The PARCS project

Person-centred Activities for people with Respiratory, Cardiac and Stroke conditions

SECTION D

Review of comparable activity elsewhere in the UK

1. **England and Northern Ireland**
2. **Wales (National Exercise Referral Scheme)**

The PARCS Project

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1. England and Northern Ireland

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1. Introduction

A scoping exercise of comparable activity across England and Northern Ireland was undertaken between June 2013 and July 2014 to support the development of the overarching PARCS project recommendations.

For the purpose of this report, the following four areas were identified and reviewed: Belfast, Sunderland, Nottingham (Broxtowe) and Brighton. The four areas are representative of varying health indicators (risk factor prevalence), long term condition prevalence, socio-economic status and method of programme delivery. Mirroring the similar scale of variance currently experienced across Scotland provides a more valid and transferable insight.

Detail on each programme was sourced and collated both by desk review and direct programme engagement. The programme review focuses and reports on the following key themes: service provision, inclusion criteria, referral processes, data collection/audit and evaluation, programme funding, staff training/qualifications, key challenges and successes. Additional detail is reported (where applicable) on future service developments, areas of innovation and third sector involvement.

Local and national health policies, frameworks and delivery plans have been cited throughout the report to highlight programme integration, need and, where applicable, impact.

National / Regional Overview

2.1 NATIONAL / DISTRICT PROFILE[1]

Country / Area	Total Population	Urban	Rural
North East England	2,596,886	**81.6**	**18.4**
Sunderland	275,506		
East Midlands	4,533,222	**73.3**	**26.7**
Nottingham	305,680		
South East England	8,634,750	**79.6**	**20.4**
Brighton	273,369		
Northern Ireland	1,814,000[2]	**63**	**37**[3]
Belfast (HSCT)	348,204[4]		

Figures from the 2011 Census reveal that 8.6% of Sunderland residents deem their health to be bad or very bad, compared to 5.3% in Brighton[5]

In urban areas, the proportion who described their health in general as poor or very poor was almost double (11%) the rate in rural areas (6%)[6]

2.2 HEALTH INDICATORS[7]

Area	% who currently smoke	% who have BMI > 30 (Obese)	% who have had a MI / angina	% who have had a stroke	% who have high blood pressure	% who have high cholesterol
UK	**20.6**	**21.1**	**1.3**	**0.8**	**18.7**	**26.7**
North East England	**24.6**	**22.7**	**1.6**	**0.8**	**19.9**	**26.2**
Sunderland	**27.3**	**23.2**	**1.7**	**0.9**	**19.9**	**25.5**
East Midlands	**20.2**	**21.8**	**1.5**	**0.7**	**19.7**	**27.1**
Broxtowe (Nottingham)	**17.9**	**21.7**	**1.5**	**0.7**	**20.5**	**27.8**
South East England	**18.2**	**20.2**	**1.2**	**0.6**	**18.3**	**27.3**
Brighton	**21.6**	**16.3**	**1.0**	**0.5**	**15.6**	**24.9**
Northern Ireland	**21.8**	**23.0**	**1.5**	**0.7**	**19.5**	**26.8**
Belfast	**28.7**	**23.1**	**1.5**	**0.8**	**18.8**	**24.9**

Inequities in health are avoidable differences in the opportunity to be healthy, and in the risk of illness and premature death which can arise from an unfair distribution of services, resources or power.[8]

[1] England & Wales Census (2011) – Office for National Statistics; - http://www.ons.gov.uk/ons/rel/census/2011-census/
[2] Ireland & Northern Ireland Census 2011 – p9
[3] Family Resources Survey – Urban Rural Report 2010/11 –NISRA p2
[4] Northern Ireland Statistics & Research Agency (NISRA) -http://www.ninis2.nisra.gov.uk/public/AreaProfileReportViewer.aspx
[5] England & Wales Census (2011) – Office for National Statistics; - http://www.ons.gov.uk/ons/rel/census/2011-census/
[6] Health Survey Northern Ireland 2012/2013 – Public health and information research branch, p2
[7] Acorn (2014) – England and Northern Ireland – Wellbeing Reports – BHF Business Unit (April 2014)
[8] Putting a health inequalities focus on the Northern Ireland cardiovascular service framework, Health impact assessment, NI Cardiovascular Framework,p15

2.3 STRUCTURED CLINICAL REHABILITATION

2.3.1 CARDIAC[9]

	England	North East	East Midlands	South East	Northern Ireland
Number of Cardiac Rehabilitation Programmes	**271**	**23**	**23**	**23**	**15**
Cardiac Rehabilitation Referral Population	**122,030** *MI 72,774* *PCI 35,036* *CABG 14,230*	**8,142** *MI 4,945* *PCI 2,231* *CABG 966*	**9,665** *MI 5,719* *PCI 2,957* *CABG 989*	**9,153** *MI 5,530* *PCI 2,490* *CABG 1,133*	**5,128** *MI 2,221* *PCI 2,309* *CABG 598*
Patients Receiving Cardiac Rehabilitation	**53,568** *MI 33,317* *PCI 10,236* *CABG 10,015*	**4,727** *MI 3,132* *PCI 749* *CABG 846*	**3,909** *MI 2,820* *PCI 617* *CABG 472*	**4,899** *MI 2,792* *PCI 1,123* *CABG 984*	**1,942** *MI 1,109* *PCI 428* *CABG 405*
% Uptake of Cardiac Rehabilitation	**44%** *MI 46%* *PCI 29%* *CABG 70%*	**58%** *MI 63%* *PCI 34%* *CABG 88%*	**40%** *MI 49%* *PCI 21%* *CABG 48%*	**54%** *MI 50%* *PCI 45%* *CABG 87%*	**38%** *MI 50%* *PCI 19%* *CABG 68%*

"The coordinated sum of activities* required to influence favourably the underlying cause of cardiovascular disease, as well as to provide the best possible physical, mental and social conditions, so that the patients may, by their own efforts, preserve or resume optimal functioning in their community and through improved health behaviour, slow or reverse progression of disease" [10]

**The BACPR's seven core components for cardiovascular disease prevention and rehabilitation constitute the coordinated sum of activities*.

2.3.2 STROKE

	England	Northern Ireland
Estimated Strokes per annum[11]	107,300	4,000
Living with the effects of Stroke[12]	1,083,180	120,000
Stroke Mortality[13]	40,567 (Female 24,743 / Male 15,824)	1,239 (Female 750 / Male 489)
Patients not receiving a single joint assessment post hospital care[14]	**39%**	**24%**
Patients and carers reported problems caused by either poor or non-existent co-working between health and social care providers [15]	**48%**	**59%**

[9] The National Audit of Cardiac Rehabilitation – Annual Statistical Report (2013) 2011-12 Data Set
[10] The BACPR Standards and Core Components for Cardiovascular Disease Prevention and Rehabilitation 2012 (2nd Edition) p2
[11] Stroke Association Available at www.stroke.org.uk/news/stroke-facts-and-statistics-your-area
[12] Stroke Association Available at www.stroke.org.uk/news/stroke-facts-and-statistics-your-area
[13] British Heart Foundation Coronary Heart Disease Statistics 2012, p 20
[14] The Daily Life Survey, Stroke Association, 2011 (patient sample n= 2,050)
[15] Struggling to Recover, Stroke Association, Spring 2012 – reference The Daily Life Survey, 2011

"For people with stroke, who are continuing an exercise programme independently, physiotherapists should supply any necessary information about interventions and adaptations so that where the person is using an exercise provider; the provider can ensure their programme is safe and tailored to their needs and goals" [16]

2.3.3 PULMONARY

"Respiratory disease affects one in five people in the UK. It is responsible for around one million hospital admissions and is the third biggest cause of death in the UK" [17]

"Around three million people in the UK are estimated to be living with chronic obstructive pulmonary disease (COPD), 2.2 million of whom are undiagnosed"[18]

	UK Mortality Rates 2001 – 2010[19]	
Year	Diseases of the circulatory system per 100,000	Diseases of the respiratory system per 100,000
2001	**257.38**	**78.10**
2010	**164.19**	**67.50**
% Change - decrease	**36.21%**	**13.57%**

Pulmonary rehabilitation audit - Mapping of pulmonary rehabilitation services in England and Wales is currently taking place (**Completion date December 2014). Up to June 27th 2014 – approx. 150 pulmonary rehabilitation services had been mapped** (Report is due to be published Feb 2016)[20]

Seymour, JM et al showed that providing pulmonary rehabilitation after discharge from hospital can reduce readmissions within three months from a third to just 7% of patients.[21]

"People completing pulmonary rehabilitation are provided with an individualised structured, written plan for on-going exercise maintenance"[22]

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[16] NICE Guideline (CG162) – Stroke Rehabilitation; Long-term rehabilitation after stroke – published June 2013

[17] Report on Enquiry into respiratory deaths, AAPG on respiratory health, p5

[18] Prevalence, diagnosis and relation to tobacco dependence of chronic obstructive pulmonary disease in a nationally representative population sample, Shahab et al, Thorax 2006: 1043-1047.

[19] Report on Enquiry into respiratory deaths, AAPG on respiratory health, p12

[20] National COPD Audit programme; Pulmonary Rehabilitation work stream - https://www.rcplondon.ac.uk/projects/pulmonary-rehabilitation-workstream

[21] Outpatient pulmonary rehabilitation following acute exacerbations of COPD. Seymour JM et al. Thorax 2010 May;65(5):423-8

[22] Quality Standards for Pulmonary Rehabilitation in adults, BTS, May 2014 – standard 7

3. Exercise Maintenance – Northern Ireland (Belfast)

3.1 Northern Ireland – Contextual Overview

In 2008 the Health Promotion Agency (HPA) commissioned a mapping of all exercise referral services in Northern Ireland. Some of the key points will be noted below and throughout this section. Although this document is now six years old, many of the recommendations presented are still pertinent to the service provision currently being delivered. This research was based on a survey of 370 GP practices (202 responses), 63 Leisure Centre managers (43 responses) and focus groups with regional physical activity co-ordinators.

- The majority (89%) of GP practices promote physical activity during consultations[23].
- However time restraints within the consultation and lack of awareness of service provision were cited as barriers to conveying this message[24].

In April 2011, a new initiative was launched – the Active Belfast partnership – with the initial aim of improving levels of participation in health enhancing physical activity. The partnership includes representation from the Public Health Agency, Belfast Health and Social Care Trust and Belfast City Council. To raise awareness of the work being undertaken and have a collective recognition, a city wide logo was created to badge both new and existing programmes.

The Active Belfast strategy has five key objectives: People, Places, Participation, Partnership and Promote – set against the three themes of Active Living, Active Leisure and Active Travel (Active Ageing is currently being developed).

For the purpose of this section of the report, focus will be on the delivery arm of the integrated health and physical activity pathway – 'Healthwise' programme.

3.1.1 Programme Background

- **Initial programme focus was primary prevention; to support referred clients currently not meeting the physical activity guidelines who were 'at risk' of developing a chronic condition.**

- **Currently the programme is delivered via two pathways:**

    - **Healthwise referral –** 12 week programme offered to all sedentary participants referred via their GP or healthcare professional
    - **Cardiac Phase IV referral -** 12 week programme (with option of additional 12 week maintenance programme) for participants directly referred from cardiac rehabilitation (phase III).

[23] Mapping physical activity referral schemes in Northern Ireland (2008) – Perceptive Insight Market Research prepared for HPA. P8

[24] Mapping physical activity referral schemes in Northern Ireland (2008) – Perceptive Insight Market Research prepared for HPA. P9

3.2 Healthwise Referral

3.2.1 Programme Inclusion Criteria:

- Sedentary individual, not currently participating in regular physical activity
- Motivated to complete a 12 week programme of moderate intensity physical activity.
- MUST be considered capable of undertaking physical activity as course of treatment.

- **Suffer from/or at risk of:**
- Mild - moderate hypertension > 140/90mmhg but < 180/100mm/hg
- Controlled diabetes or a strong family history
- Heart disease or risk factors associated with coronary heart disease
- Anxiety / Stress / Depression
- Overweight or obese (body mass index (BMl)>25)
- Asthma, bronchitis or chronic obstructive pulmonary disease (COPD)
- Osteoporosis
- Being treated for or having a previous diagnosis of breast cancer
- Other* (must specify).

*Stroke and TIA participants would be referred into the standard Healthwise programme.

Programme Exclusion Criteria:

- Undertakes regular physical activity
- Uncontrolled hypertension
- Poorly controlled epilepsy
- Unstable angina
- Uncontrolled diabetes
- Cardiomyopathy, unless recommended by a cardiologist
- Severe disease or disability that impairs ability to take part in physical activity
- Less than 12 weeks since a cardiac event
- Under the age of 16
- Within 12 weeks of a cardiac event
- Systemically unwell due to infection or side effects of medical treatment. Must see a medical practitioner prior to clearance for inclusion.

3.2.2 Service provision

- **Programme offered at 9 leisure facilities/healthy living centres across Belfast**
- **Participant 1-1 assessment (see data collection) at Baseline, 6 weeks and 12 week stage**
- **Personalised participant goal and physical activity plan**
- **Access to a variety of independent and group based exercise activities**
- **Minimum of three supervised gym sessions (if applicable)**
- **12 weeks ‘free’ access to leisure facility (follow on membership can be purchased at a subsidised rate)**
- **Feedback provided to referring healthcare professional upon discharge (see data collection).**

3.3 Phase IV Cardiac Rehabilitation

3.3.1 Programme Inclusion Criteria[25] (in line with BACPR guidelines)

- Post Myocardial Infarction
- Acute Coronary Syndrome
- Post revascularisation – Following Coronary Artery Bypass Grafting/Following PCI
- Post-transplant (as deemed appropriate)
- Post valve replacement (as deemed appropriate)
- Stable angina.
- All of these conditions must be clinically stable prior to referral and:
    - Participants must be able to achieve 30 minutes of continuous physical activity without symptoms (cardiac chest pain/discomfort, severe breathlessness, dizziness or palpitations) before being referred
- Participants must have been clinically stable and well in themselves for a minimum of two weeks prior to referral
- Participants must be a minimum of eight weeks from their event or surgery and should have completed a Phase III Cardiac Rehabilitation Programme in order to assess suitability for exercise.

Programme exclusion / refer back to healthcare professional

- Existence of unstable angina (defined as any or all of the following: -
    - Angina occurring at rest
    - New event of angina within the past four weeks
    - Angina occurring more easily on less effort
    - Angina that does not respond so easily to GTN, or fails to respond at all
- Uncontrolled blood pressure where systolic is > 180 mmHg and/or diastolic >100mmHg
- BP drop > 20 mm/Hg demonstrated during Exercise Tolerance Testing
- Resting pulse rate of greater than 100 beats per minute
- Uncontrolled arterial or ventricular arrhythmia
- Unstable or acute heart failure
- Unstable diabetes
- Patient with severe co-morbidity which prevents safe or effective exercise (as assessed by cardiac rehabilitation nurse/physiotherapist)
- Patients with severe psychiatric illness who may endanger themselves or others
- Acute febrile or systemic illness
- Orthopaedic limitations which would prohibit exercise.

