

Protecting and improving the nation's health

# Identifying what works for local physical inactivity interventions



NATIONAL CENTRE FOR SPORT & EXERCISE MEDICINE WORKING FOR FEALTH & WELKING

November 2014

# About Public Health England

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Published November 2014 PHE publications gateway number: 2014432

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# Acknowledgements

The ukactive Research Institute and the National Centre for Sport and Exercise Medicine in Sheffield would like to thank all the local authorities, clinical commissioning groups, leisure centres, gyms, walking groups, school providers, cultural and community providers, charities, employers and brands from across England and the wide range of stakeholders who provided us with the support and information for this report.

Thanks are also due to the members of the Classification Board made up of members of the ukactive Research Institute, the National Centre for Sport and Exercise Medicine in Sheffield and Public Health England who were involved in the development of the evaluation process and the moderation of the programme categorisations.

# Foreword

The case for getting everybody active every day could not be clearer. Inactivity is responsible for 1 in 6 deaths and wider health, social and economic costs for individuals, families and communities in England. However, it is less clear 'what works' to tackle inactivity, especially interventions that can be implemented with pace and scale.

A collaboration of the willing to address the rising tide of inactivity is developing across sectors, political parties and at community, local and national levels. Yet resources have never been tighter and the All Parliamentary Commission on Physical Activity reported that poor measurement and evaluation of interventions illustrates the "lack [of] a coherent picture of what 'good' looks like".

In commissioning this work, we sought to explore the Commission's concerns and test their hypotheses. It takes a rigorous, objective approach based on the Nesta standards of evidence and the Standard Evaluation Framework for Physical Activity. It doing so we test two things: 1) Can we identify 'what works' for roll-out across the country?; and 2) Are there issues to be addressed regarding measurement and evaluation of interventions? The answer to both is that we are making progress, but more work is needed.

In many ways this work exceeded expectations. The community came together to present over 950 projects and programmes for scrutiny, making it the largest study of its kind. A broad range of intervention models were represented , from those which change the physical infrastructure of the world we live in, to targeted programmes supporting specific individuals into activity. It is likely we will need a mix of such approaches.

The Nesta standards illustrate a somewhat academic approach to evidence, and this highlights the disparity between academic research and programme-level evaluations. Few projects achieve the higher thresholds of Nesta, reflecting the gap in research investment into physical activity and the limitations of current methodologies, particularly for infrastructure and ecological interventions. However, many initiatives aspire to build from routine data collection through structured internal and external evaluation before some move into the research space.

The project has highlighted the significant gap in routine collection of baseline data and evaluation. This is something that we have suspected for some time, so tangible evidence of the issue allows us to truly start to address the 'elephant in the room'.

We recognise that across this spectrum there are different levels of evaluation which need to be appropriate to the scale and focus of the intervention; however commissioners should consider how they can resource this as part of responsible commissioning.

Public Health England intends to lead from the front. Commissioning this work was always the start, not the end of a process. We will continue to roll out training and support for the use of the Standard Evaluation Framework for physical activity to help projects evaluate their impact, including baseline and monitoring data in all interventions. A recently conducted mapping of the academic sector will form the basis of improve the academia-delivery interface on evaluation. We are also developing our own offering to support partners at both national and local level.

Throughout our recent engagement process, many people have remarked that it is an exciting time for physical activity and that it 'feels' different. Embedding systematic and standardised evaluation in national and local levels will ensure what is done 'sticks'. PHE is committed to be there to lead and support you.

Dr Justin Varney National Lead for Adult Health and Wellbeing

# Executive summary

Building on the recommendations of the All Party Commission on Physical Activity, this project aimed to take a rigorous, objective look at local physical activity interventions across England to identify 'what works'. This is the first time such a large scale and academic approach has been taken to analysing and categorising the extent of physical activity interventions across the country.

An open call across all organisations, groups and individuals working to increase physical activity in communities across England elicited an unprecedented 952 programme for scrutiny. These represented a wide range of programmes in terms of activities offered, delivery settings, participation rates and target populations, reaching a reported over 3.5 million people annually (one in 15 of the population).

An objective and methodical approach was used at all stages. A template based on the Standardised Evaluation Framework for physical activity interventions was used for submissions. With the Nesta standards of evidence used to benchmark by an academic classification board to categorise and rank programmes.

Notable trends across submissions included:

- two-thirds of programmes funded by non-local authority monies
- 80% programmes delivered in non-local authority settings
- one in five programmes involved one to 5,000 participants per year
- most programmes had been running for three to five years
- over half of submitted programmes located in London and the South-East

Using this stringent criteria and process we identified:

- no 'proven' practice (Nesta levels 4 and 5)
- two programmes of 'promising' practice (Nesta level 3)
- 28 programmes of 'emerging' practice (Nesta Level 2; with nine on track to become promising)
- four examples of 'developing' practice (Nesta Level 1; all with processes in place to move into higher classifications)

Given rigorous academic standards used to examine complex physical activity interventions, it is arguably unsurprising that no programmes reached the threshold of 'proven'. This reflects the pattern seen in other countries; for example, an analogous process by the National Institute for Public Health and Environment in the Netherlands found no interventions with 'strong' evidence of effectiveness, 'seven' with good evidence and 'two' with a first indication of evidence.

In conclusion, this work represents a marked step forward from the All Party Commission recommendations. For the first time, it provides tangible evidence of the strengths and weakness of the sector in respect to the richness of interventions and variable levels of monitoring and evaluation.

# Introduction

This document summarises the methods and findings of a national call for local practice to increase physical activity intended to identify 'what works' for roll out across the country and explore the use of measurement and evaluation across interventions. It was delivered by the ukactive Research Institute and National Centre for Sport and Exercise Medicine (NCSEM) in Sheffield following a commission by Public Health England (PHE).

# Background

Despite significant investment across the breadth of physical activity (eg, sports, active travel, 2012 Games, etc), we are failing to stem the rising tide of physical inactivity across the population. We are already around 20% less active than in the 1960s and this is anticipated to increase to 35% less active by 2030<sup>1</sup> with the associated health, social and economic costs to individuals, families, communities and the country as a whole. Many studies have already made the urgent case for a more active nation. There have been reports from national government,<sup>2</sup> across political parties,<sup>3</sup> the private sector<sup>4</sup> and from the voluntary sector;<sup>5</sup> and most recently PHE's Everybody Active Every Day framework.<sup>6</sup> A key theme across these reports – most notably in the recommendations of the All Party Commission for Physical Activity – is the a potential systematic deficiency in monitoring and evaluation within interventions that dictates a failure to identify 'what works' and can be scaled up across the country to achieve population level improvement in physical activity levels and delivery the associated societal benefits.

This study aims to bring an academic rigour to explore this issue. It uses recognised robust models as (ie, the standard evaluation framework for physical activity interventions and Nesta standards of evidence) as the basis for the collation and benchmarking of interventions. In taking such an approach it is important to recognise the disparity in scope of evaluation in research and delivery contexts, and the associated risk of judging the effectiveness of interventions against such rigorous evidence standards. For example, an analogous process by the National Institute for Public Health and Environment in the Netherlands found no interventions with strong evidence of effectiveness, seven with good evidence and two with a first indication of evidence.

The unsustainable rising tide of inactivity coupled with dwindling resources to invest in interventions makes this study extremely timely. Decision makers need to be able to understand 'what works' in order to invest their resources to achieve maximum benefit. However, if – as the All Party Commission suggested – systematic deficiencies in monitoring and evaluation of intrevnetions is undermining identifying 'what works' then we need to fill the gap. This study aims to inform across both these issues.

- Ng SW, Popkin B (2012) Time Use and Physical Activity: a shift away from movement across the globe. Obesity Review 13(8):659-80.
- 2. Her Majesty's Government (2014) Moving More, Living More: The physical activity Olympic and Paralympic Legacy for the Nation. London: HMG.
- All Party Commission on Physical Activity (2014) Tackling physical inactivity – a coordinated approach.
- London: All-Party Commission on Physical Activity.
- Designed to move (2013) Designed to Move: a physical activity agenda. Portland, USA: Nike
- 5. ukactive (2014) Turning the Tide of Inactivity. London: ukactive
- Public Health England (2014) Everybody Active Every Day. An evidence-based approach to physical activity. London: Public Health England

# Summary of process

An open call was issued to all organisations, groups and individuals undertaking work actively contributing to increasing levels of physical activity in England. Details were submitted through a simple online questionnaire on the ukactive Research Institute website. The national review was formally closed at 5pm on Friday the 18 July 2014.

Target groups included local authorities, clinical commissioning groups, leisure centres, walking groups, school providers, cultural and community providers, charities, employers, brands and anyone actively looking to increase physical activity through unique networks.



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# Method

# Communications and promotion

#### Survey design

A standardised template was designed to capture the details of 'promising' and 'good' physical activity programmes that have been and/or are currently being delivered in England. The template was based on elements of the Standards Evaluation Framework for Physical Activity Programmes published by the National Obesity Observatory. This also represented the Tool kit for the Design, Implementation and Evaluation of Exercise Referral Schemes published by the BHF National Centre and the Standards of Evidence published by Nesta.

#### Project logo

A neutral logo was designed to promote the project for the purpose of attracting a diverse set of programmes for submissions.

#### Incentives for participation

The project was launched and communicated as "an open call to all physical activity programmes to identify promising and good practice in England." Incentives included:

- good practice included in the PHE National Implementation Framework
- individual case studies of top ranked programmes to feature in subsequent ukactive report
- social media promotion from ukactive and PHE highlighting individual projects
- promotion on the ukactive and PHE websites (as well as key stakeholders)
- poster presentations to be displayed at ukactive Summit 2014
- invitation to an event hosted by ukactive and Public Health England

#### Identification process

An initial process was undertaken to identify the key stakeholders and targets groups. This was supplemented by additional desk-based research and field-based research undertaken through one-on-one meetings and scheduled events. A process of ongoing calls and emails to potential participants was also undertaken to reach-out to the length and breadth of the physical activity sector.

#### Significant communications

Contact was initiated via email with over 6000 individuals who represented key figures in local authorities, clinical commissioning groups, leisure centres, walking groups, school providers, cultural and community providers, charities, employers and brands. A follow up email was sent two weeks before the submission deadline and ongoing calls were made.

Date	Details
21.05.14	Letters sent to 500 local stakeholders alongside regional fora
28.05.14	Press release launch alongside NCSEM and PHE
28.05.14	Hosted on ukactive and PHE website
28.05.14	Promotion on ukactive Active Intelligence (ongoing) and ukactive media review (ongoing)
28.05.14	Start of social media promotion (ongoing)
28.05.14	First round of letters to identified key stakeholders and target organisations
29.05.14	Phone calls to key stakeholders, local authority teams, identified organisations (ongoing)
02.06.14	Phone calls to cross section of national membership (ongoing)
16.06.14	Second round of letters to identified stakeholders and target organisations
01.07.14	Articles in sector press (health club management, leisure opportunities etc.)
01.07.14	Featured in ukactive Journal (see left)
01.07.14	Key communications with stakeholders; (ongoing)
	Sport England – contacts: Kay Thomson & Suzanne Gardner, promotion to Sport England funded physical activity schemes
	Macmillan – Sarah Worbey and Rhian Horlock, promotion to Macmillan-funded schemes
	Physical Activity Network through the Department of Health - contact: Lucy Foster, promotional content through LinkedIn, identification of existing PAN partners and encouragement to submit case studies, supportive collaborative social media promotion
	BHF National Centre for Physical Activity and Health - contacts: Elaine McNish & Emma Adams, identification of existing BHFNC partners and encouragement to submit case studies, supportive collaborative social media promotion
	The Outdoor Industries Association - contact: Andrew Denton, identification of existing OIA partners and encouragement to submit case studies, supportive collaborative social media promotion
	Other key influencing stakeholders were; Sports and Recreation Alliance, (James Allen), AgeUK (Ben Long), Youth Sports Trust, (Phil Chamberlain) Physical Activity Commission (Phil Insall)
01.07.14	Promoted at PAN Partners Forum event in London
01.07.14	Promoted at Flame Conference and designated stand in Telford
10.07.14	Promoted at regional forum and designated stand in Birmingham
14.07.14	Promoted at regional forum and designated stand in Leeds
15.07.14	Promoted at regional forum and designated stand in London
16.07.14	Promoted at regional forum and designated stand in Cambridge
17.07.14	Promoted at regional forum and designated stand in Bristol

# Evaluation process

The evaluation process described in the subsequent sections of this chapter provide the strategy which was used to methodically and objectively identify the best examples of physical activity programmes based on survey responses. The initial method developed by ukactive was subject to review by the ukactive Research Institute Classification Board and PHE and the final agreed method is presented here. Initially, two distinct categories were identified which a programme could fall under; 'good' and 'promising'. During the process, four more specific categories of were identified correlating to the Nesta standards: proven practice; promising practice; emerging practice; and developing practice. The evaluation process differed depending on category but comprised of the following fundamental steps:

# Stage 1

Programmes were assessed for eligibility against inclusion/exclusion criteria.

# Stage 2

Remaining programmes were assessed for quality using a critical appraisal framework.

### Stage 2.1

Programmes were given a score based on responses to key questions which indicated quality in relation to category definitions such as quantitative and qualitative measures of impact and evaluation methods. Programmes were subsequently ranked according to their total score. These questions were directly amenable to an automatic scoring system programmed using basic software.

#### Stage 2.2

The top 60 programmes were subject to an appraisal based on responses to further key questions. Scores were based on an appraisal scoring form (see subsequent sections for details).

# Stage 3

Programme categorisations were subject to moderation by the classification board which consisted of the following academics;

- Dr Chris Beedie (University of Aberystwyth)
- Dr Robert Copeland (Sheffield Hallam University)
- Professor Steve Haake (Sheffield Hallam University)
- Professor Alfonso Jimenez (University of Madrid)
- Professor Lynne Kennedy (University of Chester)
- Professor Andy Lane (University of Wolverhampton)
- Professor Greg Whyte (Liverpool John Moores University)

### Stage 4

The top ranking examples of physical activity programmes for each category are collated and presented. The protocol was designed to reduce bias and produce balanced and repeatable results. 'Good' and 'promising' practice were defined as detailed in the subsequent sections of this chapter.

Evaluation process flow chart

#### Stage 1

Programmes assessed for eligibility against inclusion/exclusion criteria

#### Stage 2

Remaining programmes are assessed for quality using a critical appraisal framework

#### Stage 2.1

Scored according to responses to key questions

Stage 2.2

Detailed appraisal

#### Stage 3

Category moderation by classification board

#### Stage 4

Top ranked programmes from each category are collated and presented

# Nesta standards of evidence

The scoring process was based on the Nesta standards of evidence. For a visual summary of the scoring process see the flow chart in the appendices (appendix A). It should be noted that to progress through each of the Nesta levels, all the criteria described for the previous levels must have been achieved.

### Proven practice definition (Nesta levels 4 & 5)

'Proven' practices are those programmes which can be classified as Level 4 or 5 as rated by the Nesta standards of evidence. They must have captured data which shows a positive impact on the participants and have demonstrated causality using a control or comparison group. Furthermore, they must have undergone an independent evaluation which confirms these conclusions.

#### Stage 1: Proven practice inclusion/exclusion criteria

To be considered an example of 'proven' practice, the programme must have undergone some form of external evaluation. These criteria directly relate to question 32 of the survey.

