



## About Health Junction

Health Junction is a dynamic Community Interest Company operating in the Health and Social Care Sector. Health Junction works in conjunction with local stakeholders to develop evidence-based health programmes, health promotion initiatives and educational training which can be delivered to target groups of participants, patients and service-users in the heart of the community – a model which provides not only a rapid response to the changing demands of the health and care sector, but also ensures cost-effective delivery of programmes at non-clinical venues such as leisure and community centres.

Health Junction has provided consultancy services and worked with Mersey Care NHS Mental Health Trust developing their Recovery College and patient co-production model.

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### Cath Aitken, B.Sc. (Hons), PhD

Prior to founding Health Junction, Cath previously worked in Public Health for NHS Wirral, where she was involved with the development of a community-based programme set up to address the poor health outcomes associated with worklessness – the programme won an award for Excellence in Innovation. Her research experience was gained in a role as a Senior Research Associate with the patient-reported outcomes team of a global research consultancy where she supported pharmaceutical companies with clinical trials. At the outset of her career, having studied Business Studies with Marketing at University, Cath joined BT PLC to follow a marketing career, becoming a Chartered Marketeer during ten years with the telecommunications giant.

When taking a career-break to have her family, Cath took the opportunity to return full-time to university where she studied Applied Psychology and achieved a 1<sup>st</sup> class B.Sc. (Hons). Her interest in health psychology, specifically, the impact of fatigue and pain in chronic disease, led to her completing a PhD in the field of psoriatic arthritis and psoriasis.

### John Smith

Prior to founding Health Junction with Cath, John was a Health and Social Care Consultant and was responsible for the development of an ESF funded employment service based on a user-led model for people suffering from mental health conditions.

John's career with Wirral NHS Public Health developed his interest in service design and pathways implementation and development.

In the early part of his career, John worked in Youth and Mental Health services and was also a Volunteer Trustee for the national charity Home Start. His interest in raising awareness of mental health issues has resulted in him designing and developing various training courses which Health Junction regularly delivers to organisations in the Public, Private and Third sectors.

He was selected to participate in the development and design of the Open University Course on Personalisation - a joint initiative between Wirral NHS, Wirral Borough Council and the Open University – John presented the Development of Personalisation within Health and Social Care at the 2010 National Social Workers Conference.

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# Quotes - Breeze Programme

**Interviewer: What advice would you give to someone who was offered Health Junction's Breeze programme?**

**Jump at it! I have learnt so much... it's been really helpful and I've met new people who understand what it's like to have health problems.** *George, 66*

**I'm really going to miss you and the Breeze programme – I haven't been outside of Claughton for 10 years...I've been so isolated...I haven't been over to Liverpool for more than 30 years... you've given me reason to make changes...** *Mary, 60*

**I haven't exercised for over 30 years, but I used my leisure pass last week – 3 of us went together from the Breeze group and we did have a laugh...we've arranged to go again on Monday!** *Lesley, 50*

**Some of the things I've learnt have been great...I used to visit my GP each month to get repeat prescriptions, but since being on Breeze and finding out about electronic prescriptions, I've used it, and the service works so I don't need to see my GP as much...** *Male, 55*

**I've worked as an advisor in the Job Centre for 30 years and Breeze is the best programme that I've come across – we've had really good feedback from the people we've referred...** *Job Centre+ Advisor, Birkenhead*

## Acknowledgements from Health Junction

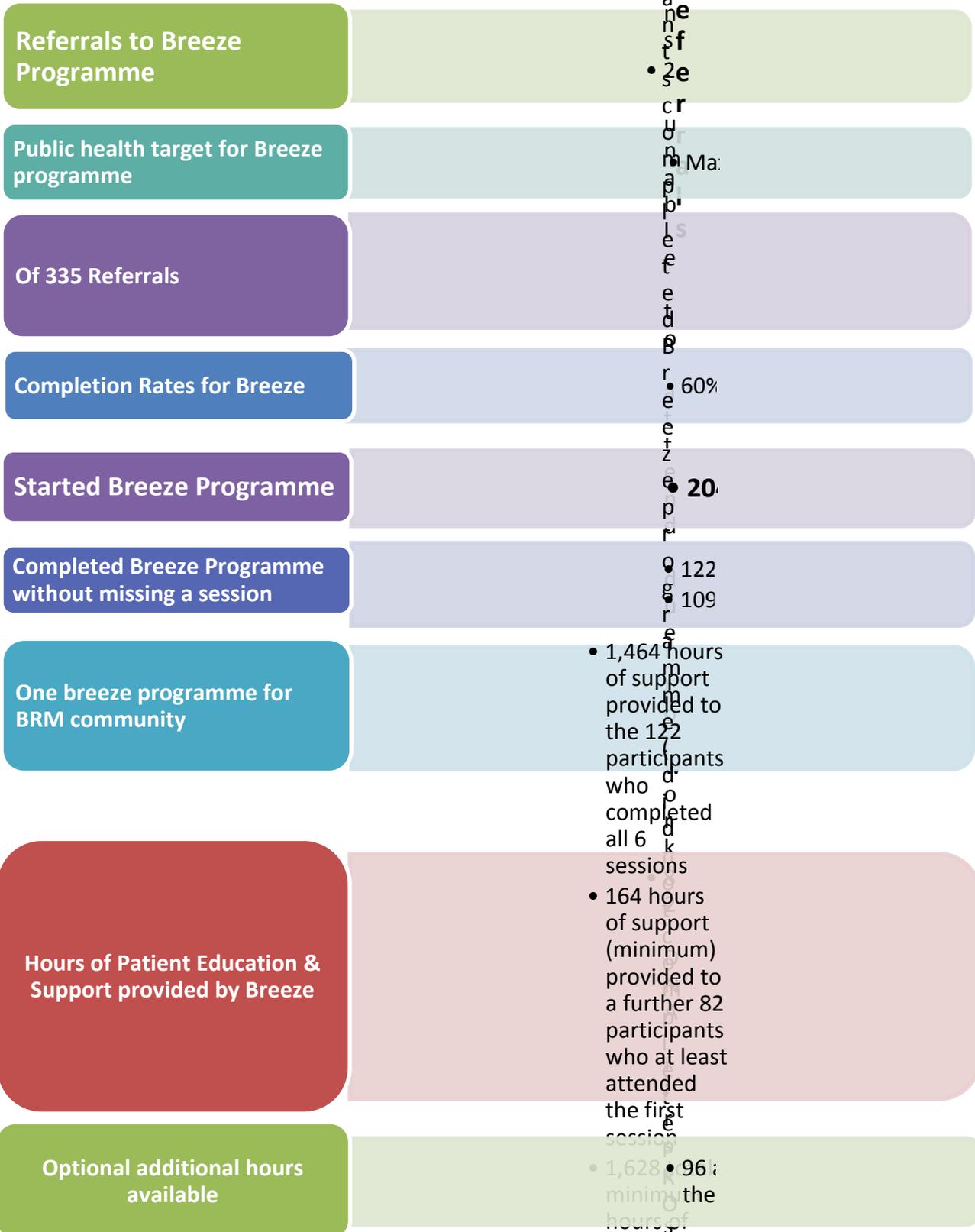
Health Junction would like to say a special thank you to Wirral Public Health for the opportunity to develop and deliver the Breeze Programme. We are very grateful to Wirral Borough Council, in particular Boo Stone, Mike Henderson and the staff at Europa Leisure Centre and the Occupational Health Department.

We extend our gratitude to Dr Clive Pleasance, Anita Jones and the staff at Whetstone Lane Surgery; Peter Matthews, Sean Harrington, and Richard Lacey and his staff at Wirral Community Trust.

A special thanks to pharmacist Peter Jamieson and Debbie Veevers of DWP for their valuable contribution and support of the Breeze programme, and to all our trainers for their professionalism and commitment.

Finally, we thank all the participants who have taken part in Breeze and shared their experiences with us and who found time to help others, in particular, Sue, Pauline, Glenn and Miriam.