3.3.2 Service Provision

- **Programme is offered in 4 leisure centres across Belfast**
- **Participant 1-1 assessment (see data collection) at Baseline, 6 weeks and 12 week stage**
- **Personalised participant goal and physical activity plan**
- **Access to a BACPR qualified instructor circuit based class**

[25] Cardiac Rehabilitation Guidelines (2010-2011) – Phase IV Eastern Area, p 6-7

- **12 weeks free access to the classes, with an option for additional 12 weeks continuation class (follow on membership can be purchased at a subsidised rate)**
- **Feedback provided to referring healthcare professional discharge (see data collection).**

3.4 Referral Processes

- 1 standardised referral form for cardiac rehabilitation participants (BACPR template)
- 1 'generic' exercise referral form for Healthwise programme

	Primary Care	Secondary care	Social Services	Voluntary/ Third Sector	Health Education/ Programmes	Other
Sectors referring to Healthwise & phase IV	Yes	Yes	No	No	No	No

3.5 Audit/Evaluation

DATA	Not collected	Leisure services	CHP	Academic institution	NHS	Other
Referral source data		✔				
Condition breakdown of referrals	✔					
Follow on data		✔				
Cost effectiveness						✔[26]
Drop outs positive or negative		✔				
Person centred data		✔				

3.5.1 Data Collection

SERVICE DATA COLLECTED	Service Total
Total number of referrals	✔
HCST distribution	✔
GP Practice/Referrer	✔
Referral uptake	✔
Adherence	✔
Drop outs	✔

[26] Capturing and quantifying social and economics outcomes for Belfast - Commissioned health and social wellbeing programmes, May 2014

PARTICIPANT DATA COLLECTED	Data Collection - Stage			
	Referral	Baseline	6 Weeks	12 Weeks
Gender	✔			
Age	✔			
Demographics	✔			
Ethnicity	✔			
Socioeconomic data	✔			
BMI*	✔	✔	✔	✔
Blood pressure/RHR*	✔	✔	✔	✔
Reason for Referral*	✔			
Past medical history	✔			
Goal Setting*		✔	✔	✔
% Body Fat*		✔	✔	✔
Strength*		✔	✔	✔
Feel Good Index*		✔	✔	✔
Smoking Status*		✔	✔	✔
Flexibility*		✔	✔	✔

***The data collected at baseline, 6 weeks and 12 weeks is collated and forwarded to the referrer. In addition within this reporting mechanism data on number of sessions attended, future exercise plans and personal comments are also included.**

From the 2008 mapping report the incidence of exercise referral schemes providing feedback to the GP/referrer varies; with only 36% of schemes providing this on a regular basis. 18% of schemes claim that the information is not requested by the GP[27].

From April 2013 – March 2014 Healthwise received approximately 2200 referrals and over 600 cardiac phase IV referrals. Over 150 cardiac patients are participating in the phase IV and continuation programmes every week.

[27] Mapping physical activity referral schemes in Northern Ireland (2008) – Perceptive Insight Market Research prepared for HPA. P28

3.5.2 Social Return on Investment (SROI)

To assess and demonstrate the financial value of the outcomes of the 'Healthwise' programme, the Social Return on Investment methodology was applied.

In addition to the quantitative data collected by the programme at baseline, 6 and 12 weeks, a participant focus group was held to provide a qualitative perspective on the participant journey.

The physical activity services provided through the referral programme generates a social value of approximately **£1:£7** over a five year period. This is based on a Total Present Value (overall social value identified) of £484,697 created against an input of £69,000 over the extrapolated 5 year period, due to the impact being experienced by stakeholders beyond the period the service is delivered.[28]

3.5.3 Key Recommendations from Active Belfast Commissioned Evaluation[29]

- **Implementation of the four dimensional model – framework development, measurement, quantifying and communicating impact.**
- **Detailed review of its internal data collection processes.**
- **Explore the possibility of an IT management information system for analysing and collating data.**
- **Consideration should be given to the support required to enable Active Belfast staff to implement these recommendations, in terms of time commitment, skills development and financial resources.**

3.6 Funding

- Programme is funded by the Public Health Agency.
- Operating costs of £69,000 were recorded for the Healthwise programme (financial year 2012/13 at Andersonstown Leisure Centre (one of nine venues)[30]
- **Programme co-ordinator funded for 3 years, Healthwise staff are on a 12 month rolling contract**
-

"The point was made that, for some, there was a continual process of applying for funding which was distracting from the overall implementation of the scheme. In addition, even where the scheme had been set up and was working well, the next application for funding would have to meet other criteria and therefore it was difficult to continue with the scheme in its current format." [31]

[28] Healthwise Physical Activity Scheme, SROI Pilot Exercise, Gauge NI p 6

[29] Capturing and quantifying social and economics outcomes for Belfast - Commissioned health and social wellbeing programmes, May 2014

[30] Capturing and quantifying social and economics outcomes for Belfast - Commissioned health and social wellbeing programmes, May 2014 p99

[31] Mapping physical activity referral schemes in Northern Ireland (2008) – Perceptive Insight Market Research prepared for HPA. P36

3.7 Staffing – Training & Qualifications

- One Programme Co-ordinator
- All Heathwise staff trained to REPS level 2 gym instructor and REPS level 3 Exercise Referral Qualification
- All staff involved in the delivery of Cardiac IV are qualified BACPR level 4.

3.8 Key Successes

- Central programme co-ordinator
    - "Where there is a dedicated central resource for organising referrals the scheme appears to be working better and is more effective. They appear to be more pro-active in informing GPs about the scheme, approaching clients, screening them for their suitability for the scheme, monitoring their progress and in achieving more positive outcomes in terms of keeping clients on the scheme"[32].
- Programme accessibility – offered in 9 venues across the HCST
- Established referral pathway and inclusion/exclusion criteria
- Multi agency approach – Active Belfast Partnership
- Positive Social Return on Investment evaluation
- Third sector support groups utilise leisure facilities to meet (integration)

3.9 Key Challenges

- Short term staff funding
- Parallel pathways for Healthwise and Phase IV referrals
- Various schemes / local service provision pilots across Northern Ireland
- Stroke and Respiratory participants offered generic prevention referral service
- Co-ordinating internal and external data collection mechanisms – aligning programme outcomes and performance indicators.

3.10 Participant Satisfaction / Evidence of impact

Outcomes identified both at a 'beneficiary' (increased activity, health and well-being) and 'community' (reduced social isolation) level;

Level of Activity

"Do more at home. Simple things like getting upstairs or carrying something, I feel stronger. Before I hadn't left home for over a year."

Social Engagement

"The best things are meeting people; it's a good laugh and I am enjoying the (fitness and weight) machines"

[32] Mapping physical activity referral schemes in Northern Ireland (2008) – Perceptive Insight Market Research prepared for HPA. P37

71% of participants surveyed noted an increase in confidence levels with 92% citing they were more aware of the services available to them.[33]

3.11 Future Service Development

- Programme extension piloted a cancer specific pathway – 'Small Steady Steps' – positive evaluation.
- Currently developing framework for a similar respiratory pilot – dedicated specialist member of staff – 36 week programme post pulmonary rehabilitation
- Scoping and developing regional plans to support a proposal for a national service provision framework.

3.12 Innovations

There are many innovative pieces of work being undertaken in Belfast and across Northern Ireland, one example of which was the 'Healthy Hearts in the West' project;

- Community assets based approach to tackle the underlying risk factors for CVD in West Belfast
- Two-year pilot involving community, voluntary, statutory and private sectors
- Six key objectives identified[34]
    - Raise awareness about the risk factors contributing to heart disease.
    - Raise awareness about how to achieve a healthy lifestyle through local programmes.
    - Strengthen partnerships between community, statutory, voluntary and private sectors to improve heart health.
    - Improve access to preventative, diagnostic, treatment and rehabilitation services.
    - Promote self-management for those with cardiovascular disease.
    - Create care pathways that enable delivery of integrated services for cardiovascular disease.

One work strand of this project was to offer cardiac rehabilitation in the community and integrate services;

- Delivering phase III cardiac rehab in a community setting elicited a 25% increase in uptake[35]
- Cardiac nurses were able to directly refer participants to the counsellor and complimentary therapist within the same facility
- Community phase IV classes were also offered within the same facility

[33] Healthwise Physical Activity Scheme, SROI Pilot Exercise, Gauge NI p 9

[34] Healthy Hearts in the West Initiative – phase 1 – Evaluation Report (Sept 2013), Public Health Agency and Belfast Local Commissioning group.

[35] Healthy Hearts in the West – Two Years in a Nutshell – celebration report p 25

3.13 Third sector involvement

- Active Belfast engage with third sector organisations via steering groups to develop new condition management pathways (e.g. cancer and pulmonary).

Generic Support Groups

- Three Northern Ireland Chest, Heart & Stroke (NICHS) groups for chest, heart and stroke patients

Respiratory Support Groups

- 21 Northern Ireland Chest, Heart & Stroke (NICHS) groups
    - five located within Belfast HCST
- Four British Lung Foundation – Breathe Easy Groups in Northern Ireland

Providing: social support, education – self management, healthy lifestyle, links to alternative services, promote continued rehabilitation and campaigning on service provision/redesign.

Cardiac Support Networks

- 22 NICHS support networks in Northern Ireland
    - four located within Belfast HCST

Stroke Support Schemes

- 21 NICHS groups nationwide
    - two located within Belfast HCST
- Eight young stroke support groups nationwide
    - two located within Belfast HCST

The Young Stroke Groups have been specifically designed to meet the needs of the younger stroke survivor. The service aims to provide specialised, community based support to improve the recovery of younger survivors of stroke or Transient Ischaemic Attack (TIA).[36]

Innovation

Moving on Programme[37]

- Developed in partnership with Southern HCST stroke team
- Six week physiotherapist led community based programme
- Education and exercise based post rehabilitation enablement programme[38] - aimed to rebuild participants' lives and confidence

[36] Northern Ireland Chest, Heart and Stroke – stroke support services - http://www.nichs.org.uk/571/young-stroke-schemes
[37] Northern Ireland Chest, Heart and Stroke – Moving On - http://www.nichs.org.uk/863/moving-on
[38] Appendix Figure 1 – NICHS service user pathway

4. Exercise Maintenance – England (Sunderland, Nottingham & Brighton)

4.1 England: Contextual Overview

Throughout the scoping activity for this report (June 2013-July 2014), the NHS in England was undergoing a major period of transition and restructure. From April 2013, the core structure of the NHS evolved, with many of the primary care trusts (PCTs) and strategic health authorities (SHAs) being abolished and new organisations such as clinical commissioning groups (CCGs) taking their place.

In addition, local authorities had taken on responsibility for the budgets for public health resulting in a far bigger role to play in terms of service integration. Specifically, health and wellbeing boards have duties to oversee and encourage a more cohesive approach of working between commissioners of services across health, social care and public health.

Boards themselves recognise that that they need to change gear, building on the investment in their development during the shadow year to establish a firm grip on local issues and make a real difference to services and outcome.[39]

Unfortunately due to this 'shifting sands' situation in relation to core services, care pathways and community based service provision, difficulties were encountered to create an evidence base from each core component across the patient journey.

In light of the commissioning process, NHS services have been opened up to competition from providers that meet NHS standards on price, quality and safety as a result there was a natural trepidation from services to be transparent and share detailed information on; rehabilitation pathways, service provision and local evaluation. Moreover, as a consequence of the restructuring process job roles and responsibilities had been amended, staff had new remits, overseeing multi-morbidities thus gaining an insight to historical and current provision was challenging.

As a direct consequence, community based exercise maintenance services were under increased scrutiny, funding of such projects/programmes was short term with services asked to morph into a new method of delivery, aligning to an increased number of the local health and wellbeing outcomes/performance indicators. The programmes/projects detailed throughout this report represents a snap shot of activity – due to the nature of the funding process, few services could predict existence (and in what form) more than 12 months in advance.

Three areas were identified for the purpose of this scoping activity. These were Sunderland, Nottingham (Broxtowe) and Brighton. The three areas were representative of varying health indicators (risk factor prevalence), long term condition prevalence, socio-economic status and programme/service delivery. Providing a review of activity similar to the varying demographics encountered across Scotland. The report evidence base was collated both by desk review and direct programme engagement.

[39] Health and Wellbeing boards – One year on. Kings Fund, Ideas that change healthcare, Oct 2013 p2

4.2 Sunderland Exercise Referral and Weight Management

4.2.1 Programme Background

- Commissioned in November 2008
- Exercise referral (ER) component provides opportunities for exercise professionals to play an important role in disease prevention and health promotion, in partnership with medical practitioners and allied health professionals
- Programme aims include[40] –
    - To provide opportunities for people with underlying medical conditions to become more active.
    - To provide access to safe and effective exercise in a supervised environment.
    - To elicit the co-operation of health care professionals in referring to the programme and to make them aware of the benefits of exercise for certain conditions.
    - To network with community based leisure operations to provide maximum opportunities for patients referred to engage in appropriate physical activity.
- Developed as part of 5 tier obesity agenda
    - Tier 1 - mainstream activity
    - **Tier 2 – Community intervention***
    - **Tier 3 -Specialist Community intervention***
    - Tier 4 – General hospital based rehabilitation (BMI 40+)
    - Tier 5 – Specialist hospital services BMI> 50

***(Exercise referral and weight management scheme)**

4.2.2 Programme Inclusion Criteria

- Adults (16 years plus) with a BMI ≥28 with no co-morbidities
- Adults (16 years plus) with a BMI ≥28 with one or more of the co-morbidities listed below:
    - Osteoporosis
    - Arthritis or joint problems
    - Anxiety, depression or stress
    - Asthma/bronchitis/emphysema/COPD
    - Angina
    - Heart Attack
    - CABG/PCI (completed Phase III)
    - Mild to moderate heart failure
    - Suffered from or are recovering from stroke
    - Claudication
    - Balance problems as a result of Parkinson's Disease, MS etc
    - Awaiting or recovering from surgery (not cardiac)
    - Non acute severe mental illness
    - Family history of heart disease
    - Cholesterol levels consistently over 5 total cholesterol
    - Hypertension (<100 diastolic) for cardiac patients

[40] SUNDERLAND EXERCISE REFERRAL AND WEIGHT MANAGEMENT PROGRAMME ANNUAL REPORT (April 2011 to March 2012), p2

- Hypertension (<110 for general population
- All types of diabetes
- Impaired glucose tolerance (IGT)
- Hyperlipidaemia
- Inflammatory bowel disease
- Food intolerances or allergies
- Renal/Liver problems
- Other dietary related problems i.e. Coeliac disease
    - Hyperglycaemia – HbAIC level<10 at last 15 months
    - Stable insulin dépendant diabètes (Type 1)
    - Non stable dépendant diabètes (Type 2)

- **Participants with a BMI <28 with one or more of the co-morbidities listed above can be referred to the Exercise Referral component only**

Programme Exclusion Criteria

- People who have previously been referred
- People who are already exercising on a regular basis
- People under the age of 16 years (see LAF programme)
- People who are not motivated to make lifestyle changes
- People whose mental health or ability to learn would not allow them to participate in the programme
- Those showing symptoms or traits considered absolute contraindications* to exercise i.e. Unstable angina, Unstable to acute heart failure, Specific cardiac problems
- Active myocarditis

*adhering to BACPR exercise contraindications

4.2.3 Service Provision

- Programme offered in 9 sites across Sunderland
- Combination of leisure centres, wellness centres and community venues
- 15 week participant centred programme including baseline consultation, exit assessment and 6 & 12 month follow up contact (see data collection)
- Personalised participant goal and physical activity plan
- 15 week subsidised access to leisure facilities – fitness suite, classes and independent activities
- Exit assessment feedback provided to referring healthcare professional (see data collection)

4.3 Referral Processes

- 1 standardised referral form used for both exercise referral and weight management programmes
    - Additional section to be completed by referrer for participants with CVD / respiratory conditions.

	Primary Care	Secondary care	Social Services	Voluntary/ Third Sector	Health Education/ Programmes	Other
Sectors referring to Exercise / Weight Man	Yes	Yes	No	No	No	Yes*

*community pharmacists – as part of the NHS health check pilot

Self-referral is available for the weight management component only.

29.3% of people with COPD and Medical Research Council (MRC) Dyspnoea scale ≥3 were referred to a pulmonary rehabilitation programme. (target referral rate of 22.3% 2013/14)[41]

4.4 Audit/Evaluation

DATA	Not collected	Leisure services	CHP	Academic institution	NHS	Other
Referral source data		✔				
Condition breakdown of referrals		✔				
Follow on data		✔				
Cost effectiveness	✔					
Drop outs positive or negative		✔				
Person centred data		✔				

- **From Apr 2011 – Mar 2012 – 3112 were received**
    - **Of which 2084 (67.0%) booked an initial assessment**
    - **Of which 1957 (93.9%) attended the initial assessment**

- **Adherence – of the 1957 participants attending the initial assessment – 858 (43.8%) completed the 15 weeks, with a further 214 (10.9%) becoming independently active prior to the 15 week assessment.**
- **Across all facilities and activities – 56,617 attendances were recorded.**

[41] NHS Sunderland Clinical Commissioning Group (CCG) Annual Report and Accounts 2013/14, p21

Condition specific data (of the 3112 referrals)

- **335 (10.8%) had cardiac conditions (Angina, MI, CABG & CHF)**
- **137 (4.4%) had respiratory problems (excluding asthma)**
- **71 (2.3%) had a previous stroke**

4.5 Data Collection

PARTICIPANT DATA COLLECTED	Data Collection - Stage				
	Referral	**Baseline**	**15 Weeks**	**6 Months**	**12 Months**
Gender	✔				
Age	✔				
Demographics	✔				
Ethnicity	✔				
Socioeconomic data	✔				
BMI*	✔	✔	✔		
Waist Circumference*	✔	✔	✔		
Blood pressure/RHR*	✔				
Reason for Referral	✔				
Past medical history		✔	✔		
Goal Setting*		✔	✔	✔	✔
% Body Fat*		✔	✔		
Strength*		✔	✔		
GHQ-12*		✔	✔	✔	✔
Smoking Status*		✔	✔	✔	✔
Peak Flow*		✔	✔		

*The data collected at baseline and 15 weeks is collated and forwarded to the referrer.