Question 32: Who, if anyone has evaluated your programme?

Answer	Action
In-house evaluation	Excluded
External evaluation	Included
No formal evaluation has been undertaken	Excluded

#### Stage 2.2: Appraisal

The remaining programmes were then subject to a critical appraisal and ranked. Further key questions relating to the definition above were considered (see table below); these questions provided information on if and how impact was measured, whether this impact was positive, causality and external evaluation methods.

#### Stage 3: Categorisation moderation

Classification board members received programme details, appraisal scores and categorisation information and compare programmes against criteria for levels 4 and 5 of the Nesta standards of evidence. Those not meeting the minimum requirements for level 4 were then considered for promising impact.

Question		Question no.	Y/N	S	Scor	Э	
1	Can the programme demonstrate causality? le, used a control group	27, 28, 29, 30, 31		1	2	3	
2	Were measurements collected a valid representation of the dependent variable?	27, 28, 29, 30, 31		1	2	3	
3	Has the programme demonstrated delivery of a meaningful, positive effect on the health of participants?	27, 28, 29, 30, 31		1	2	3	
4	If so, is this effect statistically significant?	27, 28, 29, 30, 31		NA	NA		
5	Has the programme demonstrated delivery of a meaningful, positive social benefit to the participants?	27, 28, 29, 30, 31		1	2	3	
6	If so, is this effect statistically significant?	27, 28, 29, 30, 31		NA	NA		
7	Has the programme demonstrated delivery of a meaningful, positive economic benefit? eg, local authority, PHE, NHS	27, 28, 29, 30, 31		1	2	3	
8	Has the programme been independently evaluated?	32		1	2	3	

Good practice evaluation flow chart

Stage 1: Exclusion criteria Has your programme been externally evaluated? YES Stage 2.1: Scoring Not applicable for this category

Stage 2.2: Detailed appraisal Appraisal based on: evidence of positive impact, causality, evaluation methods used and results,

Stage 3: Categorisation moderation

Does the programme meet at east level 4 Nesta standards?



# Promising practice definition (Nesta level 3)

'Promising' practice are those programmes which may not yet have been externally evaluated. However, they are able to show positive impact by taking qualitative and quantitative measurements. In addition, programmes should be able to demonstrate the potential to be scaled up, ie, they could be operated by someone else, somewhere else while continuing to have a positive and direct impact upon outcome measures and some consideration of continued professional development (CPD) provision should be evident.

#### Stage 1: Promising practice inclusion/exclusion criteria

All programmes not considered 'good' practice were eligible to be considered as a promising practice and were scored according to the 'promising' criteria (below).

#### Stage 2.1: Initial scoring system

The initial scoring system was based on the answers to three questions within the survey which were identified as key indicators of 'promising' practice in accordance with the definition above. They tested whether programmes have the potential to show a positive impact by taking qualitative and qualitative measurements and whether they have undergone internal and/or external evaluation.

Each question has been given an equal weighting and the maximum score a programme can achieve is 30.

Question 28 Have any observational measures or feedback of the impact of th	ne programme	been taken?
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Answer	Score
Questionnaires	2.0
Focus groups	2.0
Diary logs	2.0
Other (please specify)	2.0
None taken	2.0

Maximum weighting 10

Question 30 Have any actual measures (quantitative) of the impact of the programme been taken?

0.0

Answer	Score
Body Mass Index (BMI)	1.25
Blood pressure	1.25
Cholesterol	1.25
Cardiorespiratory fitness	1.25
Psychological outcomes	1.25
Mobility	1.25
Recovery	1.25
Other (please specify)	1.25
None taken	0
Maximum weighting 10	
Question 32 Who, if anyone, has eva	luated your programme?
Answer	Score
In-house evaluation	3.0
External evaluation	7.0

Promising practice evaluation flow chart

Stage 1: Inclusion criteria All programmes not considered for good practice

Stage 2.1: Scoring Scoring based on qualitative and quantitative measured being taken and evaluation methods

Stage 2.2: Detailed appraisal Appraisal based on: evidence of positive impact, scalability and training schemes

Stage 3: Categorisation moderation

Promising practice rank

#### Stage 2.2: Appraisal

The top 60 projects were then critically appraised and ranked. Further key questions relating to the definition above were considered; these questions provide information on impact, scalability and CPD provision (table below).

For Promising practice, programmes were scored according to the level of evidence of positive impact on the health, social and economic outcomes of the participants. The number of observational measures taken such as questionnaires, diary logs, etc. were taken into account as well as whether these had demonstrated a positive impact. The number of quantitative measures taken such as BMI, blood pressure etc. was taken into account as well as scalability and provision of CPD. The appraisal form below was used to score each programme against these criteria.

Q	uestion	Question no. Y/N		Score		
1	Has the programme demonstrated delivery of a meaningful, positive effect on the health of participants?	27, 28, 29, 30, 31		1	2	3
2	Has the programme demonstrated delivery of a meaningful, positive social benefit to the participants?	27, 28, 29, 30, 31		1	2	3
3	Has the programme demonstrated delivery of meaningful, positive economic benefit? eg, local authority, PHE, NHS	27, 28, 29, 30, 31		1	2	3
4	Is the programme in the process of collecting qualitative measures to demonstrate impact?	27, 28, 29, 30, 31		1	2	3
5	Is the programme in the process of collecting quantitative measures to demonstrate impact?	27, 28, 29, 30, 31		1	2	3
6	Does the programme have the potential to be scaled up?	33		2	4	6
7	Has the programme considered staff training?	25,26		1	2	3

#### Stage 3: Moderation

In order to minimise bias that may have resulted from the appraisal stage (stage 2.2), programme scores were subject to a moderation process. Moderation acted as a quality assurance process to ensure appropriate standards. This involved members of the classification board who were required to categorise five randomly selected programmes according to the criteria set out in tables 2 and 3 (depending on categorisation). Categorisation decisions were then based on recommendation from the classification board.

# Other categories and definitions: emerging and developing practice

A further two categories were developed during the process to recognise programmes that either have demonstrated positive impact and in some case are on course to be promising (ie, 'emerging' practice) or have a robust embedded approach to monitoring and evaluation ('developing' practice). Importantly, the inclusion of control groups to demonstrate causality is what sets these programmes apart from the rest.

#### Emerging practice (Nesta level 2)

Emerging practice are those programmes that:

captured data which has demonstrated a positive change

- scored highly overall on questions related to scalability, CPD provision, qualitative and quantitative measurement of relevant variables in addition to evidence of positive impact (health, social economic)
- are able to supply detailed explanations of external evaluation plans which they are currently in the process of carrying out
- are including control groups in evaluation studies

#### Developing practice (Nesta Level 1)

Developing practice programmes have:

- not yet captured data which can demonstrate a positive impact
- scored highly overall on questions related to scalability, CPD provision, qualitative and quantitative measurement of relevant variables which they are either in the process of collecting or have clear and well-defined plans to collect



# Results

### Submissions overview

A total of 952 examples of physical activity programmes were submitted. These represented a wide range of programmes being run all over England. The figures below provide an overview of the range of programmes submitted with regard to setting, participation rates, funding bodies and regions.

Summary of funding types for physical activity programmes in England



Summary of participation rates for physical activity programmes in England



Summary of how long physical activity programmes have been running in their current format





Summary of physical activity programmes settings

Summary of physical activity programmes by region. Note that figure numbers include those programmes running in multiple regions



The details of 952 physical activity programmes were submitted within a four-week period making this one of the largest surveys of its kind ever conducted. This process has brought to light the large number of people and organisations currently running physical activity programmes in England who are actively interested in being a part of this type of scoping work. The programmes are having a substantial impact on increasing physical activity levels across the country with over 3.5 million people reportedly taking part in these programmes annually.

As described in previous sections of this report, programmes were rated according to the Nesta standards of evidence and the best examples

categorised into one of four groups based on their evaluation methodology: good, promising, emerging and developing practice.

### Findings of initial sift

A total of 263 programmes stated that they had undergone some kind of external evaluation. These programmes were then subject to a more in depth analysis in relation to the Nesta standards of evidence to assess whether they should be considered as a 'good' practice.

One-hundred and ninety two programmes were rejected based on information given, ie, they did not use control groups or no information was provided on the external evaluation; 81 programmes only provided limited information on external evaluation procedures which was insufficient to make a categorisation decision. The necessary information was gathered by checking the rest of survey, referring to programme websites and contacting programme leads.

### Proven practice (Nesta levels 4 and 5)

Upon further investigation, just two of the 81 studies considered for 'Proven' had performed studies involving control groups. These were Project ACE (Active Connected Engaged neighbourhoods) and Les Mills UK. These studies were sent to the classification board for moderation. However, ukactive Research Institute and the NCSEM-Sheffield, together with the classification board recommend that these programmes not be considered Proven in relation to the Nesta standards of evidence due to the evaluation methods used:

Evaluations for Project ACE were intervention studies conducted by the same university group that are running the programme. Therefore this programme cannot be classified as externally or independently evaluated – a requirement for Nesta levels 4 and 5.

Similarly, Les Mills UK has published papers authored by programme leads which may be viewed as a conflict of interest. As a result, no programmes have been classified as 'Proven' practice.

# Promising practice (Nesta level 3)

Promising practice are those programmes which have shown a positive impact by taking qualitative and quantitative measurements. They have also been internally evaluated which has resulted in a peer reviewed publication (although this is not a prerequisite for Nesta level 3). They can demonstrate causality using a control or comparison group.

Two such studies were identified: Project ACE and Les Mills UK.

### Emerging practice (Nesta level 2)

Emerging practice are those programmes which are have taken qualitative and/or quantitative measurements and been able to demonstrate effective and meaningful impact. These programmes should be able to demonstrate the potential to be scaled up, ie, they could be operated by someone else, Nesta standards of evidence

#### Level 1

You can describe what you do and why it matters, logically, coherently and convincingly

#### Level 2

You can capture data that shows a positive change but you cannot confirm you caused this

#### Level 3 You can demonstrate causality using a control

or comparison group

#### Level 4

You have one + independent evaluations that confirms these conclusions

#### Level 5

You have manuals, systems and procedures to ensure consistent replication and positive impact somewhere else while continuing to have a positive and direct impact upon outcome measures. In many cases, they are able to supply detailed explanations of external evaluation plans, which they are currently in the process of carrying out and should in time see them move into the Promising category. In contrast to the Promising category, the absence of control groups prohibited to determination of causality.

A total of 28 programme were identified as Emerging practice, with nine having provisions in place to support moving into promising classification over time;

Northumberland Exercise Referral Scheme,\* Macmillan physical activity behavioural change,\* Bupa Start to Move,\* Momenta,\* Live Well Suffolk's Get Healthy Get Into Sport,\* Getting into Sport Surrey/Guildford Hypertension 2000,\* MYZONE,\* Let's Get Moving and Movement is Medicine.\* (\*Have the measures in place to be moving towards Nesta level 3, promising practice.)

# Developing practice (Nesta level 1)

Four programmes were identified as examples of developing practice. These programmes have not yet been able to provide evidence of positive impact as they either have not yet started or haven't yet analysed data which they are in the process of collecting. Hence they have not shown 'promise' as interventions. However, they scored highly overall on the strength of the qualitative and quantitative measurements being taken, the provision of CPD and scalability. All of these programmes have measures in place to improve their evidence base and therefore move up the Nesta standards of evidence scale. These programmes can therefore be considered strong examples of embedding robust monitoring and evaluation into interventions.

### Case studies

The following pages contain cases studies of the programmes identified above for the four categories in which programmes were identified: promising practice, emerging practice and developing practice.

# Promising practice

### Nesta Level 3

Two programmes were categorised as promising published. These were Project ACE (Active, Connected Engaged neighbourhoods) and Les Mills UK. A commonality of these programmes is that they each have undertaken evaluations which included control groups; in these instanced also published in peer reviewed journals giving additional validity. They are able to demonstrate causality and can therefore be rated as Nesta level 3. In each case, the organisation or institution performing the evaluation was the same organisation leading the project so these were considered internal evaluations. It is stipulated that to reach level 4 of the Nesta standards of evidence an intervention must have one or more independent evaluations that confirms study conclusions. Arguably inclusion of studies in peer reviewed journals demonstrates a form of independent review and so the quality of the journal and peer review process should be taken into consideration as well as the scientific rigour of the study design.

# Scalability

The scalability of these programmes is an important factor to consider; Nesta level 5 requires full scalability with manuals, systems and procedures in place to ensure consistent replication and positive impact. Les Mills UK is an international operation operating a franchise model in 80 countries delivering 30,000 classes per week in the UK alone As such it's scalability is evident. Project ACE has been designed with scalability in mind although it is only currently operating locally. ACE is described as scalable through the involvement of volunteers to increase cost-effectiveness and the project has secured funding through collaboration with the charity LinkAge.

### LES MILLS UK

Les Mills group fitness classes support a variety of groups to increase physical activity levels as well supporting weight loss and social cohesion. Participants are referred to classes through their fitness club staff/ membership consultants. Facilities pay a license fee to operate the programmes and many clubs have been running these programmes for up to 20 years. Les Mills estimates that there are 21,564,712 attendances (nonunique) per annum across the UK.

#### Impact

The ability of the programmes to deliver health benefits has been tracked according to the ACSM activity guidelines. Les Mills International have published the results of this in a peer reviewed journal; the paper evaluates a multi-modal group exercise programme, this was a 30-week group fitness intervention study which demonstrated the effectiveness of group fitness in reducing the cardiovascular risk in sedentary individuals. This study also demonstrated a 98.8% compliance rate. A second published study measured the application of six weeks of high intensity interval training to demonstrate the benefits of this approach on active adults with significant reductions in cardio vascular risk factors.

#### Qualitative measurements

None

#### Quantitative measurements

BMI, blood pressure, cholesterol, cardiorespiratory fitness, psychological outcomes, body composition changes via DEXA, strength gains and glucose levels

#### Evaluation

Evaluation conducted by Pennsylvania State University in collaboration with Les Mills International and published in peer-reviewed journals. Paper 1: Group fitness intervention Research aims: Evaluation of whether a multi-modal group fitness intervention could produce physiological health benefits. Sample: 25 sedentary adults (25-40 years). Method: completion of 30 week group exercise program. Data: sub-maximal oxygen consumption treadmill test, fasting blood draws, iDexa scans. Results: statistically significant reduction in body mass, fat percentage, cholesterol, LDL-C, triglycerides and elevations in oxygen consumption, lean body mass percentage and HDL-C compared to baseline measurements. Conclusion: group fitness minimises attrition and maximises health benefits to reduce risk of cardiovascular disease. Paper 2: high intensity interval training. Research aims: investigate the health effects of high intensity training in a group fitness environment. Sample: 84 healthy trained adults. Method: sample randomly split into high intensity interval training (GRIT) program and moderate intensity training (FIT) program (control). Results: compared to baseline levels, GRIT group significantly reduced body mass, triglyceride concentration and increased lean body percentage, glucose tolerance, maximal oxygen consumption and strength. Conclusion: health, fitness and strength of already active participants can be improved with the addition of two 30-minute sessions of high intensity interval training per week.

#### Scalability

The programme delivery, instructor training and club support strategies have been designed to be fully scalable. Les Mills classes are currently being delivered in more than 15,000 clubs and gyms and across over 80 countries.

