activity brief interventions in primary care.
- To determine the effectiveness of this approach in increasing physical activity levels and making positive changes to depression and perceived quality of life.

Nature of intervention
Patients are screened using GPPAQ and Patient Health Questionnaire (PHQ-9 depression scale). If appropriate (ie, patient is not active and/or stable on the PHQ-9 scale) the patient is booked an appointment with a member of the brief interventions team at the health centre. This involves a 30 minute one-to-one client centred motivational interview (MI). At the end of the MI consultation, where appropriate, the patient may be signposted to local physical activity opportunities that are of interest. Participants choose activity that is right for them from a framework of local activities that can be expanded to meet individual needs. MI reviews are conducted at one (optional), three, six, nine (optional) and twelve months.

Evaluation
The evaluation of this project is ongoing and being undertaken by a PhD student at the University of Northampton and partners based at the University of Derby, Sheffield Hallam University and NHS Northamptonshire.
Measurement
Research data was collected at baseline, three and six months. This includes physical activity assessed through the International Physical Activity Questionnaire (IPAQ), depression assessed through PHQ9 depression scale, Quality of life assessed through RAND SF-36, knowledge, skills and attitudes towards physical activity and stage of behaviour change. At six months a social validation questionnaire was also completed.

In addition the MI sessions were audio-recorded to assess treatment fidelity and coded using the Motivational Interviewing Treatment Integrity scale (MITI) with internal and external supervision from national MI trainers.

Outcomes
40 patients were screened using GPPAQ and PHQ-9, of these, 37 participants (93%) attended the initial brief intervention, 26 (65%) completed 3 month review and 23 (58%) completed 6 month review. Plus an additional three participants completed the three and six month follow up questionnaires.

The mean increase in self reported physical activity from induction to 3 months (n=24) was 1135.92 +/- 3422.28 MET. The mean increase in self reported physical activity from induction to 6 months (n=24) was 1765.90 +/- 4070.90 MET.

The results show a mean decrease in self-reported PHQ-9 scores: -2.41=+/-8.48 at 3 months (n=29) and -3.77 +/-6.17 at 6 months (n=26).

Results show significantly higher self-reported physical functioning, role limitation due to physical health, role limitation due to emotional problems, energy, improved emotional well-being, social functioning and general health over six months.

Use of the evaluation
Interim reports on the pilot have been disseminated within the health practice and the LGM team to share knowledge, enhance skills and identify training needs. All participants will receive a summary report and be invited to a post pilot meeting with the health practice to share lessons learnt. As the first LGM pilot in the East Midlands, lessons learnt during the project process will be shared via the Public Health project report internally and within the East Midlands hub. It is intended to publish the study (methods and evaluation of effectiveness) in peer reviewed journals and present the research at international conferences.

Key learning
- Use evidence to support rationale in project design and research study to enable effective sharing of outcomes from physical activity brief interventions.
- Learning from previous brief interventions and feedback from participants can support the design of effective physical activity brief intervention programmes.

Footnote: For a definition see glossary
• Communicating the theoretical framework and validated measuring tools used, may allow comparison of other research programmes.
• Timing of the intervention should be considered; recruitment was challenging in the winter due to health practice priorities of dealing with flu and the worst winter in the NHS for ill health and influenza admissions.
• Budget for LGM is required to continue team training and supervision of MI skills.
• For those individuals that attend LGM, physical activity may increase, depression may decrease and quality of life may be improved.

**Funding Acknowledgement**
The Let’s Get Moving pilot is the first one implemented in the East Midlands and is led by a Primary Care Trust Commissioner and researcher from the University of Northampton. The pilot will run from January 2011 - May 2012.

For further information about the project contact
Kerry Michelle Clarke
kerry.clarke@northampton.ac.uk

Michelle Aveyard
michelle.aveyard@northants.nhs.uk
More Active MuMs in Stirling (MAMMiS) Study: A randomised controlled trial of a physical activity intervention for postnatal women

**Location** Stirling, Scotland

**Target group** Postnatal women

**Evidence underpinning the intervention**

**Evidence base**
The project draws upon a range of public health guidance and research evidence regarding behaviour change and dietary and physical activity interventions post childbirth.