4.6 Funding

- **The programme is jointly funded by the NHS and joint local authority**

4.7 Staff – training and qualifications

- 1 WTE Programme team leader
- 10 WTE exercise referral consultants
    - **Minimum qualifications REPS Level 3 advanced gym instructor and REPS Level 3 Exercise referral qualification**
    - **All staff also REPS Level 4 Obesity and diabetes management trained**
    - **Staff directly supporting cardiac/high risk referrals – BACPR level 4 qualified**
- 2 WTE programme administrators

4.8 Key Successes

- Central programme co-ordinator
- Programme accessibility – assessments offered in 9 venues across the city – leisure, wellbeing centres and community venues
- Established referral pathway and inclusion/exclusion criteria
- Multi agency approach – overarching steering group includes health, leisure and rehabilitation leads.
- 100% of GP practices in Sunderland refer to the service
- Administrative support to assist with communication plans and data collection/analysis
- One standardised referral form for both services
- Direct link with cardiac and pulmonary rehabilitation and community stroke physiotherapists
- Strong links with voluntary sector – cardiac support groups meet within leisure facility – service signposts to support groups

4.9 Key Challenges

- Delivery staff on a 12 month rolling contract
- Exercise referral scheme badged with weight management service
- Time limited intervention (15 weeks)
- Performance indicators heavily biased towards weight loss/maintenance
- Staff funding split by NHS and joint local authority – each funder requests staff specific statistics
- Limited activity options for participants with reduced functional capacity
- Service variance – different schemes operate across the north east – can be confusing for the referrer

4.10 Participant Satisfaction / Evidence of Impact

- At the 6 and 12 month follow up stage – 80% felt their health and well-being had improved.

"This service is great for people with a health condition who would benefit from a more active lifestyle. It offers personalised exercise advice and guidance by an experienced team of health and fitness professionals resulting in an activity programme which is safe and appropriate for the individual."[42]

Practice Manager

- **63% of participants had maintained their levels of physical activity at the 12 month stage.**

"This programme has changed my life for the better, and everyone with any health complications should be given the opportunity to try this"

Male participant, 64

4.11 Future Service Developments

- Improve links with pulmonary rehabilitation and explore feasibility to train staff in level 4 certificate Exercise Training for Chronic Respiratory Disease.
- Amend the assessment protocol and personalise the consultation time to meet the needs of the participant
- Develop and launch pilot stroke programme
- Data collection: aligning performance indicators to participant goals (reduce bias towards weight loss/maintenance)
- Explore the opportunity of a generic rehabilitation class, based on participant's level of functional capacity – project shadowing GGC model

4.12 Third Sector Involvement

- **Service recognition**
  - The Sunderland Stroke Community Rehab team were awarded most improved stroke service 2011 by the Stroke Association. Helping to reduce average length inpatient length of stay from 30.3 days to 12.5 days. Moreover establishing a seven day service for early supported discharge and community service[43].
- **British Lung Foundation – 1 group based in Sunderland**
  - **Meets monthly – facilitated by members offering a network of support, education and advice, links to patient services, activities and social excursions.**

[42] SUNDERLAND EXERCISE REFERRAL AND WEIGHT MANAGEMENT PROGRAMME ANNUAL REPORT (April 2011 to March 2012), p34

[43] Stroke Association website - http://www.stroke.org.uk/involved/most-improved-stroke-service-sunderland-community-rehab-team

- **British Heart Foundation affiliated cardiac support groups**
    - **12 based in the North-East, 2 located in Sunderland**

"Run by former heart patients for the support of heart patients and their carers"

- Founded in 1993 by six heart patients (currently 179 members on their database)
- In addition to social support activities, the cardiac support group runs 6 exercise sessions per week. Each session is led by two IV BACPR instructors
- Format: standard multi station circuit class
- Direct exit strategy from phase III, BACPR referral form template adopted
- Established peer support links with phase III, support group members attend phase III sessions monthly to promote service
- Exercise sessions cost £2 – annual group membership is £2
- Average class attendance is 20 members
- Sessions offered in local leisure centres – good links with exercise referral scheme – cross signposting (if applicable)
- 75% active members are female
- Additional activities include group walks (April – October) and monthly social gatherings
- Key challenges;
    - Raising funds to maintain level of service (entirely self-funded)
    - Keeping participant costs to a minimum
    - Appearing an attractive option for younger cardiac patients
    - Recruiting volunteers to become trustees / board members

"I am certain it does me good and helps keep the heart healthy. Everyone who attends enjoys the exercise as well as the social aspect of meeting friends once or twice a week, especially as a lot of our members live alone"

Sunderland Cardiac Group, Service User

- **Stroke Association Support Groups**
    - Offer community integration services – return to work and peer support sessions
    - Family care support services – patient / carer transport, benefit support information
    - No exercise session delivery, work closely with local health trainers and signpost accordingly. Keen not to duplicate services

5.1 Nottingham Exercise Maintenance Services – (Broxtowe)

5.1.1 Programme Background

- **Broxtowe is one of seven borough/county councils in Nottinghamshire – each of which has its own independent exercise maintenance service and protocol**
- Exercise maintenance services in Broxtowe are delivered in partnership with Broxtowe Borough Council and NHS Nottinghamshire County
- Post 2010 the service sits under the sports development department of Broxtowe Borough Council
- Exercise maintenance is delivered via three core services;
    - Exercise Referral Scheme
    - Cardiac Rehabilitation (Heartbeats)
    - Strokeability sessions (time limited funding 2 x 12 week blocks)
- Current service protocol due to be re-commissioned post August 2014
    - Initial funding period only extended by 5 months (Apr-Aug 14)
- Exercise Referral aim;
    - Help people to improve their health by becoming more active. Exercise Referral is available to people who suffer from or are at risk of certain diseases that would benefit from physical activity.
- Cardiac Rehabilitation (Heartbeats);
    - Is a network of exercise sessions throughout Broxtowe, suitable for people with diagnosed heart problems who would like to be more active.
- Strokeability Sessions;
    - Programme specifically designed for people who have had a stroke encouraging them to become more active.

5.1.2 Programme Inclusion Criteria (Exercise Referral)

- **Over the age of 16, currently active and have at least one of the following;**
    - Family history of heart disease
    - High cholesterol levels (consistently above 5.2 total cholesterol)
    - Obesity/Overweight (BMI >27)
    - Hypertension (140/90 to 179/99 mmHg)
    - Waist circumference measurement above: Male: 102cm (40 inches) Female: 88cm (35 inches)
    - Treated Type 1 or 2 Diabetes Mellitus
    - Controlled Asthma
    - Mild to moderate rheumatoid arthritis or osteoarthritis
    - Mild to moderate COPD
    - Mild to moderate depression, stress or anxiety.

- **Exclusion Criteria**
    - Angina pectoris
    - Uncontrolled hypertension (regular readings over 180/100)
    - Severe Peripheral vascular disease
    - Paroxysmal arrhythmias

- Recent cardiac event (e.g. MI or Cardiac Surgery) but no current angina
- Poorly controlled or brittle insulin dependent diabetes (type 1, or 2 on insulin)
- Severe or poorly controlled asthma
- Severe chronic pulmonary disease
- Chronic muscle, joint or bone conditions that greatly impede mobility or require physiotherapist treatment
- Unstable or severe mental health state
- Patients who in the Healthcare Professionals opinion are not medically fit to undertake an exercise programme, due to other conditions.

- **Cardiac Rehabilitation Inclusion Criteria (Heartbeats)**

  - Myocardial Infarction
  - Percutaneous Coronary Intervention
  - Coronary Artery Bypass Grafting
  - Aortic or Mitral Valve Replacement or repair
  - Stable Angina
  - Heart Transplant
  - Heart Failure
  - Cardiomyopathy
  - Arrhythmia and or implantable devices

  Patients must also be:

  - Clinically stable prior to the event
  - Motivated to attend the sessions
  - Able to exercise independently and safely

  Exclusion Criteria

  - Those showing symptoms or traits considered absolute contraindications* to exercise i.e. unstable angina, unstable to acute heart failure, specific cardiac problems

  *adhering to BACPR exercise contraindications

5.2 Service Provision

Exercise Referral Scheme

- Programme offered in 3 leisure centre venues across the borough
- 12 weeks subsidised access to a wide variety of leisure activities
- 12 week participant centred programme including baseline consultation and exit assessment (see data collection)
- Personalised participant goal and physical activity plan
- Additional activities available via the sports development team

Cardiac Rehabilitation (Heartbeats)

- Programme offered in 3 leisure centre venues across the borough
- 6 sessions in total offered weekly
- 3 supervised gym sessions / 3 circuit based classes
- Each session duration – 90 minutes
- Initial 1-1 assessment undertaken prior to exercise participation
- On-going assessment by qualified instructor of participant readiness to attend mainstream activities (after a minimum of 8 attendances)
- Access to Heartbeats programme up to a maximum of 6 months
- Subsidised access during this period

Strokeability Sessions

- Not currently being offered in Broxtowe but available in two of the other Nottinghamshire boroughs*.
- When operational the programme consisted of a time limited 12 week programme of one session per week (60 mins) followed by an education session
- Sessions were open to both the participant and their carer

*Ashfield and Newark boroughs offer Strokeability sessions on a continual basis, each area has a different criteria and cost structure. Cost is generally reduced for the first 10 weeks then increases thereafter.

5.3 Referral Processes

- 1 standardised referral form for cardiac rehabilitation participants (BACPR template)
- 1 'generic' exercise referral form for programme

	Primary Care	Secondary care	Social Services	Voluntary/ Third Sector	Health Education/ Programmes	Other
Sectors referring to Exercise Referral & Heartbeats	Yes	Yes	Yes*	No	No	No

*Adult and Social care services can refer into the exercise referral scheme only.

A neighboring exercise referral service in Bassetlaw produced a patient focused model for exercise on referral – 'People who can make it happen!'[44]

[44] Bassetlaw District Council – Exercise Referral Guide – model depicted in Appendices – figure2

5.4 Audit/Evaluation

DATA	Not collected	Leisure services	CHP	Academic institution	NHS	Other
Referral source data		✔				
Condition breakdown of referrals		✔*				
Follow on data		✔				
Cost effectiveness	✔					
Drop outs positive or negative		✔				
Person centred data		✔				

***only a selected number (9) of conditions / reasons for referral can be identified**

Exercise Referral Scheme

- **Target of 500 referrals per annum**
- From Apr 2012 – Mar 2013 – 492 referrals were received
    - Of which 346 (70.3%) started the programme
    - 82.9% of referrals were from primary care with only 6.5% coming directly from a rehabilitation service (not specified)

- Adherence – of the 346 participants starting the programme – 154 (44.5%) completed the 12 weeks.

Heartbeats Cardiac Rehabilitation

- From Apr 2012 – Mar 2013 – 80 new referrals were received
- Due to the flexible nature of the service – adherence is difficult to quantify

"Key ambitions for the people of Nottinghamshire – a good start, living well, coping well and working together" [45]

Two of the key operating priorities in relation to the above are:

- support people with long-term conditions
- support older people to be independent, safe and well

[45] Our strategy for health and wellbeing in Nottinghamshire, 2014-2017, Nottinghamshire County Council p3

5.5 Data Collection

PARTICIPANT DATA COLLECTED	Data Collection - Stage		
	Referral	Baseline	12 Weeks
Gender	✔		
Age	✔		
Demographics	✔		
Ethnicity	✔		
Socioeconomic data	✔		
Referral Source	✔		
BMI	✔	✔	✔
Blood pressure/RHR	✔	✔	✔
Reason for Referral	✔		
Past medical history	✔		
Goal Setting*		✔	✔
Stage of Change		✔	✔
Physical Activity (category)		✔	✔
EQ-5D		✔	✔

Quarterly and annual reports detailing the above data fields are submitted by the service to the commissioning manager for review.

5.6 Funding

- The service is currently jointly funded by NHS and Joint Local Authority (up to August 2014)
- During the period of scoping Nottingham County Council were undertaking a consultation process with current providers and will be going out to tender for a new County wide weight management service in Nottinghamshire from August 2014.
- Moving forward - weight management services include Exercise Referral, pulmonary rehab and the nutrition and dietetics teams.
- It was estimated that funding had to be secured at a minimum level of £36,600 to ensure continuation of the exercise referral scheme beyond Apr 2014.[46]

[46] Bringing People Together Delivery Plan, Broxtowe Council, p22

- **The cardiac rehabilitation (Heartbeats) programme receives no external funding; the service is self-funded via the leisure centres with participants paying £4.40 per session (opposed to £2.35-£2.80 for exercise referral sessions)**

5.7 Staff – training and qualifications

- All staff are qualified to REPS Level 3 – Exercise Referral
- Heartbeats staff (n=3) in addition are BACPR level 4 qualified

5.8 Key Successes

- Established referral pathway and inclusion criteria
- Standardised exercise referral and cardiac rehabilitation forms
- Structured data reporting procedure between service provider and commissioner
- Wide variety of activities available to referred participants due to service sitting within local authority sports development department (e.g. walking football, walking netball, walk and talk)
- Clear exit strategy from Heartbeats programme into mainstream activity – selection of activities available post phase IV
- Continued subsidised access for exercise referral participants post 12 week programme
- Good links with referring clinical rehabilitation services

5.9 Key Challenges

- Short term service funding – re-commissioning of services
- Staff turnover due to uncertainty of programme sustainability
- Programme variance - alternative programmes (7) being offered in each neighbouring borough/council
- Short term pilot sessions for condition specific groups – e.g. strokeability sessions
- Time limited programme for both exercise referral and ‘Heartbeat’ participants
- Performance indicators not necessarily aligned with programme aims
- Stroke and respiratory patients referred into mainstream exercise referral service
- Programmes only offered in a leisure/sports facility

5.10 Participant Satisfaction / Evidence of Impact

- **Feedback from the Strokeability sessions**

"Really enjoyed the class and meeting new people"

"I really enjoyed the classes and it has helped with my condition"

"The class has given me the motivation to try things instead of just sitting at home"

- As noted previously, data collection methods/analysis appears to focus on programme attendance, weight loss and demographic subgroups. No direct indicators of impact on health (stroke, cardiac and respiratory specific).

- **Evaluation of the 'Heart Fit' phase IV programme in Newark, Nottinghamshire by University of Lincoln noted;**

Using a process of thematic analysis, participants revealed six main themes as being important factors during the 12-week programme. These included the instructor's influence, the social nature of the group, the availability of clinical observation, psychological development and the perceived beneficial physical improvements made.

Future phase IV cardiac rehabilitation programmes need to gain a greater insight into the patient experience. This will enable health planners and policy makers to generate a sense of context on how these programmes operate at local levels and develop models of best-practice[47].

5.11 Future Service Development

- Limited due to the uncertainty of programme funding and sustainability (applicable to exercise referral arm only)
- Proposal to rerun 'Strokeability' sessions in Broxtowe
- Closer working relationship with community nutrition and dietetics department to introduce 'healthy eating' workshops.
- Possible service redesign to include exercise referral within a weight management context - possible implications of this could be;
    - Amended inclusion criteria – BMI focused
    - Performance indicators/outcomes less transferable to long term conditions
    - Reduction in variety of services suitable to stroke, cardiac and respiratory patients – especially with significantly reduced functional capacity

[47] An evaluation of the success of the 'Heart-Fit' phase IV cardiac rehabilitation programme in Newark, Nottinghamshire: A mixed-method approach,Woolley, E.R.,et al. Presented at the BASES conference 2013

5.12 Innovations (clinical delivery pilot)

Service Integration

Nottinghamshire CHD Heart Failure Network in partnership with Pulmonary Rehabilitation services created a modified pilot rehabilitation service suitable for heart failure patients (based on the foundation of the existing pulmonary rehabilitation protocol).

