Cardiac Rehab and Body Active
Evaluation and Social Return on Investment analysis of physical activity projects delivered by Westbank Community Health and Care, Devon
Summary Report

Key Points

- The aim of this research was to evaluate the impact of the Big Lottery funded exercise referral and rehabilitation projects on their participants. The research also sought to assess the wider social value that the project is creating using a Social Return on Investment (SROI) analysis.

- **Body Active** is a health professional referred project for people who can benefit from exercise to relieve and recover from injury, ill health and to promote healthy lifestyles. A second project, **Cardiac Rehab**, is for people in the final stage – phase 4 – of rehabilitation following a cardiac event or elective surgery.

- SROI is a framework for measuring and accounting for change in ways that are relevant to the people or organisations that experience or contribute to it. It seeks to capture social, environmental and economic outcomes and uses monetary values to represent them.

- Physical exercise makes a key contribution towards good health. Physical inactivity is hugely costly to the individual and to society, because it contributes towards obesity, hypertension, coronary heart disease and a range of other forms of physical and mental ill health.

- The evaluation includes data from 188 people of whom 154 completed two assessments post enrolment with one of the projects.

Key Findings

- The demographic characteristics of participants were:
  - 60% of participants were male,
  - the average age was 64 years,
  - 21% reported having a disability,
  - 44% reported least one long-term condition,
  - 33% had more than 2 long-term conditions.

- Follow-up assessments and self-reported changes found that:
  - 56% reported they are doing more or the same levels of physical activity and 85% said they have continued after the second time they completed the evaluation questionnaire.
  - 97% increased their functional ability.
  - 78% reported that their overall life satisfaction had increased or stayed about the same.
  - 77% indicated that their mental well-being is maintained or improved.
  - 50% of participants indicate a positive change in attitude towards healthier eating and / or eating habits.
  - 93% said participation has a positive impact on their lives.

- SROI analysis finds that that for every £1 invested in Cardiac Rehab and Body Active there is £10.61 of social value created. The greatest value is through increased functional ability and improved mental well-being which together represent over 80% of the value gained.
Body Active and Cardiac Rehab Projects at Westbank

Westbank is a Healthy Living Centre based in Exminster, Devon. It has a large multi-purpose exercise suite offering a broad range of exercise machines which can accommodate able bodied and people with low levels of physical ability.

Body Active at Westbank

Body Active is a gym-based class for people who could benefit from regular, gentle and controlled exercise. Most people are referred to the class by health professionals. The instructors devise an exercise schedule specific to each client using the range of fitness equipment, taking into account any medication or medical condition that the client may have. Body Active aims to:

- Relieve symptoms.
- Speed up recovery.
- Rehabilitate short & long term injuries.
- Promote healthy lifestyles.

Participants attend initially for 20 sessions (2 x per week) and then ‘graduate’, if they choose, to a less supervised gym regime. However where someone’s underlying physical disability means they need higher levels of supervision to use or change machines, they will continue in Body Active. Key intended outcomes are:

- Increased functional ability.
- Increased confidence to manage their long-term conditions.
- Regular exercise.
- Improved mental well-being.

Cardiac Rehab Phase 4 at Westbank

Cardiac Rehab Phase 4 is the final stage of Cardiac Rehabilitation following a cardiac event or sometimes elective surgery. The primary aim of Phase 4 is about embedding long term maintenance of changed behaviour in participants to continue to take regular physical activity. Most referrals to Cardiac Rehab Phase 4 are made by the Cardiac Nurse as part of the Cardiac Rehab pathway at the end of Phase 3. Some Phase 3 is delivered as a National Health Service (NHS) programme with the support of Westbank staff which provides continuity and familiarity on participants’ journeys to Phase 4.

Cardiac Rehab comprises a 10 week programme of 1 session per week where participants are introduced to gentle physical exercise regime appropriate to their assessed abilities and conditions. The intended outcomes are:

- Long term behaviour change.
- Improved confidence to exercise.
- Improved functional ability.
- Improved mental well-being.
- Reduced risk of cardiac events.

As with Body Active, participants are encouraged to ‘graduate’ to Well-being Sessions in the gym.

Physical Activity in Public Health Context

The Department of Health recognises that even moderate levels of physical exercise can bring health benefits to individuals and cost savings to the NHS particularly through reductions in obesity, hypertension, coronary heart disease, anxiety and depression and by up to 50% for some conditions. Physical activity also helps with other chronic illness and lifestyle issues such as lower back pain, colon and breast cancer.