# Key Points - Breeze Programme



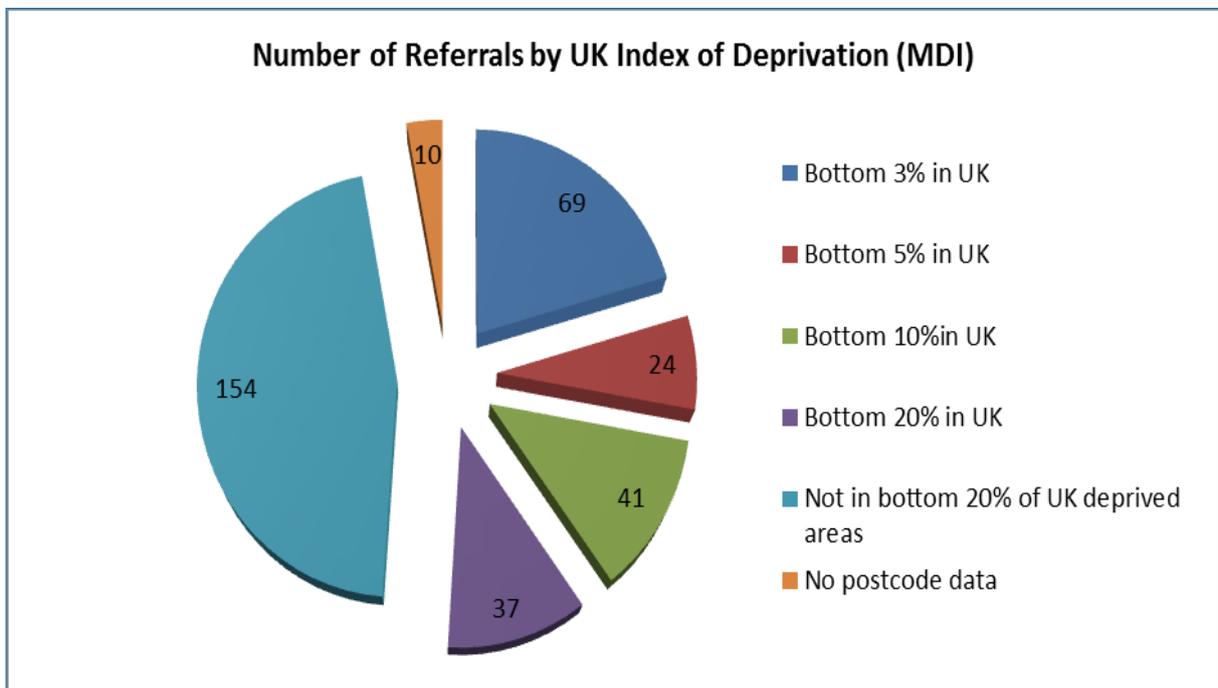
## Key Demographic Data (for 335 Referrals to Breeze)

Multiple Index of deprivation (MID)	Caring	Education	Employment
<ul style="list-style-type: none"> <li>• 52% participants in bottom 20%</li> <li>• 21% bottom 3%</li> </ul>	<ul style="list-style-type: none"> <li>• 20% cared for</li> <li>• 11% carers for family member</li> </ul>	<ul style="list-style-type: none"> <li>• 63% no formal educational qualifications</li> </ul>	<ul style="list-style-type: none"> <li>• 61% on long term sickness</li> <li>• 9% employed</li> <li>• 79% claim 1+ benefits</li> <li>• &lt;3% in voluntary work</li> <li>• 15 employed people supported to stay in work</li> </ul>

Age
<ul style="list-style-type: none"> <li>• 51 Mean Age</li> <li>• 20 Youngest</li> <li>• 77 Oldest</li> </ul>

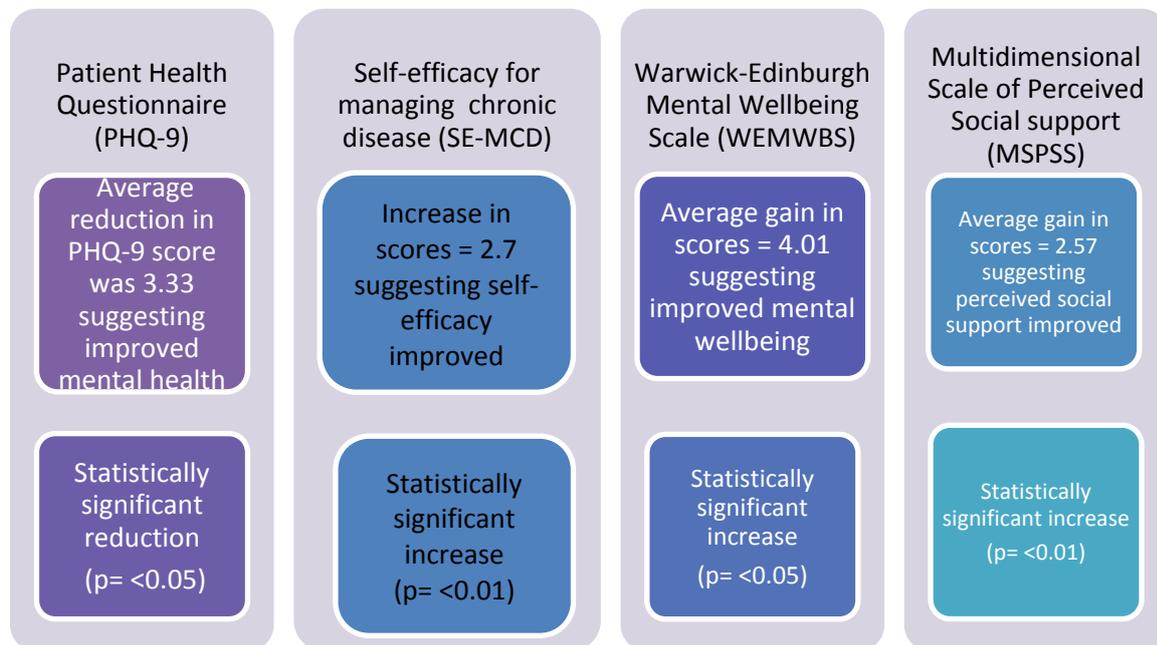
Number of Long-Term Conditions
<ul style="list-style-type: none"> <li>• 2 (Average per participant)</li> <li>• 1 Minimum</li> <li>• 9 Maximum</li> </ul>

Gender
<ul style="list-style-type: none"> <li>• Males 41%</li> <li>• Females 59.5%</li> </ul>

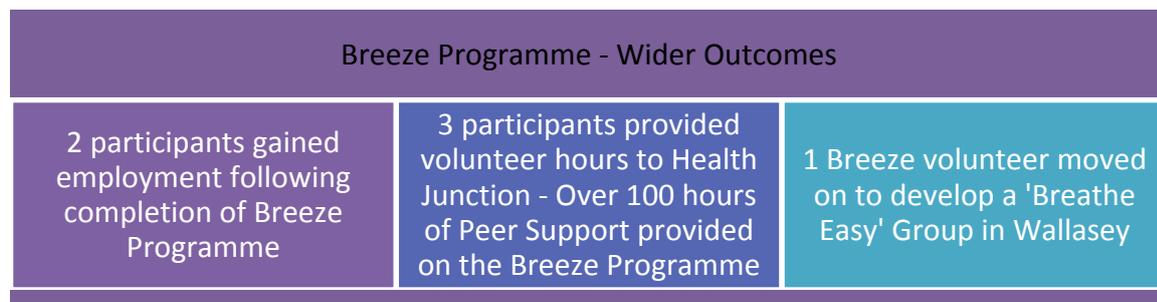
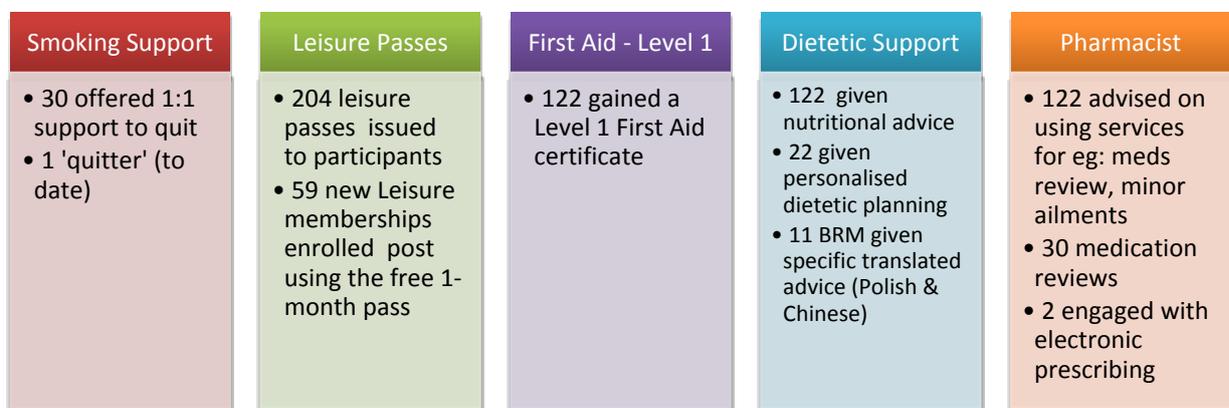


## Pre & Post Patient Reported Outcomes Data for Breeze Programmes

**1-14** (Note: Statistical analysis was conducted externally before completion of all 16 programmes)



## Key Outcomes for 122 Breeze 'Completers'



## Executive Summary

The purpose of this report is to provide feedback regarding 'Breeze' – a community-based pilot programme for patients living with one or more long-term health conditions. Breeze was funded by the Public Health Innovation Fund and supported by Wirral Borough Council and Wallasey Clinical Commissioning Group.