A cohort of 12 participants (NYHA II/III) were recruited and enrolled onto the pilot for a period of 6 weeks[48]

Primary outcomes included

- 11 out of 12 (90%) patients showed a clinically significant improvement in dyspnoea.
- 10 out of 12 (81%) patients showed a clinically significant improvement in Fatigue.
- 9 out of 12 (72%) patients showed a clinically significant improvement in Emotion & Mastery (the patient's feeling of control over their disease).

"The programme provided excellent assessment, careful guidance, support and challenge. The generous and caring staff gave freely a huge amount of encouragement, which enabled me to build my confidence"

Participant feedback

Therefore the innovative approach in combining cardiac and Pulmonary Rehabilitation locally could be of great advantage to the local health economy, heart failure patients and their carers to deliver the principles of effective integrated patient centred care.[49]

5.13 Third Sector Involvement

Heart Support Groups

- 21 British Heart Foundation affiliated heart support groups across the East Midlands
    - 4 situated across the Nottinghamshire region

Groups generally meet on a monthly basis providing peer support, education and advice in relation to continued rehabilitation.

Local Stroke Services

- A range of services are available across the Nottingham area including;
    - 3 Stroke Association affiliated clubs
    - 3 Voluntary groups
    - 2 Information, Advice and Support Services
    - 1 Return to work service
    - 1 Arts and Crafts Club

[48] Pilot service pathway – Appendices – Figure 3

[49] Combined Heart Failure & Pulmonary Rehabilitation Service Pilot, NHS Nottinghamshire CHD network, Vanessa Holmes, June 2013 p 20

Respiratory Support Groups

- 4 British Lung Foundation 'Breathe Easy Groups'
    - 2 of which offer community based exercise sessions – Tai Chi and Respiratory exercise class.
    - Respiratory class is has been designed to offer three levels (of each exercise), ensuring the session is inclusive for all.

"Classes are brill in that there are different levels for different people for example you can have a seated or standing warm up. After the warm up there are different activities/workstations that you go round. It's a place where you can exercise in safe hands."[50]

[50] British Lung Foundation Website - http://www.blf.org.uk/News/Detail/New-Respiratory-exercise-class

6.1 Brighton Exercise Maintenance Services – (Zest & Fit Clinic)

Contextual Overview

There are a number of commissioned, voluntary and privately run projects and groups offered across Brighton and Hove. For the purpose of this report, detail has been provided on the 'Zest' Exercise Referral Scheme and Fit Clinic (Community based cardiac rehabilitation).

6.1.1 Programme Background

Zest Exercise Referral Scheme (part of Zest People)

- 'Zest People' was established in 2005 and offers a number of services including;
    - Exercise Referral Scheme
    - Falls Prevention Programme – feel good and balanced
    - Evaluation and consultancy support for other exercise referral schemes
    - Health development consultancy support and tendering
- Commissioned by Public Health, Brighton & Hove County Council to deliver – Exercise Referral Scheme.
- Programme aims include;
    - Initiate long-term lifestyle change with a programme of supported physical activity options for residents of Brighton and Hove.
    - To assist with the management of Chronic Disease and to encourage the continued benefits of rehabilitation following physiotherapy.

Fit Clinic (community cardiac rehabilitation)

- Cardiac rehabilitation classes established since 2004
- Small organisation (team of 3) offering across Brighton and the south-east;
    - Cardiac Rehabilitation phase IV classes
    - Tai Chi
    - Personal Training
    - Weight management and lifestyle advice
- Employed by a number of local support groups including 'Brighton Take Heart Group.'
- Organisation aims;
    - Using evidence-based methods to help bring about sustainable improvements in physical health, physical fitness and wellbeing.

6.1.2 Inclusion Criteria

Zest Exercise Referral Programme

- **Activity and Behaviour Levels**

- Sedentary behaviour i.e. not moderately active for 3 or more times per week
- De-conditioned through age or inactivity
- Exhibits a desire to become more active in the **next month**

Medical Conditions (minimum two or more)

CHD Risk factors
- Controlled Hypertension (see exclusions)
- Weight management
- BMI greater than 29
- Controlled diabetes
- Impaired glucose tolerance
- Hyperlipidemia
- Referral from Cardiac Rehabilitation Schemes **(from Phase IV only)**

Mental Health
- Clinical depression
- Other stable conditions (details required)

Musculoskeletal
- Osteoporosis
- Arthritis (mild/moderate)
- Musculoskeletal (physiotherapy referrals only)

Respiratory/pulmonary
- Mild/well controlled Asthma, Bronchitis, Emphysema)

Stable Neurological Conditions
- Multiple sclerosis
- Parkinson's Disease
- Motor Neuron Disease

Other
- Stroke/TIA (> 3 months and stable)
- Chronic fatigue/ME
- HIV symptomatic
- Fibromyalgia

Exclusion Criteria

- Under the age of 16
- Re-referral within 12 months of COMPLETION of the scheme
- Unstable/newly diagnosed angina (within 6 months)
- Blood pressure 180/100 (in either) or above and/or uncontrolled or poorly controlled hypertension
- Unexplained dizzy spells
- Excessive or unexplained breathlessness on exertion
- Uncontrolled or poorly controlled diabetes
- Uncontrolled or poorly controlled epilepsy
- History of falls or dizzy spells in the last 12 months
- Uncontrolled or poorly controlled asthma (severe COPD)
- First 12 weeks of pregnancy
- Awaiting medical investigation
- Aneurysms
- Stroke/TIA (recent <3 months)

Exclusions (Established Coronary Heart Disease)

- Cardiomyopathy
- Uncontrolled tachycardia
- Cardiac arrhythmia
- Valvular heart disease
- Congenital heart disease
- Myocardial infarction (unless stable > 1 year)

Fit Clinic Inclusion / Exclusion Criteria

- As per BACPR guidelines – contraindications to exercise

6.2 Service Provision

Zest Exercise Referral Scheme

- Programme offered across 8 leisure centre and community venues
    - Within leisure centre setting delivered in partnership with Freedom Leisure provider
- 3 months subsidised access to a range of leisure activities
- 1-1 assessment and up to 4 follow up assessments in 3 month period – depending participant requirement and activity undertaken
- 1-1 exercise gym plan (if applicable)
- Follow up questionnaire at 3 and 6 months

Fit Clinic (Community Cardiac Rehabilitation)

- Classes offered across a range of venues including;
    - Leisure centres
    - Social clubs
    - Community hall
- 17 classes offered per week
- Initial assessment – unlimited access to exercise sessions
- Pay as you go or monthly membership rates
- Direct integration with phase III and community support groups
- Option for carers and relatives to join exercise session
- Variety of equipment used (depending on class location) –
    - spin bikes, concept rowing machines

6.3 Referral Processes

Zest Exercise Referral Scheme

- **1 standardised referral form for multiple services in Brighton – Zest Exercise Referral Scheme, Community Health Trainers & Healthy Weight Referral Scheme**[51]
- 76% of referrals to Zest are received on line via 'Refer-All' on line database system[52]

	Primary Care	Secondary care	Social Services	Voluntary/ Third Sector	Health Education/ Programmes	Other
Sectors referring to Exercise Referral & Heartbeats	Yes	Yes	No	No	Yes	No

Fit Clinic

- Standard BACPR phase IV transition form

	Primary Care	Secondary care	Social Services	Voluntary/ Third Sector	Health Education/ Programmes	Other
Sectors referring to Exercise Referral & Heartbeats	Yes	Yes	No	No	No	No

[51] Appendices – Figure 4 – generic referral template
[52] Refer-All website link - http://www.refer-all.net/

6.4 Audit and Evaluation

Zest Exercise Referral Scheme

DATA	Not collected	Leisure services	CHP	Academic institution	NHS	Other
Referral source data		✔				
Condition breakdown of referrals		✔*				
Follow on data		✔				
Cost effectiveness	✔					
Drop outs positive or negative		✔				
Person centred data		✔				

*Data is split by 20 medical conditions including CHD, respiratory and stroke/TIA

- From Apr 2012 – Mar 2013 – 1289 referrals were received
  - Of which 637 (49.4%) have started or intend to start the programme
  - 60.7% of referrals received were from a physiotherapist
- In relation to medical conditions*;
  - 1% (14) had CHD
  - 8.4% (108) had a respiratory condition (including chronic asthma)
  - 0.85%(11) had a stroke/TIA

  *participants were referred with multi-morbidities and were counted under all conditions noted
- Average activity sessions attended by participants was 12.1

Fit Clinic

As this service operates as a community based rehabilitation programme and is not time limited (some members attending for 10+ years) numbers are monitored in terms of attendance to ensure safe staff to participant ratios:

- E.g. the Hove class has over 100 registered members

6.5 Data Collection

Zest Exercise Referral Scheme

PARTICIPANT DATA COLLECTED	Data Collection - Stage			
	Referral	**Baseline**	**3 Months***	**6 Months***
Gender	✔			
Age	✔			
Demographics	✔			
Ethnicity	✔			
Socioeconomic data	✔			
Referral Source	✔			
Referrer Role	✔			
NHS Health Check	✔			
BMI	✔			
Blood pressure/RHR	✔			
Reason for Referral	✔	✔		
Past medical history		✔		
Goal Setting*		✔	✔	✔
Stage of Change		✔	✔	✔
Physical Activity (self-reported)			✔	✔

*Data collected at the 3 and 6 month stage is via phone or questionnaire.

6.6 Funding

Zest Exercise Referral

- Commissioned by Public Health, Brighton and Hove County Council on a 12 month basis
- Participant usage highly subsidised
    - E.g. participant would £20 per month for 3 months activity
    - Public Health would pay £49.95 to leisure facility per participant[53]
- If attending on a pay as you go basis Public Health would pay service provider 50% of class costs (up to a maximum of 20 attendances)

Fit Clinic

- **Independent exercise provider (no external funding)**
- **Participant pays £5-6 per session (depending on location)**
    - **Option of unlimited monthly attendances for £50 per month**

6.7 Staff - Training / Qualifications

Zest Exercise Referral

- All fitness staff holds an Exercise Referral Qualification at REPS level 3.

Fit Clinic

- Delivery staff hold BACPR level 4 qualification
- Additional qualifications include
    - Level 4 Advanced Instructor
    - MSc in Exercise & Behavioural Medicine
    - Tai Chi for Cardiac Rehabilitation

6.8 Key Successes

Zest Exercise Referral

- Established Service (7+ years)
- Central co-ordinator – overseeing service delivery in 8 sites
- Robust paper referral and on line referral pathway
    - 76% of referrals on line
    - 75% of inappropriate referrals received on paper
- Extensive reporting mechanism available via on line database
- Good links with referrers (73 referring organisations)
- Integrated with community services – Healthy Living Referral Steering Groups
- Overarching company offers multiple services – more sustainable model
- Bi annual newsletter to all referring organisations (communication)

[53] Annual Report for ZEST ERS, 2012/2013 – p 29

Fit Clinic

- Established service (10+ years)
- Non-complicated referral pathway – standard BACPR template forms
- Strong links with primary and secondary care
    - Selected classes offered in same facility as phase III rehabilitation – seamless transition
- Embedded within community support groups – integrated service offering physical activity and/or social support
- Independent service therefore not relying on commissioning protocol/funding
- Participant engagement is non-time limited – some participants been attending 10+ years
- Participant cost consistency
- Evening classes offered for participants in employment/day time commitments
- Venue accessibility noted on the website
- Additional communication via newsletter and social media
- Drop in facility – no waiting list

6.9 Key Challenges

Zest Exercise Referral

- Limited referrals for Cardiac, Stroke and Respiratory participants
- Cardiac referrals accepted post **phase IV** only
- Limited activities for participants with more complex needs
- Staff turnover due to sessional delivering consultations
    - As a result leisure provider has employed WTE post
- Low referral uptake rate
- Follow up data/assessment collected via telephone/questionnaire
- Low response rate to questionnaire follow up (approx. 20-30%)
- Time limited participation (3 months)
- Yearly funding – relying on service being re-commissioned
- Relying on leisure provider collating and forwarding attendance data
- Increased level of competing services in the region

Fit Clinic

- Number of similar service providers operating in the region
- Keeping overheads low and participants' costs down
- Staff cover – holidays / sickness

6.10 Participant Satisfaction / Evidence of Impact

Zest Exercise Referral Scheme

> "Pleased, practical, real results, swimming four times a week. Increased mobility, flexibility and strengthening for my back"

> "I found the scheme tremendously helpful and motivating"

In 2011 Zest evaluated the average length of time a referral patient continued with their membership and reported that 65% continued with membership post intervention for an average period of 8 months.

63.7% achieving 3 days or more of 30 minutes physical activity post intervention compared to 31.8% at baseline.

Fit Clinic

> "I am living proof that there is a great life after a heart problem and to be honest, I feel even better now than I did before."
>
> *Participant feedback*

Large percentage of participant base returning month on month, additional classes added due to demand.

6.11 Future Service Development

Zest Exercise Referral

- Include 12 month assessment questionnaire
- Opportunity to further develop 'falls prevention' reach
- Improve links with secondary care
- Plan to introduce a participant satisfaction tool as part of assessment

6.12 Third Sector Involvement

Fit Clinic

This service has strong links with a number of local cardiac support groups – exercise classes are offered the hour preceding the support group to allow participants to benefit from both the physical and social support aspects in one visit.

There are a number of local cardiac support groups; one example is Take Heart.

Brighton Take Heart Support Group

- Patient led cardiac support group – established 1993
- Exercise IV classes delivered by Fit Clinic
- Tai Chi and swimming also available
- Number of social and fundraising activities
- Grant funds received from Sussex Heart Charity
- Produce bi-annual members magazine
    - Activity timetable
    - Recipe ideas
    - Health advice / medication adherence

Stroke Association

- 2 affiliated clubs within the Brighton area

British Lung Foundation

- 1 Breathe Easy group – monthly meeting

7. Conclusion

The four programmes reviewed across England and Northern Ireland, although eliciting evidence of impact and participant satisfaction, did encounter a number of operational issues due to both the nature and duration of funding. As a result, the programmes often struggled to embed themselves as a 'constant' in the pathway of supported self-management for participants with a long term condition.

A number of common themes emerged from the scoping activity. These included:

- The level of variation in programme delivery and remit (both nationally and locally)
- Multiple pathways/referral routes incur a barrier for the referrer (and often confusion for the participant)
- Participant may receive a short term intervention – segmented pathway to supported self-management
- Variance across programme inclusion / exclusion criteria - programme may exclude participants with a long term condition
- Lack of equitable access to programmes for cardiac, stroke and respiratory patients
- Impact of time limited funding:
    - Staff retention issues due to short fixed term contracts
    - Programmes redesigned to secure funding not necessarily local need
    - Programmes in competition with private/third sector partners
    - Maintaining a knowledge of 'current' services difficult for the referrer and participant
- Data collected within the programme often not aligned to the overarching aims e.g. defining programme success by changes in BMI instead of wider health outcomes
- Partnerships vary locally – services/programmes may operate in 'silo'
- Lack of consistency in instructor training/qualifications.

The catalyst for service redesign may be to secure additional funding rather than being driven by the need of the local community or in striving for equity of access. Variance in programme provision was expected nationally; however, this was also prevalent at a local authority level where multiple parallel services appeared to operate in silo, making the referral process arduous both for the referrer and participant. Lack of programme continuity and partnership involvement/support may be attributable to reduced levels of participant engagement, adherence and opportunity to long term supported self-management.