Recommendations for activity changed in 2012 from 5 x 30 periods of physical activity to 2.5 hours per

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1 Be Active Be Healthy (2009) A plan to get the nation moving. Department of Health
2 Ibid
3 Guidance from the Chief Medical Office (CMO) on how much physical activity people should be doing, along with supporting documents. https://www.gov.uk/government/publications/uk-physical-activity-guidelines
week. According to recent data, 67% of men and 55% of women meet the new guidelines\(^4\). The proportion meeting the recommended activity levels has been steadily increasing although participation rates amongst women remain much lower. The percentage of those meeting the current recommendations increases with household incomes but reduces with age. While the advice for older people recognises that ‘some exercise is better than none’ and balance based exercise helps reduce falls, overall the levels of activity recommended for older people are the same as the rest of the adult population.

**Cardiac Rehab**

Thus Cardiac Rehab is a holistic approach encompassing more than the medical intervention. The four stages of Cardiac Rehab are:

- **Phase 1** Before discharge from hospital.
- **Phase 2** Early post discharge period.
- **Phase 3** Structured exercise, continued education and psychological support.
- **Phase 4** Long term maintenance of changed behaviour.

National Institute for Health and Care Excellence (NICE) and the World Health Organisation recognise that secondary prevention services are an important part of rehabilitation. Community as well as home based services are both recognised effective approaches.

The take-up of Cardiac Rehab services is not universal. The British Heart Foundation\(^5\) found in 2014 overall uptake of Cardiac Rehabilitation was 45%. The BHF report (which refers to the whole Cardiac Rehab Pathway) highlights that as a result of Cardiac Rehab:

- The proportion of patients undertaking recommended levels of physical activity rose from 23% (pre) to 44% (post Cardiac Rehab).
- More people had normal levels of anxiety and depression and fewer were borderline or clinically anxious or depressed.

- 55% of patients had a cholesterol level <4 compared with pre 32%.
- Overall quality of life improved.

**The Benefits of Referred Schemes for Physical Activity**

NICE guidance for those referred for physical activity\(^6\) suggests that exercise referral schemes for those who are sedentary or inactive and have a chronic health condition should be based around behaviour change techniques such as recognising readiness to change, agreeing goals and developing tailored action plans and strategies to prevent relapse.

The Health Impact of Physical Activity\(^7\) estimates 37,000 deaths may be caused each year by inactivity and in Devon (2010) there were 3,054 deaths that were preventable through physical activity. NICE\(^10\) note that in 2006/7 the cost to the NHS of diseases that can be prevented by physical activity to be £0.9bn and the wider economic costs e.g. absence from work to be £5.5bn per year. The Evaluation of the National Exercise Referral Scheme in Wales in 2010\(^8\) concluded here were positive effects on depression and anxiety and increased levels in physical activity demonstrating the wider positive impacts referred exercise programmes have.

**Research Aim and Methods**

This research is part of a wider University of the West of England (UWE)-led study of projects funded by the Big Lottery under the South West Well-being Programme (SWWB). This study aimed to evaluate the impact of the project on participants and assess the Social Return on Investment (SROI) generated by the Body active and Cardiac Rehab Projects. In addition we used the RE-AIM framework to review the learning from evaluation.

The evaluation focusses on 12 months of operation (April 2014 - March 2015) of the Cardiac Rehab / Body active and Cardiac Rehab Project.

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\(^4\) Statistics on Obesity, Physical Activity and Diet: Health and Social Care Information Centre 2015.  


\(^6\) Exercise Referral Schemes to Promote Physical Activity: NICE Guidance PH54: Sept 2014  
https://www.nice.org.uk/guidance/ph54

\(^7\) Health Impact of Physical Activity; Public Health England 2013.  

\(^8\) The Evaluation of the National Exercise Referral Scheme in Wales.  
Murphy, Raisanen, Moore, Tudor Edwards, Linck , Hounsome, Williams, Ud Din, Moore for the Welsh Assembly Government 2010  
http://jech.bmj.com/content/early/2012/05/10/jech-2011-200689.full
Active projects and includes all those estimated to have taken part during this time (n=188).

Quantitative and qualitative data have been used to inform this SROI. Measures of mental well-being, life satisfaction, physical activity and functional ability collected from participants as part of the project’s outcome monitoring were analysed together with qualitative data collected through interviews with participants and stakeholders. Five interviews were undertaken with Cardiac Rehab and Body Active participants and three interviews undertaken with Westbank staff and two external stakeholders. Additional Westbank staff have supported the corroboration of data and information.