#### **Future Work**

Future work will focus on increasing the population samples tested when determining the effectiveness of the programmes and include control groups to add strength to the data. There are plans to repeat the 30 week programme with a much larger group in 2015.

#### Setting

Local authority leisure facility, private leisure facility Region UK Wide **Running length** 10+ years Funding Local authority, private Participants/year 25.000+ Activities Dancing, cycling, group activity classes, resistance exercises, yoga/pilates/tai-chi, high intensity training

#### Nesta level 3

- captures data that shows positive
- change
- demonstrates causality using a control group
- evidence or scalability

#### PROJECT ACE (ACTIVE, CONNECTED, ENGAGED

#### **NEIGHBOURHOODS**

ACE is an intervention programme in which retired volunteers (activators) promote physical activity among older adults by supporting them to 'get out and about' more and engage with their local communities. ACE began in 2013 as a research project developed by researchers at the University of Bath, Bristol and the University of West England and is currently being rolled out across Bristol by the charitable organisation LinkAge.

#### Impact

Evaluation of the ACE programme show that it has a considerable impact on the health and social outcomes of the participants. From the self-reported qualitative measures, following the six-month intervention, ACE participants significantly increased their confidence and felt more supported to be active. 55% of the intervention group reported an increase in vitality compared to 22% of the control group. In terms of social wellbeing, 68% reported an increase (42% of the control group) and 59% reported an increase in life satisfaction (50% of the control group). 57% felt that life was more worthwhile at six months than at baseline, compared to 0% of the control group. The weekly number of activities that participants took part in rose from four to six. This compared to a decline in outside activities among the control group. 50% of participants improved their functional ability (compared with 11% of the control group).

#### Qualitative measurements

Activities diary, satisfaction with life (Diener et al, 1985) and process measures, the Resilience Scale (Wagnild et al, 2009), the Vitality Scale (Bostic et al, 2000), Basic needs satisfaction (Gagne, 2003), the Ageing Well Profile (physical, mental, developmental, social scales) (Stathi et al., 2004), focus groups and interviews.

#### Quantitative measurements

Physical activity levels (using accelerometers), physical function (Short Physical Performance Battery (three balance tests, timed sit to stands, a timed four-metre walk)), psychological outcomes

#### Evaluation

Performed by The University of Bath; 20 papers have been presented in academic conferences, seminars and workshops. Participants who volunteered to take part in ACE were randomly allocated to an intervention or control group. Paper title: A feasibility study of a peer volunteering intervention for promoting active ageing in the community: Project ACE. Sample: 54 older adults were recruited as volunteers (n=15) or intervention recipients (n=39). Methods: recipients were randomised to either one-to-one support by a peer volunteer or a waiting list control group. Recruitment and retention rates were recorded. Physical activity was assessed with accelerometry at baseline, three and six months (post-intervention). A mixed-methods approach was adopted to explore the degree to which the intervention was able to operationalise the underlying theoretical framework, the Process Model for Lifestyle Behaviour Change. Intervention recipients were administered a process evaluation questionnaire at baseline, three and six months. All volunteers and intervention recipients participated in semi-structured interviews postintervention. Results: at three and six months, the intervention group showed significantly improved general confidence to get out and about (p=.038, p=.003), increased confidence in facing specific barriers (p=.011, p=.015), increased knowledge of local initiatives (p=.001, p=007) and increased social support (p=.010, p=018). The qualitative findings supported the acceptability and feasibility of the intervention. Conclusion: results indicated that while recruitment was challenging, ACE is feasible and acceptable to volunteers and recipients and increases key motivational processes. ACE will be further assessed for its effectiveness and cost-effectiveness.

#### Scalability

The programme can be operated by a range of providers, its volunteering model results in low delivery costs and it can be delivered anywhere in the UK.

#### Target group

Older adults Setting Local authority leisure facility, community venue Region South west **Running length** 1-2 years Funding Charity Participants/year 100-250 Activities Wide range – all that is on offer in the local community

#### Nesta level 3

- captures data that shows positive
- change
- demonstrates causality using a control group
- evidence of scalability

# **Emerging practice**

### Nesta level 2

Emerging practice programmes were selected from the top 60 ranked programmes according to the initial criteria. These were then subject to an in-depth appraisal and the resulting 28 are presented here – these scored 15 points or more out of a possible 31 (see table 3 for details on the appraisal and scoring process) and can be rated as Level 2 according to the Nesta standards of evidence.

### Impact

Appraisals were based on evidence of positive impact on the health and social wellbeing of the participants, economic benefits, the strength and suitability of measurement variables being taken as well as scalability and continued professional development provision. This category highlights programmes which are in the process of measuring appropriate data and are currently undergoing evaluation in the form of an study with a control or comparison group to demonstrate causality. These programmes are the in the early stages of development so are not necessarily able to demonstrate impact. However, they represent practices which have the potential to be 'good' in the future. This is particularly important as this process has uncovered a lack of programmes which have considered this type of scientifically rigorous evaluation. Nine such studies have been identified; Northumberland Exercise on Referral scheme, Getting into Sport Surrey, Macmillan Get Healthy Get into Sport, Bupa Start to Move, Momenta, MYZONE, Live Well Suffolk's Get Healthy Get into Sport, Movement is Medicine and Let's Get Moving.

Three of these programmes are exercise referral programmes which have secured funding from the local authority or national funding bodies such as Sport England. A range of variables are being measured which includes both qualitative and quantitative measures. Quantitative research is a formal, objective, deductive approach to data analysis. In contrast, qualitative research is a more informal, subjective, inductive approach. Quantitative measurements are often considered the more rigorous of the two. However, both methods are appropriate for conducting research and selection depends on the research question being asked. There is a need for objectivity in order to maximise validity. Four programmes are behaviour interventions which aim to improve the health of the local community. Bupa Start to Move is the only promising design programme that targets children. Measures of mobility used to assess impact reflect the research aims well but the wider reaching, more general health benefits were not considered using this approach.

### Scalability

Over all there was a lack of detailed information provided in terms of scalability. Notable informative responses include Bupa Start to Move which is already delivered across the UK and has a website in place

which provides resources and training videos. Similarly, Momenta weight management programme offers a flexible approach to ensure cost effective delivery at scale as evidenced by the multiple locations and operators currently using the programme.

The case studies encompass a variety of programmes which can be grouped according to themes from the PHE Framework:

#### People

- 1. Start well: Bupa Start to Move
- 2. Live well: Flexcare+, Get Active, Get Well, Live Well Suffolk's Get Healthy Get Into Sport, Macmillan Physical Actvity Behaviour Change Pathway, Momenta, MYZONE, Slimming World Body Magic
- 3. Exercise referral schemes: Active Health, BEATS Bury's Exercise Therapy Scheme, Northumberland Exercise on Referral Scheme, PALS (Practice Activity and Leisure Scheme), Sheffield International Venues Exercise Referral Scheme, Southwark Exercise on Referral Scheme

#### Places

- 4. Schools: Girls Active
- 5. Built and the natural environment: Fitter For Walking, Milton Keynes Health Walks, Paddlers For Life, Sustran's Personalised Travel Planning, Walking for Health
- 6. Health and care: Back Gym and Cancer Gym, Inform Pulmonary Rehabilitation Scheme
- 7. Workplaces: CSPN Workplace Challenge, Well@Work
- 8. Communities
- 9. Community engagement: Birmingham Be Active, Leeds Let's Get Active, Let's Get Moving, Tandrusti

#### **1. START WELL**

#### **BUPA START TO MOVE**

#### Developing physical literacy

Start to Move is a programme developed by the Youth Sport Trust in partnership with Bupa which aims to develop primary teachers confidence and competence in teaching 4 to 10-year olds the movement foundations required to participate in life, activity and sport. This in turn gives the young people the body confidence and competence to want to get involved in activity and sport. Once teachers have completed the training, they are given access to the Start to Move website, which holds a wealth of resources, including research and training films.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews

#### Quantitative measurements

Mobility, motor proficiency tests (Bruininks-Oseretsky Test of Motor Proficiency).

Target group 4-10 year olds Setting School Region Nationwide Running length 6-12 months Funding Charity, private Participants/year 92,000 Activities Walking, dancing, running, fundamental movement skills

#### Impact

Through independent research (Leeds Metropolitan University) there has been an observed improvement over a six-month window of children's gross motor development and a small improvement of their physical proficiency. Start to Move was found to improve fine motor proficiency more than controls (except manual dexterity, small sample size). Balance decreases following Start to Move (small sample size). In terms of the qualitative measures taken, behavioural changes have been observed; teachers are recognising the importance of improving their confidence and competence to teach PE. As a result the attitudes of children towards PE are improving.

#### Evaluation

External evaluation ongoing with Leeds Metropolitan University. Study design: randomised control trial. Data: Bruininks-Oseretsky Test of Motor Proficiency – Brief Form (BOT-2) which measures fine and gross motor proficiency, physical activity levels using an accelerometer, teacher behaviour, pupil behaviour. Methods: physical activity (PA) levels will be measured using accelerometers which the children will wear for the entire school day. A combination of variables will be considered, including how PA changes during segmented parts of the school day (break-time, lunch-time, PE lessons), what affect increases in Fundamental Movement Skills (FMS) have on PA and what affect does a change in PA have on FMS.

#### Scalability

Project is scalable evidenced by the already UK wide delivery of the project. A website provides access to resources, research and training videos.

#### 2. LIVE WELL

Leisure facilities (Impulse and Barnsley Premier Sport) measure a comprehensive set of health indicators. These companies invest in the necessary equipment to offer a sophisticated healthcare package to their clients. Evidence of positive health impacts can be provided on a person to person basis however no large sample statistics have been calculated. Slimming world were able to provide a large amount of anecdotal evidence of positive health and social impacts with well-established research programmes and study publications. However, the variables being measured are limited to self-reported psychological and health outcomes. Scalability and training are both well established in these programmes as they are already running in multiple locations across the UK.

#### FLEXCARE+ (BARNSLEY PREMIER SPORT)

This is a Barnsley Premier Sport membership programme supporting people to maintain their physical activity levels, monitor their health outcomes and manage low risk health conditions.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews.

#### Nesta level 2

- captures data that shows positive change (pre and post intervention comparisons)
- ongoing independent evaluation
- trial including control groups not yet completed

#### Moving towards...

#### Nesta level 3

 randomised control trial in place

# Setting

Leisure trust **Region** Yorkshire and Humber **Running length** 3-5 years **Funding** Private

#### Quantitative measurements

BMI, blood pressure, cholesterol, cardiorespiratory fitness, psychological outcomes, mobility, recovery, functional ability.

#### Impact

Impact has been shown through client case studies used to demonstrate how prescribed programmes provided by BPL's health and exercise specialists have allowed people to build their confidence and live a full proactive life. For example, for one client: BMI - 20.5 %, body fat % - 7.6 %, waist circumference - 18.9 %, systolic blood pressure - 2.6 %, diastolic blood pressure - 14.4 %, resting heart rate - 16.7 %, lung function (PEF) - 25.0 %.

#### Scalability

New membership offer so unsure on scalability.

#### Training

Fitness qualification, REPs accreditation, GP referral. CPD: working with NHS partners, staff receive shadowing and training on a verity of medical conditions.

#### **GET ACTIVE, GET WELL (IMPULSE LEISURE)**

Impulse Leisure is a non-profit distributing organisation (NPDO), a charitable company providing leisure and recreation facilities to the local community. There is a wide array of health improvement programs on offer including an extensive program catering for people suffering long term conditions such as Parkinson's disease, cancer and stroke survivors.

#### Qualitative measurements

Questionnaires, one-on-one interviews.

#### Quantitative measurements

Body mass index, cardiorespiratory fitness, psychological outcomes, mobility, recovery.

#### Impact

Impact has shown increase in physical activity levels, physical and mental well-being and self-reported social benefits such as confidence. Weight management programs have shown a reduction in body weight and physical activity levels and an increase in physical and mental wellbeing. Programmes for long term conditions have shown either an increase in energy and stamina levels, reductions in the effects of the long term conditions. Currently outcomes are measured on an individual basis.

#### Training

Required: fitness qualification, counselling qualifications, REPs accreditation. Training: staff development to support to the main wellbeing coordinator.

#### Scalability

The programmes have been rolled out to the West Sussex area and Brentwood Leisure trust has communicated an interest in adopting the model.

# Participants/year 0-100

Walking, running, cycling, swimming, group activity classes, gym-based sessions, condition specific exercise classes, resistance exercises, yoga/pilates/taichi, motivational counselling

Nesta level 2
captured data that shows a positive change

#### Setting

Workplace, local authority leisure facility, community venue Region South east Running length 6-12 months Funding Local authority, clinical commissioning group, charity Participants/year 1,000-5,000 Activities Wide range

#### Nesta level 2

 captured data that shows a positive change

#### LIVE WELL SUFFOLK'S GET HEALTHY GET INTO SPORT

Live Well Suffolk is an integrated lifestyle service which delivers specific health improvement services to the population in Suffolk. "Get into sport" is a free health improvement intervention which involves the delivery of a motivational support session to a client with a trained staff member. A "Get into Sport menu" which lists the sporting activities on offer in the local area is provided and discussed. The client is then offered additional support in the form of accompanied visits to the class, club or activity, face-to-face support meetings, telephone conversations and access to an informal peer support group. The 20% most deprived areas of Suffolk are targeted, as well as people with long term medical or mental health conditions.

#### Qualitative measurements

Questionnaires, one-on-interviews, follow up calls, IPAQ.

#### Quantitative measurements

BMI, weight, patient-related outcome measures (PROM's), waist measurements.

#### Impact

The programme has demonstrated a positive impact with 53% of clients more active at three and six months after the initial intervention. As a result these clients have transitioned out of the inactive threshold. Accessing community sport and provision has also aided many peoples weight loss as a way to burn calories as well as helping smoking cessation by relieving stress. At the end of year one the intervention has benefited many individuals and some communities have had new clubs created where gaps in provision have been identified: 512 clients thus far have been given at least one motivational appointment with a project worker plus an introductory session is facilitated where appropriate; 394 of these have been retained within community sport. Socio economic data has been collected on all clients as well as more qualitative data on outcomes in terms of physical activity and in terms of the outcomes for the service they originally were referred for.

#### Evaluation

Current analysis is in house on an ongoing basis however a study is in place with the University of East Anglia to be completed in autumn 2016. The evaluation is funded by a Sport England Get Healthy Get into Sport grant with additional funding from Suffolk County Council. Aim: to evaluate the effect of Suffolk's Get Healthy Get into Sport initiative on sport participation and physical activity levels in adults. Sample: All individuals aged 14 years and above who enrol in Live Well Suffolk services from the start date of the project. Study design: cluster control trial. Methods: each Live Well Suffolk service location will be delivering either (i) the new intervention in addition to the existing usual care (the intervention arm of the project, hereafter), or (ii) usual care alone (the control arm of the project). Outcome measures. Change in physical activity levels and sport activity levels (self-reported using IPAQ) at three, six and 12 months compared to baseline. There will also be a qualitative analysis of the client experience of the service.