Appendices

Figure 1 – NICHS – Stroke Service User Pathway

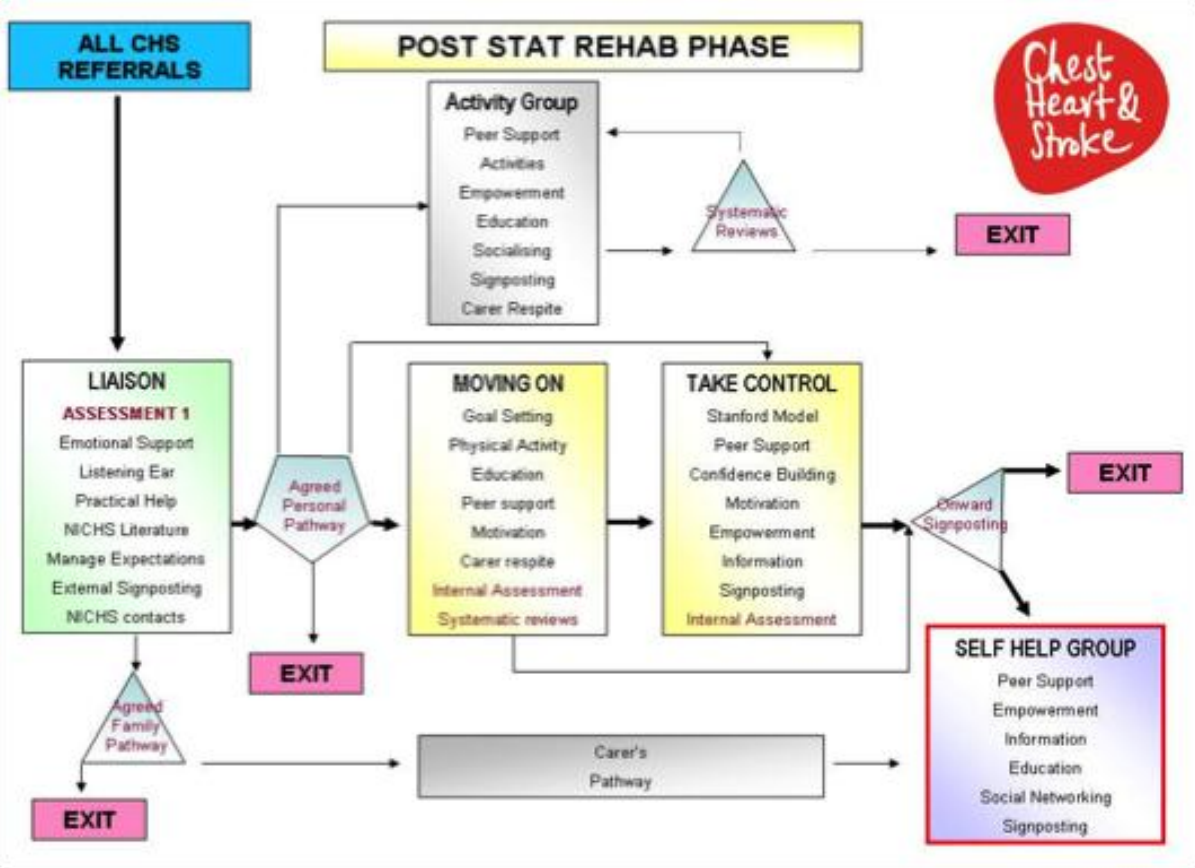


Figure 2 – Bassetlaw Council, patient-focused service integration model

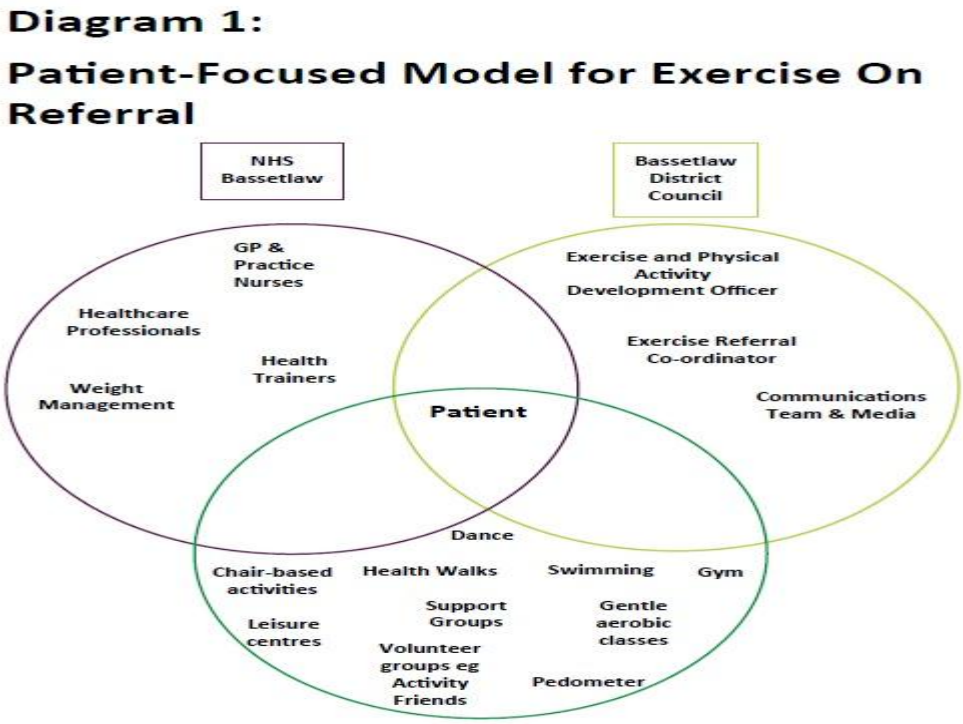
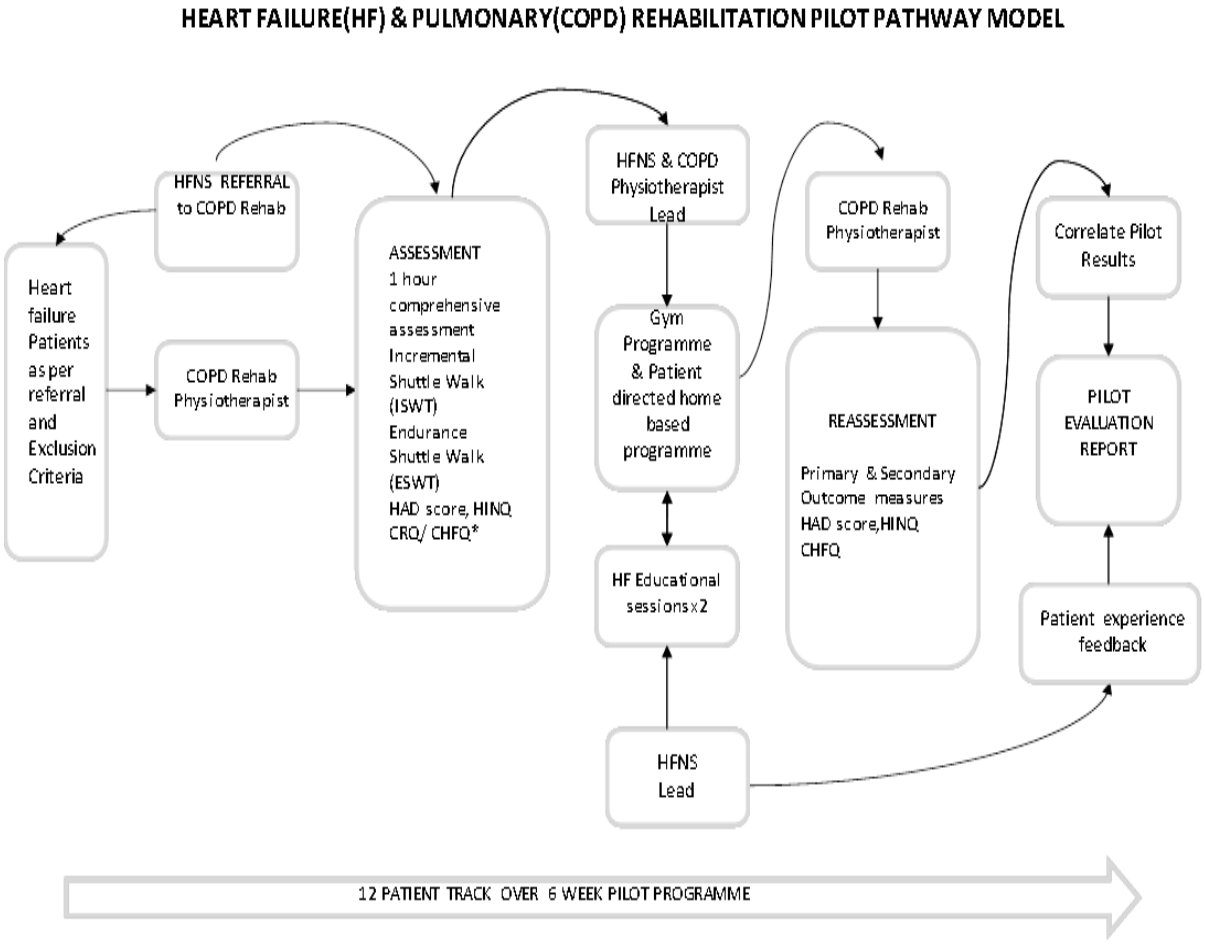


Figure 3



CRQ- Chronic Respiratory Questionnaire CHFQ- Chronic Heart Failure Questionnaire HINQ- Heart failure Information Questionnaire

Figure 4 – Brighton Generic Referral Form

BRIGHTON AND HOVE REFERRAL TO HEALTH

NHS Brighton and Hove

Please complete each section in turn

1. Referral to be sent to (please tick ☑)

☐ **Zest Exercise Referral Scheme**
TEL: 01903 660070
FAX: 01903 206685

☐ **East Brighton Healthy Living Centre**
TEL: 01273 294533
FAX: 01273 294542

☐ **Healthy Weight Referral Scheme**
TEL: 01273 431703
FAX: 01273 431719

☐ **Community Health Trainers**
TEL: 01273 296877
FAX: 01273 296873

Please refer to the guidance notes overleaf for each services inclusion/exclusion criteria

2. Patient Details *(if under 16 please include parent/guardian details)*

Name
Address
Postcode
Telephone
Mobile
Email

3. Referrer Details *(surgery stamp or insert)*

Name
Address
Postcode
Telephone
Email

4. Reason for referral: *(i.e. Weight loss, becoming more active etc)*

Is there anything we need to know about this referral that could impact on the personal safety of this patient and our staff?

☐ Yes ☐ No *(If Yes, please specify)*

5. East Brighton HLC Referrals ONLY:
Please specify service required in order of priority
(1 being most important, 5 being least)

☐ Mental Health: Advice and Support
☐ Cookery: Advice and Support
☐ Sexual Health: Advice and Support
☐ Activity: Advice and Support
☐ Substance Misuse: Advice and Support
☐ Advice and Support for Carers

6. Patient/Clinical Information

Date of Birth: Age: Sex:
Height: Weight:
BMI (please state):

Medical History: (please tick current condition/s)

☐ Asthma (Exercise Induced)	☐ Asthma (Chronic)
☐ Arthritis	☐ Back Pain
☐ Bone Density	☐ Claudication
☐ COPD	☐ Diabetes (Type 1)
☐ Diabetes (Type 2)	☐ Diabetes (Type 2 Insulin treated)
☐ DepressionFamily	☐ Fibromyalgia
☐ History CHD	☐ Hypertension
☐ Hyperlipidaemia	☐ IGT/IFG
☐ Joint replacement	☐ Neurological
☐ Obesity	☐ Osteoarthritis
☐ Osteoporosis	☐ Overweight
☐ Pregnancy	☐ Smoker
☐ Stress/Anxiety	☐ Stroke/TIA
☐ Surgery	☐ Other (Please state)

Most recent HbA1c
Date taken

7. Medication *(please state or append most recent script)*

Patient's Signature
I have been fully informed about the service I am being referred to and I agree for my information to be passed to the relevant service provider who will contact me in due course.

Referrer's Signature
The information contained on this form is an accurate representation of this patient's health status. I agree to inform the relevant service provider if the health status changes.

Print Name Role Signature Date

The Brighton referral System is a partnership between Brighton & Hove Food Partnership, Community Health Trainers, East Brighton HLC, and Zest People Ltd, with funding from Brighton & Hove PCT.
All information will be treated as confidential and will be handled in accordance with the data protection act 1998.

Guidance notes when making a referral to one of the services

Zest Exercise Referral Scheme

1. Please refer to ZestERS inclusion guidance when referring, taking into consideration any additional clinical information and referring to ZestERS inclusion and exclusion guidance, as provided.

   > Currently inactive (less than 3 x week for 30 mins)

   > Ready to change and adopt a more active lifestyle

   > Requires specialist help and support with regards to exercise

   > Patient is over the age of 16

2. Please complete all sections of the referral form (apart from section 5). This is necessary to ensure safe and effective exercise programming.

   Once referred, we will:

   > Contact your patient to discuss suitable activity options

   > Arrange the initial activity consultation on behalf of the patient

   > Support the patient throughout their referral

3. Once complete please fax or post one copy of the completed referral to:

Thandi Rudin
Zest Exercise Referral Scheme,
Zest People
5 Field Row,
Worthing, BN11 1TD
Tel: **01903 660070**
Fax: **01903 206685**
thandi@zestpeople.co.uk
www.zestpeople.co.uk

ZestPeople
Getting the nation active...

East Brighton Healthy Living Centre

The East Brighton Healthy Living Centre (HLC) uses a multiagency approach to provide support to patients within East Brighton who might benefit from taking positive steps to improve their health.

How can you refer?

> Step 1
Identify additional support with the patient and complete referral form, including section 5.

> Step 2
Ensure that the patient has provided their consent for being referred by signing the form.

> Step 3
Hand the patient their copy of the form.

> Step 4
Fax or post a copy of the referral form to East Brighton Healthy Living Centre (Fax number and address below).

> Step 5
The relevant Health Worker will contact the patient Please indicate priority of support needed if patient is addressing more than one health issue.

Healthy Living Prescription Referral Scheme
The Healthy Living Centre
Moulsecoomb Children's Centre,
Hodshrove Lane,
Brighton, BN2 4SE
Tel: **01273 290223**
Fax: **01273 294542**
sarah.withers@brighton-hove.gov.uk
www.healthylivingcentre.org.uk

HEALTHY LIVING CENTRE EAST BRIGHTON

Healthy Weight Referral Scheme

1. The inclusion and exclusion criteria are based on BMI for adults and BMI for age assessment for children. Please refer to the HWRS inclusion guidance when referring.

Adults

> Ready to change and willing to access one of our services

> BMI 26 – 40 (with no un-controlled co-morbidities and no insulin treated diabetes)

> Refer to Healthy Weight Referral Scheme

Please note Adults with a BMI >28 with uncontrolled comorbidities including insulin treated diabetes, HbA1c > 7.5% or BMI >40 should be referred to BSUH Nutrition and Dietetics Department.

Children

> Ready to change and willing to access one of our services

> BMI 91st Centile and above (with no co-morbidities)

> Refer to healthy weight Referral Scheme

Please note children with a BMI above 99.6th centile should be referred to secondary care.

2. Once referred we will contact your patient to find a programme suitable for their needs

3. Once completed please send one of the copies of the referral form to

Healthy Weight, Brighton & Hove Food Partnership,
Emmaus Manor Offices,
Drove Road,
Brighton. BN41 2PA
Tel: **01273 431703**
Fax: **01273 431719**
healthyweight@bhfood.org.uk
www.bhfood.org.uk

Food Partnership
Healthy Weight

Health Trainers

The Health Trainer service can take referrals from the following wards: **Brunswick & Adelaide, Central Hove, East Brighton, Goldsmid, Moulsecoomb & Bevendean, Queens Park, St Peter's & North Laine, South Portslade.**

Health Trainers offer information, support and motivation to people wanting to achieve lifestyle changes in relation to: becoming more active, stopping smoking, reducing alcohol intake, healthy eating & improving general wellbeing. Health Trainers are not specialists in any particular area however they are trained in the use of behaviour change techniques and are knowledgeable about local services and activities.

Consider referring to a Health Trainer if:

- Patient has expressed they are ready and willing to make a change in relation to their health and lifestyle
- Patient would benefit from some general information, motivation or confidence building to help them achieve this change
- The change can be achieved through realistic and manageable steps
- Patient is aged 18+ and does not have an identified clinical problem that requires specialist support

Once completed please fax or post one copy of the form to us. We will then contact the patient directly.