**What is Social Return on Investment?**

SROI is a framework for measuring and accounting for change in ways that are relevant to the people or organisations that experience or contribute to it. It seeks to measure social, environmental and economic outcomes and uses monetary values to represent them. SROI captures wider forms of value often left out of more traditional methods of economic evaluation such as cost benefit analysis.

Interest in social value has been raised by The Public Services (Social Value) Act (2013). The Act requires public bodies to consider how the services they commission and procure might improve the economic, social and environmental well-being of the area.

The act defines social value as “the benefit to the community from a commissioning/procurement process over and above the direct purchasing of goods, services and outcomes”.

**Project Participants**

The main beneficiaries are those who participate in Body Active and Cardiac Rehab. It is estimated 188 participants started (106 Body Active) (82 Cardiac Rehab) and 154 (80 Body Active) (74 Cardiac Rehab) completed two assessments.

In terms of demographic characteristics:

- 60% of participants were male.
- The average age was 64 years.
- 21% reported having a disability.
- 44% reported least one long-term condition.

The most common conditions are heart disease, blood pressure, cholesterol and mobility issues. Thirty three percent had more than 2 long term conditions.

“My time at Westbank is terribly important. I don’t allow any other appointments on a Thursday so I am completely focused and prepared to come to Westbank. The changes are terribly important. Coming to the gym hasn’t just benefitted me but my daughter and mother in law who I am able to support.” Participant A

**Outcomes for Body Active and Cardiac Rehab participants**

In terms of key self-reported outcomes:

- 78% said their overall life satisfaction had increased or stayed about the same.
- 77% indicated that their mental well-being is maintained or improved.
- 93% said participation has a positive impact on their lives.
- 56% reported they are doing more or the same levels of physical activity and 85% said they have continued after the second time hey completed the evaluation questionnaire.
- 97% increased their functional ability.
- 50% of participants indicate a positive change in attitude and / or eating habits.

“I was effectively housebound except for the occasional shopping trip. This is the most purposeful thing I have done in my life. It may have saved my life coming here. I have lost weight, I am physically fitter and in myself I am much better at coping with the situation.” Participant F

“I was feeling pretty down. I was stuck in the house watching TV but now I am able to make more trips out, I can get around the house more easily. I am much more like my old self compared with the first four or five years after my stroke.” Participant S
Social Return on Investment Analysis
The SROI analysis is a stage-based process that involves mapping outcomes from the perspective of stakeholders; defining the relationship between inputs, outputs and outcomes; evidencing outcomes and giving them a value; identifying those aspects of change that would have happened anyway or are a result of other factors to ensure that they are taken out of the analysis; and then calculating the SROI.

Calculating the Social Value
SROI analysis found that that for every £1 invested in Cardiac Rehab and Body Active there is £10.61 of social value created. The net SROI ratio, which takes account of the amount invested, is 1:9.61, which means that the SROI analysis estimates that for every £1 spent invested by Westbank there is a further £9.61 of social value created.

The total value of the impact for the 188 participants who received an intervention in the first 19 months of Stroke / Dementia project is £254,431.35. The greatest value is through increased functional ability and improved mental well-being which together represent 80.6% of the value gained.

The SROI analysis shows only low value (2.6%) of benefits National Health Service (NHS) and local authority social care services as a result of Westbank’s programmes. This is because there was limited evidence available from the qualitative and longer term quantitative data to prudently quantify such outcomes and place appropriate value. However in the sensitivity analysis section such a scenario is discussed and based on comparison with other assured SROI reports an estimate is made that £56,780.70 (22%) might be the social value to the health and social care bodies.

Despite such limitations, Westbank’s SROI ratio is sufficiently robust that there would still be a strong positive social value.

Conclusion and Recommendations
Using the Re-AIM review framework we can summarise some key areas of learning from the evaluation:

Reach
The activities clearly reach people who benefit from Cardiac Rehab Phase 4 and Body Active. As Westbank supports NHS cardiac nurses locally in the delivery of Cardiac Rehab Phase 3, for many participants there is a natural and relatively seamless progression into Phase 4. The familiarity of Westbank staff and / or venue helps this transition and reduces drop-out rates.

Participants are referred to Body Active by a GP or other health professional. There is a steady stream of referrals (106 in the year) demonstrating that local health professionals consider Westbank can offer health and social outcomes to their patients.