#### **Setting**

Workplace, local authority leisure facility, private leisure facility, outdoor settings, community venue Region East of England **Running length** 6-12 months Funding Local authority, Sport England Participants/year 1000-5000 Activities Wide range

#### Nesta level 2

- captured data that shows a positive change
- external evaluations ongoing that include control groups

#### Moving towards...

#### Nesta level 3

 cluster control trial in place

#### Scalability

Project is described as scalable providing the intervention was embedded within an integrated healthy lifestyle service and the right people were put in place to deliver and co-ordinate the process. The aim for GHGIS was to test whether tackling inactivity should be embedded within a health improvement organisation and so far this has been a positive experience.

# MACMILLAN PHYSICAL ACTIVITY BEHAVIOUR CHANGE PATHWAY

This is based on the NHS physical activity care pathway 'Let's Get Moving'. It provides an overarching framework for embedding physical activity into cancer care and works to develop sporting opportunities for people with cancer. Included in this is the delivery of the Get Healthy Get into Sport Macmillan Project and the provision of an evidence based approach to service delivery.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews, diary logs.

#### Quantitative measurements

BMI, blood pressure, cholesterol, cardiorespiratory fitness, psychological outcomes, mobility, recovery.

#### Impact

A national evaluation is currently taking place to review health, social and economic outcomes of the participant. Local evaluations have also taken place. Results from the Get Active Feel Good evaluation revealed positive trends in physical activity levels and care outcomes for patients. While the observed overall trend was positive, consideration must be given to the many variables contributing to changes, especially when patients are entering and subsequently attending the service at various stages of their cancer care. However, what should not be overlooked is the aspects of continued support, motivation and reassurance provided by GAFG which has an impact on levels of well-being and various aspects of life. Quality of life and wellbeing outcomes reported: a change in beliefs relating to physical activity, reduced unhealthy behaviours, increased social activity and decreased social exclusion, increased measures of wellbeing.

#### Evaluation

There are a number of studies currently being undertaken by Universities at different levels, some which include control groups. Projects which have been running for two years; Public Health Shropshire and Chester University have produced a report of their evaluation from the year-one pilot phase. Projects commenced January 2014: New Berkshire University has set up a series of focus groups and is analysing the data for the Berkshire Macmillan Sport England Get Healthy Get into sport site. Bournemouth University is evaluating the Dorset Macmillan programme. Specific fitness and BMI improvements are being measured alongside behaviour changes. To be published later this year. New Projects. Sheffield Hallam University has worked with Weston

#### Target group

People with certain medical conditions Setting Local authority leisure facility, private leisure facility, home-based, outdoor settings, community venue, primary care setting Region UK wide Running length 12-18 months Funding Sport England Participants/year 500-1000 Activities Wide range

#### Nesta level 2

- captured data that shows a positive change
- external evaluations ongoing

#### Moving towards...

- Nesta level 3
- control trial in place

Park Hospital on a scoping study led by Dr Helen Crank. This study asked people living with and beyond cancer and stakeholders in the city who would be involved in setting up a future exercise service, their views and thoughts about creating a new exercise and cancer rehabilitation service in Sheffield. They will be involved in evaluating the Sheffield Macmillan and Sport England funded Get Healthy Get Into Sport Project launching Sept 2014. Manchester University will be evaluating the Manchester arm of our Macmillan Get Healthy Get into sport project, which launched this summer.

#### Scalability

Currently in the innovation stage, projects have been categorised into grow, expand and extend grow. Beacon sites include Dorset and Berkshire (successful pilots in Bournemouth and Windsor) now expanding to the whole county (extend); Luton and Shropshire have been going for two years and are expanding their services. The intention is to eventually roll out the tested model across the UK.

#### **MOMENTA**

Momenta is a behavioural intervention that encourages individuals to make their own choices around when, what, where and how they participate in physical activity. The Momenta programme strongly and pro-actively promotes physical activity, specifically Momenta includes three one-hour classroom discussions on the benefits of cardiovascular exercise, resistance training and lifestyle activity in weight loss and maintenance. There are optional physical activity classes. Momenta also works to reduce barriers to participation, including cost (eg, free/discounted class passes/memberships), and increase confidence, eg, participants buddying up to try activities together.

#### Qualitative measurements

Questionnaires (HADS, WHOQOL, IPAQ short form, SCOFF), focus groups, one-on-interviews

#### Quantitative measurements

BMI, blood pressure, psychological outcomes, accelerometry.

#### Impact

Momenta has achieved clinically significant weight loss, improvements in physical activity levels, improvements in psychological measures, improvements in behavioural risk factors and better than anticipated retention. In addition data on demographics, weight loss history, behavioural risk factors for obesity and chronic disease (especially nutrition) is also being monitored. Data is currently analysed by a clinical psychologist, with concurrent third party academic studies.

Before Momenta, participants were doing an average of 249 minutes of moderate to vigorous physical activity per week (166% of the DH target). After Momenta participants reported doing an average of 423 minutes of moderate to vigorous physical activity per week (a 70% increase and 282% of the DH target); they also reported a 28% reduction in sedentary behaviour

#### Setting

Workplace, local authority leisure facility, private leisure facility, community venue, mobile bus Region North West, West Midland, s North East, South East, London **Running length** 1-3 years Funding Local authority, clinical commissioning group Participants/year 1000-5000 Activities Wide range

#### Nesta level 2

- captures data that shows positive change (pre and post intervention comparisons)
- ongoing independent evaluation
- trial including control groups not yet completed

Moving towards...

#### Evaluation

In-house evaluation is extensive, builds on a long history of evaluation of community-based programmes and is conducted and reviewed by an internationally recognised clinical and health psychologist in the field of weight management. External evaluation is starting now with two universities, Leeds Metropolitan and Durham.

Pilot study: tier 2 weight management scheme, carried out by Active Northumberland (see previous case study for Northumberland Exercise Referral Scheme details) and the public health team and evaluated by Durham University School of Applied Social Sciences. Research aims: to compare the Momenta programme with a physical activity only option and a combined Momenta and physical activity option. Study design: randomised control trial. Sample: 180 participants, patients with a BMI of 25.0-29.9 kg/m2, across two leisure sites. Method: once referred, participants will be randomly allocated into one of three groups:

a) the Momenta adult weight management 12-week programme (n=60), b) regular gym membership for 12 weeks (n=60), c) The Momenta 12week programme + regular gym membership for 12 weeks (n=60). Data: demographics (age, IMD, gender, ethnicity and employment status), physiological measures (BMI and waist circumference), self-reported physical activity pre and post programme and an objective measure of physical activity via the Fitlinxx Pebble, attendance at Momenta sessions/leisure centre, diet. Follow up data will also be collected three months and nine months post programme.

#### Scalability

Momenta has been designed to be scalable from the outset. Evaluation across multiple operators, locations and delivery formats confirms this. The programme is deliberately flexible in its approach to ensure that it is costeffective for delivery at scale. Sometimes participants pay part or all of the cost of the programme. In other cases it is completely paid for by public health or corporate facilities, for example.

#### MYZONE

MYZONE® is a chest strap and monitoring system that transmits heart rate, calories and effort in real time to a live display and wirelessly uploads the data to a logbook that can be accessed online or via the free MYZONE® Lite app. MYZONE® collects data to the benefit of physical activity stakeholders, and enables health and fitness professionals to stay connected with their users.

#### Qualitative measurements

Diary logs.

#### Quantitative measurements

Cardiorespiratory fitness, recovery, physical activity levels.

Nesta level 3 • control trial in place

#### Setting

School, workplace, local authority and private leisure facilities, outdoor settings, community venue **Region** Nationwide **Running length** 1-2 years **Funding** Local authority, central government, clinical commissioning group, privately log health outcomes. All physical activity data is stored in an online cloud based logbook, with individual and group aggregated data visible to the health practitioner and delivery partner. Qualitative feedback has shown that the system motivates sustained physical activity behaviours and improves awareness and understanding of physical activity 'intensity' by providing feedback to participants when CMO guidelines have been achieved.

#### Evaluation

The ukactive Research Institute used MYZONE in a yearlong study 'Project Get UK Active' and found clinical and statistically significant reductions in body mass, body fat, body fat percentage, waist circumference & BMI.

MYZONE has also been used as the subject of a research dissertation at Sheffield Hallam University. Title: the effect of MYZONE on physical activity referral scheme participant activity levels. Aim: to research the effectiveness of the MYZONE belt, in relation to increasing the amounts of physical activity undertaken by physical activity referral scheme (PARS) participants. Research design: counterbalanced repeated measures. Sample: new referrals in to Sheffield International Venues PARS (n=19). Methods: intervention group used the MYZONE belt and recorded their physical activity on a log sheet, while the control group only recorded physical activity on the log sheet over a period of two weeks. Data: frequency, duration and intensity of physical activity measured by MYZONE belt. Results: use of the MYZONE belt in PARS significantly increased both frequency, mean 3.3 occasions without MYZONE against 4.7 with MYZONE (Z=-2.12, p=0.033; =0.05), and duration, mean 202 mins without MYZONE to 328 mins with MYZONE (Z= -2.48, p=0.013; =0.05) of physical activity. However, Intensity remained the same and statistically insignificant throughout both conditions at moderate intensity (Z=-0.024, p=0.81; ns). Conclusion: the MYZONE belt is an effective way of increasing frequency and duration of physical activity undertaken by PARS participants

#### Scalability

Simple technology that accurately tracks and motivates all physical activity has significant flexibility and scalability.

\*NB. Although this could arguably meet Level 4 Nesta standards of evidence it has not been rated as Level 2 as the independent evaluation was part of a final year undergraduate research project so has not been submitted to a peer reviewed journal.

#### **SLIMMING WORLD BODY MAGIC**

The Slimming World programme as a whole reaches over 500,000 adults and their families each week. Body Magic is a lifestyle behaviour change programme aimed at weight control within which facilitation of engagement in physical activity forms part of the support programme.

Qualitative measurements Questionnaires, focus groups, diary logs. Participants/year 10,000-25,000 Activities Wide range

#### Nesta level 2

- captures data that shows positive change
- has undergone an evaluation

#### Setting

School, local authority leisure facility, community venue **Region** Nationwide **Running length** 10+ years

#### Quantitative measurements

BMI, psychological outcomes.

#### Impact

Within published data, based on self-reported survey data, the programme has been shown to have significant impact on loss of body weight, significantly improve mental wellbeing, improve various health measures, promote dietary change, facilitate participation in physical activity and is cost effective. Average weight change over 12 weeks was around 4kg and 4-5% loss of body weight. The average BMI change over 12 weeks was -1.5kg/m2. Over six months the mean weight change was 8.9kg (8.6% weight loss). Significant improvements in self-esteem, depression and anxiety were also reported after 12 weeks.

Qualitative data shows significant improvement in various aspects of mental wellbeing, numerous clients reported health benefits e.g. better glucose control, reduced blood pressure and cholesterol and reduction in medication. Increases in physical activity levels were also reported. Published survey data found that over 80% of respondents reported the programme had improved their health and around a third reported improvements in the health of the families also; 56% of Slimming World members reported becoming more active as a result of the programme and participation in physical activity increases with duration of membership. Participants reported a number of benefits as a result of increasing their physical activity levels including having more energy (37% of respondents), enjoying exercise now (33%), improved posture (31%), improved mobility (29%), being calm and less stressed (25%) and improved sleep (22%). The Body Magic programme also has a wider reach with 33% of participants reporting involving their partners in their more active lifestyle and 28% involving their children.

#### Scalability

The programme has already been scaled up and is run as a nationwide service. The programme continues to be scaled up.

#### Training

Qualifications: Slimming World qualifications in facilitation of behaviour change, basic nutrition and promotion of physical activity. No training is provided.

#### **3. EXERCISE REFERRAL**

Six programmes fall under this sub category. A feature of these programmes is the strength of the quantitative measures being taken; at the least these programmes measure BMI, blood pressure and psychological outcomes. Impact on the health of the participants is well evidenced through comparisons between baseline and follow up or end of programme tracking. However, only the best examples have been externally evaluated and none have provided any evidence of statistical significance testing. These programmes are characterised by having a clear aim and target population and employ clinical measures to prove outcomes. Objectively measured health benefits are often backed up by the use of questionnaires to measure social impacts.

#### Funding Private Participants/year 25,000 Activities Motivational counselling

# Nesta level 2 captures data that shows positive

Results such as improved self-confidence, self-esteem and social inclusion are the most commonly reported. Economic benefits haven't been reported by any of the exercise referral programmes presented. In terms of scalability, most programmes have been specifically tailored to reflect the needs of the community within which they serve. CPD is offered in three out of the six programmes, however, it is difficult to gauge the level of provision as little detail was provided.

#### **ACTIVE HEALTH**

Active Health is a physical activity referral programme which operates in the south west. General referral is 12 weeks, with some specialist classes being longer, the primary objective is for participants to become long term users. The programme targets people with long term conditions such as stroke survivors.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews.

#### Quantitative measurements

BMI, blood pressure, psychological outcomes, mobility, recovery, resting heart rate, waist and hip measurements, functional tests, SF12, stroke impact scale (SIS).

#### Impact (health, social, economic)

The initial 14 weeks of the Exercise After Stroke programme (n=72 people) has had a significant improvement on 10m walk time (20% improvement), timed up and go (20% improvement), SIS physical problems (12%), SIS Mood and emotions (5%), SIS daily activities (5%) and SIS mobility (5.4%). For those people who have now had three assessments (n=19) from baseline they showed an improvement in 10m walk time (23.7%), timed up and go (35%), SIS memory and thinking (8.9%), and SIS recovery (30%). This data shows firstly that people with a history of stroke (some from quite a long time ago) can still improve their functional abilities and reduce their falls risk significantly within 14 weeks. It also shows that over a longer time period (up to 26 weeks) there is a consistently improving profile of quality of life measured on the SIS. It is also important to note that mental health aspects of the SIS also improved (such as mood and emotions, and memory and thinking) thereby inferring that the exercise is having more than just a physical benefit to these stroke survivors.

#### Scalability

This programme could be expanded but is dependent on resources, funding and capacity. However, it has been tailored specifically for Wiltshire needs and criteria, which any other deliverer would need to evaluate to ensure appropriate for their particular needs.

#### Training

Specialist level 3 exercise referral, and level 4, eg, BACPR, exercise after stroke, postural stability. CPD – either as REP's accredited courses or via in house workshops.

#### Target group

People with long term medical conditions Setting Local authority leisure facility, private leisure facility, home based, community venue, primary care setting Region South west **Running length** 21/2 years Funding Local authority, clinical commissioning group Participants/year 1000 - 5000 Activities Motivational counselling

#### Nesta level 2

 captures data that shows positive change

#### BEATS BURY'S EXERCISE AND THERAPY SCHEME

BEATS is an exercise referral scheme for people with a recurring illness or medical condition who would benefit from a personal exercise programme. BEATS is a 12-month programme with a close supervision period for the first twelve weeks. Patients referred to BEATS get advice and support on how to improve general health and wellbeing through physical activity. This can take place at home, outdoors or at a local leisure facility.

#### Qualitative measurements

Questionnaires, one-on-one interviews, diary logs.

#### Quantitative measurements

BMI, blood pressure, waist circumference, psychological outcomes, mobility.

#### Impact (health, social, economic)

Of all clients using the service to date, 67% reduced waist girth measurements, 60% reduced weight, and we have many advocates of the scheme who have managed to reduce their medication due to the exercise intervention. Overall the scheme has reduced weight and waist girth measurements and has observed decreases in heart rates, blood pressure and overall BMI scores. Working closely with the mental health team the programme has developed pathways for clients with mental health issues to access exercise environments thus improving their mental wellbeing and social inclusion confidence.