NB: In our experience self referrals tend to be more successful in achieving change; if appropriate please encourage your patient to self-refer by contacting us directly.

Health Trainers
Brighton & Hove City Council
3 Palace Place
Brighton BN1 1EF
Tel: **01273 296877**
Fax: **01273 296873**
Email: **healthtrainers@brighton-hove.gov.uk**

health trainers

The PARCS Project

Person-centred Activities for people with Respiratory, Cardiac and Stroke conditions

SECTION D

Review of comparable activity elsewhere in the UK

2. Wales

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Figure 3 – Respiratory Referral Pathway
Figure 4 – Stroke Referral Pathway
Figure 5 – Generic Level 3 Pathway

1. Introduction

A scoping exercise and review of comparable activity across Wales was undertaken between March 2013 and February 2014. The aim was to support the development of the overarching PARCS project recommendations and proposed national framework.

The National Exercise Referral Scheme (NERS) for Wales was reviewed both as a national programme and regionally, with the four areas of focus selected as Cardiff, Carmarthenshire, Powys and Vale of Glamorgan. These areas were identified to compare and contrast service provision and programme delivery across urban, semi-rural and rural populations. This ranged from 98.3% urban in Cardiff to 13.5% in Powys, representative of similar demographic variance in Scotland.

Programme insight and evidence was collated both by desk review and direct programme engagement (both nationally and regionally). The review focuses and reports on the following key themes: service development and provision, referral processes, clinical services and partner engagement, audit and evaluation, instructor qualifications and evidence of impact. Additional detail is reported on local areas of innovation, key challenges and service uptake.

In the wider context, national health policies, frameworks and delivery plans have been cited to highlight the value, recognition and integration of NERS.

Wales / District Overview

2.1 NATIONAL / DISTRICT PROFILE[54]

Area	Total Population	Urban	Rural
Wales	3,095,837	67.2%	32.8%
Powys	132,976	13.5%	86.5%
Cardiff	346,090	98.3%	1.7%
Carmarthenshire	183,777	48.5%	51.5%
Vale of Glamorgan	126,336	80.6%	19.4%

2.2 HEALTH INDICATORS[55]

Area	% who currently smoke	% who have BMI > 30 (Obese)	% who have had a MI / angina	% who have had a stroke	% who have high blood pressure	% who have high cholesterol
UK	**20.6**	**21.1**	**1.3**	**0.8**	**18.7**	**26.7**
Wales	**21.5**	**22.6**	**1.6**	**0.8**	**20.0**	**27.2**
Powys	**17.0**	**22.4**	**1.7**	**0.7**	**22.8**	**29.2**
Cardiff	**21.3**	**19.4**	**1.1**	**0.6**	**16.1**	**25.0**
Carmarthenshire	**19.4**	**22.8**	**1.7**	**0.8**	**21.6**	**28.3**
Vale of Glamorgan	**19.0**	**20.8**	**1.3**	**0.6**	**18.7**	**27.4**

Figures from the 2011 Census reveal that five of the ten local authority areas in England and Wales with the worst health are in Wales [56]

Around 1 in 6 adults (17%) reported that they had talked to a GP about their own health in the past two weeks [57]

2.3 STRUCTURED CLINICAL REHABILITATION

2.3.1 CARDIAC[58]

	Wales	North Wales	South Wales
Number of Cardiac Rehabilitation Programmes	24	5	19
Cardiac Rehabilitation Referral Population	7,373 (MI 4,763 / PCI 1,712 / CABG 898)	1,959 (MI 1,272 / PCI 472 / CABG 215)	5,414 (MI 3,491 / PCI 1,240 / CABG 683)
Patients Receiving Cardiac Rehabilitation	2,789 (MI 1,919 / PCI 257 / CABG 613)	556 (MI 421 / PCI 61 / CABG 74)	2,233 (MI 1,498 / PCI 196 / CABG 539)
% Uptake of Cardiac Rehabilitation	38% (MI 40% / PCI 15% / CABG 68%)	28% (MI 33% / PCI 13% / CABG 34%)	41% (MI 43% / PCI 16% / CABG 79%)

[54] Wales Census (2011) – Office for National Statistics; Key Statistics for Wales - http://www.ons.gov.uk/ons/rel/census/2011-census/ (Table 1)
[55] Acorn (2013) - Wales: © CSSIW - Care and Social Services Inspectorate Wales 2012
[56] Transforming Health Improvement in Wales – Working together to build a healthier, happier future p 5
[57] Welsh Health Survey (2012) – p3 www.wales.gov.uk/statistics
[58] The National Audit of Cardiac Rehabilitation – Annual Statistical Report (2013) 2011-12 Data Set

2.3.2 STROKE

Estimated Strokes per annum in Wales[59]	11,000
Living with the effects of Stroke[60]	65,100
Stroke Mortality[61]	2,796 (Male 1,085 Female 1,711)
Patients given a personalised rehabilitation Discharge plan[62]	**93%**
Stroke service has formal links with community user groups for stroke[63]	**100%**

"Since August 2013 every stroke survivor discharged home from hospital receives a follow up phone call within two weeks of going home to ensure that the appropriate support is available and to signpost stroke survivors to the most relevant services" [64]

2.3.3 PULMONARY

Emergency Admission Rates – Age Standardised per 100,000 Population 2011/12[65]

All Respiratory Diseases				
Wales	**Powys**	**Cardiff**	**Carmarthenshire**	**Vale of Glamorgan**
1,294	**924**	**1,184**	**1,118**	**1,278**
COPD				
166	**100**	**138**	**124**	**136**

Around 1 in 7 adults (14%) reported currently being treated for a respiratory illness[66]

Pulmonary rehabilitation audit - Mapping of pulmonary rehabilitation services in England and Wales is currently taking place (**October 2013 – March 2014). This is being undertaken by the British Thoracic Society[67]**

From the 2008 Audit (UK perspective) - Only 49% of units fully met the standard of having annual audits of the service that includes patient numbers AND outcomes AND patient satisfaction.
Only 30% of units fully met the standard of having a continuation phase, run by people trained in pulmonary rehabilitation, in the community[68].

[59] Stroke Association Available at www.stroke.org.uk/news/stroke-facts-and-statistics-your-area
[60] Stroke Association Available at www.stroke.org.uk/news/stroke-facts-and-statistics-your-area
[61] British Heart Foundation Coronary Heart Disease Statistics 2012, p 20
[62] Sentinel Stroke National Audit Programme (SSNAP) Acute Organisational Audit 2012, p73
[63] Sentinel Stroke National Audit Programme (SSNAP) Acute Organisational Audit 2012, p73
[64] Powys Teaching Health Board Stroke Annual Report- April 2012 to August 2013
[65] https://www.healthmapswales.wales.nhs.uk/IAS/dataviews/report
[66] Welsh Health Survey (2012) – p23 www.wales.gov.uk/statistics
[67] National COPD Audit Programme Newsletter 2, December 2013
[68] Report of The National Chronic Obstructive Pulmonary Disease Audit 2008: Resources and Organisation of care in Acute NHS units across the UK Sept 2008

3. MAINTENANCE OF EXERCISE

3.1 NATIONAL EXERCISE REFERRAL SCHEME (NERS) – WALES

3.1.1 Scheme Background

- **In development since 2007 – initial scheme aim was primary prevention, to support referred clients 'at risk' of developing a chronic condition.**

- **Scheme rolled out in 3 phases**[69]
  - **Phase 1 – July 2007** Bridgend, Blaenau Gwent, Cardiff, Conwy, Neath Port Talbot and Swansea
  - **Phase 2 – April 2008 -** Flintshire, Denbighshire, Monmouthshire, Torfaen, Vale of Glamorgan, Pembrokeshire and Ceredigion
  - **Phase 3 – January 2009 -** Carmarthen, Rhondda Cynon Taff, Merthyr, Caerphilly, Wrexham, Powys, Gwynedd, Anglesey and Newport.
  - **Post March 2009 operational in all 22 local authorities.**

In 2009 NERS developed into two distinct but inter-related components:

- Exercise Professionals that are registered at Level 3 of Register of Exercise Professionals (REPs) provide 'generic' NERS sessions for 'low risk' population groups that need some support to increase fitness and reduce general risks of developing chronic conditions – **primary prevention**. (16 week programme)

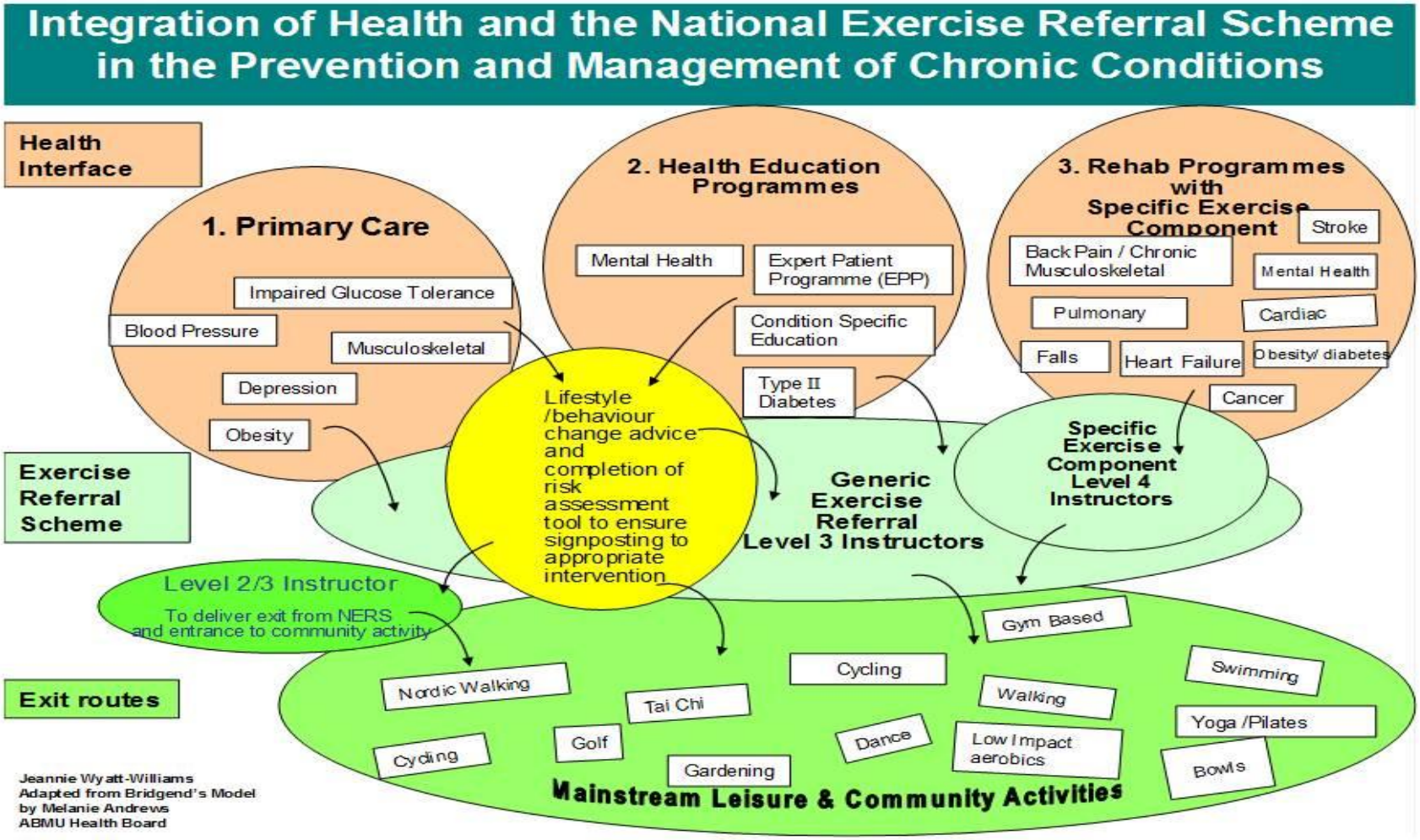
- Level 4 (REPs) Exercise Professionals provide more specialist NERS sessions for population groups deemed to be 'higher risk' and needing to undertake tailored exercise sessions as part of their rehabilitation following an intervention by the NHS or to manage a chronic condition and use exercise as a means of **secondary prevention**. (16-48 week programme) – *figure 1*

  Specific Conditions/Sessions (include)
  - Cardiac
  - Stroke
  - Respiratory
  - Cancer
  - Back Care
  - Mental Health
  - Weight Management
  - Falls Prevention

- 9 referral pathways exist for NERS –
  - 1 generic level REPS level 3
  - 8 specialist level REPS level 4

[69] National Exercise Referral Scheme, Wales 2010 p 5

3.1.2 Fig 1 – NERS Referral Flow Chart



3.1.3 Delivery

	Long term conditions	Cardiac	Respiratory	Stroke	Ex referral Generic	Ex referral Older adults	Other
Generic or condition specific	Yes*	Yes	Yes	Yes	Yes	No	Yes
Established Pathways to exercise maintenance	Yes*	Yes[70]	Yes[71]	Yes[72]	Yes[73]	No	Yes
Availability across Wales	Yes*	Yes	Yes	Yes	Yes	No	Not all regions offer all 8 Level IV models
Self-referral	All participants must be referred via Primary or Secondary Care. Participant can initiate/request referral.						

***Regional Variance – due to low referral rates, regions may merge pathways (E.g. Stroke and Falls Prevention) to offer a sustainable class/service.**

3.1.4 Referral

- 9 nationally standardised referral forms and pathways
  - 1 'generic' exercise referral pathway (Primary Prevention)
  - 8 'specialist' condition specific services (Secondary Prevention) – all regions do not offer all 8 condition specialist services.

	Primary Care	Secondary care	Social Services	Voluntary/ Third Sector	Health Education/ Programmes	Other
Sectors referring to exercise maintenance	Yes	Yes	No	No	No	No

3.1.5 Audit/Evaluation

DATA	**Not collected**	**Leisure services**	**CHP**	**Academic institution**	**NHS**
Referral source data		✔			
Condition breakdown of referrals		✔			
Follow on data		✔			
Cost effectiveness – e.g. NHS service usage				✔	
Drop outs positive or negative		✔			
Person centred data		✔			

[70] Appendices – figure 2 Cardiac Rehabilitation phase IV NERS flow chart
[71] Appendices – figure 3 Respiratory Rehabilitation NERS flow chart
[72] Appendices – figure 4 Stroke Rehabilitation NERS flow chart
[73] Appendices - figure 5 – Generic Level 3 NERS flow chart

3.1.6 Funding

National Exercise Referral Scheme (NERS)

- **Welsh Assembly Government funded Scheme**

    - **The estimated total setup costs incurred by the Welsh Government were £365,875[74] (for the 6 pilot areas -** Bridgend, Blaenau Gwent, Cardiff, Conwy, Neath Port Talbot and Swansea **in 2007)**
    - **Annual operating costs for NERS in 2007/08 - £1.36 million[75].** Operating costs are inclusive of salaries for coordinators, exercise professionals, printing, administration, travel, staff management, additional training and room hire **(operating in 13 out of the 22 local authorities).**

- **NERS (along with 70% of the Public Health Initiatives) now managed by Public Health Wales – 2012 onwards**
- **Total cost of current initiatives - £17,573, 875**
    - **Nutrition based projects - £4,500,000**
    - **Physical Activity initiatives (including NERS) - £3,500,000**
- **NERS has secured funding until 31st March 2014[76]**
- **NERS has been identified as a one of three key initiatives to be 'maintained and improved' -** recognised their strengths and supports continued investment but also noted that larger-scale change and reach could be achieved from such programmes[77]
- However it was also cited that from the Health Economics and Programme Budgeting and Marginal Analysis (PBMA) findings – the PBMA group voted to recommend the potential for partial disinvestment in NERS[78]

- **Additional NERS sessions (if required) funded locally by leisure service providers**

[74] Cost-effectiveness of a national exercise referral programme for primary care patients in Wales: results of a randomised controlled trial - *BMC Public Health* 2013, **13**:1021 – table 1

[75] Cost-effectiveness of a national exercise referral programme for primary care patients in Wales: results of a randomised controlled trial - *BMC Public Health* 2013, **13**:1021 – table 1

[76] http://www.wlga.gov.uk/ners

[77] Transforming Health Improvement in Wales – Working together to build a healthier, happier future p 32

[78] Transforming Health Improvement in Wales – Working together to build a healthier, happier future p 20

3.1.7 SAFETY – (overseeing programme delivery)

Collaborative working group (s) for governance of exercise maintenance	None	Long term conditions	Cardiac	Respiratory	Stroke	Ex referral
		Yes	Yes	Yes	Yes	Yes

"All protocols went through ethical approval, and the British Medical Association in Wales was consulted as part of the development of the Scheme"[79]

QUALITY STANDARDS

All staff delivering NERS are trained to a minimum of NVQ Level 3 - meeting occupational standard D449 working with referred patients.