Strengths and Limitations of the Research
A key strength of this SROI is the investment by Westbank in collecting baseline and follow-up data from project participants. This meant that there was paired data for a sample of project participants that could be incorporated in to the evaluation.

There are some limitations to this evaluation and SROI.
- It has been necessary to model an estimate of the number of participants and attendances because of the way participants are tracked between services. The SROI ratio could thus be higher or lower.
- There are a number of beneficiaries or outcomes identified that have not been included because the time or resources were not available to reach them e.g. wider family members or because the outcome was likely to duplicate another or have a high level of attribution and thus make only a small difference to the SROI ratio.

Although there isn’t sufficient data on what happens to participants after completing the more structured Body Active and Cardiac Rehab sessions, all stakeholders report that Westbank has good retention rates into the less formal Well-being sessions and sometimes other exercise and social activities.

On a practical level, in response to the demand for Body Active and Cardiac Rehab, Westbank has upskilled three additional members of staff to increase capacity and flexibility.

**What is the RE-AIM Framework?**

RE-AIM is a useful framework for reviewing community projects that have public health goals.

**Reach**
Does the intervention reach the target population?

**Effectiveness**
Does the intervention achieve the assumed goals, without negative outcomes?

**Adoption**
Was the intervention broadly adopted at the community level?

**Implementation**
Was the intervention consistently implemented at a reasonable cost?

**Maintenance**
Does the intervention have the ability to be sustained, with long-lasting effects?

**Effectiveness**
There is baseline and follow up evidence of short and medium impacts for increased functional ability, lifestyle changes and well-being. There is plausible evidence of longer-term outcomes in terms of physical and emotional well-being. How these outcomes impact on the use of health and social care services is less well evidenced amongst participants but published research suggests there should be considerable benefits.

There were no significant negative outcomes identified although the risks of a possible negative outcome had been identified (dependence on Westbank) and action taken to mitigate it occurring.

At the outset of the activities the social benefits, both within groups and with other gym users, had not been planned and these increases in social well-being and reduced isolation for some participants were unplanned outcomes.

**Adoption – Was the Intervention Broadly Adopted at Community Level?**
The activities evolved from locally felt needs by health professionals and Westbank. The appeal of Westbank lies in a mixture of the specialist staff, the equipment available and above all Westbank’s community based ethos- to offer these interventions in a community and non-medicalised way.

Partner agencies continue to be supportive. This is clearly evident in the volumes of referrals and need for Westbank to upskill its staff further to meet demand and offer continued improvements to its services.

**Implementation**
The activities have clearly been delivered in line with Westbank’s core values. The contributions expected from participants are maintained at an affordable level. These levels are comparable with other social and community activities including community based exercise classes.

**Maintenance**
The activities are clearly well-established and there is good throughput, low drop-out rate and a reported good ‘graduation’ rate to other activities. The participants’ contributions in fees go part of the way to supporting the direct costs. However, for Westbank the services are a long-term commitment and investment, and considered an important connection with local GPs and NHS.

For Cardiac Rehab it is best practice for participants to attend twice a week for 10 weeks in order to reinforce long-term lifestyle change. During the period of the evaluation Westbank could only offer Cardiac Rehab once per week. Westbank has made further investment into its ability to run Cardiac Rehab and Body Active. Four staff members are now qualified to deliver these types of support which will increase capacity and efficiency.
Key recommendations for Westbank arising from this study are:

Data Collection: During this evaluation it came to light that some data was lost or no longer recognisable in the data base that records use of the gym. It is recommended that this database is reconfigured to allow participants be tracked and be able to follow participants journeys as they use different services. An improved data base would allow for more structured monitoring of activity rates. Staff could undertake follow ups / motivational calls where participants may be lapsing if that becomes a priority for Westbank (although it is recognised for Cardiac Rehab Phase 4 the onus remains with the client to be motivated to attend). Monitoring well-being sessions more closely would give an opportunity to gain a projection of long-term outcomes including sustained physical activity, those meeting recommended government levels of physical activity as well as accurate assessment of drop-off, reoccurrence etc.

Recognising Impact. The Cardiac Nurses report good indicators of stabilised or reduced anxiety and depression in Phase 3 Cardiac Rehab. While recognising Body Active and Cardiac Rehab are de-medicalised support programmes in a community setting – consideration should be given to follow through specifically changes in depression and anxiety. The value of this would be greater if the NHS is able to share patients’ scores for PHQ9 and GAD7 from Phase 3 Cardiac Rehab at the point participants’ progress to Phase 4.