#### Training

Level 3 advanced gym instructor, and a relevant GP referral qualification is required, though no training is offered.

#### Scalability

No details given.

#### NORTHUMBERLAND EXERCISE ON REFERRAL SCHEME

This is an exercise referral scheme that aims to support weight loss, social cohesion and increase physical activity levels of people who are inactive as well those who have certain medical conditions. The programme operates in Northumberland and receives ≈2000 referrals per year with an 80% uptake on places. Based on analysis of those referred between October 2011 and March 2013, 12-week adherence was 57.6% and 24 week adherence was 46.5%.

#### Qualitative measurements

One-on-one interviews, questionnaires.

#### Quantitative measurements

Psychological outcomes, cardiorespiratory fitness, blood pressure, BMI, waist circumference, physical activity levels

#### Target group

People with certain medical conditions Setting Local authority leisure facility, home based, outdoor settings, community venue, primary care setting Region North West Running length 10+ years Funding Local authority Participants/year 1000-5000 Activities Wide range

#### Nesta level 2

 captures data that shows positive change

#### Setting

Local authority leisure facility, community venue **Region** North East **Running length** 6-8 years **Funding** Local authority **Participants/year** 1000-5000

#### Impact and evaluation

Internal evaluations reported significant positive changes in systolic and diastolic blood pressure, waist circumference and BMI.

Independent evaluation carried out by the University of Northumbria; the study was published in BMJ Open in August 2013. Study design: a naturalistic observational study. Setting: nine local authority leisure sites in Northumberland. Participants: 2233 patients referred from primary and secondary care between July 2009 and September 2010. Intervention: a 24-week program including motivational consultations and supervised exercise sessions for participants. Results: uptake was 81% (n=1811), 12-week adherence was 53.5% (n=968) and 24-week completion was 42.9% (n=777). Participants who completed the intervention significantly increased their self-reported physical activity levels at 24-weeks t (638) =–11.55, p<0.001. Conclusion: completer's of the Northumberland ERS increased physical activity at 24 weeks, although the levels achieved were below the current UK guidelines of 150 min of moderate exercise per week. Leisure site was associated with uptake, adherence and completion.

#### Scalability

There is a robust evaluation methodology being applied in Northumberland to the ERS which constitutes that the scheme is very clear in its processes and methodology making it suitable to be scaled up.

#### Future work

PhD research programme (ongoing): analysis of qualitative data such as satisfaction and wellbeing questionnaires following participants from referral through the scheme.

Pilot study: tier 2 weight management scheme, carried out by Active Northumberland and the public health team and evaluated by Durham University School of Applied Social Sciences. Research aims: to compare the Momenta weight management programme (see also standalone Momenta case study below) with a physical activity only option and a combined Momenta and physical activity option. Study design: randomised control trial. Sample: 180 participants, patients with a BMI of 25.0-29.9 kg/m2, across two leisure sites. Method: once referred, participants will be randomly allocated into one of three groups: a) the Momenta adult weight management 12-week programme (n=60), b) regular gym membership for 12 weeks (n=60), c) the Momenta 12-week programme and regular gym membership for 12 weeks (n=60). Data: demographics (age, IMD, gender, ethnicity and employment status), physiological measures (BMI and waist circumference), self-reported physical activity pre and post programme and an objective measure of physical activity via the Fitlinxx Pebble, attendance at Momenta sessions/ leisure centre, diet. Follow up data will also be collected three months and nine months post programme.

#### Activities

Walking, swimming, group activity classes, gym based sessions, motivational counselling, sports, fall prevention

#### Nesta level 2

- captures data that shows positive change (pre and post intervention comparisons)
- independent evaluation
- RCT trial to demonstrate causality not yet completed

#### Moving towards...

# Nesta level 3control trial in place

### PALS (PRACTICE ACTIVITY AND LEISURE SCHEME)

PALS is an exercise referral partnership programme between local health agencies, Kirklees Communities and Leisure and Kirklees Active Leisure Trust. It is a 45-week scheme which aims to encourage participants to take part in group or individual activity programmes and teaches them how to incorporate activity into their daily living.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews, diary logs.

#### Quantitative measurements

BMI, blood pressure, psychological outcomes.

#### Impact (health, social, economic)

PALS clients were asked to score themselves at the beginning and end of the scheme using a tool called the 'results flower' – an adapted behaviour change model designed to reflect positive/negative change in relation to physical activity and health outcomes. Results showed that 99% of clients were more active, 65% of clients enjoyed physical activity more, 69% of clients were more confident to continue an active lifestyle and 55% were more motivated to remain physically active. In addition 77% reported an improvement in their physical health and a further 64% said they felt better about themselves.

#### Training

NGB qualification, fitness qualification, REPs accreditation, motivational interview training. Training: in house workforce development, individual tutoring plans to ensure standard, shadowing and mentoring opportunities.

#### Scalability

Model of good practice subject to continuous improvement.

# SHEFFIELD INTERNATIONAL VENUES EXERCISE REFERRAL SCHEME

A variety of referral classes are delivered each week over six sites in Sheffield. SIV provide specialist 12-week exercise programmes for clients who have been referred by their GP or health professional for a variety of conditions.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews, diary logs.

#### Quantitative measurements

BMI, blood pressure, cardiorespiratory fitness, psychological outcomes, mobility.

#### Impact

To date participants completing the scheme have had reduced blood pressure, resting heart rate, body fat percentage, BMI and increased fitness. Improvements on BREC, EQ5D and IPAQ questionnaires. Some participants returned to work having been on long-term disability. Average weight loss was

#### Setting

Local authority leisure facility, home based, outdoor settings, community venue, primary care setting **Region** North West **Running length** 20 years **Funding** Local authority **Participants/year** 1000-5000 **Activities** Wide range

#### Nesta level 2

 captures data that shows positive change

Target group People with certain medical conditions Setting Local authority leisure facility Region Yorkshire and Humber Running length 10+ years Funding Session fees Participants/year 1000-5000 Activities Wide range

9.1kg, highest weight loss was 15kg, lowering BMI by six points. Average BMI reduction was 1.8 points. Average systolic was reduced by 17mmHg, average diastolic was reduced by 3.1mmHg, average resting heart rate was reduced by 4.46bpm, 40 % of those referred for long term sickness were able to return to work following completion of the programme.

#### Scalability

Patients investing into their own health improves adherence, the programme has created partnerships working with health professionals.

#### Training

Requires a fitness qualification and REPs accreditation. No detail provided in terms of CPD.

#### SOUTHWARK EXERCISE ON REFERRAL

GP exercise referral scheme funded by Southwark Primary Care Trust and delivered by the borough leisure provider. The intervention consisted of a lifestyle assessment and motivational interview, gym induction, reduced membership to a leisure facility and promotion of leisure centre activities.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews.

#### Quantitative measurements

BMI, blood pressure, cardiorespiratory fitness, psychological outcomes, waist circumference, body fat, physical activity levels.

#### Impact

External evaluation by London Southbank University (2008) found; those who were assessed at the end of the 12-week exercise programme had significantly increased the amount of moderate/vigorous physical activity performed per week. At baseline only 33% of clients reached the level of activity recommended by the chief medical officer (CMO), but at the end of the programme 81% achieved the CMO's target. There was also a significant reduction in systolic blood pressure and waist circumference at 12 weeks which was maintained for a further 12 weeks. The programme appears to have had a positive impact on reducing health risk factors and a significant proportion of participants who completed the programme reported their health was better and that they had more energy.

#### Training

Qualifications: fitness qualification, REPs accreditation. Training: CPD in the form of assessing functional capacity, obesity and diabetes level 4, mental health.

#### Scalability

The programme has clear protocols and can be easily replicated by providers, barriers are capacity and funding.

#### Nesta level 2

 captures data that shows positive change

#### Setting

Local authority leisure facility, home based, outdoor settings, community venue, primary care setting **Region** London **Running length** 10+ years **Funding** Local authority **Participants/year** 1,000-5,000 **Activities** Wide range

 Nesta level 2
 captures data that shows positive

#### 4. SCHOOLS

One programme in the top 21 is currently delivering physical activity programmes in schools. Girls active has been running less than two years and as yet can only provide limited evidence of positive impact. Evidence of impact has been shown through an external evaluation; however at this stage evidence is limited to self-reported, qualitative data. However, this programme should be commended on intentions to perform RCT's with universities. It should be noted that the information provided on these plans was vague and not of an appropriate level of detail for inclusion into the promising design category. Scalability is dependent on positive outcomes and funding provision; the programme has been developed with scalability in mind and a cascade training model has been designed to reduce cost, and access to resources will be simplified through an online platform or DVD formats.

#### **GIRLS ACTIVE YOUTH SPORT TRUST**

Girls Active aims to empower girls, through leadership and innovative marketing, to increase participation by developing them as positive role models who 'sell' PE and school sport to their peers. The Girls Active process involves girls and teachers working together to understand the girls' preferences and motivations for taking part in PE and school sport. The aim of the project is to make PE a positive experience and encourage girls to do additional activity through regular attendance at extracurricular activities as well.

#### Qualitative measurements

Questionnaires, one-on-one interviews.

#### Quantitative measurements

Recovery.

#### Impact

External evaluation was undertaken by Research as Evidence between January 2013 and March 2014. Overall the impact study concluded the pilot had resulted in particularly positive outcomes for the majority of participants, most strongly demonstrated in the improved attitudes towards physical activity that the participants themselves report. Questionnaire data provided measures of changes in attitudes and perceptions towards PE, sport and physical activity, students' opinions on PE, sport and physical activity in school and opinions on school, kit and body image. For example, girls who were happy with the way their body looked rose from 25.4% to 55.5%, the number of girls who looked forward to their PE lessons increased from 37.6% to 71.4%, 73.3% 'liked the way they felt ' after physical activity compared with 41.1% previously. Almost two thirds (62%) of participants said they have an improved view of how physical activity is an important part of their life. A joint bid has been made with the Universities of Leicester and Strathclyde to the NIHR for an RCT with 12 intervention schools and 12 control schools in Leicester. If successful, delivery will commence in January 2015.

#### Scalability Girls Active could be delivered in any secondary school with girls in the

Girls aged 11-14 Setting School Region Nationwide **Running length** 1-2 years Funding Charity Participants/year 1000-5000 Activities Wide range including walking, dancing, Zumba, cheer-leading, football, cricket, boxercise

Target group

# Nesta level 2

 captures data that shows positive change

Moving towards...

#### Nesta level 3

control trial in place

state or independent sectors. Resources are currently being simplified to make them more user friendly for 'time poor' teachers and the possibility of resources being accessed on line or via DVD is being explored keep production costs to a minimum. The bid to NIHR includes a cascade training model for the RCT which will reduce cost per participant and increase capacity for the programme to be scaled up.

#### 5. BUILT AND THE NATURAL ENVIRONMENT

Five programmes in the top 21 are set outdoors. With the notable exception of dragon boat racing, measures used to assess impact have solely focused on qualitative evaluations, attendance rates and self-reported physical activity levels. Reliance on these measures provides only anecdotal evidence of the health and social benefits of these programmes. Walking for Health has undergone a substantial number of external evaluations, which has resulted in a number of published papers and through which they have built up a large database that could arguably stand as good evidence for the success of the programme. However, these evaluations rely entirely on self-reported (ie, subjective) physical activity levels and other self-reported outcomes measures which are not as accurate as using measurement devices such as accelerometers.

However, programmes such as Walking for Health and MK Walks do seem to recognise the importance of research based evidence and reference plans to perform further in-depth evaluations with independent partners. This research in some cases includes the use of pedometers which would provide a more objective and accurate measure physical activity levels.

Only Fitter for Walking has performed an economic assessment resulting in positive benefit to cost ratios. Other programmes express plans to perform this type of analysis in the future. Each of the programmes is based on a franchise model and so were able to demonstrate scalability as they have been rolled out nationally. Paddlers for Life appear to offer the most in terms of CPD requiring health professionals to run the programme and the provision of training for their staff.

#### FITTER FOR WALKING

Fitter for Walking is a community based project delivered by Living Streets in conjunction with local authorities to support community groups and residents in making improvements to their neighbourhood environment to promote walking as a mode of travel for local journeys. Areas were selected to participate in the project by Living Streets based on reported low levels of physical activity.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews.

Quantitative measurements None taken.

#### Setting

Community venue **Region** North West, West Midlands, North East, Yorkshire and Humber **Running length** 3-5 years **Funding** Local authority **Participants/year** 13,845

#### Impact

Impact evaluation performed externally by the BHF National Centre for Physical Activity and Health, Loughborough University. Residents and communities all reported perceptions of improvements in community cohesion and social interaction in most of the projects. The Health Economic Assessment Tool (HEAT) for walking found the projects were generally likely to result in significant financial savings from decreased mortality as a result of an increased number of people walking. The benefit to cost ratios (BCRs) were positive between 0.9 and 46:1 for all the FFW interventions using at least one measure of walking level (duration or distance). 68% of respondents indicated that they felt fitter, 55% felt less stressed, 80% said that the amount of walking they do had increased and 69% of those respondents reported walking more for leisure.

#### Scalability

The model of community engagement worked well with Living Streets coordinators facilitating the relationship between community residents and local authority partners. With the right level of financial investment along with Living Streets' expertise to guide the process, co-ordinators could be trained and the Fitter for Walking project's approach rolled out over a larger number of areas.

#### Training

No qualifications needed. Training: Internal staff CPD training and development policies have been established.

#### MILTON KEYNES HEALTH WALKS, WALKING FOR HEALTH

MK walks is a local programme which is part of the national project Walking for Health. Walking for Health is targeted at those wishing to improve their health, this could be due to being inactive or due to existing medical conditions (including Cancer patients - as funded nationally by Macmillan Cancer Support). Walking for Health Milton Keynes offers a range of walking groups, to suit walkers of all fitness levels. Walks are led across the whole city, to provide the opportunity for participants to see the wide range of parks and open spaces available in Milton Keynes.

#### Qualitative measurements

Questionnaires.

#### Quantitative measurements

Pedometers, physical activity levels, levels of perceived exertion.

#### Impact

There were observed increases in self-reported physical activity levels with many participants increasing the frequency of walking from once a week to three times a week. Participants also reported an increase in social inclusion and decreases in depression and anxiety while maintaining and improving their health (helping with weight loss, controlling blood pressure) and level of fitness. Those who are newly retired find the volunteering aspect of the walking groups a new challenge to keep their minds active and provide a purpose for their week. The University of East Anglia and Ecorys are currently

#### Activities Walking, lifestyle activities

Nesta level 2

captures data tl

nows posit hange

#### Setting Outdoor settings Region Milton Keynes Running length 10+ years Funding Local authority, clinical commissioning group, charity, private Participants/year 1,000-5000 Activities Walking

Nesta level 2

• captures data that shows positive change

undertaking a research study led by Macmillan to evaluate the programme; research includes questionnaires and pedometer readings. Initial part of assessment completed May/July 2014 with a four and eight month follow up.

#### Scalability

Currently 600 health walking schemes (MK being just one) are delivered in the UK and this could increase through sharing good practice and encouraging more areas to deliver the programme if they aren't currently or expand existing groups to offer more.