**Breeze, aimed at improving and facilitating self-management of health conditions, was designed and developed using patient feedback** from Health Junction's previous programme for patients with chronic obstructive pulmonary disease (COPD). The PHOF fund has provided the opportunity to utilise this learning, undertake further patient consultation and develop the Breeze Long Term Conditions Programme into a unique, supportive self-management package.

Breeze encompasses specialist advice from health practitioners, community information, exercise, and all the psychosocial elements that facilitate self-management. Breeze comprised six, two-hour sessions that covered a variety of topics pertinent to managing long term conditions and developing self-management skills. It also provided a weekly, low-intensity exercise session which was available to all Breeze participants to attend for the full lifetime of the programme (18 months).

**The programme uses four measures (PROs) for monitoring outcome data which relate to the public health framework indicators:** The Patient Health Questionnaire-9 (PHQ9), the Multidimensional Scale of Perceived Social Support (MSPSS), Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) and the Self- Efficacy for Managing Chronic Diseases Scale (SE-MCD). Qualitative interviews are also used to capture rich data.

**Between September 2013 and March 2015, a total of 335 people were referred to attend the 16 Breeze programmes delivered during this pilot programme. The completion rate for Breeze, which we based on participants having completed all 6 sessions, was 59.80% - this compares very favourably against those published by two other UK self-management programmes, which reported completion rates of 60% and 51% respectively (Kennedy et al., 2007; Griffiths et al, 2005).**

**The analysis of Patient Reported Outcome data was conducted externally prior to the end of the pilot – it used available data from the first fourteen programmes which included a total of 305 participants.**

Of the 305 participants, a total of 163 people (97 females, 66 males; Mean age = 51) started the Breeze sessions, whilst the remainder either missed one or more sessions through prior engagements such as hospital appointments or illness, or chose not to complete the Patient Reported Outcome Measures (questionnaire pack). Of the 14 Breeze courses delivered so far, a total of 95 participants completed – this included a cohort of 11 participants drawn from the Polish and Chinese communities, who did not complete the questionnaires (PROs) due to translation issues.

**Given that 52% of Breeze participants were living in the 20% most deprived areas in the country, with 21% drawn from the bottom 3% and that the average age of participants was 51, with over 40% male, it is clear that Breeze is certainly reaching and engaging with participants generally viewed as 'hard to reach' and who have high levels of health utilisation.**

**An unexpected finding was that 63% of participants stated their education level as “none”** – such a result has, potentially, huge implications for patient health literacy and highlights the complexities of communicating health information and the risks and benefits of treatment options. In particular, it emphasises the need to consider the type and style of information used in health literature and early intervention messages if we are to increase an individual’s ability to use health information.

**Analysis of the data found that, for participants who completed the programme, statistically significant improvements were reported in their levels of depression, anxiety and self-efficacy, whilst their perceived social support also increased.**

Over the 16 programmes, behavioural change was also reported and was evidenced with regard to engagement with exercise interventions and uptake of the free 1-month leisure passes – 204 passes were issued over the life of the programme and data from Europa Leisure Centre has shown that **59 Breeze participants who used their free 1-month pass have now paid for membership and enrolled onto the Invigor8 scheme – for many, this is the first time they have engaged in exercise since leaving education.** The uptake of leisure passes may be viewed as a key finding, particularly given the demographic of the participants, and it demonstrates the vital role that community-based education and engagement can play in supporting sustained behavioural change towards exercise.

It is also of great interest that one female participant, having used the free one-month leisure pass, approached Health Junction with a request from her GP. **Her GP was so impressed with her improved health status, weight loss and commitment to self-management, that he agreed to continue to fund her Invigor8 leisure pass if Health junction wrote to him in support of this ‘social prescribing’** – which of course, we did! **This is an excellent example of how patient education has informed decision-making and choice, and highlights the contribution that social prescribing may make to self-management of long-term conditions and reductions in health care utilisation.**

Snapshot data provided by the dietician for 20 participants found that **50% of participants were classified as overweight, 30% were obese, whilst 85% had a waist circumference indicative of an increased risk of developing diabetes, heart disease and other serious health conditions.** These findings confirm the importance of creating accessible opportunities, particularly for participants in low income households, to increase their awareness of weight management and to engage in exercise.

Dietetic and nutritional advice was given to all participants, however, **22 people received personalised dietary planning and 1:1 support from the dietician** in order to facilitate and improve the management of their health conditions.

Health Junction was contacted by a Birkenhead-based GP with regard to targeting and offering support to people managing long-term health conditions in the Polish and Chinese communities. As a result, one Breeze programme was specifically offered to these groups. **A total of 11 Chinese and Polish participants attended – none of this group had ever received dietetic input, so a key outcome for this group was the provision of culturally appropriate dietetic information that was translated into their own language.**

**Following completion of the Breeze programme, 2 participants reported that they had started a new job and had stopped claiming benefits.**

In addition, **122 participants were trained in Basic First Aid and achieved Level 1 certificates.**

The Breeze programme incorporates **'Stop Smoking' support** – whilst this is offered to every participant, the support, which includes home visits, is also extended to family and friends. The 'Stop Smoking' support worker is available at every session each week to ensure the service is offered to participants every week. **At the point of writing, 1 participant achieved 'quit' status.**

The major qualitative findings were that participants preferred an innovative approach to patient education, learning and involvement that was community-based, rather than the more traditional approach. Peer group sessions were viewed as providing a safe forum and a new way of learning about their health condition – this enhanced opportunities for shared learning and understanding the life course of their condition. This approach was supported by fundamental learning which included mental health, nutrition, and physical health, how to access health and social care, self-management strategies, wellbeing and austerity measures – all of which were delivered within the Breeze programme.

A major theme to emerge from participants in all 16 of the Breeze programmes concerned the lack of opportunities to engage in paid employment or meaningful activity. There was consensus that living and managing long-term health conditions was often time consuming and impacted on their ability to maintain a routine that would enable them to engage with work opportunities. Often there was a desire to work, but in many cases, a lack of confidence and low levels of education combined with their perceptions that society does not understand the impact of long-term health conditions resulted in barriers being created.

The evidence to date suggests that Breeze not only supported and encouraged self-management strategies and problem solving, but also developed patient confidence and engagement which enabled them to feel more in control of their lives.

The Breeze programme moved people with long-term conditions from passive to activated, engaged and informed patients and achieved **additional value by reducing clinical time as onward referrals were made to a variety of partners** including, Wirral NHS Live Well Programme, Healthbox Quit Smoking Service, Advocacy in Health Wirral, Community Pharmacies, Community Action Wirral (CAW), Nautilus, Age UK, Breathe Easy, Tomorrows Women, Wirral Change, Wirral Multi-cultural Centre, Mind and Wirral Leisure Centres.

Referrers and partners have indicated they are keen to keep referring into the programme - Health Junction currently has a waiting list of 29 people with long-term conditions who are hoping to attend a Breeze programme should additional /continuation funding become available.

## **1 Introduction:**

### **1.1 What are Long Term Conditions?**

Long term conditions (LTCs) are defined as those conditions that can be controlled by medication or other therapies. They affect more than 15 million people in the UK and their care absorbs 70% of hospital and primary care budgets in England, accounting for half of all GP appointments, two-thirds of all outpatient appointments and 70% of all inpatient bed days.

### **1.2 What is the Breeze Long-Term Conditions Programme?**

Health Junction co-designed the Breeze Programme in consultation with Wirral-based patients – all of whom were managing and living with a variety of long-term health conditions, including Chronic Obstructive Pulmonary Disorder (COPD), diabetes, kidney disease, coronary heart disease, stroke, Parkinson's, and depression – the result was and is, Breeze<sup>®</sup> - an innovative 6-week programme, that supports the current long-term condition pathways into the community.

The multi-faceted programme incorporates patient educational and psychological elements and goal setting awareness which facilitates improvements in patient stamina, self-efficacy and psychological wellbeing, whilst the use of low-level physical exercise and 'Digital Inclusion' sessions impacts positively on levels of social isolation – all of which results in improvements in self-management and motivation which contributed to sustained behavioural changes.

During the development of Breeze, Health Junction targeted local community resources and worked closely with Wirral Borough Council to identify appropriate community assets which would not only facilitate and increase patient access to long-term condition support across Wirral, but would also provide locally-based, cost effective venues for delivery.