3.1.8 Staffing – Training & Qualifications

- **1 National Co-ordinator**
- **22 Regional Co-ordinators**
- Total NERS staff – 150 (equating to 91 WTE)
    - Powys – 8, Cardiff 7.5, Carmarthenshire 5, Vale of Glamorgan 4.5

- **All staff (150) trained to a minimum of REPS level 3**

- **Additional Qualifications**

Qualification	Number of Staff
Phase IV Cardiac Rehabilitation Instructor	**137**
Level 4 Respiratory Disease Instructor	**90**
Level 4 Exercise after Stroke Instructor	**40**
Level 4 Postural Stability Instructor (Falls Prevention)	**81**
Level 4 Back Care Specialist Instructor	**34**
Level 4 Mental Health Instructor	**28**
Level 4 Cancer Rehabilitation	**37**
Level 4 Obesity and Diabetes Instructor	**48**

[79] NERS Quality Standards - http://www.wlga.gov.uk/ners

KEY CONTEXTUAL OVERVIEW

NERS is delivered in all 22 local authorities across Wales. Standardised referral forms and pathways have been implemented nationally, however not all local authorities offer all eight specialist level 4 services (Cardiac, Stroke, Respiratory, Cancer, Back Care, Mental Health, Weight Management and Falls Prevention). Specialist level 4 services have been implemented locally based on condition prevalence and local 'health improvement' priorities.

4. Clinical Rehabilitation

4.1 Cardiac rehabilitation (CR)

- **Delivered both within hospital and community settings**
- **Mean CR uptake 2011/12 was 38%[80] , however local health boards estimate uptake as high as 60-65%[81]**
- **Urban centres (such as Cardiff) operate as a tertiary centre – 1,700 referrals per annum – with 700 attending rehab within Cardiff and remaining 1,000 being referred back to local CR services**
- **Most areas offer a standard CR model of 6 weeks of 2 sessions per week incorporating physical activity and education sessions**
- **Heart manual usage is sporadic – reported limited success – some health boards no longer subscribe**

4.1.1 Cardiac exercise maintenance

- **Standardised referral pathway from clinical rehabilitation to exercise maintenance**
- **Standardised referral form from clinical rehabilitation to exercise maintenance**
- **BACPR exercise inclusion/exclusion upheld[82]**
- **Specialist NERS level 4 exercise sessions**

4.2 Pulmonary Rehabilitation

- **Delivered to British Thoracic Society (BTS) Guidelines[83]**
- **Delivered both within hospital and community settings**
- **Standard model of 7 weeks of 2 sessions per week – including pre and post rehabilitation assessment**
    - **Shuttle Test**
    - **Questionnaires include – St. Georges, HADS, CAT and Bristol Respiratory**
- **MDT approach - Educational sessions by dietician, pharmacist, occupational therapist and psychologist**

[80] The National Audit of Cardiac Rehabilitation – Annual Statistical Report (2013) 2011-12 Data Set
[81] Telecom Interview – Rachel Owen Clinical Nurse Specialist, Cardiac Rehabilitation. Cardiff & Vale UHB Oct 2013

[82] http://www.bacpr.com/resources/BACPR_Protocol.pdf
[83] BTS Guidelines on Pulmonary Rehabilitation – Thorax – September 2013, Volume 68 Supplement 2

4.2.1 Pulmonary Exercise Maintenance

- **Standardised referral pathway from clinical rehabilitation to exercise maintenance**
- **Standardised referral form from clinical rehabilitation to exercise maintenance**
- **Specialist NERS level 4 exercise sessions**

4.3 Stroke Rehabilitation

- **Delivered both within hospital and community settings**
- **All health boards piloting the 'Stroke Passport'**[84]
- **1000 Lives + – Life After Stroke Learning Collaborative –launched Feb 2013**
    - **National improvement programme** supporting organisations and individuals, to deliver the highest quality and safest healthcare for the people of Wales

4.3.1 Stroke Exercise Maintenance

- **Standardised referral pathway from clinical rehabilitation to exercise maintenance**
- **Standardised referral form from clinical rehabilitation to exercise maintenance**
- **Specialist NERS level 4 exercise sessions**

4.4 Transition - Clinical Rehabilitation to Exercise Maintenance

4.4.1 KEY SUCCESSES (from a Clinical Rehab perspective):

- **Standardised single point of referral (NERS) post clinical rehabilitation**
- **Standardised 'patient pathway' post clinical rehabilitation**
- **Rehabilitation integration –**
    - **clinical rehabilitation may be offered in the same venue as exercise maintenance**
    - **exercise maintenance (NERS) instructor attending clinical rehabilitation sessions and promoting exit strategy/exercise maintenance**
    - **NERS session taking place one hour preceding /following clinical rehabilitation – increasing likelihood of attendance to exercise maintenance – seamless transition**
- **Communication between Clinical Rehabilitation and Exercise Maintenance**
- **Opportunity to 'fast track' standard PCI patients to NERS**

[84] Together for Health – Stroke Action Plan 2013 p 24

4.4.2 KEY CHALLENGES

- **Clinical rehabilitation teams (Cardiac, Stroke and Pulmonary) all reported low levels of staffing – illness and maternity leave have a major impact on service delivery**
- **Piloting new initiatives can be difficult as staff resources stretched delivering 'core business'**
- **Stroke rehabilitation in a rural setting (Powys) – multiple acute providers therefore often difficult to track/follow up patients post discharge**
- **Multiple localities within health board incur difficulties to deliver a co-ordinated / standardised clinical rehab intervention (not applicable to NERS)**

4.4.3 INNOVATIONS

- Powys has piloted a 'bridging' stage (Stroke Group) between stroke rehabilitation and NERS in the Newton area – positive evaluation. Will consider roll out depending on resources
- North and South Powys have amended their goal planning meetings to ensure 'stroke survivors' are involved in the planning of their rehabilitation[85]
- Nationwide Stroke prevention campaign delivered via 712 community pharmacies - lifestyle advice and medicine use review (MUR) consultations offered to patients on anti-hypertensive or oral anticoagulant medication to reduce their stroke risk. 10,059 MUR consultations were undertaken with people whose medication indicated they were at an increased risk of stroke[86].
- Swansea Pulmonary Rehabilitation Physiotherapists deliver pre-assessment clinics one month prior to enrolling patients onto clinical rehabilitation – additional screening has led to reduced attrition levels within clinical rehabilitation.
- Delivering cardiac rehabilitation phase III and phase IV simultaneously in rural communities - sustains core service, reduces operating costs, increases likelihood of continued attendance into exercise maintenance and incorporates peer mentoring model.

[85] Together for Health – Stroke Action Plan 2013 p 22

[86] Together for Health – Stroke Action Plan 2013 p 12

5. USEAGE OF EXERCISE MAINTENANCE SERVICES

5.1 DATA COLLECTION - EXERCISE MAINTENANCE

(NERS) SERVICE DATA COLLECTED	Service Total	Condition Specific Total
Total number of referrals	✔	✔
Regional distribution	✔	✔
GP Practice/Referrer	✔	✔
Referral uptake	✔	✔
Adherence	✔	✔
Drop outs	✔	✔
Cost effectiveness – via external academic evaluation		

PARTICIPANT DATA COLLECTED	Data Collection - Stage			
	Referral	Baseline	16 Weeks	52 Weeks
Gender	✔			
Age	✔			
Demographics	✔			
Ethnicity	✔			
Socioeconomic data	✔			
BMI	✔	✔	✔	✔
Blood pressure/RHR	✔	✔	✔	✔
Reason for Referral	✔			
Past medical history	✔			
Goal Setting		✔	✔	✔
Physical Activity Levels/Status (SPAQ)		✔	✔	✔

5.2 CONDITION SPECIFIC DATA *(in addition to participant data)*

5.2.1 CARDIAC

DATA COLLECTED	Data Collection - Stage			
	Referral	Baseline	16 Weeks	52 Weeks
Cardiac history/status (inc. investigations)	✔			
Co-morbidities	✔			
Medication	✔			
Rehabilitation profile	✔			
Health questionnaire		✔	✔	✔
EQ-5D		✔	✔	✔
Timed Up and Go (TUAG) Test – 3m ***Or*** Chester Step Test ***Or*** 6 min walk test		✔	✔	✔

5.2.2 STROKE

DATA COLLECTED	Data Collection - Stage			
	Referral	Baseline	16 Weeks	52 Weeks
Stroke history/status (inc. investigations – Berg Balance or Tinetti Score)	✔			
Co-morbidities	✔			
Medication	✔			
Rehabilitation profile	✔			
Health questionnaire		✔	✔	✔
EQ-5D		✔	✔	✔
Timed Up and Go (TUAG) Test – 3m ***Or*** 6 min/10M walk test		✔	✔	✔
Stroke Impact Scale **(no longer measured)**				

5.2.3 PULMONARY

DATA COLLECTED	Data Collection - Stage			
	Referral	**Baseline**	**16 Weeks**	**52 Weeks**
Respiratory history/status (inc. – FEV1, FVC, O_2 Sats)	✔			
Co-morbidities	✔			
Medication	✔			
Rehabilitation profile	✔			
Health questionnaire		✔	✔	✔
EQ-5D		✔	✔	✔
Timed Up and Go (TUAG) Test – 3m ***Or*** ISWT/6 min walk test		✔	✔	✔

5.3 KEY DATA CONTRIBUTING TO EVIDENCE BASE

REFERRALS	• **National target - 20 referrals per month per WTE member of staff**
	• Referrals per annum – nationally 25,000
	  ○ Cardiff – 2400-2600
	  ○ Powys - 850
	  ○ Vale of Glamorgan - 996
	  ○ Carmarthenshire - 1380

ATTENDANCE (Referral uptake)	• **National target - 75% of total referrals attending a BL assessment**
	  ○ Vale of Glamorgan – 70%
	  ○ Carmarthenshire 75-80%
	
	*******requested additional national/regional data*

ADHERENCE	• **National target – 50% still engaged with service at week 16**
	  ○ Currently achieving 62-63%
	  ○ Carmarthenshire achieved 72%
	
	• **National target – of those still engaged at week 16 – 50-70% still to be engaged/physically active at 12 months**
	
	*******requested additional national/regional data*

BREAKDOWN OF REFERRALS	• **Estimated nationally 10% of all referrals are specialist level 4**
	  ○ **Carmarthenshire –** total referrals 1380
	  ○ Cardiac- 95(6.9%) Stroke- 33(2.4%) Pulmonary- 73(5.3%)
	  ○ **Vale of Glamorgan –** total referrals 996
	  ○ Cardiac- 60(6.0%) Stroke- 25 (2.5%)
	  ○ **Powys –** total referrals 850
	  ○ Cardiac- 71 (8.4%)
	• **Significant regional variance – Powys 10-15% of total referrals are level 4, in Newton this increases to 40%**

5.4 NERS Reach/Sessions Delivered

- Cardiff
    - 10 leisure facilities (6 pool based + 4 community based)
    - 50 NERS level 3 classes + 12 level 4 classes per week
- Carmarthenshire
    - 4 leisure facilities + 6 community venues
    - 80 NERS sessions per week (attendance >680)
- Vale of Glamorgan
    - 4 leisure facilities (2 rural venues)
    - 45 NERS sessions per week
- Powys
    - 7 leisure facilities
    - 22 NERS Cardiac sessions + 22 AAA sessions
    - Utilise the AAA (Get Active, Stay Active, Be Active) sessions for exercise maintenance – 50+ - includes social support aspect

5.5 KEY SUCCESSES – (from a NERS professional perspective)

- Standardised forms, pathways and inclusion / exclusion criteria
- Multifaceted model of delivery to include clearly defined exit strategies
- Specialised training (BACPR, Exercise after stroke, Respiratory disease) allows staff to support referred participants confidently
- Clinical rehabilitation and NERS sessions delivered in same venue
- Simultaneous delivery of Cardiac Rehabilitation phase III and IV
- Venues include urban, rural and community centres (increases reach)
- All referrals received and screened by a designated regional co-ordinator
- Most areas have close links with clinical rehabilitation teams – service integration
- NERS is recognised and detailed in Government Health Strategies (Scheme profile/future funding)
- Peer support from regional/national co-ordinator(s)
- Fostering social support networks -key mechanism for reducing programme dependence.

5.6 KEY CHALLENGES

- National performance indicators – identical for rural/urban centres
- Limited staff resources – reduce opportunities to develop scheme
- Yearly funding – job security / scope to develop service
- Hall availability within main leisure centres (mostly off peak)
- Promotional opportunities within leisure centres
- Session fragility if numbers are low
- Respect from HCPs (importance of job title)
- Not all level 4 pathways are delivered in all regions
- Partners deal in various currencies (income generation, throughput, health improvements…)
- Local authorities/health boards – differing health priorities

- Inappropriate referrals (participants not requiring specialist support)
- Time – to fully support participants with increased needs
- Replicating NERS sessions in rural locations – balancing variety and accessibility

5.7 FUTURE SERVICE DEVELOPMENT

- Develop referral pathway for neurological conditions
- Transition from a 'general' exercise model of delivery to become more health focused
- Incorporate the PARQ+[87] as additional screening tool
    - Result in reduced generic level 3 referrals (who can access mainstream activities independently)
    - Increase capacity for specialist level 4 referrals
    - Deliver additional NERS level 4 sessions
- Database integration – aligning NERS database and NHS database
    - Via Secure Anonymised Information Linkage Databank (SAIL)
    - Improve ability to track patients throughout the 'patient journey'

5.8 PARTICIPANT SATISFACTION / EVIDENCE OF IMPACT

Cardiac Rehabilitation Referral

"Following a Heart Attack in April 2010 as part of the rehabilitation I attended the referral scheme at Carmarthen Leisure Centre.

"It has changed my life completely. My health is better now than it was prior to my heart attack. I am no longer on beta blockers, I feel fitter and stronger. I would encourage anybody to attend the referral scheme – it has improved my life 100%."

Weight Management Referral

Patient referred with diabetes, renal problems, and back pain.

1st week assessment	**16th week assessment**
Weight: 121kg	Weight: 112kg
Waist circumference: 134cm	Waist circumference: 121cm
6MWT: Not well enough to walk	6MWT: 400 meters

NERS received a letter from patient's renal physician consultant 6 months after completing scheme stating that they had lost another 9 kg and that they had seen beneficial effects on patient's diabetes, high BP and kidney problems, resulting in reductions in their medication.

[87] http://www.csep.ca/english/view.asp?x=698

5.9 Evaluation of NERS (2007-2008)* – Randomised Control Trial (RCT)[88]

*****prior to implementation NERS specialist level 4 chronic condition pathways*

5.9.1 Key Data

- 1080 participants assigned to NERS intervention –
    - 913 (84.5%) attended BL consultation
    - 621 (57.5%) adhered for 4 weeks
    - 473 (43.8%) adhered for 16 weeks – favourable result compared to alternative exercise referral schemes (25-26%)[8990]

- Participant profile (referral stage)
    - Age >40 (67.7%)
    - Female (65.6%)
    - Inactive (57.7%)
    - Car owner (71.5%)

- Completer profile (16 weeks)
    - Age >40 (76.1%)
    - Female (64.5%)
    - Inactive (53.3%)
    - Car owner (74.2%)

- At 12 months those in the intervention group (NERS) had higher levels of physical activity, lower levels of anxiety and depression than those in the control group.

- Cost Effectiveness – **QALY of £12,111** (within NICE threshold of £20,000-30,000) as participants indicated a willingness to £2 per exercise session this would reduce QALY to <£10,000.