#### Training

Required: walk leader one-day training course and evidence of leading a safe health walk. Training: retraining to refresh the skills of the walk leaders and behaviour change presentations to encourage promotion of other health services.

# PADDLERS FOR LIFE, DRAGON BOAT PADDLING AFTER BREAST CANCER

The aim of this programme is to relieve sickness and protect and preserve good health for persons facing cancer, in particular but not exclusively breast cancer, or persons in need of rehabilitation as a result of such illness, within Cumbria and Lancashire, by providing or assisting in the provision for physical activity and recreation, notably dragon boating.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews, diary logs.

#### Quantitative measurements

Arm volume girth, BMI, blood pressure, cardiorespiratory fitness, psychological outcomes, recovery.

#### Impact

Evaluated by researchers at Sheffield Hallam University. Research aim: to measure the effects of a 20-week dragon boat training programme upon upper limb volume (lymphoedema) by assessing change in arm circumference. Sample: n=13, four of which had clinically diagnosed mild lymphoedema. Intervention: 20-week training programme incorporating aerobic, strength and flexibility training as well as dragon boat training and racing, individual and group support. Results: participants reported emotional, physical and well-being benefits. There was significant reduction in limb volume for both groups, significant improvement in aerobic fitness. Conclusions: a useful approach to assist breast cancer rehabilitation and promote an active lifestyle.

#### Scalability

Already being replicated across a number of areas in the North West of England and the US.

#### Target group

People with certain medical conditions Setting Private leisure facility, outdoor settings Region North West **Running length** 6-8 years Funding Charity, privately Participants/year 100-250 Activities Walking, swimming, group activity classes, gym-based sessions, resistance exercises, sports, motivational counselling

#### Nesta level 2

 captures data that shows positive change

#### Training

Qualifications: fitness qualification, REPs accreditation. Training: the charity paid for the Wright Foundation Level 4. Course volunteers access training programmes funded by the charity.

#### SUSTRANS' PERSONALISED TRAVEL PLANNING

Sustrans works with communities, policy makers and partner organisations so that people can choose healthier, cleaner and cheaper journeys and enjoy better, safer spaces where they live. The scheme helps local authorities and transport bodies to develop strategy and vision for the delivery of ambitious but achievable cycling walking and sustainable travel change.

#### Qualitative measurements

Questionnaire, one-on-one interviews, diary logs.

#### Quantitative measurements

Mobility.

#### Impact

A 7.6:1 cost to benefit ratio, 11% reduction in car driver trips, increases in walking (15%), cycling (33%) and public transport (18%), a decrease of 989 car km per household per year, estimated CO2 savings of 2,117 tonnes per year per project, 15% increase in time spent using active travel modes (three minutes per person per day).

#### Scalability

The programme format is flexible and inclusive with a proven, replicable method. This allows for the programme to be operated by others in other areas, to bring about a positive, direct impact. The cost of less than a third of a mile of motorway would allow the programme to target a city the size of Birmingham. To roll out the programme to all 25m households in the UK would cost around £500m.

#### Training

None, no qualifications needed.

#### WALKING FOR HEALTH

Walking for Health is an open-ended programme offering ongoing short and easy group walking activities to local communities. Schemes offer a variety of walk lengths depending on participant's needs and abilities. The scheme operates across the UK and is designed to target the most inactive people such as low income groups, black and minority ethnic groups and people with long term health conditions.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews, diary logs.

Setting

Home based, outdoor settings, community venue Region South West, North East, East of England, London **Running length** 10+ years Funding Local authority, privately, central government, lottery funding, European union Participants/year

25,000+ Activities

Walking, cycling, group activity classes

#### Nesta level 2

 captures data that shows positive change

Setting Outdoor settings Region Nationwide Running length 10+ years Funding Local authority, clinical commissioning group, charity, private Participants/year 1,000-5000

#### Quantitative measurements

Physical activity levels (self-reported and pedometer studies).

#### Impact

National database containing information on demographics, physical activity levels, health conditions and walk attendance rate. Evaluations have been based on analysis of participation data from the database, follow-up work with samples of participants using one-on-one interviews and qualitative evaluation using focus groups. Major findings; almost half of current participants previously did no more than half an hour of activity on three days a week, the average participant takes part in at least five walks a quarter, 56% of participants who were previously active on only 0-2 days per week increased their activity levels, 72% of current participants are over 55 and 72% are women, and these groups also exhibit better levels of adherence than average, 56% of participants who were previously active on only 0-2 days per week increased their activity levels. Current evaluation is being carried out by Ecorys and the University of East Anglia and has been advised by the University of Oxford, Intelligent Health and Cavill Associates. This includes a detailed longitudinal study of health, wellbeing and social impacts, with an economic impact component.

#### Scalability

Walking for Health has an open ended and flexible approach based on a powerful 'franchise' model where local activities are resourced, managed and delivered locally, with support in kind provided to qualifying local schemes by a national team. This includes a common training framework through a cascade system; support materials, best practice and advice; a national brand, website, promotional materials and templates; national quality assurance, campaigning and advocacy; civil liability insurance; and a national monitoring and evaluation framework with a shared database. This structure makes it very suited to scaling up so that it forms a major component of physical activity delivery on a national scale.

#### Training

At present no qualifications are required and there is no training offered.

#### 6. WORKPLACE

Workplace programmes are generally focussed on the promotion of team based challenges and events to encourage physical activity. Two such workplace initiatives are presented; CSPN workplace challenge and Well@ Work. CSPN and W@W are both nationwide schemes with relatively large participation rates (>5000 per year). Measures taken to demonstrate impact were limited to self-report outcomes and physical activity levels. Both programmes have undergone large scale external evaluations by Loughborough University which demonstrates recognition of the importance of proven impact and statistical analysis provides some evidence of positive health impact using indirect measures such as physical activity levels. Scalability is implicit to the design of the interventions so programmes scored highly on this aspect.

#### Activities Walking

#### Nesta level 2

 captures data that shows positive change

#### **CSPN WORKPLACE CHALLENGE**

CSPN Workplace Challenge is a national programme from the County Sports Partnership Network funded by Sport England which aims to engage workplaces in sport and physical activity. It is a motivational tool developed to encourage participants to be more active through online activity logging and promotion of offline opportunities for participation.

#### Qualitative measurements

Questionnaire, focus groups, one-on-one interviews, self-reported general health.

#### Quantitative measurements

BMI.

#### Impact

Overall, there was a significant increase (p=<0.001) in the proportion of inactive individuals reporting taking part in one 30-minute session of sport between baseline and three-month follow up (33.1% and 57.6% respectively). Survey respondents perceived that they were more active (36.8%), fitter (30.7%) and more healthy (27.3%). Focus group discussions highlighted that the challenge had encouraged an increase in levels of physical activity and sports participation over the eight week period of the challenge. The activity log challenge had a positive impact on communication within the workplace and encouraged relationships to be formed between colleagues that didn't previously know each other. Inactive interviewees indicated that the activity log challenge provided them with the motivation to try new activities. This was from seeing the range of activities available through the activity log and also gaining more confidence to try activities. Evaluation designed and conducted by British Heart Foundation National Centre for Physical Activity and Health, Loughborough University.

#### Scalability

Programme could be delivered by other sectors, partners, areas, countries, etc. This would require investment to further develop the system and funding for coordination.

#### Training

Training in how to use the system plus annual networking/conference for CSPs. Workplace challenge champion training is delivered in partnership with BHF health at work to workplace champions.

#### WELL@WORK PROMOTING ACTIVE AND HEALTHY WORKPLACES

The Well@Work programme is a national workplace health initiative, comprising nine regional projects encompassing 32 workplaces representing different sized organisations and sectors. Well@Work was a national project aimed at assessing the effectiveness of a broad workplace health programme in promoting and influencing the health and well-being of the workforce. Each of the projects implemented a set of interventions and actions aimed

#### Setting

Workplace **Region** Nationwide **Running length** 6-12 months **Funding** Sport England **Participants/year** 10,000-25,000 **Activities** Motivational tool that promotes activities, no sessions delivered

 Nesta level 2
 captures data that shows positive change

Setting Workplace Region Nationwide Running length 1-2 years at promoting and supporting healthy lifestyles. Initiatives were focussed on three key lifestyle behaviours: increasing physical activity; encouraging healthy eating; and smoking cessation.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews, diary logs.

#### Quantitative measurements

Pedometer, weight.

#### Impact

Increases in active travel were observed in three projects and in sports and recreation participation in nine projects. The national evaluation of Well@ Work was conducted by Loughborough University. A significant increase in METminutes\* of physical activity between baseline and follow-up was observed in six of the projects; statistically significant increases in active travel were observed in three projects, total minutes of cycling and walking to work increased significantly in these three projects; seven of the projects showed a significant increase in MET minutes of sports activities between baseline and follow up. Weight loss challenge: % weight loss ranged from 0.4% to 6.4%. Pedometer challenge: stair climbing intervention stair counts at week 24 (2 weeks post final intervention) remained 28% higher than baseline counts, the average change in step counts was 48% (range 16%-63%). Two projects provided some evidence to indicate a reduction in absenteeism between January 2005 and June 2007; however, this cannot be solely attributed to the effects of the Well@Work project. Employers perceived an improvement in staff morale, working atmosphere, communications and interactions between employees and managers in the workplace. It was perceived to have positively impacted on organisational culture and business-related indicators including absenteeism and productivity.

#### Scalability

The socio-ecological approach taken to delivering Well@Work provided a useful structure under which interventions were developed and delivered which could be easily adopted by other organisations and incorporated to create a long term and sustainable culture of employee health and wellbeing in the workplace. Well@Work has the potential to be expanded across many more organisations representing different sectors and settings.

#### Training

Training in how to use the system plus annual networking/conference for CSPs. Workplace challenge champion training is delivered in partnership with BHF health at work to workplace champions.

#### 7. HEALTH AND CARE

This group is made up of intervention programmes which have a focus on health improvement for specific conditions using physical activity. These specialised programmes have a relatively small target population typically seeing less than 100 participants per year. Programmes are proficient in the use of quantitative clinically relevant measurements and are able to provide

#### Funding

Charity, central government **Participants/year** 5,000-10,000 **Activities** 

Walking, dancing, jogging/running, cycling, swimming, group activity classes, gym based sessions, resistance exercises, sports, yoga/Pilates/ tai-chi

Nesta level 2

 captures data that shows positive change an in depth statistical analysis of the results so far. Models are considered transferable to other areas as well as – in the case of Back and Cancer Gym – other conditions. There is training incorporated into both programmes and a high level health care qualifications are required.

#### BACK GYM AND CANCER GYM

Lifestyle based physical activity programmes run by the University of St Mark and St John which aim to increase self-management of cancer through education, capability, opportunity and increasing self-efficacy. The programmes are designed to reflect and modify activities of daily living to ensure better sustainability and impact.

#### Qualitative measurements

Questionnaires, one-on-one interviews, diary logs, focus groups.

#### Quantitative measurements

BMI, blood pressure, cardiorespiratory fitness, psychological outcomes, mobility, Chester step test, body composition, grip strength, back flexion extension, pedometer steps.

#### Impact

Back pain data: pre-post standardised assessments of aerobic fitness, muscular endurance, low back pain and body composition showed significant (p < 0.05) pre-post intervention improvements in back extension (36%) and flexion (16%) muscular endurance, grip strength (5%), aerobic fitness (15%), and disability rating (19%). Patients also reported increases in their physical activity levels as identified by recorded pedometer counts. All patients were then invited to attend a 6-month follow up for which 58 patients volunteered (32%). Repeated Measure ANOVA, with Bonferroni adjustment, identified significant (p < 0.05) reductions in body fat (6.5%) compared to post programme measures, while aerobic fitness, disability rating and muscular strength and endurance were maintained. Based on a custom recall questionnaire preliminary data also indicated that some patients had reduced medication and access to medical services, although further analysis is required.

Cancer data: participants (n=10) reported increased perceptions of happiness, wellbeing and vitality, and a decrease in levels of fatigue that they attributed directly to participation on the programme. They also reported perceived improvements to body composition and muscular strength and endurance. Significant increases in pedometer steps were identified. Evaluation performed by University of St Mark and St John, Plymouth.

#### Scalability

Fitness professionals have been trained to deliver cancer programmes across the south west could be rolled out nationwide with funding. The model and approach is considered transferable to other conditions such as diabetes, osteoporosis, hypertension, obesity, orthopaedic patients, mild depression, etc.

Target group People with certain medical conditions Setting Sports centre (university) Region South West **Running length** 6-8 years Funding Clinical commissioning group, charity Participants/year 0-100 Activities Range of activity offered – lifestyle based physical activity programme

Nesta level 2
captures data that shows positive change

#### Training

Required REPs accreditation, CPD: exercise referral conferences, research groups and networks.

#### **INFORM PULMONARY REHAB PROGRAMME**

The programme provides pulmonary rehab to COPD and pulmonary fibrosis patients. The programme runs over seven weeks, twice a week for two hours at a time. It teaches patients about their condition, how to manage it, to live with it and to improve their exercise tolerance so they can live a full and active life.

#### Qualitative measurements

Questionnaires, one-on-one interviews, diary logs.

#### Quantitative measurements

Cardiorespiratory fitness, psychological outcomes, mobility, hospital anxiety and depression score, activities of daily living, spirometry, six-minute walk test.

#### Impact

The average improvement in the six-minute walk test from initial assessment to post pulmonary rehab was 71.95 metres. On average patients' COPD symptoms decreased from 19.85 on initial assessment to 14.2 post pulmonary rehab. Anxiety and depression (HADs) reduced on average from 15.29 on initial assessment to 10.52 post pulmonary rehab. Satisfaction currently sits at 93% (to end of May 2014). We are currently involved in a data capture project with DGS CCG to analyse the number of hospital admissions caused by COPD and PF in the area and plan to cross-correlate these with attendance on our PR programme with the aim of determining the impact of pulmonary rehab on hospital admissions.

#### Scalability

In the process of scaling the programme up ourselves and have recently won a tender to provide the service to Bexley CCG.

#### Training

The programme is delivered by a multidisciplinary team of nurses, physiotherapists and exercise specialists (all of whom are degree educated). Bi-annual courses are run on smoking cessation, exercise for respiratory patients and there is also a clinical guardian who keeps the team updated with the latest clinical research.

#### 8. COMMUNITY ENGAGEMENT

These are local authority initiatives which aim to increase activity in local communities by improving the accessibility of existing local facilities and services to certain target populations. Physical activity levels are the primary indicator used to demonstrate impact; this has been measured by tracking session attendances or using self-report methods such as the IPAQ. Within this group there is a lack of use of statistical analysis techniques, despite the fact that a large set of relevant quantitative data has been collected. For

Target group People with certain medical conditions Setting Community venue Region South East **Running length** 3-5 years Funding Clinical commissioning group Participants/year 500-1000 Activities Walking, group activity classes, condition specific exercise, resistance exercise, lifestyle activities, chair based exercise, motivational counselling

Nesta level 2
captures data that shows positive change example, Tandrusti have a large database of individual quantitative health measures which includes BMI, blood pressure and cardiorespiratory fitness. However, there is no evidence that any sort of inter-subject analysis has been carried out. Social benefits are anecdotally reported through individual case studies. Reported benefits include decreased levels of anxiety and depression and increases in feelings of social inclusion and confidence. Birmingham Be Active was the sole programme in this group which was able to demonstrate a positive economic impact through completion of a cost to benefit analysis.