### **1.3 Why did Health Junction design and develop the Breeze Programme?**

People living with long-term conditions face significant challenges, but, they also have strengths and abilities, which, if activated with appropriate training and support, could empower them to improve self-management of their health condition/s.

Often, patients also have family, friends, communities and peer networks that can, given the right support, work alongside healthcare professionals to support them to live well with long-term conditions.

During the last decade, the chronic care model (Wagner model) provided a framework for understanding and addressing gaps in chronic illness care, and established a body of evidence that supporting its effectiveness. The model defined the multipronged approach required to optimise outcomes and recognised that the majority of effort for management of chronic conditions falls to the patient - this is termed 'self-management'. However, this model has been superseded by the House of Care Model which takes a whole system approach to long-term conditions management. It makes the person central to care. It is about aligning levers, drivers, evidence and assets to enhance

the quality of life for people with long term conditions no matter what or how many conditions they have.

Self-management support has been defined as ‘the systematic provision of education and supportive interventions by healthcare staff to increase patients’ skills and confidence in managing their health problems, including regular assessment of progress and problems, goal setting, and problem-solving support’. The goals of self-management are behaviour changes to promote improved functioning and quality of life. However, while there is a growing body of evidence for the efficacy of self-management strategies (e.g. patient education, coping skills, action plans for exacerbations, exercise programmes) among patients with, for example, COPD, few interventions have been specifically designed to promote and sustain behaviour change.

The need for Breeze<sup>®</sup> to be a community-based programme offering extended support, advice and interventions was driven by patient consultation which found individuals stated a preference for the sessions to take place in local community venues for ease of access.

## **2. The Breeze Programme**

### **2.1 An overview**

Developed using a biopsychosocial approach, Breeze<sup>®</sup> incorporates a broad package of support for patients and encompasses specialist advice from health practitioners, community information, exercise, and all the psychosocial elements that facilitate self-management. All sessions were evidence-based and linked to best practice for condition management.

The Breeze Programme consists of six weekly sessions, each lasting two hours – each session focusses on a different topic, delivered by an expert from the relevant field – both health and community. Typically, sessions contained a ‘patient education’ element, with time also given to an informal question and answer session and a ‘tea break’ to enable participants to engage with each other and support shared learning.

In addition to these sessions, Breeze also incorporated a weekly, hour-long, community physical exercise session, delivered by a fitness instructor who was sensitive to the needs, circumstances and capabilities of the participants.

All Breeze participants are given a free, 1-month leisure centre pass, which entitles them to access leisure facilities operated by Wirral Council which includes swimming pools, tennis centres, leisure centre gyms, exercise classes, running and walking groups

The Breeze programme is funded by Public Health and is scheduled to deliver a total of sixteen, six-week programmes, delivered between September 2013 and March 2015.

### **2.2 The Breeze Sessions**

The programme is based in the heart of the deprived communities where high incidences of long-term health conditions exist. All sessions are delivered in an easily accessible, ground floor training room in a local Leisure centre (Europa, Birkenhead).

Underpinned with input from a dietician, pharmacist, and with mental health support, Breeze incorporates a broad array of support, advice and information throughout the programme, including:

- Education and information about managing long-term health conditions
- Digital health sources and interventions to support long-term management
- Dietician-led nutritional input including healthy living & nutritional screening
- Level 1 First Aid
- Psychological and emotional wellbeing support including motivational interviewing
- Utilising a pharmacist and understanding their role in your health
- Relaxation and Mindfulness
- Welfare and benefits advice
- Smoking cessation support
- Provision of free 1-month Leisure health passes including a presentation by Wirral Leisure Services representative to encourage uptake.
- Post-programme provision of follow-on exercise classes to encourage improvements with self-management (Health Leisure pass, Green gyms & Community Health Programme)

## 2.3 The Participants

The inclusion criteria for the Breeze programme is that participants should be a Wirral resident aged 18+, understand spoken English and have a new or existing diagnosis of one or more long-term health conditions.

As a pilot, one Breeze course was delivered to a group of participants drawn from Wirral’s Polish and Chinese communities. However, due to potential translation issues and the participants varying levels of ability to understand written English, this group did not complete the standardised Patient Reported Outcome Measures, but did take part in qualitative feedback sessions, which is presented in Section 4.4

### 2.3.1 Participant Demographics (External analysis used available data up to Programme 14)

Of the 163 participants included in this analysis, less than 5% (8/163) of the participants had data missing for any single demographic feature.

Demographic results in Table 1 are presented as mean values with a single standard deviation (SD) and the upper and lower ranges. As can be seen, the mean age of the patient group was 51 years (20 to 77 years). With regards to gender distribution, there were 97 females (59.5%) as compared to 66 males (40.5%). All of the participants were of white British ethnic origin. The average number of long-term conditions for each participant was 1.6, although the maximum reported was 9.

**Table 1: Participants Demographics (data from Programmes 1-14)**

	Number (of Participants provided data)	Minimum	Maximum	Mean (Standard Deviation)
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Age	(162)	20	77	50.938
Number of Long-Term Conditions	(163)	1	9	1.638
Males	66	-	-	-
Females	97	-	-	-
<b>Total</b>	<b>163</b>			

The postcode data given by all 335 referrals was categorized according to the UK Multiple Index of Deprivation (MID). As can be seen in Table 2 and Chart 2, of the 335 participants referred to the Breeze Programme, 52% were classified as living in areas in the bottom 20% most deprived areas in the country.

**Table 2: Participants categorised by postcode and Multiple Index of Deprivation (Programmes 1-16)**

Multiple Index of Deprivation (MID) Category	Breeze Referrals by MID	As %
<b>Bottom 3% in UK</b>	69	21
<b>Bottom 5% in UK</b>	24	8
<b>Bottom 10% in UK</b>	41	12
<b>Bottom 20% in UK</b>	37	11
<b>Not in bottom 20% of deprived areas in UK</b>	154	45
<b>No postcode data</b>	10	3
<b>Totals</b>	<b>335</b>	<b>100</b>

**Chart 1: Pie Chart detailing 335 participants (Programmes 1-16) by Multiple Index of Deprivation**

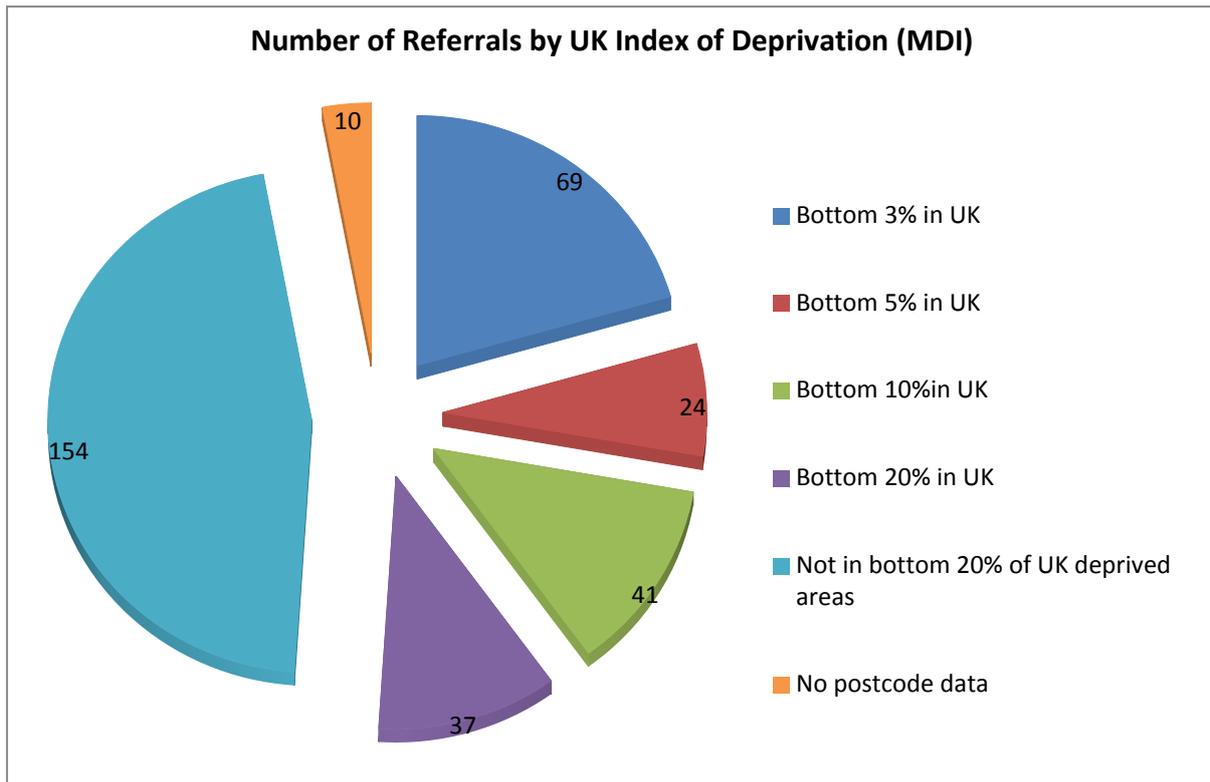


Table 3 details the marital status of the participants who provided data in the first 14 programmes.. As can be see, the majority of the participants (49.0%) were single, whilst 31.2% were married and 14% were divorced. The number of single parents was 26 (16.5%)

**Table 3: Marital Status of Participants (Programmes 1-14)**

Status	Participants	As %
Single	77	49.04
Married	49	31.21
Divorced	22	14.01
Partner	5	3.18
Widowed	4	2.55
<b>Total providing data</b>	<b>157</b>	

Table 4 details the level of education achieved by the the 158 participants (programmes 1 – 14) who completed the question and reveals that almost 64% (101) did not have any formal education.