The guidance and evidence used in the development of this project include, but is not limited to:

- NICE public health guidance 2: Four commonly used methods to increase physical activity
- NICE public health guidance 6: Behaviour change at population, community and individual levels
- NICE public health guidance 13: Dietary interventions and physical activity interventions for weight management before, during and after pregnancy
- Cochrane review recommendations relating to weight reduction in women after childbirth
- a series of journal articles.

**Evidence of need**
High quality studies of interventions to promote physical activity in this group are lacking. Previous studies have been underpowered, lacked a control group and/or employed short-term follow-ups. All studies have used self-report methods to measure physical activity; however these methods are inadequate as they are susceptible to recall bias and can lead to over-reporting of activity levels.

**Intervention aims**
The intervention aims to increase postnatal physical activity levels and to identify the potential impact of these changes on psychological wellbeing, weight management and cardiovascular fitness amongst postnatal women.
Objectives of the intervention

This research will test the effectiveness of a physical activity intervention on postnatal women’s moderate to vigorous physical activity (MVPA) participation at three and six months using an objective measurement approach (accelerometers).

The programme focuses on:
- increasing the number of minutes postnatal women spend in MVPA per week
- identifying the impact of these changes on psychological wellbeing, weight management and cardiovascular fitness.

Recruitment

Postnatal women will be recruited through referral from their health visitor at six to eight week postnatal check-up, community-based support groups (e.g., breastfeeding groups) and self-referral from local advertisements.

Nature of intervention

Participants take part in two physical activity consultations. These introduce participants to cognitive behavioural, motivational and self-management behaviour change strategies such as goal setting, making an activity plan and coping with barriers. This intervention incorporates a ten-week group pram walking programme to encourage and support insufficiently active postnatal women to increase their physical activity levels. The intervention provides an opportunity for new mums along with their babies to be physically active in the local area. A pedometer and diary are introduced for self-monitoring purposes. Relapse is tackled through providing feedback regarding activity changes at three months and problem solving an individual’s long-term barriers to activity. A resources book has been developed to support postnatal women through the intervention.

The control group will receive usual care plus an information leaflet about keeping active in the postnatal period.

Evaluation

The study adheres to Consolidated Standards of Reporting Trials (CONSORT) guidance regarding conduct/reporting of randomised controlled trials. Postnatal women are still being recruited to the trial but future evaluation will provide evidence regarding efficacy.

Measurement

Changes in postnatal women’s weekly participation in MVPA from baseline will be measured at three months and six months to assess effectiveness of the intervention in comparison with the control group.

An accelerometer will be worn on the hip for seven consecutive days during waking hours to measure minutes spent in light, moderate and vigorous intensity objectively. The seven-day Physical Activity Recall will also be used to gather self-reported physical activity for leisure, work-related activity, transportation (including walking) and domestic and household activities.
Key learning

- The importance of developing good links with NHS professionals who have access to the population that is being targeted for the intervention.
- Engagement with existing programmes to enable development and sustainability of the project (e.g., good links with local community walking programmes for support with training in risk assessment and marketing).
- Ensuring the target population has an opportunity to air their views as part of a pilot to identify reasons for success or failure of the intervention (additional funding from the Chief Scientist’s Office has enabled recruitment of an independent research assistant to conduct post-trial interviews).

For further information about the project contact
Alyssa Gilinsky
a.s.gilinsky@stir.ac.uk
Welsh National Exercise Referral Programme

**Location** Wales, national programme

**Target group** Inactive adults (16+) with coronary heart disease (CHD) risk factors and/or mild to moderate depression, anxiety or stress.