External evaluations are currently being undertaken for all three programmes however these are focused on self-reported physical activity levels and participation rates. Continued professional development (CPD) schemes appear to be well established with appropriate provision of training where necessary, however little detail was given. Similarly to the exercise referral schemes, these programmes have been specifically tailored to reflect the needs of the community within which they serve so are not able to demonstrate scalability, with the exception of Tandrusti which has been adopted in Stoke providing a real life example of it being implemented somewhere else.

#### **BIRMINGHAM BE ACTIVE**

This is a partnership initiative between Birmingham City Council and the three Birmingham PCT's, aimed at increasing physical activity levels among Birmingham residents through providing free access to public leisure centres, green space and structured chronic disease management services.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews.

#### Quantitative measurements

BMI, blood pressure, cardiorespiratory fitness, psychological outcomes, future falls risk.

#### Impact

Programme is currently under review and development to consider the inclusion of wider determinants of health, eg, smoking, NHS health checks, specialist weight management, etc. Evaluation performed by Birmingham University. Of the participants followed up in the prospective study, 19% were inactive at the time of joining, and 89% of these increased their activity levels to moderately or very active over three months; 40% of members had lower than recommended physical activity levels at baseline, of which 70% increased their activity levels to recommended levels over three months. Higher levels of physical activity at follow up were related to lower levels of anxiety and depression. The results of the cost benefit analysis (CBA) were sensitive to the intervention costs. When costs were adjusted to reflect the revised model of implementation, the net-benefit of Be Active was positive (expost perspective).

#### **Setting**

School, local authority leisure facility, home based, outdoor settings, community venue, primary care setting Region West Midlands **Running length** 3-5 years Funding Local authority Participants/year 150,000 Activities Wide range

#### Nesta level 2

 captures data that shows positive change

#### Scalability

Programme is already a population level approach but support is provided to other areas that are considering developing a similar model.

#### Training

Gym instructor level 2, 3, GP referral and specialist level 4 (COPD, cancer, postural stability/falls). Level 1 and 2 NGB qualifications. REP's CPD and local authority performance and development review process.

#### LEEDS LET'S GET ACTIVE

Leeds Let's Get Active is a programme of free gym and swim sessions as well as beginner running, family sports activities and health walks. The main aim of LLGA is to support inactive people to become active. LLGA provides a supportive environment for those new to or returning to activity and supports those with medical conditions, those at risk of social isolation and those wanting to lose weight.

#### Qualitative measurements

Focus groups, one-on-one interviews, social media commentary, IPAQ.

#### Quantitative measurements

Attendance monitoring.

#### Impact

Analysis carried out in March 2014 demonstrated that by using LLGA session attendance data as an indicator, 34.8% (n=3117/8951) of participants reporting ≤1 day moderate to vigorous intensity activity per week at baseline had attended at least one session since signing up. LLGA has currently (July 2014) seen around 90,000 visits which have included gym, swim, classes and community activities. It can be estimated that each activity costs on average £4. This would mean that currently around £360,000 has been saved by LLGA members in Leeds participating in the scheme. Data is currently being analysed by Leeds Metropolitan University – the project's research partner. This will be available from August 2014. This data will include full analysis of IPAQ at baseline compared with IPAQ at follow up alongside participation data.

#### Scalability

A free, universal offer in leisure centres would require funding to cover loss of income as well as officer time, marketing and coach/delivery etc. This all depends on the offer that is developed. LLGA was based on learning from the Birmingham Be Active Scheme.

#### Training

Required: NGB qualification, fitness qualification. Training: all staff within Leeds City Council leisure centres are offered CPD opportunities appropriate to their role. Casual LLGA coaches are also invited to undertake specific training and supporting workshops for LLGA.

#### Setting

School, local authority leisure facility, outdoor settings, community venue Region Yorkshire and Humber **Running length** 10+ years Funding Local authority, central government Participants/year 33,000 Activities Walking, dancing, jogging, swimming, group activity classes, gym based sessions, resistance exercises, sports, motivational counselling

#### Nesta level 2

 captures data that shows positive change

#### LET'S GET MOVING

Let's Get Moving reaches out to people in selected communities who have been flagged up as potentially inactive and offers them the opportunity to receive free motivational interviewing from a community exercise professional with the aim of identifying existing physical activity opportunities in the local area that might be of interest to the individual

#### Quantitative measurements

Questionnaires, IPAQ.

#### Qualitative measurements

BMI, blood pressure, body composition, fasting glucose levels, accelerometer to measure physical activity levels.

#### Impact

Two per cent decrease in body mass, 2% reduction in BMI, 7.8% decrease in fat mass, 5.7% decrease in body fat percentage, 9.57% decrease in resting heart rate, currently screening using single item measure, before progressing to do IPAQ (plus the sport question) at baseline, 12 weeks, six months and 12 months. In terms of the data that has been received so far, there has been an observed uplift through IPAQ Plus at 12 weeks of 153% uplift in total time spent walking, 242% uplift in time spent doing moderate activity, 375% uplift in time spent doing sport, with 23% of participants achieving 30 minutes. Current longitudinal study is being performed by the ukactive research institute in collaboration with the University of Aberystwyth. The sub sample analysis is ongoing and the measurement effect is isolated via the use of a 'usual treatment' control group.

#### Scalability

The technical system and information governance elements of the programme mean that it can be packaged and 'franchised' out to different local authorities as a system which has demonstrable effectiveness.

#### Training

Level 2 REP accreditation is required, as well as an NGB qualification. Once employed, the community exercise professional is given formal training on motivational interviewing techniques. Ongoing training, support, guidance and peer support is offered throughout.

#### TANDRUSTI

The purpose of the Tandrusti project is to improve the health and well-being of people from black and minority ethnic (BME) communities in Dudley Metropolitan Borough through locally provided physical activity and health education programmes.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews.

Target group Inactive Setting Primary care setting Region East of England Running length 6-12 months Funding Local authority, clinical commissioning group Participants/year 1000-5000 Activities Motivational counselling

#### Nesta level 2

- captures data that shows positive change
- control trial ongoing

#### Moving towards...

Nesta level 3

control trial in place

#### Target Group

People from black and minority ethnic communities **Setting** Local authority/private leisure sites, outdoors,

community venues, places of worship

#### Quantitative measurements

BMI, blood pressure, cardiorespiratory fitness, psychological outcomes, waist circumference, rate of perceived exertion.

#### Impact

Results show positive reductions in BMI, waist circumference, cardiovascular fitness, blood pressure and rate of perceived exertion (RPE), and social benefits around social inclusion and loneliness. The results have been collated over ten years and are contained within yearly annual reports. The service has also made inroads into tackling local and national myths about what activities BME groups and in particular Asian women will take part in. Beneficiaries reported significant improvements in their health, well-being, fitness, self-esteem, independence, and improved confidence in accessing health services. The health benefits of Tandrusti courses are being sustained at home by beneficiaries who are exercising more, eating more healthily and sharing healthy living messages and practices with their families. 35 people have trained and are volunteering with Tandrusti, including as community health champions, so contributing to the Big Society agenda. In February 2012 health and fitness improvements for 3,707 beneficiaries had been recorded, which meets the project outcome, of 3,000 adults from black and minority ethnic communities in Dudley Borough report improved health and fitness levels. Externally evaluated via the Lottery and an independent commissioned consultant (Mary Curran Applied Research and Consultancy).

#### Scalability

This programme has developed due to local will and a commitment to equality and diversity, as well as a clearly identified evidence based need. These needs are similar across the country regarding BME populations. This service has already been adopted in Stoke so there is a real life example of it being implemented somewhere else

#### Training

Required: fitness qualification, REPs accreditation, CPD: 14 staff training events (against a target of four) have been run providing evidence of continuing professional development of project staff, tutors and volunteers over the project term.

#### Region

West Midlands **Running length** 10+ years **Funding** Local authority, lottery **Participants/year** 1,000-5,000 **Activities** Walking, dancing, swimming, group activity classes, condition specific exercise classes

Nesta level 2
captures data that shows positive change

# **Developing practice**

# Nesta Level 1

Promising Emerging physical activity programmes were selected from the top 60 ranked programmes according to the initial criteria. These were then subject to an in-depth appraisal and the resulting four are presented here – these scored 15 points or more out of a possible 31 (see table 3 for details on the appraisal and scoring process) and were rated as Level 1 according to the Nesta standards of evidence.

These programmes have not yet been able to provide evidence of positive impact as they either have not yet started or haven't yet analysed data which they are in the process of collecting. While no judgement can therefore be made on the specific interventions, they represent strong examples of how robust monitoring an evaluation can be embedded into intreventions. However, they have scored highly overall on:

- the strength of the qualitative measurements being taken
- the strength of the quantitative measurements being taken
- the provision of CPD
- scalability

The case studies have been grouped according to themes from the PHE Framework as follows:

Places

- 1. Health and care: Ballet Burst
- 2. Workplaces: Beat the Business Park
- 3. Schools: Camden Active Places
- 4. Built and the natural environment: Coca-Cola Zero Park Lives

#### **BALLET BURST**

Ballet Burst is a randomised control trial using ballet exercise to reduce obesity in people with intellectual disability.

#### Qualitative measurements

One to one interview, diary logs.

#### Quantitative measurements

Cummins' Comprehensive Quality of Life Scale (Cummins, 1997), the adapted Rosenberg Self-Esteem Scale (Dagnan & Sandhu, 1999), height, weight, BMI, timed Up and Go Test (Podsiadlo & Richardson, 1991), Berg Balance Scale (Berg et al, 1989).

#### Impact

None as the programme has not started yet. This will be done by the University of Kent, Tizard Centre's Research Programme. Findings will be published approximately March 2015. As part of the study 60 service users have been selected. Once measurements are taken in August on all 60 candidates the group will then be split into two groups of 30 with one group becoming the

#### Target group

People with an intellectual disability Setting Community venue Region London **Running length** 0-6 months Funding Local authority Participants/year 0-100 Activities Dancing, group activity classes, fall prevention, strength and balance

intervention group taking part in the ballet sessions for the first six months. These service users will be selected at random by the University of Kent. The remaining 30 candidates will be used as a control group for comparative data and identifying impact on the intervention group who will be taking part in the sessions. After the first six months sessions end and final measurements are taken on all 60 service users the control group will then have the opportunity to take part in the Ballet sessions for the following six months.

#### Scalability

In addition to the research project the council are aiming to create a session tool kit which will enable other authorities, organisations including third sector's to roll this out to their members, participants and service users.

#### Training

Qualification: qualified ballet teacher, no training provided.

#### **BEAT THE BUSINESS PARK**

This is a corporate challenge to promote local sustainable and active travel to/from and around work. The challenge started on 1 September 2014 and will run for six weeks. The main aim is to encourage engagement in local sustainable travel to create a healthier and less congested Crewe. This will be achieved by encouraging walking, cycling, and opting to take local transport over and above driving to, from and around work, at lunchtimes and beyond through a six-week corporate pedometer challenge.

#### Qualitative measurements

Questionnaires, focus groups, one-to-one interviews.

#### Quantitative measurements

BMI, blood pressure, cholesterol, psychological outcomes, glucose levels, visceral fat mass, lean mass, hydration, body fat mass, physical activity levels.

#### Impact

None (not started yet).

#### Scalability

This intervention can be conducted by any business or local community with support of Beat the Business Park project leads to do the health screening, audit and provide general advice.

#### Training

Qualifications: BSc/MSc physiotherapy, sports therapy. Training: two hours of CPD training is provided weekly.

#### CAMDEN ACTIVE SPACES

The intention of this project is to increase physical activity in young people with the aim of having a positive impact on obesity levels in young people in Camden. The project centres on building bespoke 'spaces' that are reflective

Nesta level 1

Moving towards...

Vesta level 3

Nesta level 1

Moving towards...

Nesta level 2

**Target group** Young people of local communities and that inspire Camden residents to be more active. Training and development is being used to 'activate' the spaces and will be centred on providing individuals within schools and local communities to support structured and unstructured activity programmes.

#### Qualitative measurements

Questionnaires, focus groups, one-on-one interviews.

#### Quantitative measurements

BMI, cardiorespiratory fitness, psychological outcomes, sit and reach, standing jump, grip test.

#### Impact

Health and social benefits have been taken into account alongside the design of the Active Spaces and by securing a research grant with UCL, the Active Spaces project will seek to provide robust evidence of any outcomes. UCL are measuring the impact of Active Spaces on altering physical activity levels in young people. Measurements such as those highlighted above are being taken at baseline, post build and one year on to ascertain sustainable outcomes associated with the Active Space. At this point baseline data has been collected in 500 young people. Evaluations are being undertaken by UCL in the Active Spaces sites incorporating data from two secondary schools and five primary schools. A control group at a Camden Primary school will be used and quantitative and qualitative data captured (including use of Actigraph data) to ascertain anomalies/impact directly associated with the intervention.

#### Scalability

If robust outcomes can be demonstrated by this project, there is the potential that future funding could be secured and potentially Active Spaces could be placed community settings.

#### Training

No training offered.

#### COCA-COLA ZERO PARK LIVES

This is a series of free, family friendly outdoor activities in the heart of local communities – the parks. For the first summer, this year, this scheme will run in Birmingham, Newcastle and Newham with 1702 activities on offer.

#### Qualitative measurements

Questionnaires.

Quantitative measurements

Psychological outcomes.

#### Impact

At present this is to be determined, the overarching impacts of the programme will only be known in 2020 and a process is in place to help evaluate these impacts. The Research Institute at ukactive will help guide

#### Setting

Schools **Region** London **Running length** 1-2 years **Funding** Local authority, clinical commissioning group **Participants/year** 500-1000 **Activities** Varied: exploration, climbing, resistance, balance and agility activities

Nesta level 1

Moving towards...

Nesta level 4

#### Setting

Outdoor settings **Region** North East **Running length** 0-6 months **Funding** Local authority, private **Participants/year** 10,000-25,000 **Activities** Walking, dancing, cycling, group classes, lifestyle activity, yoga/ pilates/tai-chi and refine the evaluation process in collaboration with a team from Coca-Cola GB including knowledge and insights experts. There is a plan to ask additional research questions around a variety of aspects of benefits and outcomes of the programme as part of the six-year roll out plan.

#### Scalability

The aim for the next six years is to bring in multiple cities and sites into the programme so that it runs within 10-12 major conurbations in the UK. Partnerships will be sought with local authority partners in each city or across city boundaries as appropriate. After 2020 the potential for the programme to keep running will be evaluated with external input and investment from a variety of sources.

#### Training

Qualifications: NGB qualification, fitness qualification. CPD: some of the staff delivering the programme have benefited from training provided by the StreetGames Training Academy which is funded by Coca-Cola Great Britain.

# GETTING INTO SPORT SURREY/GUILDFORD HYPERTENSION 2000

This is a 12-week sports-orientated exercise referral programme with the addition of a web-delivered interactive tool to support and promote sports participation and health behaviour change. It is a formal RCT that has been recruiting since October 2013 and will continue to recruit until December 2014. The exercise programme lasts 12 weeks but the self-help web-tool is used for 12 months. The programme is currently delivered by the Surrey University's Sports Park but it is cleared for ethical purposes to be delivered in any leisure facility that currently operates GP referral schemes. Currently around 500 people have been recruited.

#### Qualitative measurements

One-on-one interviews, questionnaires.