**Table 4: The educational status of the participants (Programmes 1 – 14)**

Educational Level	Participants	As %
No Formal Education	101	63.92
No Degree	17	10.76
Degree Level Education	40	25.32
<b>Total</b>	<b>158</b>	

The employment status of 158 participants who completed the data (in programmes 1 – 14) is described in Table 5 below. The majority of participants were not working due to long term sickness (61.4%).

**Table 5: Employment status of Participants (Programmes 1 – 14)**

Employment Status	Participants	As %
<b>Long-term Sickness</b>	97	61.39
<b>Employed</b>	15	9.49
<b>Unemployed</b>	15	9.49
<b>Unemployed + Unpaid Voluntary Work</b>	1	0.63
<b>Employed + Unpaid Voluntary Work</b>	1	0.63
<b>Long-Term Sickness + Unpaid Voluntary Work</b>	1	0.63
<b>Retired</b>	27	17.09
<b>Retired + Unpaid Voluntary Work</b>	1	0.63
<b>Total</b>	<b>158</b>	

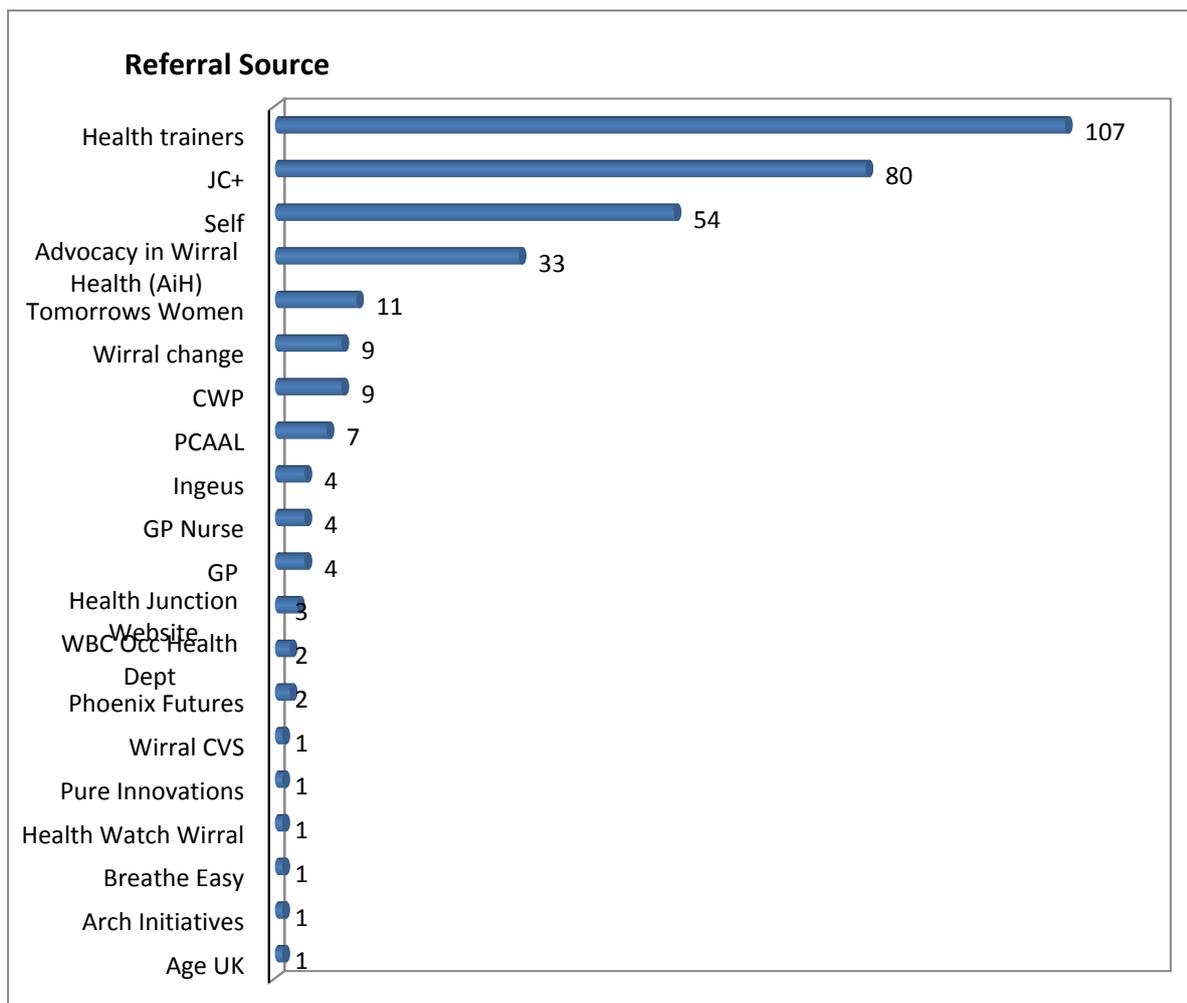
Of the 158 participants that completed the data with regards to benefit receipt, 126 (79.8%) were currently in receipt of benefits.

Participants answered questions relating to whether they had a carer for their own needs, or were actually a carer for someone else. Of 155 respondents, a total of 20.7% (32 participants) were currently being cared for and 11% (17 participants) were currently carers for someone else.

All of the 163 participants were divided into two groups according to whether or not they had undergone the entire six week programme. A total of 84 participants completed the six weeks Breeze LTC programme, whilst 79 participants did not complete all of the sessions.

The referral route in to the Breeze Programme was designed to be as open as possible to ensure it did not present as a barrier for patients, health professionals, community workers etc. Referral pathways were established initially with GP's and also the Health Trainers who were based in GP surgeries. Other referral pathways were developed as Breeze became established – a full breakdown is shown in Graph 1.

**Graph 1: Sources of Referral into Breeze (Programmes 1-16)**



## 3. Description of evaluation methods

### 3.1 Purpose of the evaluation

This evaluation considers the experience of participants who attended the ‘Breeze’ Long-Term Conditions Programme, and seeks to establish how Breeze fulfilled the needs of individuals living with, and managing long-term health conditions.

Through the use of Patient Reported Outcomes, the evaluation will establish whether Breeze was associated with any self-reported improvement in levels of anxiety, depression, social isolation and self-efficacy.

### 3.2 Data Collection

This evaluation uses both qualitative and quantitative data.

Quantitative data is gathered through the use of validated, self-reported, questionnaires.

Qualitative data is collected from the individual by means of several techniques – typically interviews with participants, either on an individual basis or in a focus group, diaries (written or video) and

various forms of writing. The data can then be analysed in different ways, such as discourse analysis, narrative analysis, grounded theory and interpretative phenomenological analysis (IPA).

Qualitative research is concerned with the nature of the phenomenon, rather than producing aggregate data and is aimed at discovering the meaning that events have for the individuals who experience them. As a consequence, the results deal with the emotional and contextual aspects of human response, rather than with objective measurable behaviours and attitudes.

A qualitative approach is undoubtedly the preferred choice where the goal is to try and present people on their own terms and from their own perspective and to give the participant a voice, however, despite its strengths, it must be acknowledged that fewer participants are usually studied when a qualitative approach is utilised, meaning that the results are less easily generalised to the wider population and, because it is difficult to aggregate data, systematic comparisons may not be possible.

### **3.2.1 Breeze Qualitative Data Collection**

Data was collected at the end of the programme through the use of semi-structured patient interviews and group feedback sessions.

A qualitative method particularly suited to understanding the lived experiences of an individual is Interpretative Phenomenological Analysis (IPA), a framework developed and described by Smith et al. (1995, 1997, 1999), that is concerned with trying to understand lived experience and how individuals make sense of their experiences, particularly with regard to living with a medical condition.

