

PILOT EVALUATION OF MOVE IT OR LOSE IT!**SUPPORTED BY PLAYERS OF PEOPLE'S POSTCODE LOTTERY**

MAY TO DECEMBER 2016

In summary

Overall, the *Active Moves* pilot, supported by players of People's Postcode Lottery, showed positive impacts for older people on three of the four measures collected. In addition, there also appears to be an association between improvements in physical function and wellbeing/loneliness scores.

Measure	Impact
1. Physical function	Substantial improvement (see pages 3 and 4; Tables 2 & 3)
2. Wellbeing measures	Small improvement (see page 4; Table 4)
3. Confidence levels	No change (see page 4; Table 5)
4. Loneliness	Substantial improvement (see pages 5; Tables 6 & 7)

The findings from this pilot suggest that targeted physical activity which improves physical function might be an effective intervention for tackling loneliness/isolation and improving the wellbeing of older adults.

1. Background

What is the problem we are trying to solve?

There is a growing body of research evidence which finds that targeted resistance based exercises can significantly reduce frailty in older adults. Sarcopenia (e.g. loss of muscle mass and strength) is estimated to cost the NHS £11.9 billion¹; these costs are represented by increased hospitalisation, nursing home admissions, and home care expenditure. In addition, there is encouraging findings on the impact of exercise on those with cognitive impairment as well².

Such benefits relate to:

- 1) Improvements in strength and balance, hence reduction in falls,
- 2) Improvements in the ability to perform daily activities and remain independent,
- 2) Improvements in overall well-being and temperament, and
- 3) Reduction in frequency of visits to A & E and GPs.

Yet, the majority of social and physical activities provided in the community are for those who are more agile and mobile - such as Zumba gold, tai chi, yoga and tea dances. Those who might be frailer (e.g. following a period of illness, surgery or accident) and/or those with cognitive impairment (e.g. dementia) are largely not well catered to in mainstream community activities. Royal Voluntary Service sees a significant market opportunity here to improve the physical, emotional and cognitive health of these older adults.

The solution – new partnership

Royal Voluntary Service, working in partnership with an innovative social enterprise - *Move it or Lose it!* (Founder Julie Robinson) - developed a bespoke chair-based exercise training programme for our staff and volunteers to deliver. The Move it or Lose it! model focuses on interactive exercises with familiar music and props to create an atmosphere that makes it fun and engaging. While there is greater focus on physical activity, elements of cognitive stimulation are also present through coordination exercises, games involving alphabet and words, the use of familiar music and singing. All of the exercises are focused on tasks which help people maintain their independence in the home – such as washing, dressing, getting out of bed, off the toilet etc.

The Active Moves pilot – areas and training

Funds raised by players of People's Postcode Lottery enabled us to launch a pilot in four areas – Banbury, Leicester, Oxford and Suffolk. The pilots in Banbury and Oxford started in May and the pilots in Leicester and Suffolk started in September. The majority of sites delivered chair-based exercises involving groups of between 10 to 14 people. In Leicester we also delivered one to one exercise support to those on our Home from Hospital service following discharge from hospital.

In total 18 - volunteers (6) and staff (12) - received 2 days of training in Move it or Lose it! chair-based exercises. A further two staff members undertook the full accredited FABS (Flexibility, Aerobic, Balance, Strength) training programme (Level 2); this will help to further build our level of expertise in this area.

2. Findings of Active Moves pilot

A total of 60 people were measured at baseline and 44 completed the follow-up assessment (average 10 to 14 weeks of exercises); attrition at assessment stage related to – infrequency of attendance/dropping out, continuing poor health, a fall, admission to nursing home or mortality . We had a 73% completion rate which is very good considering the frailty/health of the client group.