**Evidence underpinning the intervention**

**Evidence base**
The main evidence used in the development of this project is the NICE public health guidance 2: Four commonly used methods to increase physical activity (2006). In 2006 NICE reported that there was insufficient evidence to recommend the use of exercise referral schemes to promote physical activity, other than as part of research studies where their effectiveness can be evaluated. Consequently, NICE guidance recommended that practitioners, policy makers and commissioners should only endorse exercise referral schemes to promote physical activity that are part of a properly designed and controlled research study to determine effectiveness (recommendation 5).

**Evidence of need**
In 2006 the Welsh Government commissioned a review of exercise referral schemes in Wales. The review revealed a range of practice across the country in terms of protocols, size of schemes, referral and retention rates and funding streams. Following this review the Welsh Government concluded that there was a need to rationalise exercise referral schemes in Wales. Furthermore following the publication of the NICE public health guidance they were keen to evaluate the effectiveness of exercise referral schemes in increasing physical activity participation and improving health.

**Intervention aims**
The primary aim of the National Exercise Referral Scheme (NERS) is to increase scheme participants’ physical activity to achieve 30 minutes of moderate intensity activity on at least 5 days per week.

**Objectives of the intervention**
To determine whether a 16 week exercise referral scheme is effective in increasing physical activity participation and improving the health of scheme participants in Wales. Focusing on the effectiveness of the scheme among two priority patient groups, those referred for mental health reasons (anxiety and depression) or for CHD risk factors.

**Nature of intervention**
A randomised controlled trial formed the cornerstone of the intervention. Participants were recruited using opportunistic referral by a range of healthcare professionals. To be eligible for
the scheme participants had to be inactive (defined as not moderately active for three or more times per week or deconditioned through age or inactivity) and have at least one medical condition, covering CHD risk factors, mental health, musculoskeletal, respiratory/pulmonary and neurological conditions. Only patients referred for mental health and/or CHD reasons who agreed to take part in trial were included in the research study.

NERS is a 16 week exercise programme supervised by qualified exercise professionals. On entry to the scheme participants have an initial face-to-face consultation where a lifestyle questionnaire is completed and health checks are carried out. The health check comprises several physiological measurements including resting heart rate, blood pressure, BMI, and waist circumference. The initial consultation also includes an introduction to facilities and an individualised activity programme is established through goal setting and motivational interviewing techniques.

Participants can access either one-to-one exercise instruction and/or group exercise classes at a discounted rate of £1 per session\(^3\). At week four a follow-up telephone consultation is carried out by the exercise professional to review the participant’s goals.

At week 16 a follow-up face-to-face consultation with the exercise professional is conducted where the lifestyle questionnaire and health check are repeated. This consultation also includes a review of participant’s goals and advice on how to continue to be active is provided including sign posting to local classes and exit routes. A service evaluation questionnaire is also administered at this point. Post 16 weeks, the range and cost of activities available to participants as an exit path from the scheme are dependent upon the local area. Participants are contacted by telephone at eight months to monitor progress and at twelve months they are invited to attend a final review session.

**Evaluation**
The Welsh Government commissioned an independent evaluation of the scheme.

**Measurement**
A variety of methods are used for monitoring programme reach and assessing outcomes at baseline, 16 weeks, 8 months and 12 months.

Referral rates, numbers attending consultations, numbers attending exercise sessions and scheme completion/adherence rates are captured at a local and national level through routine programme monitoring systems.

The primary outcome is to increase total minutes of weekly activity at 12 months. Physical activity, anxiety and depression scores were determined by the seven day physical activity recall questionnaire (7-DAY PAR) and the Hospital Anxiety Scale and Depression Scale (HADS) at six and twelve months.

---

\(^3\) Charges have now increased to £1.50 per session.
The 7-DAY PAR was administered by telephone interview. For those respondents who were contacted by telephone but refused to complete the time-consuming 7-DAY PAR telephone questionnaire, the GPPAQ was administered to give an indication of activity level at 12 month follow up. The Baecke Questionnaire of Habitual Physical Activity was included in the 12-month postal questionnaire. The Hospital Anxiety and Depression Scale (HADS) was used to assess depression and anxiety at 12 months.