For the purpose of this evaluation, the qualitative data were analysed using IPA as described by Smith (2003). This method strives to fully preserve people's perceptions of the world and ensure their unique view is reflected, so capturing the quality of individual experience.

IPA identifies subordinate and overarching themes within and across transcripts through a process of reading and re-reading the texts. In order to obtain the richest representation of the transcripts, analysis is underpinned by a process of coding, organising, integrating and interpreting of data.

The process involved small themes being identified and labelled and clustered into larger themes. Finally all the cluster themes were integrated across transcripts in order to identify shared themes that captured the essence of the participants' experience of the Breeze Programme. A table of quotes from across all interviews was constructed to illustrate each theme and demonstrate that the themes were supported verbatim within the texts.

### **3.2.2 Breeze Quantitative Data Collection**

Participants completed baseline questionnaires at the start of their Breeze programme (session 1) and at end of programme (session 6). The questionnaires consisted of the following standardised, validated, patient reported outcome measures and also included a demographic sheet:

#### ***3.2.2.1 The Patient Health questionnaire (PHQ-9)***

The PHQ-9 contains a brief, 9-item, patient self-report depression assessment specifically developed for use in Primary Care. It has demonstrated usefulness as an assessment tool for the diagnosis of

depression in primary care with acceptable reliability, validity, sensitivity and specificity. The 9 items come from the nine DSM-IV signs and symptoms of major depression.

### ***3.2.2.2 Self-Efficacy for Managing Chronic Disease (SE-MCD)***

This 6-item scale was developed and validated by the Stanford Patient Education Resource Center. It encompasses several domains that are common across many chronic diseases including, symptom control, role function, emotional functioning and communicating with physicians.

### ***3.2.2.3 Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS)***

The WEMWBS, developed by Warwick and Edinburgh Universities (2006), is a scale of 14 positively worded items, with five response categories, for assessing a population's mental wellbeing.

### ***3.2.2.4 The Multidimensional Scale of Perceived Social Support (MSPSS)***

The MPSS is a brief 12 item scale designed to measure perceptions of support from 3 sources: Family, Friends, and a Significant Other. Across many studies, the MSPSS has been shown to have good internal and test-retest reliability, good validity, and a fairly stable factorial structure.

### ***3.2.2.5 Body Mass Index (BMI)***

Body mass index is defined as the individual's body mass divided by the square of their height. The formulae universally used in medicine produce a unit of measure of kg/m<sup>2</sup>

## **4. Results**

The results of the quantitative and qualitative data analysis are presented below.

Section 4.1 reports the results of the nutritional sessions, 4.2 Leisure pass uptake, 4.3 Digital Awareness, 4.4 the qualitative analysis with implications discussed in 4.5 whilst 4.6 provides the quantitative results from the patient reported outcomes.

### **4.1 Nutritional Sessions (This section provided by the dietician)**

The data and analysis relating to the nutritional sessions undertaken in the Breeze programme has been provided by the dietician who delivered the sessions – her report is detailed below.

#### **4.1.1 Overview of Nutrition Session**

The current nutrition session included in the Breeze programme provides a two hour group update on diet in relation to long term health conditions.

The session outlines: a healthy balanced diet, how diet can be affected by managing a long term health condition, healthy weight loss and practical tips for managing day to day shopping and cooking. Interactive activities within the session include a healthy eating quiz.

An optional opportunity exists for all attendees to have their body measurements taken (weight, height, body mass index (BMI) and waist circumference). Personal body measurement data is provided to each attendee alongside the appropriate gender & ethnic BMI and waist circumference guidance.

Attendee feedback throughout eighteen months of the nutrition programme has been positive.

### 4.1.2 Telephone Consultation Service

If any attendees to the nutrition session wish a more in-depth dietary discussion an additional telephone consultation is also available. During the past eighteen months two attendees have requested a separate dietetic consultation.

The first of these consultations involved a lady who had been diagnosed with an IgE egg allergy in primary care and had only received minimal dietary guidance on how to manage her condition. Following a dietetic consultation her confidence increased in being able to increase the variety and nutritional adequacy of her diet.

The second consultation provided dietary advice for an attendee diagnosed with hyperthyroidism. The lady requested a telephone consultation after reading a variety of online nutrition articles on how to manage her condition. A personal dietetic consultation was able to provide up to date evidence based dietary advice in relation to ethnic minority groups.

### 4.1.3 Multi Culture Resource Provision

During the course of the past eighteen months the Breeze nutrition programme has delivered a number of sessions to Polish and South Asian ethnic minority groups.

South Asian groups have the same risk of Type 2 diabetes and other chronic health conditions at a lower BMI than the white European population. The nutrition session and dietary resources were adapted to reflect NICE guidance for health awareness interventions within South Asian groups (NICE 2013).

Polish group attendees received a Polish translated version of the Breeze dietary hand out with specific reference to Polish dietary staples. This was well received within the group, particularly as none of the participants had ever received any dietetic input.

### 4.1.4 BMI and Waist Circumference Data

Average uptake within the groups to have BMI & waist circumference calculated was 70%.

The following tables provide 'snapshot data' of Body Measurements from the nutrition sessions based on a selection of 20 participants. Table 6 provides an overall summary of the 20 participants, whilst Table 7 and Table 8 provide the snapshot data categorised by gender.

**Table 6: Summary (snapshot of 20 Participants)**

<b>BMI kg/m<sup>2</sup></b>
<b>20% Healthy (18.5-24.9)</b>
<b>50 % Overweight (25-29.9)</b>
<b>30 % Obese (&gt;30)</b>
<b>Waist Circumference Increased Risk</b>
<b>85% had increased or high risk</b>

As can be seen from the summary data in Table 6, 80% of the participants were categorised as either being overweight or obese, which increases their risk of developing diabetes and other serious health conditions.

When this data is shown by gender, 70% of males (Table 7) were overweight or obese, whilst this figure increased to 90% for females (Table 8).

**Table 7: Male Data (10 Participants)**

<b>BMI kg/m<sup>2</sup></b>
<b>30% (Healthy Weight)</b>
<b>50 % (Overweight)</b>
<b>20 % (Obese)</b>
<b>Waist Circumference &gt; 94cm</b>
<b>70% had increased or high risk</b>

**Table 8: Female Data (10 Participants)**

<b>BMI kg/m<sup>2</sup></b>
<b>10% (Healthy Weight)</b>
<b>50 % (Overweight)</b>
<b>40 % (Obese)</b>
<b>Waist Circumference &gt; 80cm</b>
<b>90% had increased or high risk</b>

#### 4.1.5 Discussion Of Breeze Body Measurement Data

In 2012, an estimated 62% of adults in England were overweight or obese (PHE 2014). Snapshot body composition data from the Breeze nutrition sessions has highlighted that 80% of people weighed were overweight or obese. The Health Survey for England in 2013 highlighted that obesity rates among adults with a long-term limiting illness or disability are likely to be significantly higher than those without. Breeze nutrition data reflects this finding (Gatineau et al 2013).

Having a raised BMI and waist circumference are well known major risk factors for non-communicable diseases (NCD) such as: cardiovascular diseases, type 2 diabetes; musculoskeletal disorders and some cancers (NICE 2012). In addition to the increased risk of developing an NCD being overweight or obese also increases a person’s vulnerability to depression, low self-esteem, poor body image, disordered eating behaviours and exercise avoidance (Puhl et al 2009). Evaluations from the nutrition session have indicated that more discussion around ‘food & mood’ would be useful. Food and Mood would certainly be an area worth including within any future Breeze nutrition programme.

#### 4.1.5.1 Low Income

Over the past eighteen months Job Centre referrals into the Breeze programme have increased significantly. This has consequently led to an increase in people attending the nutrition sessions who are living on a low income. Evaluations from the nutrition session have reflected this changing socio economic demographic in that there have been a number of requests for the session to discuss eating healthily on a budget.

In 2007 the Low Income Diet and Nutrition Survey (LIDNS) found low income households appear to have similar areas for dietary concern to that of the general population. The report also found that several of these areas were more profound within low income households i.e. average intake of fruit and vegetables were half of the recommended five portions a day, sugar and saturated fat intakes were above the (maximum) UK recommendations, dietary fibre intakes were below the (minimum) UK recommendations and a substantial proportion of men and women were overweight or obese (Nelson et al 2007). More recent public health statistics indicate that women living in low income households having the highest prevalence of obesity (PHE 2014).

Although people living within a low income household may have good understandings of what constitutes a healthy diet and indeed wish to adopt healthy changes themselves; their living conditions, cooking facilities and day-to-day cash flow can all make planning, budgeting, storing and preparing healthy meals difficult. In addition deprived neighbourhoods typically contain a denser supply of fast food outlets and have less availability of fresh vegetables and fruit (WHO 2014).