In this evaluation it was difficult to demonstrate with quantitative evidence the link direct between Westbank’s activities and savings to the NHS and local authority services. Part of the reason for this was because there was less evidence around medium and longer term impacts on health. It is recommended that Westbank’s develops their evaluation tools to track outcomes such as return to work, GP and hospital admissions.

Cross department Integration and Holistic Approach
Through the well-being evaluation it has become apparent for participants that there is a clear link between physical activity and diet. Westbank currently has expertise in diet, nutrition and the link between diet and physical exercise (as demonstrated in the Living well taking Control type 2 diabetes programme). There is an opportunity to involve diet as part of the Cardiac Rehab and Body Active offer and it is understood that this is currently being developed by Westbank staff.

This study was led by Phil Aubrey (Well UK), Mat Jones (UWE) with support from Richard Kimberlee (UWE).

We would like to acknowledge and thank all the Westbank staff and participants for their support and assistance in undertaking this research.

Ethical approval for the research was obtained from UWE’s Health and Applied Science Research Ethics Committee

JULY 2015

For the full Evaluation & SROI Report and details of the evaluation of the SWWB programme see http://westbank.org.uk/
Or contact matthew.jones@uwe.ac.uk
For details on the Westbank HLC contact j.keable@westbankfriends.org
## Social Return on Investment – outcomes included and their values

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Sample size</th>
<th>Financial Proxy</th>
<th>Gross Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants reporting increased physical functional ability and therefore ability to be more active</td>
<td>36 (154)</td>
<td>Cost of a domestic cleaning service for 3 hrs per week x £11 per fortnight</td>
<td>£132,132</td>
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<tr>
<td>Participants reporting sustained physical activity</td>
<td>23 (54)</td>
<td>2 sessions per week equivalent at Community Gym. Joining Fee £5, Induction £5 and £28 per month</td>
<td>£18,684</td>
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<tr>
<td>Participants reporting increased social activity/ reduced isolation</td>
<td>27 (74)</td>
<td>Cost of joining a social group plus participation costs OR Befriending Sessions</td>
<td>£8,880</td>
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<tr>
<td>Participant reporting not recommended smoking tobacco</td>
<td>1</td>
<td>Saving 50 cigarettes per day @ £8.74 per pack (or £21.85 per day for 1 year)</td>
<td>£7,975</td>
</tr>
<tr>
<td>Participants reporting improved mental well-being</td>
<td>22 (105)</td>
<td>A course of CBT to build psychological resilience and self-esteem</td>
<td>£97,650</td>
</tr>
<tr>
<td>Participants reporting reduced diabetic medication</td>
<td>1</td>
<td>Cost of 8 prescriptions per year.</td>
<td>£42</td>
</tr>
<tr>
<td>Participants reporting reduced symptoms of depression</td>
<td>1</td>
<td>Six sessions of CBT</td>
<td>£558</td>
</tr>
<tr>
<td>Participants reporting improved Healthy Eating</td>
<td>23 (80)</td>
<td>a) Cost of a takeaway meal (equivalent per session attended) 1 per person per month £8.80 x 12 = £105.60 less b) the cost of a 15% increase in household expenditure on fruit and vegetables calculated at £1.16 x 52 = £60.32</td>
<td>£3,622</td>
</tr>
<tr>
<td>New Volunteering at Westbank</td>
<td>1</td>
<td>Estimated from Average Hourly Rate £12.92 per hour in England, 2 hrs per week for 26 weeks per year.</td>
<td>£672</td>
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<tr>
<td>Participants reporting loss of weight</td>
<td>20</td>
<td>20 Weight Watchers sessions @ £6.75 + £10.70 joining fee</td>
<td>£2,914</td>
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<tr>
<td>NHS staff report potential for reduced GP visits and Hospital admissions</td>
<td>3/74</td>
<td>Cost of admission to hospital (elective or non-elective per episode). NHS Reference Costs 2011-12; average cost per ‘finished consultant admitted patient’</td>
<td>£5,436</td>
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<tr>
<td>Staff undertaking AED Training</td>
<td>4</td>
<td>£96 cost of training with St. John’s Ambulance</td>
<td>£384</td>
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<tr>
<td>Westbank reporting 3 staff identified for Cardiac Rehab Phase 4</td>
<td>3</td>
<td>BACPR Specialist Exercise Instructor Level 4 Cardiac Qualification</td>
<td>£1875</td>
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