#### Quantitative measurements

Psychological outcomes, blood pressure, BMI, cholesterol, self-report activity levels, smoking and drinking measures, waist and hip measurements.

#### Impact and evaluation

Formally registered trial (ISRCTN71952900) is being undertaken by the University of Surrey with funding from Sport England. Research aims: to test the independent and synergistic efficacy of a 12-week sport orientated exercise referral intervention and a self-help web-based intervention over a period of 12 months. Sample: currently inactive 18 to 74-year olds with hypertension, suspected hypertension, pre-hypertension or high-normal blood pressure. Method: four-arm randomised controlled trial (RCT). Control arm will be a standard care GP referral for gym-based exercise. The interventions groups will be 12-week sports-orientated exercise programme, the efficacy of a web-delivered interactive tool to promote and support sports participation and healthy behaviour change and the effect of these Nesta level 1

Moving towards...

Nesta level 2

Target group Inactive people with certain medical conditions Setting Private leisure facility Region South East Running length 6-12 months Funding Participant fees, Sport England Participants/year 500-1000 Activities Group activity classes, gym based sessions, sports, resistance exercises, jogging/ running

#### Nesta level 1

Moving towards...

Nesta level 2

interventions in combination data: The primary outcome measures are physical activity rates, secondary outcome measures will include increased involvement in sporting activity and biomedical health outcomes including BMI, waist and hip measurement and blood pressure.

#### Scalability

If shown to be effective the interventions (sports programme and webbased self-help tool) could be rolled out nationally by the NHS as an alternative to existing gym-based referral.

#### **MOVEMENT AS MEDICINE**

Movement as Medicine is series of physical activity training and engagement programmes for people with a range of medical conditions from type II diabetes and CVD through to pre- dementia and stroke. A branch of this scheme – Movement as Medicine for type II diabetes – is a dual learning pathway that introduces the benefits of a more active lifestyle to diabetes management for primary health care practitioners and their type II diabetes patients.

#### Qualitative measurements

Questionnaires, focus groups, objective assessment of physical activity and videoing of counselling

#### Quantitative measurements

BMI, blood pressure, cholesterol, cardiorespiratory fitness, psychological outcomes, glucose control, physical activity levels, sleep.

#### Impact

The diabetes programme has undergone a cluster based control trial and fidelity assessment with significant success (clinical trial outcomes being published later this year). This research is being funded by NHR/Department of Health. Aims: 1) To assess the acceptability and feasibility of a professional eLearning and patient development pathway called Movement as Medicine in primary care, 2) To evaluate the impact on physical activity and glucose control in people with existing type II diabetes. Research overview: the study will use an online training programme for healthcare professionals to equip them with the knowledge and skills to support people with type II diabetes to become more physically active. Patients will receive a range of support materials including activity planners, trackers, a pedometer and DVD. All patients will be followed up over a 12-month period.

#### Scalability

The pathway has been co-designed with patients, care teams and commissioners and already contains the infrastructure to be broadly disseminated, scaled and commissioned.

#### Training

The programme includes its own CPD-approved delivery training programme and is CPD accredited.

#### Target group

People with certain medical conditions Setting Local authority leisure facility, community venue, secondary care setting Region South West Running length 3-5 years Funding Local authority, central government, charity Participants/year 1000-5000 Activities Wide range

#### Nesta level 1

Moving towards...

Nesta level 3

# Limitations

All studies have inherent limitations reflecting the chosen approach and associated biases that must be taken into consideration when interpreting results and conclusions. This study was the largest of its kind and focussed on two questions, ie, 'what works' for roll-out across the country and robustness of measurement and evaluation. Biases and limitations reflect this design.

# Quality of submissions

Submissions were independently completed and submitted. This enabled a breadth of interventions at variable levels of development and delivery to be showcased. However, the quality of the submissions considered were a reflection of the ability of an individual to complete the survey, not just the quality of the programme. This was particularly relevant during the first stage of evaluation, where programmes were scored using an automatic algorithm based on answers to key questions in order to filter submissions to a manageable quantity for further appraisal; answers that did not fit the strict criteria may have been overlooked. The more detailed second appraisal stage enabled a request to project leads for clarification or more information.

### Scope

In contrast systematic approaches – such as that undertaken by NICE – the scope of the interventions was dictated by the submissions. 'Systematic' approaches such as those undertaken by NICE take a comprehensive overview of known practice presented in a common format (ie, peer-reviewed formats) are therefore more representative of the range of interventions in use.

### Inverse evidence law

The 'Inverse care law' is the concept that there is an inherent bias towards what is most easily implemented and/or measured: ie, small-scale projects rather than large-scale environmental, social or policy interventions. As a consequence, we have the most evidence for interventions with relatively low levels of impact and limited or no evidence for actions with large-scale impact.

# Level of impact

"What you measure is what you get" and the measurement in this study was the robustness of approach and a demonstrated evidence of impact, scalability and training. The focus on these factors may have meant programmes with high participation and completion rates, and able to demonstrate cost effectiveness were overlooked. For example, programmes such as the National Cycling Network, Now We Move and Camden Outdoor Gyms reach more than 25,000 people annually. The National Cycling Network is not a 'programme' as such, but an ongoing scheme and the large number of users indicates it has a large impact on increasing physical activity levels in the UK, however, no quantitative measures have been taken at a national level. In addition, no judgement was made on the level of impact achieved or the relative effectiveness or costeffectiveness between interventions either within or external to this study.

# Scalability

Given the aim of identifying interventions with the potential to scale-up,

scalability was weighted heavily during appraisal stage 2.2 for promising practice. This question was largely not answered with sufficient detail; often the relevant information had to be inferred based on the rest of the survey answers or programmes received low scores. The majority of programmes in the top 60 said their programme was scalable, however, little detail was given. Only programmes already operating at scale were able to clearly demonstrate scalability and this perhaps demonstrated the lack of importance of this fundamental aspect of the marking criteria.

### Evaluation in research versus delivery contexts

The Nesta standards of evidence take an academic stance to evaluation which contrasts with that employed in a delivery context. In academic research the primary focus – and therefore investment of resources – is in generating a robust, publishable data, while in a delivery context the focus is on funding-related variables (eg, specific outputs, environments or target groups) and value for money. As a consequence, this study favoured programmes with academic input from the individuals or partners involved

This study provides invaluable insight into areas for further investigation, specific promising practice and the use of monitoring and evaluation. Case studies are 'promising' rather than 'proven' practice, therefore not proposed for local or national roll out at this juncture. Everybody Active Every Day publications highlight existing evidence-based interventions for roll out at scale, in particular the nine physical activity guidelines from NICE.

# Next steps

This study is part of an ongoing process to develop, evaluate and implement evidence-based interventions to tackle inactivity in local communities across England. The ukactive Research Institute and NCSEM-Sheffield are among the partners PHE is working with to deliver a developing programme that includes:

- further analysis of submissions over 80% of submissions were appraised to a limited level, so a substantial amount of untouched data remains that will be analysed in respect to different settings and population groups. Findings will be shared during 2015, including through regional Moving More, Living More forums
- developing the academia-practitioner interface building on a mapping of the academic landscape for physical activity to improve collaboration
- supporting implementation of the standard evaluation framework continuation of the ongoing training and support for local practitioners in understanding and implementing the standard evaluation framework for physical activity as the basis for embedding systematic monitoring and evaluating in every intervention at local and national levels
- ongoing leadership and support for monitoring and evaluation Discussions are ongoing to develop an approach through which PHE can best provide its expert advice and support for monitoring and evaluation at local and national levels

# Conclusions

- 952 physical activity programmes were submitted and considered, making this one of the largest studies of its kind
- notable trends across submissions included over 3.5 million people (one in 15 of the population) engaged each year, with:
  - two-thirds of programmes funded by non-local authority monies
  - 80% programmes delivered in non-local authority settings
  - one in five programmes involved one to 5,000 participants per year
  - most programmes had been running for three to five years

- over half of submitted programmes located in London and the south-east

- this process identified:
  - no 'proven' practice (Nesta levels 4 and 5)
  - two programmes of 'promising' practice (Nesta level 3)

– 28 programmes of 'emerging' practice (Nesta level 2; with nine on track to become 'promising')

- four examples of 'developing' practice (Nesta level 1; all with processes in place to move into higher classifications)

- key barriers for submissions being rated at higher Nesta levels included:
  - quality of written submission (eg, completion of form, quality and quantity of information)

- absence of control groups to demonstrate causality against intervention

- -lack of independent evaluation (required by Nesta levels 3, 4 and 5)
- this work represents a marked step forward from the All Party Commission recommendations. For the first time, it provides tangible evidence of the strengths and weakness of the sector in respect to the richness of interventions and variable levels of monitoring and evaluation
- it is part of an ongoing process to develop, evaluate and implement evidence-based interventions to tackle inactivity in local communities across England

# Appendix A. Programme classification and ranking process



# Appendix B. Survey questions

- 1. What is the name of your programme?
- 2. Who is the programme coordinator/lead contact? First name/Second name/Job title
- 3. Coordinator/lead contact details: Email address/Telephone address/Programme twitter
- 4. In what region(s) is the programme delivered? Please select option(s): North West/West Midlands/South West/ North East/East Midlands/South East/Yorkshire and the Humber/ East of England/London/Other, eg, Scotland, Wales and Northern Ireland
- 5. In what town, city and/or county is the programme delivered? Please provide details (more than one can be added):
- 6. How long has the programme been running in its current format? Please select option: 0-6 months/6-12 months/1-2 years/3-5 years/6-8 years/10+ year. If 'other', please provide details:
- 7. What are the aims and objectives of the programme? Support whole population-groups to increase physical activity levels/Support people with certain medical conditions to increase physical activity levels/Support inactive people to increase physical activity levels/Support weight loss/Support social cohesion/Support participation in sport/Other (please specify)
- 8. How long does the programme last?
  0-6 weeks/6-12 weeks/12-24 weeks/6-12 months/12-18 months/
  More than 18 months/If the programme lasts more than 18 months, please provide details:
- 9. How many programme sessions are delivered per week?
  1 session per week/2 sessions per week/3 sessions per week/5 sessions per week/Other (please specify)
- 10. How long does each programme session last?0-10 minutes/10-30 minutes/30-45 minutes/1 hour/2 hours/More than 2 hours/Other (please specify)
- 11. In which setting is the programme delivered? School/Workplace/Local authority/Leisure facility/Private leisure facility/Home-based/Outdoor settings/Community venue/Primary care setting/Other (please specify)

12. How are participants recruited to the programme? Self-referral/Referral through health professional/Referral through other third party/Other (please specify)

13. Does the programme proactively look to engage participants from particular socio-economic groups?

No/Yes/If 'Yes', please provide details of what they are and how this is carried out

- 14. Do you have any inclusion criteria for the programme? Age/Sex/Ethnicity/Health indicators such as BMI/No inclusion criteria/Other (please specify)/Please provide details (optional)
- 15. Do you have any exclusion criteria for the programme? High blood pressure/High BMI/Previous medical conditions/Other (please specify)
- 16. What types of physical activities are available through the programme? Walking/Dancing/Jogging, running/Cycling/Swimming/Group activity classes/Gym-based sessions/Condition-specific exercise classes/Resistance exercises/Lifestyle activity, eg, gardening/ Sports/Yoga, pilates, tai-chi/Chair-based exercises/Motivational counselling/Fall prevention, strength and balance/Other (please specify)/Please provide details (optional)
- 17. How many participants take part in the programme on an annual basis? 0-100/100-250/250-500/500-1,000/1,000-5,000/5,000-10,000/10,000- 25,000/More than 25,000 – please provide details/ Please provide details (optional)
- 18. How many participants take part per session on average?
   1-on-1/2-10/10-25/25-50/50-75/75-100/Other (please specify)/
   Please provide details (optional)

19. What percentage of participants completes the programme on an annual basis?

0-10%/10-20%/20-30%/30-40%/40-50%/50-60%/60-70%/70-80%/80-90%/90-100%/Please provide details (optional)

- 20. What reasons have been cited for dropping-out of the programme? Other commitments/Lack of motivation/Lack of time/Cost/Family reasons/Change of circumstances/Unsuitability of the programme/ Health reasons/Other (please specify)/Please provide details (optional)
- 21. Do the participants incur any costs during the programme period? Induction-assessment fee/Fee per session/No fee/Other (please specify/Please provide details (optional)

- 22. What is the total cost to the participants of the entire programme? No cost/£0-£25/£25-£50/£50-£100/More than £100/Please provide details (optional)
- 23. What are the costs of the programme per participant? This describes the total cost of the project divided by the total number of people who have received the programme. It should be based on real data where possible, with any estimates or assumptions clearly documented.

Costs should be calculated on the basis of the cost per person receiving the full 'dose' of the programme at follow-up – that is, recruitment, participation and completion of the programme. However, it should also take account of the costs associated with non-completers. For example, if a walking programme spent a total of £10,000 and recruited 100 participants, but only 50 completed the course, then the cost per participant would be £10,000/50 = £200.

Cost £/Please provide details (optional)

24. How is the programme funded?

Local authority/Central government/Clinical commissioning group/ Charity/Privately/Other (please specify)/Please provide details (optional)

25. Is there a minimum level of qualification required by the staff delivering the programme?

NGB qualification/Fitness qualification/No qualifications needed/ Counselling qualifications/REPs accreditation/Other (please specify)/Please provide details included the type and level of qualification required

26. Do you provide continuing professional development (CPD) opportunities to the staff delivering the programme? No/Yes, please provide details

27. To date, can you give an account of the impact that the programme has had on the health, social and/or economic outcomes of the participants?

28. Have any observational measures and/or feedback of the impact of the programme been taken?

Questionnaires/Focus groups/None taken/One-on-one interviews/ Diary logs/Other (please specify)/Please provide details (optional)

29. If applicable, please provide the results of that feedback.

30. Have any actual measures (quantitative) of the impact of the programme been taken?

BMI/Blood pressure/Cholesterol/Cardiorespiratory fitness/ Psychological outcomes/Mobility/Recovery/None taken/Other (please specify)/Please provide details (optional)

31. If applicable, please provide the results of the actual measures (quantitative) taken

32. Who, if anyone, has evaluated your programme?

In-house evaluation/External evaluation/No formal evaluation has been undertaken/Other (please specify)/Please provide details (optional)

33. Do you think the programme has the potential to be scaled up? For example, do you think it could be operated by someone else, somewhere else while continuing to have a positive and direct impact upon outcome measures?

No/Yes/If 'Yes', please provide details of why and what this would require

34. Please provide details of any additional measurements included in the programme. For example, this could include control groups used to show isolated impact.

35. At what stage of the Standards of Evidence do you think your programme is?

Level 1: your programme is being delivered in a local setting and showing impact/Level 2: your programme captures data that shows positive change, but you cannot confirm that the programme itself caused this/Level 3: your programme can demonstrate causality using a control or comparison group/Level 4: your programme has undergone an independent evaluation that confirms this conclusion/ Level 5: your programme has manuals, systems and procedures to ensure consistent replication and positive impact.

36. What areas do you think need to be developed to increase the programme's impact, scalability and financial viability?

37. What are the barriers that you face to developing the programme? Financial resources/External expertise/Time/Partnerships/Other (please specify)/Please provide details (optional)

38. Please provide any additional information.

Thanks for completing this survey.