The above evaluation and considerations can potentially be used to further develop any future Breeze nutrition sessions that specifically meets the needs of those living within low income households with proposed interventions including:

##### • **Interactive Nutrition Session Focused on 'Eating Well for Less' To Include:**

Summary & Benefits of Healthy Eating (Including Food & Mood)  
Healthy Weight & Optional Weight, BMI & Waist Circumference  
Practical Tips for Eating Well for Less  
Cost & nutritional content of a 1-day, low budget healthy eating shopping basket v takeaway options  
Group Activity e.g. Interactive healthy eating ideas  
Printed Practical Resource Booklet to take home

##### • **Provision of a Practical Resource for all Attendees to Include:**

The Eatwell Plate  
Weight loss top tips  
Low cost healthy breakfast, lunch, dinner and snack ideas  
10 healthy low budget recipes  
A starter store cupboard for the healthy meal ideas & recipes  
A sample meal plan incorporating the healthy meal ideas & recipes  
Useful credible website links for eating well for less and weight loss e.g. love food hate waste

#### 4.1.6 Implications of the Dieticians findings

It is of particular note that a high proportion of participants requested information regarding low-cost solutions to nutritious meals, particularly as analysis of the demographic data confirms that 52%

of participants were categorized by their postcode as living in the 20% most deprived areas in the country and were likely to be claiming benefits.

All participants received specific advice concerning the nutritional impact of living with long-term health conditions and were given strategies to improve their diets in order to maintain their wellbeing, however, the use of the BMI calculations enabled the dietician to establish which participants required additional, nutritional advice.

Targeted advice was provided along with suggestions of recipes and snacks and included simple ways to monitor portion size and calories whilst the implications of different fats and oils were highlighted.

For participants classified as obese (or at risk of obesity) individual advice and information was provided.

The dietary management of patients with certain long-term conditions can be particularly challenging. For example, there is increasing recognition within the COPD literature of the relationship between obesity and COPD, although the exact nature of this association remains unknown (Franssen et al, 2008). Initial analysis of such data indicates that obesity may have a *protective* effect on COPD mortality, although further clarification in well-designed, clinical studies is required (Cao et al, 2012). In this group, it is common to see gradual weight reduction over the years, and this often seems to follow a pattern of weight loss during exacerbations followed by an inability to regain lost weight on recovery - being underweight, especially when this is linked to having less muscle, is independently associated with a poor prognosis in COPD (Anker et al, 2006). It is also associated with impaired pulmonary status, reduced diaphragmatic mass, lower exercise capacity and a higher mortality rate in people with COPD (Ferreira et al, 2000). Such nutritional problems highlight the need for early nutritional intervention so they can be supported to make dietary changes to improve their nutritional status as soon as possible.

## 4.2 Leisure Passes and Exercise

To date, 204 free 1-month leisure passes have been issued to participants and, in several cases, to their carers.

Since using the one-month pass and completing the Breeze programme, 59 participants are now members of the Invigor8 scheme and pay for their monthly membership.

The uptake of the monthly leisure subscription is indicative of sustained behavioural change which has occurred since attending Breeze - this is undoubtedly a key outcome for both the participant and the Breeze programme.

Mike Henderson, Manager at Europa Leisure Centre says:

*“This project has been extremely well received by both centre staff and Breeze Clients.*

*The Breeze project has introduced clients to the leisure centre, that during their normal day to day activities, would never had set foot and take part in any form of fitness activity – some of whom have joined and continue to use the centre following the Breeze Project.*

*Working alongside both John and Cath has been a pleasure and I look forward to continue our partnership on this and future ventures”*

### **4.3 Digital Health Awareness**

Digital health awareness sessions were included in the programme as a result of previous patient feedback that found awareness of online health support was generally very low, as was access to computers and the internet.

The majority of participants reported that they did not receive information regarding online resources and support from their GP or other health or social care professionals. In some instances, this had resulted in self-directed searching online – ‘the Dr Google effect’ – consequently much of the information that was found caused panic, stress and negative thoughts and behaviours – indeed, the risks associated with ill-informed online searching was highlighted by one participant who bought medication via an online sight, however the treatment was unlicensed in the UK.

The Breeze digital session demonstrated the availability of health information and how to be safe online when searching for support. It highlighted appropriate, good quality websites that were linked to specific conditions and condition management.

There is clearly a need to inform and educate participants and health professionals about key guidelines for self-management when searching for information, interventions, advice and guidance online.

### **4.4 Qualitative Results**

In order to gain an understanding of the participants experience of the Breeze programme and the meaning they attached to it, qualitative interviews were conducted with 10 participants. The interviews were taped and ranged in duration between twenty and thirty minutes. The interviews were semi-structured with the interviewer utilising a basic interview schedule to ensure that relevant topics were covered, such as benefits of attending the Breeze programme and any behaviour changes, such as engaging with exercise, that the participant had sustained. The questions were asked in no prescribed order, but were included at appropriate points within the dialogue. This allowed for flexibility within the interview and an opportunity for the participant to introduce aspects of the Breeze programme that held importance for them and enabled the interviewer to explore any of these in greater depth.

The sample size utilised for this evaluation was relatively small, however, because it was qualitative in nature, it provided rich data and theme saturation was achieved – in this instance, the usefulness of the data is a more important concern than the generalisability of the findings.

Analysis of the data revealed various themes that were concordant across the sample. That is not to say that every participant gave evidence of every theme, but that common patterns of meaning emerged both within and across the transcripts.

Six emergent themes were identified within the transcripts, as detailed in Table 6 below.

**Table 9: Themes emerging from qualitative data**

Pain	Confidence	Exercise/physical activity
Depression/Anxiety	Opportunities (Lack of)	Content of sessions
Sleep	Physical/Social Functioning	Participant Knowledge

#### 4.4.1 Pain



Of the participants interviewed, 70% stated they experienced frequent or constant levels of pain which had an impact on their quality of life and reduced their ability to maintain paid employment, socialise, exercise and sleep.

Individuals made reference to the psychological burden of constant pain, with comments including: *"it's just depressing... knowing if I do anything, I get pain"* (Male, 44) and *"makes me feel sad"* (Female, 54).

Whilst their GP's had prescribed standard pharmacological treatments, it is of note that none of the participants had been asked about, or indeed offered, other treatments to alleviate pain such as physical approaches including exercise, relaxation, massage or nerve stimulation, psychological approaches, such as hypnosis or cognitive behavioural training; diversionary therapy such as music or other activities and diet – this highlights that non-pharmacological approaches to pain are often absent in discussions between GPs and this patient group, resulting in patients being unaware of possible interventions that may reduce or help control their pain and so improve their quality of life.

Several patients (3/10) reported that in order to try and control their pain they self-medicated using alcohol. All acknowledged that this was not an ideal solution *"a drink helps me sleep"* (Female, 57)

#### 4.4.2 Depression/Anxiety

The data from the in-depth interviews revealed that depression was a common diagnosis amongst this cohort, with the majority (8/10) stating that they were currently being treated for depression, whilst half (5/10) were also experiencing symptoms of anxiety.

Comments such as, *"I feel so low sometimes, that I don't go out the house"* (Female, 60) were typical, and demonstrate the impact these symptoms have on their daily functioning.

Depression was certainly a regular theme amongst the majority of participants who attended the Breeze programme, yet it was interesting to note that participants would often say they had never spoken about it to other people prior to attending Breeze. There were many instances of participants allowing themselves to cry during a session, which invariably invoked a great deal of empathy and support from fellow participants, yet various comments suggest that this shared experience was beneficial: *"people in this room understand what it feels like ...what I'm going through"* (Male, 42).