Clients were assessed using the *Short Physical Performance Battery (SPPB)* – which is a well-recognised standardised tool used to assess lower extremity function amongst older adults. SPPB has been found to be a good tool for assessing future risk; for example: those scoring poorly on the SPPB were found to be at significant increased risk for falls, nursing home placement, and loss of independence at a 1 year follow up³. The pilot also looked at wellbeing; this was measured using the 4 Office of National Statistics (ONS) Wellbeing questions, a question on confidence from the Health Survey of England, and the 3 item UCL Loneliness scale.

a. Sample characteristics

The majority of the sample was female – 68% - and the mean age was 81. There was little difference found in the sample of 44 who completed the assessment and those that dropped out (e.g. attrition n=16). The mean age of those who did not complete the pilot was also 81 with an age range of 68 to 90. 63% were female and 38% male, and 4 (22%) had some form of cognitive impairment.

TABLE 1: Profile (of those with full physical assessments)

Total sample	Male	Female	Age (mean and range)	Known cognitive impairment
44	14	30	81 (63 to 96)	8 (19%)

b. Physical profile

The findings from the pilot show that functional improvement was achieved in 61% of the sample and that on average people improved by 20% (2.4 points out of a scale of 12). 27% of the sample declined and they declined on average by 14%. Those that declined were slightly older than those that improved – mean age was 84 versus 80. Three out of the 12 individuals that declined had dementia. It should be noted that because of the progression of their dementia it was difficult to assess their true level of physical function as some of the instructions might have been difficult for them to understand. Another 4 in the declined category had continuing poor health or a fall so did not attend the classes on a regular basis.

TABLE 2: Functional capacity following - on average 10 to 14 weeks - Move it or Lose it! chair-based exercises

Outcome	Profile
27 improved	<ul style="list-style-type: none"> • Mean improvement was 2.4 points • Range was 1 to 5 • 9 people increased by 3 or more points; 8 people increased by 1 point
12 declined	<ul style="list-style-type: none"> • Mean decline was 1.7 points • Range was 1 to 3 • Majority (n=7) people declined by 1 point
5 remained the same	<ul style="list-style-type: none"> • 1 low functioning • 2 moderate functioning • 2 high functioning (1 achieved max score of 12)

The pilot primarily helped to shift people in the lower functioning category; 14 (32%) of the sample shifted a functional category upwards – the pilot predominately helped to shift people up one category from poor to moderate function. Only 4 (9%) shifted a functional category downwards.

TABLE 3: Functional categories⁴ (max score 12; n = 44)

Baseline		
Poor (0-4)	Moderate (5-8)	High (9-12)
21 (48%)	17 (39%)	6 (14%)
Final assessment		
Poor (0-4)	Moderate (5-8)	High (9-12)
11 (25%)	25 (57%)	8 (18%)

c. Wellbeing, confidence and loneliness measures

The pilot recorded complete wellbeing scores on 27 people. There were some missing values (e.g. incomplete, not collected) which were excluded and we did not collect wellbeing data on those with dementia.

- Office of National Statistics (ONS) wellbeing scores

The 4 ONS wellbeing questions ask people to report on their sense of happiness, levels of anxiety, feelings of life satisfaction and if they feel the things they do are worthwhile. The majority - both at baseline and assessment - were found to report medium scores on wellbeing. The pilot appeared to have a **very marginal impact on overall wellbeing scores**.

TABLE 4: Wellbeing scores (n=27)

Wellbeing categories (max score is 20)	Low (less 10)	Medium (11 to 15)	High (16 to 20)
Baseline	6	14	7
Assessment	4	14	9

However, when analysing the individual wellbeing questions – particularly those questions on ‘happiness’ and ‘anxiety’; there appears to be some impact: 8 people (30%) reported feeling happier and 5 people (19%) felt less anxious at assessment.

- Confidence levels

The question on confidence asked – *have you recently been losing confidence in yourself?*; interestingly confidence levels **remained broadly similar** at baseline and assessment. The pilot appeared to have **no impact** on levels of confidence reported.

TABLE 5: Confidence scores (n=27)

Answers	Not at all	No more than usual	Rather more than usual	Much more than usual
Baseline	9	12	5	1
Assessment	10	12	3	2

- UCLA Loneliness scale

The pilot appeared to have a **very positive impact on loneliness scores**; 22% less reported that they were lonely at assessment stage and those that remained lonely tended to be older in age. This compares to other findings. From the 2011 Census⁵ loneliness was found to increase with age - 14.5% of those 65-79 reported high levels of loneliness compared with 29.2% of those 80 and over.