An integrated economic analysis was carried out as part of the study to estimate the relative cost-effectiveness of the scheme as part of the management of people at risk of CHD or mild to moderate mental health problems compared to usual care.

Outcomes

- 2,160 inactive men and women aged 16+ with coronary heart disease risk factors and/or mild to moderate depression, anxiety or stress were recruited.
- The results of the trial revealed that participants in the scheme had higher levels of physical activity than the control group. This was significant for patients referred for coronary heart disease risk factors; there were improvements in clients with depression and anxiety.
- The impact of the intervention on participants adhering for the full intervention was clear. Those who completed the 16 weeks were far more likely to increase their activity compared to non-completers.
- The impact of adhering to the full intervention also led to statistically significant improvements in mental health, with a decrease in depression and in anxiety.
- The economic evaluation demonstrated a cost per QALY of £12,111. For those who adhere to the full programme the scheme was cost saving (£367 per QALY).

Use of the evaluation

The monitoring data is used to set targets to compare and improve performance levels in all of the areas across Wales. The evidence gained has been used to make improvements to the scheme specifically focusing on improving adherence rates.

The positive outcomes shown in the evaluation have led to further funding being secured for the scheme.

The evaluation is one of the few that has shown successful outcomes for a national exercise referral scheme in the UK and therefore the protocol manuals have been used to inform a number of national strategy documents.

Key learning

- Make sure you engage your evaluation team early, well before the project starts to ensure the evaluation design can be agreed and effectively built into the processes.
- Carry out a review of evaluation evidence, best practice and protocols from other similar projects before determining your project.
• Ensure that all delivery partners have a clear understanding of the project and are trained to ensure effective delivery.
• Be clear up front what your key outcomes will be and what you are able to evaluate within the resources available.

For further information about the project contact

Jeannie Wyatt-Williams  
jeannie.wyattwilliams@wlga.gov.uk

Judith Inker  
judith.inker@wales.gsi.gov.uk
A review of the effectiveness of adult cycle training in Tower Hamlets

**Location** Tower Hamlets, London

**Target group** Adults attending cycle training in Tower Hamlets

**Evidence underpinning the intervention**

**Evidence base**
The main evidence used in the development of the project was the NICE public health guidance 6: Behaviour change at population, community and individual levels (2007) relating to partnership working to plan behaviour change programmes, evidence based practice and cost effectiveness, developing social approval for health enhancing behaviours, needs assessment and the delivery of population level policies, programmes and interventions for behaviour change.

Further evidence was drawn from NICE public health guidance 12: Promoting physical activity in the workplace (2008) recommendations on policy and planning and implementing physical activity programmes.

**Intervention aims**
The primary aim of this research is to investigate the effectiveness of the Tower Hamlets adult cycling training scheme in delivering increases in cycling levels of cycle trainees.

**Objectives of the intervention**
The objectives of the study are to:
- Provide robust evidence outlining the overall impact of cycle training on all trainees over time.
- Analyse the extent to which any changes in cycling observed are due to cycle training or confounding factors.
- Assess whether any changes in cycling levels lead to changes in other physical activity behaviours amongst trainees.
- Assess the benefit: cost ratio of the programme.

**Nature of intervention**
The study focuses on the use of cycle training as tool to build skills and generate greater cycling levels in participants post intervention and seeks to identify how effective this model is at increasing cycling behaviours and physical activity levels.
The study is designed to test the theoretical assumptions of smarter travel initiative models and the outcomes that they deliver.

**Outcomes**

The study observed the following:

- Statistically significant increases in mean weekly cycling levels amongst respondents. This means that trainees cycle ‘more often’ after training than before.
- An increase in the number of females cycling post cycle training.
- A substantial proportion of these trips appear to be generated by commuting, with statistically significant rises in commuting by bike to work seen post training compared to before.
- Initial indications are that these changes are maintained up to one year after the intervention.
- From a public health perspective, there is evidence to suggest that the average mean increase of almost one day in each week when trainees cycle for at least 30 minutes adds to, rather than replaces, other forms of physical activity undertaken.