- Mean cost per participant - **£385**

5.9.2 Key Messages / Recommendations

- Importance of designated national/regional co-ordinators
- Standardised method of data collection/monitoring
- Importance of on-going motivational interviewing training/reflection
- Positive impact of peer support and mentoring
- Impact on service of 'referral seekers' – NERS utilised to overcome standard gym PARQ (inappropriate referrals?)
- Increased variety of sessions/times
- Clear exit strategies – improved transition from ERS to mainstream exercise

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[88] A pragmatic randomised controlled trial of the Welsh National Exercise Referral Scheme: protocol for trial and integrated economic and process evaluation *BMC Public Health* 2010, **10**:352

[89] Stevens et al, Cost-effectiveness of a primary care based physical activity intervention in 45-74 year old men and women: A randomised controlled trial. *British Journal of Sports Medicine* 1998, **32(3):**236-241**.**

[90] Munro et al: Cost effectiveness of a community based exercise programme in over 65 year olds: Cluster randomised trial**.** *Journal of Epidemiology & Community Health* 2004, **58(12):**1004-1010

6. THIRD SECTOR INVOLVEMENT

- **31 BHF Heart Support Groups throughout Wales**
    - **Cardiff (1) Powys (1) Vale of Glamorgan (1) Carmarthenshire (4)**

- **330 Stroke volunteers and 30 locally based stroke co-ordinators in Wales**

- **17 Breathe Easy Groups (British Lung Foundation) in Wales**
    - Pilot project in Llandudno and Blaenau Gwent designed to increase uptake of exercise and education amongst people with lung problems. Focused on co-production, whereby service users and providers develop their services together to improve the link to exercise.
    - Groups meet regularly with members of the pulmonary rehabilitation team and exercise instructors, before the NERS session takes place.
    - BLF are currently assessing the impact these groups have on the uptake of exercise and those accessing Breathe Easy.
    - BLF believe this joined-up approach will deliver better outcomes for people with lung disease, and will deliver a model service for which the NHS could roll out across Wales

7. CONCLUSION

Although initially created as a national model of standardised primary prevention (via exercise referral), NERS has now evolved to focus on offering tiered support to participants with a long term condition, establishing clear and recognised referral pathways and processes on a national plane, while remaining engaged with the community on a local level. The programme is sensitive to local need, condition prevalence, budget, demographics and appears to adapt accordingly.

From the review, both nationally and regionally a number of key findings were identified as critical to overarching success to the programme:

- Programme management – national co-ordinator and 22 regional co-ordinators – recognised central point of contact/referral
- Nine standardised national referral pathways (one primary prevention and eight LTC including cardiac, stroke and respiratory)
- Standardised data collection tools and methods nationwide
- Instructors qualified and trained to REPS level 4 – national framework for instructor training
- Established partnerships with primary care, secondary care and third sector
- Partnership funding – long term vision, which allows the service to be viewed as a 'constant' in the overall service pathway
- Participant perceived seamless transition from clinical care to community provision
- National programme delivery appears flexible to local demographics

However it should be noted that the service does face similar challenges to those delivered across the UK. These include:

- Performance indicators set at a national level – difficult to achieve similar outputs in an urban and rural setting
- Staff retention – although funding is agreed longer term, employees have a fixed term contract
- Fragility of sessions if numbers are low/drop
- Partners viewing success differently (health improvements v numbers attending)
- Availability and accessibility of sessions – times sometimes dictated by the facility rather than participant need.

Moving forward, NERS aims to predominantly focus on referrals for participants with a long term condition and requiring additional and guidance. By incorporating the PARQ+ it is believed the number of generic level 3 referrals will drop as they will be able to access mainstream activities independently.

Appendices

Table 1

KS101EW - Usual resident population

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Rural Urban	Cardiff	Carmarthenshire	Powys	The Vale of Glamorgan
Total	346,090	183,777	132,976	126,336
Urban (total)	340,177	89,154	17,911	101,808
Urban major conurbation	0	0	0	0
Urban minor conurbation	0	0	0	0
Urban city and town	340,177	73,300	6,554	101,808
Urban city and town in a sparse setting	0	15,854	11,357	0
Rural (total)	5,913	94,623	115,065	24,528
Rural town and fringe	4,667	24,932	2,981	8,956
Rural town and fringe in a sparse setting	0	4,127	34,025	0
Rural village	1,246	15,378	9,821	13,682
Rural village in a sparse setting	0	16,545	30,862	0
Rural hamlet and isolated dwellings	0	14,502	3,781	1,890
Rural hamlet and isolated dwellings in a sparse setting	0	19,139	33,595	0

Figure 2 – Cardiac Phase IV Referral Pathway

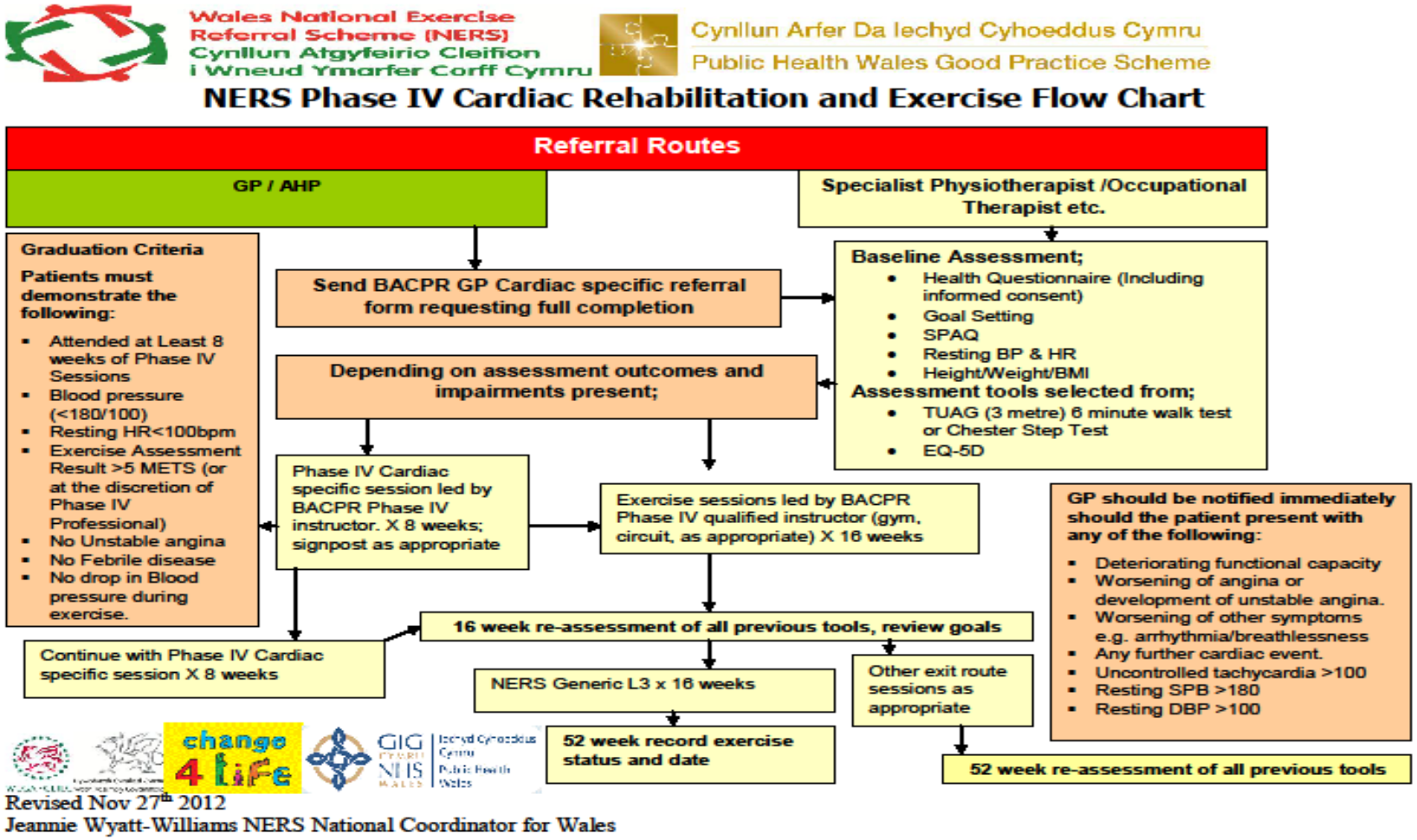

Figure 3 – Respiratory Referral Pathway

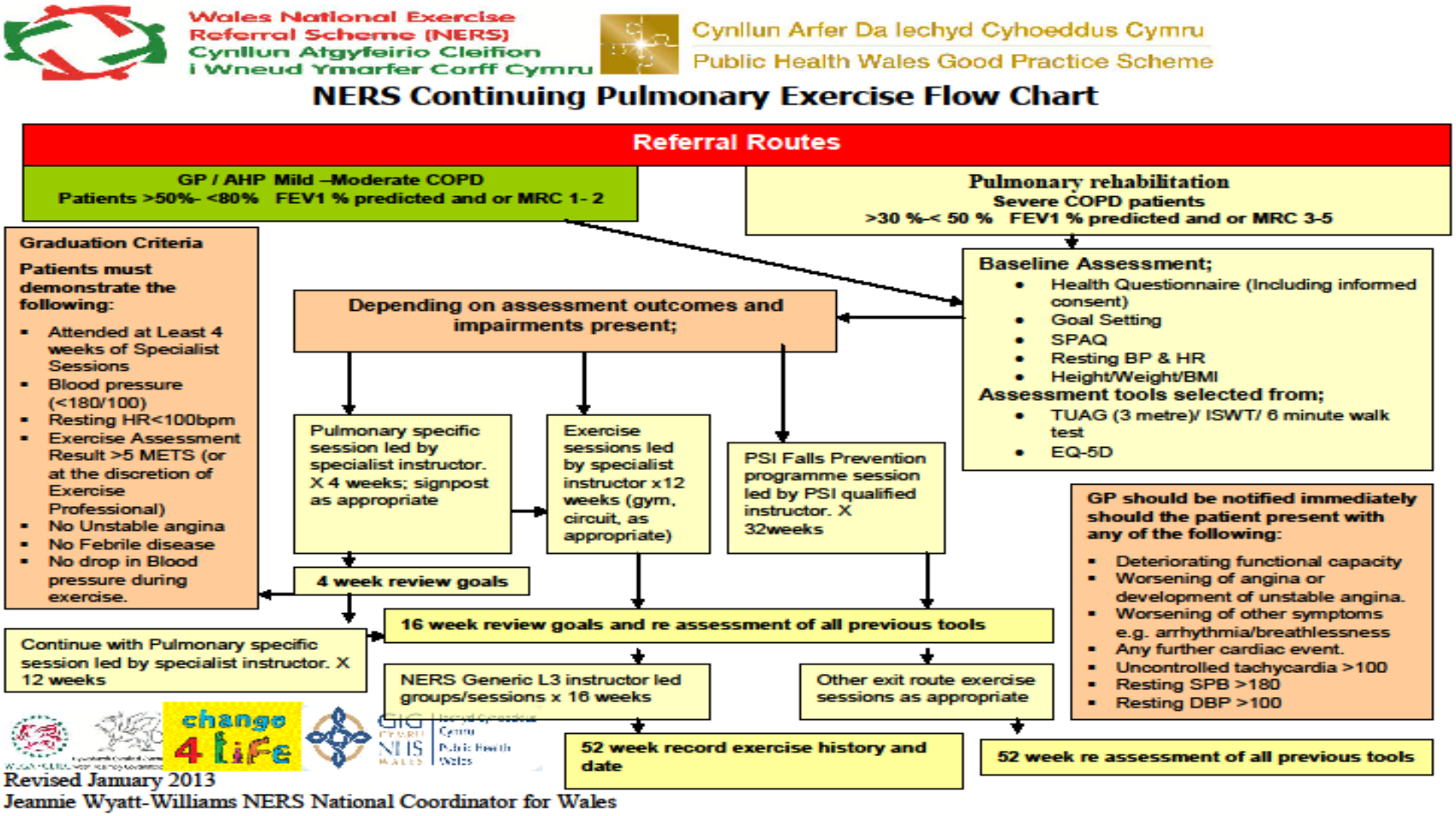

Figure 4 – Stroke Referral Pathway

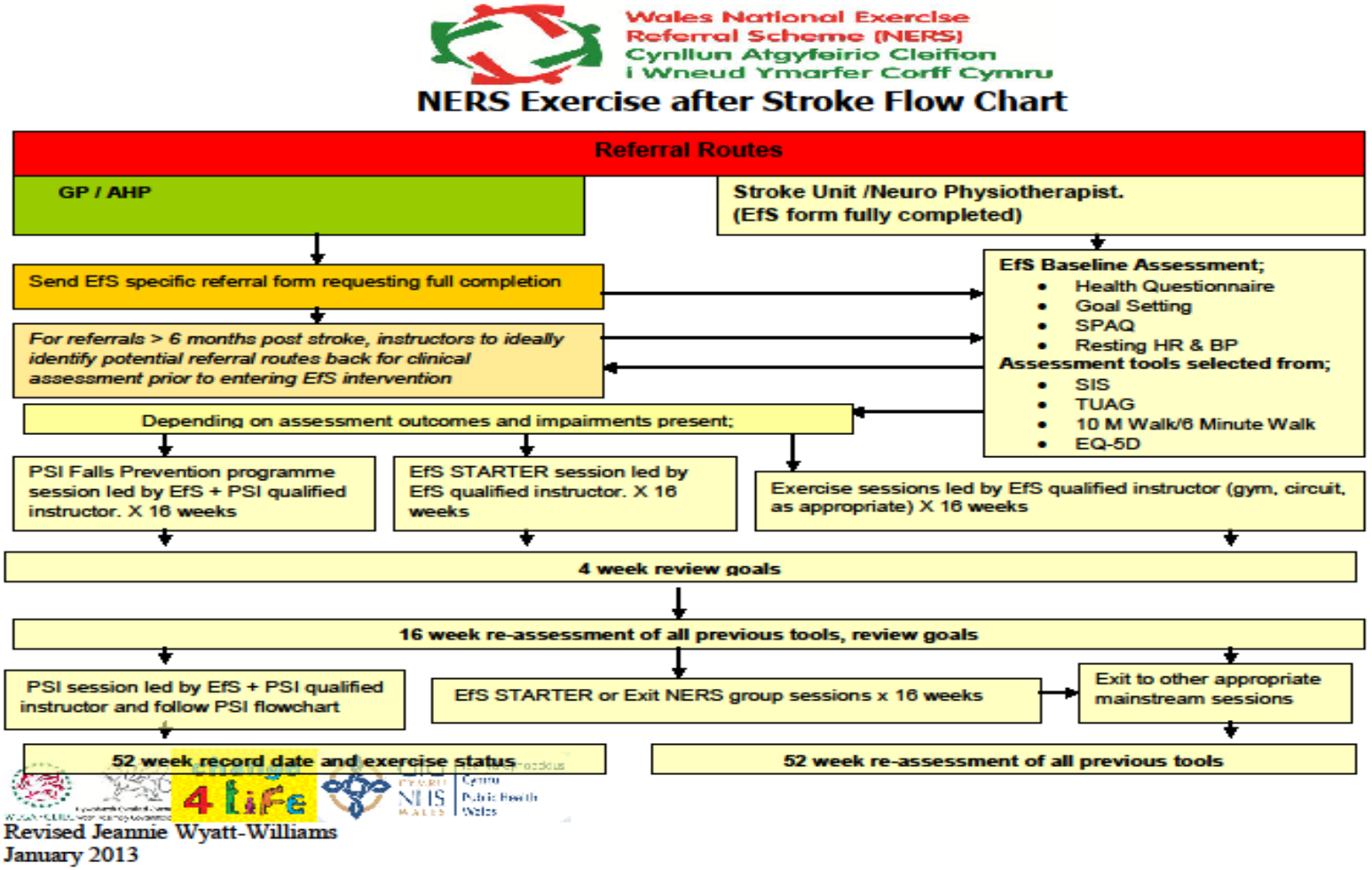

Figure 5 – Generic Level 3 Exercise Referral Pathway