TABLE 6: Loneliness scores (hardly ever, some of the time, often) (n=27)

Categories	Not lonely	Lonely	Not lonely by age: 60-79 (n=11) 80 & over (n=16)	Lonely by age: 60-79 80 & over
Baseline	16 (59%)	11 (41%)	7 (63%) 9 (56%)	4 (36%) 7 (44%)
Assessment	22 (81%)	5 (19%)	10 (91%) 12 (75%)	1 (9%) 4 (25%)

Analysing the data by each of the three UCLA questions (lack companionship, feel left out and feel isolated) reveals a bit more about which domains of loneliness this pilot had greatest impact on; overall, it reduced numbers reporting 'often' lonely and increased numbers reporting 'hardly ever'. The pilot appeared to have **greatest impact** on reducing the number of people reporting that they 'often lacked companionship' and increased the numbers of those reporting that they 'hardly ever feel left out'.

TABLE 7: Score by each question

How often do you feel that you lack companionship ?	Hardly ever	Some of the time	Often
Baseline	8 (30%)	11 (30%)	8 (30%)
Assessment	11 (+3) (41%)	15 (+4) (56%)	1 (-7) (4%)
How often do you feel left out ?	Hardly ever	Some of the time	Often
Baseline	15 (56%)	9 (33%)	3 (11%)
Assessment	22 (+7) (81%)	3 (-3) (11%)	2 (-1) (7%)
How often do you feel isolated from others?	Hardly ever	Some of the time	Often
Baseline	13 (48%)	9 (33%)	5 (19%)
Assessment	16 (+3) (59%)	10 (+1) (37%)	1 (-4) (4%)

d. Physical function scores and wellbeing/loneliness

There appears to be an association between improvement in physical function and reported wellbeing/loneliness:

- Those who were 'extremely' or 'very anxious' at baseline and 'not at all' or 'slightly anxious' at assessment stage tended to show substantial improvement in physical function – moving from low function to moderate function.
- Those reporting that they were 'lonely' at baseline and 'not lonely' at assessment tended to show improvement in physical function and to show higher functional improvement scores – 2 or more.
- When looking at particular domains of loneliness – improvements in physical function appeared to have greatest impact on shifting people from 'often to some of the time feel left out' to 'hardly ever feel left out'.

Some caution needs to be taken given the small sample size at this level; however, this association suggests that targeted physical activity which improves people's level of physical function might be an effective intervention for tackling loneliness/isolation and improving wellbeing.

3. Next steps

Given the results of this pilot Royal Voluntary Service are looking to scale up this programme and develop this as part of our core service offer to both older people and health providers (e.g. Trusts, CCGs, and Falls Teams). Move it or Lose it! chair-based exercises will form part of our service offer:

- On-ward: to help address sarcopenia/muscle loss in those who have an extended period of stay in hospital (e.g. 5 or more days)
- On our Hospital to Home: to help people rehabilitate following a stay in hospital (e.g. targeted at those with frailty problems and/or frequent falls)
- In the Community: this will be group based exercises aimed at supporting those that might need a bit of extra support to live independently and improve social connectedness.

Our immediate next steps are to:

- Expand to a further two areas in January/February 2017: 1) Lancashire (on ward offer and community group) and 2) Northumberland (community group for those living with dementia)
- To build up our capacity to deliver training in house; teach 3-4 staff members to deliver the 2 day chair-based exercise course to our staff and volunteers.

Longer term plans are to scale up this offer across England, Scotland and Wales through 2017.

¹Beudart et al (2014) Sarcopenia: burden and challenge for public health. Arch Public Health, 72:45

²Forbes, D et al (2015) Exercise programs for people with dementia. Cochran Review.

³Fisher, S et al (2009) Short Physical Performance Battery in Hospitalized Older Adults. Aging Clin Exp Res; 21(6): 445.

⁴Corsonello et al (2012) Prognostic Significance of the Short Physical Performance Battery in Older Patients Discharged from Acute Care Hospitals, Rejuvenation Res; 15(1): 41–48.

⁵ONS Loneliness analysis

(<http://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/articles/measuringnationalwellbeing/2015-10-01>)