**Use of the evaluation**

The study will add to the evidence base for the use of cycle training as a tool to increase cycling behaviours and physical activity levels. The study has been submitted to members of the NICE group that has been set up to look at interventions to boost walking and cycling through ‘smarter measures’. An article on the study will feature in the CTC’s *Cycle Digest* online briefing for professionals and enthusiasts. An investigation is currently underway to identify a suitable academic journal for the study to feature in.

**Key learning**

- Cycle training needs to go hand-in-hand with ‘hard’ infrastructure measures in order to meet ambitious local cycle mode-share targets.
- The reported increase in female cycling frequency after training gives an encouraging glimpse into the potential for cycle training to help reduce the gap between male and female cyclists in urban areas.
- Cycle training can be seen as a useful strategy in developing cycling skills, techniques and confidence.

For further information about the project contact

Sam Margolis
sam.margolis@towerhamlets.gov.uk
Knowledge into practice: Tips for translating the evidence

There is strong evidence to guide the implementation of effective approaches to increase physical activity. In the current evidence-driven climate professionals need to be equipped with the tools and skills to adopt and adapt evidence for use within community settings and systems. However, guidance on how to translate research into practice remains elusive.

The following tips should enable researchers and practitioners to develop the context for using research evidence and help guide the development of high quality, evidence-based physical activity interventions.

Researchers

1. Disseminate research findings via publications, conferences and local networks, but ensure the information highlights actionable and jargon free messages for practitioners.

2. Translate and adapt research findings to specific contexts and situations to help practitioners see the relevance and usefulness of the research for them.

3. Produce a checklist of the key components of the intervention, particularly highlighting those that will help the integration of the intervention into practice.

4. Offer training programs to enhance practitioners’ skills in accessing, assessing, acquiring and adapting research.

5. Adopt research designs that foster reflection and rigorously evaluate not only the research outcomes, but also the process for achieving those outcomes.

Practitioners

1. Develop partnerships with policy makers, commissioners and researchers which are conducive to linking research to action, taking account of the effects of the local context.

2. Set up opportunities for researchers and knowledge users to meet and exchange research and views. For example host seminars with research presentations and interactive workshops which allow policy makers and commissioners to ask and analyse local policy and commissioning questions.

3. To effectively translate the evidence, strategic partners need to work closely with community deliverers and schemes in order to ‘skill-up’ managers and practitioners to ensure projects are informed and able to adopt best practice.
4. Be realistic with your expectations of the project and use the evidence base to determine these expectations particularly regarding effects on participant physical activity levels.

5. Set clearly defined and appropriate baselines and targets that take into account the evidence base and previous delivery. Ensure targets are measurable and affordable and consider how to ensure that the expectations of all stakeholders, including the target group, are included.

6. Be clear about your target audience and how the evidence base identifies them and suggests you might reach them.

7. Think critically about past or existing projects, even if by many measures they were successful. Take account of the evaluations of those projects and consider the problems they highlighted. Also consider if there are any additional issues related to implementing the project in the local context. Pilot or otherwise test possible solutions to these problems in the real world.

8. Where possible, engage the evaluation/research team in adapting the intervention for any local roll out.

9. Ensure the local delivery of the intervention remains, as much as is realistically possible, true to the original intervention and relevant evidence. Any adaptations to the intervention must be done cautiously to avoid compromising effectiveness.

10. Where local implementation necessitates adaptation from the original intervention research, ensure you maintain key intervention components and document where any deviations occur. If possible, consult with the original research team to discuss how best to manage and implement any adaptations.

11. Continually measure the quality of the intervention to evaluate fidelity to the evidence; this includes scrutinising delivery models, training for staff and implementation techniques.

12. When developing an intervention to contribute to the evidence base, review evaluation evidence, best practice and protocols from other similar projects. Use evidence to support the rationale for the project’s design and seek feedback from participants to support the design of the intervention. Create a theory based on evidence, participants’ views and above all practitioner expertise, and put it to the test.

13. Make sure that you engage your evaluation team early (well before the project starts) to ensure that the evaluation design can be agreed and effectively built into processes.
Appendix 1: List of the recognisable sources of evidence

- NICE public health guidance 2: Four commonly used methods to increase physical activity (2006)
- NICE public health guidance 6: Behaviour change at population, community and individual levels (2007)
- NICE public health guidance 8: Promoting and creating built and natural environments that encourage and support physical activity (2008)
- NICE public health guidance 16: Occupational therapy interventions and physical activity interventions to promote the mental wellbeing of older people in primary care and residential care (2008)
- NICE public health guidance 12: Promoting Physical Activity in the Workplace (2008)
- NICE public health guidance 17: Promoting physical activity, active play, and sport for pre-school and school age children and young people in family, pre-school, school and community settings (2009)
- NICE public health guidance 27: Dietary Interventions and physical activity interventions for weight management before, during and after pregnancy (2010)
- NICE public health guidance 35: Preventing type 2 diabetes: population and community-level interventions in high-risk groups and the general population (2011)
- NICE evidence into practice briefing: Promotion of physical activity among adults
- NICE evidence briefing: Transport interventions promoting safe cycling and walking
- Other NICE clinical guidance for example,
  - NICE obesity: Guidance on the prevention, identification, assessment and management of overweight and obesity in adults
  - NICE clinical guidance low back pain: Early management of persistent non-specific low back pain
  - NICE clinical practice guideline for the assessment and prevention of falls in older people
- Cochrane systematic reviews
- Other systematic reviews
- SIGN guidelines
- Research from journal articles
- Cost effectiveness evidence - NICE/LEAP/other
- Other, for example:
  - Global Physical Activity Alliance (2011) Non Communicable Disease Prevention: Investments that Work for Physical Activity

---

4 This is not an exhaustive list of sources of evidence, case study submissions were asked to identify any alternative sources of evidence of effectiveness which they had used to guide the development of their project or programme.
Glossary of terms

NEET is a government acronym for people currently ‘Not in Education, Employment or Training’. The classification comprises people aged between 16 and 24 (some 16-year-olds are still of compulsory school age); the subgroup of NEETs aged 16-18 is frequently of particular focus.

Quality-Adjusted Life Year (QALY) is a measure of disease burden, including both the quality and the quantity of life lived. It is used in assessing the value for money of a medical intervention. The QALY model requires utility independent, risk neutral and constant proportional trade off behaviour.

The QALY is based on the number of years of life that would be added by the intervention. Each year in perfect health is assigned the value of 1.0 down to a value of 0.0 for death. If the extra years would not be lived in full health, for example if the patient would lose a limb, or be blind or have to use a wheelchair, then the extra life-years are given a value between 0 and 1 to account for this.

The Metabolic Equivalent of Task (MET), or simply metabolic equivalent, is a physiological measure expressing the energy cost of physical activities and is defined as the ratio of metabolic rate (and therefore the rate of energy consumption) during a specific physical activity to a reference metabolic rate, set by convention to 3.5 ml O2·kg⁻¹·min⁻¹ or equivalently 1 kcal·kg⁻¹·h⁻¹ or 4.184 kJ·kg⁻¹·h⁻¹. Originally, 1 MET was considered as the resting metabolic rate (RMR) obtained during quiet sitting. MET values of activities range from 0.9 (sleeping) to 18 (running at 17.5 km/h or a 5:31 mile pace).

Patient Health Questionnaire (PHQ-9) is a nine item depression scale for assisting primary care clinicians in diagnosing depression as well as selecting and monitoring treatment. There are two components of the PHQ-9:

- Assessing symptoms and functional impairment to make a tentative depression diagnosis, and
- Deriving a severity score to help select and monitor treatment.

The PHQ-9 is based directly on the diagnostic criteria for major depressive disorder in the Diagnostic and Statistical Manual Fourth Edition (DSM-IV)