Whilst there was understanding regarding the time constraints of GP appointments, participants generally felt unsupported by their GP when trying to discuss their depressive symptoms:

*"I just get given pills and little else" (Male, 60)*

*"They never have time, so what's the point?" (Female, 37)*

*"I got offered counselling, but didn't get the appoint until a year later" (Male, 42)*

*"I walked in to the GP's room and he looked up & said that I was his most expensive patient...it didn't make me feel very good, so low...it's not my fault that I have Parkinson's...I didn't ask for it and all that it brings with it...I won't see him any longer. I actually stopped taking my tablets & I self-medicate" (Female, 52).*

Participants also expressed a certain amount of surprise at finding themselves talking about their mental health in the Breeze group:

*"It's easy talking about here, because it feels safe...and like...well, I'm not the only one" (Female 37)*

Participants were appreciative of the opportunity to discuss their feelings, with one female commenting, *"nobody ever mentioned to me that I might feel low" (Male, 55).*

The Breeze programme clearly provided opportunities for participants to ask questions about their mental health, but more importantly, it provided a safe place for sensitive issues to be discussed: *"I feel better because I've actually just spoken to someone else who has Chronic fatigue ...I don't think I'm on my own with it".*

#### **4.4.3 Sleep**

Disturbed sleep and the resulting tiredness and fatigue were also highlighted, with all participants (10/10) stating that their sleep patterns were *"poor"* or *"very bad"*, with typical comments including:

*"I never get a proper night's sleep" (Male, 55)*

*"I've been taking sleeping tablets for 10 years...called Zopiclone...they don't really work anymore and I don't get more than 4 hours sleep with them" (male, 42)*

There was certainly evidence of day-night reversal as 6/10 participants made reference to being unable to sleep until very late at night, which would often result in them not working up until late morning or early afternoon the next day:

*"staying awake until the early hours...but then I don't get up until maybe 11" (Male, 55)*

*"I sometimes manage to sleep about 3am, but then I don't want to wake up" (Female, 52)*

There was some awareness of what constitutes good sleep hygiene, but none of the participants felt it was particularly helpful, with several (4/10) stating they *"preferred to watch telly" (Female, 52)* or *"just watch another film" (Male, 55).*

#### 4.4.4 Confidence

The majority of participants reported increased levels of confidence. Several stated that they believed their ability to cope with their health condition had improved which enabled them to manage everyday tasks and activities, which previously they had felt unable to undertake.

*"I feel like I have got some strategies and that it's ok to pace myself" (Male, 55)*

*"...having met others with health problems, I've learnt a lot from them too" (Female, 51)*

*"I feel like my life is on hold, but really I think it's up to me to try & get things going well again...some people here have managed to" (Male, 60)*

For these participants symptoms of depression were detrimental to their confidence and assertiveness, and seemed to contribute to problems in accessing help and support, from both social networks and their GP's and other healthcare providers. Indeed, from some participants there was a sense that their condition did not entitle them to GP time and resources and so deterred them from raising concerns about their emotional distress and depressive symptoms. Similar findings have been reported in studies of other health conditions (Rogers et al, 2001; Lester et al., 2005), yet results from a study by Pollock (2007, page 175) simply found that patients actually suppressed the expression of emotional distress during medical consultations because they were trying to 'maintain face' and conform to "the socially sanctioned role of the stoic, good and uncomplaining patient in order to retain the social esteem and good will of others".

The group support and shared learning which emerged through the Breeze programme were obviously of great benefit and had a positive impact:

*"I like coming here for the 2 hours...it feels safe" (Male, 44)*

*"I used to think I was alone, so it's been good to know other people feel like me" (Female, 37)*

#### 4.4.5 Employment/Opportunities (Lack of)

The theme of 'opportunities' was completely focused on the '**Lack of opportunities**' as participants generally believed their health conditions limited their options in terms of employment. There was a shared perception that employers were unable to be flexible with opportunities and that a job would always be offered to someone who was fit, rather than someone trying to manage a long-term health condition:

*"Who would employ me...I wouldn't" (Male, 55).*

*"I've not worked for 17 years...I was a builder, but my arthritis in my back is so bad, some days I can't sit, let alone walk" (Male, 42).*

The lack of opportunities did not just refer to paid employment, but also to access to support.

*"I couldn't find any type of support...sometimes I just wanted someone to talk to as I feel so isolated because of my health" (Female, 54).*

#### 4.4.6 Physical and Social Functioning

Participants reported their physical and social functional abilities were frequently challenged by the presence of various symptoms – including fatigue, pain, breathlessness, depression, anxiety and fatigue, however, several participants suggested that although they hadn't been out of their house for a while, attending the Breeze programme gave them a reason and a routine:

*"I don't go out the house except to come down here...it's an effort, but I do it"* (Male, 44)

*"I wouldn't normally go out one week to the next"* (Female, 60)

For others, they recognised that attending the Breeze programme had challenged them to leave the confines of their immediate locality:

*"I haven't been outside of Claughton for 10 years...I've been so isolated...I haven't been over to Liverpool for more than 30 years..."* (Female, 60)

Peoples' ability to perform everyday tasks was limited by their condition, as was their ability to enjoy an active social life:

*"I can't afford to go out...since I left my job and been on benefits I have no spare money"* (Male, 44)

For many participants physical activities and exertion were difficult

Being unable to perform everyday activities impacted on many of the participants' ability to participate in an active social life, which in turn led to feelings of isolation and loneliness:

*"I used to play football with the lads but I can't do it now, so I don't even go and watch and have a drink with them like I used to as I find it difficult to be reminded of what I used to be able to do"* (Male, 42)

*"I don't see anyone...it's very lonely being me"* (Female, 37)

#### 4.4.7 Exercise and Physical Activity

At the time of commencing Breeze, the majority of participants were not undertaking any regular, physical activity. Gentle exercise was certainly beneficial to participants who engaged with it. It is possible that the benefits stem from the social contact and interaction as much as the physical activity.

#### 4.4.8 Content of Breeze Programme Sessions

Overall, all the sessions within the Breeze programme were viewed as valuable - with comments including "valuable", "interesting" and "relevant", with participants stating that the variety of topics covered was one of the strengths of the programme. The opportunity in each session for participants to ask questions was perceived to be very helpful.

*"why don't the GP's know about this stuff...all I ever get is pills"* (Male, 55)

*"each week is so different...but it's all useful"* (Female, 54)

*“I’d never heard about the Livewell Programme before I came on Breeze...the NHS should make people aware” (Female, 57)*

*“...I think I can reach my goals now – I never did before as it seemed to difficult” (Female, 52)*

*“the dietician wasn’t what I thought...didn’t bang on about going on a diet...really down to earth & gave me loads of tips” (Male, 55)*

*“the information is easy to understand...I’ve never thought about the palm of my hand being equal to a portion...so simple” (Male, 42)*

The ‘Austerity Measures and Benefits Awareness’ session was very well received and enabled participants to learn about some of the significant changes to the Welfare and Benefits system and how these may impact on their health and social care and also provided them with an awareness of benefits and support they may be able to apply for to help them manage their long term condition.

*“the benefits session was really helpful ...great ...he made me realise I wasn’t claiming the correct benefit and now I’m £200 better off which has helped me with my debts and I feel less stressed and I’ve taken my head out of the sand and feel like I will have some headspace and be able to get myself back on track ...” (Male, 55)*

*“Information on benefits, particularly the Bedroom Tax was excellent...helpful” (Male, 44)*

In 2013 Health Junction delivered programmes to patients with chronic obstructive pulmonary disorder (COPD) and feedback suggested that participants were keen to learn more about medications and how their local pharmacist could support them, so this Breeze Long Term Conditions Programme was developed to include a ‘You & Your Pharmacist’ session. It is of particular interest to note that this session was highly rated and received numerous positive comments:

*“..I didn’t know a pharmacist could have an appointment with you...” (Male, 42)*

*“I had never heard about a medication review before...I’ve booked one for next week” (Female, 54)*

*“since the pharmacist told us about electronic prescription ordering, I’ve tried it & it works! I do it once a month now so I don’t have to go to see my GP” (Male, 55)*

The ‘Know your Medication’ session was particularly useful in raising awareness of a pharmacist’s wider role in healthcare, particularly as many were unaware that they could access their High Street pharmacist for advice: *“I never knew you could have an appointment with a pharmacist at the chemist”*. In subsequent sessions several participants revealed that they had indeed visited their local pharmacist to obtain advice, with one female participant commenting *“I went to see the pharmacist and so I didn’t need to see the doctor and waste her time”*.

#### **4.4.9 Knowledge**

As would be expected, the participants’ levels of knowledge concerning their disease and its management, community support, benefits of physical activity etc. varied, so Breeze sessions held

different meaning for individuals. However, the majority of participants acknowledged that Breeze provided a useful learning forum:

*“I found out a few new things which will be useful”* (Female, 52)

*“Would be good if someone told you about some of this stuff when you’re first told about your condition...when you’re first diagnosed”* (Male, 55)

As much as the patient learning sessions provided a wealth of knowledge, it is clear the participants learnt a great deal from each other – this shared learning undoubtedly contributed to some improvement in their confidence levels and ability to self-manage their condition:

#### **4.4.10 The Breeze Programme**

Participants observations and comments regarding the Breeze programme were positive and complimentary and included: *“really useful stuff”* ; *“relaxed”* ; *“not scary like I thought it was going to be”*; *“learnt so much”*; *“like that we get a chance to chat to other people as it made me realise I’m not the only one with my condition”*.

#### **4.4.11 Moving Forwards/The Future**

Participants’ views regarding their future after completing the Breeze programme generally focused on utilizing the skills they had learnt and improving the levels of exercise they engaged in. They were also concerned with seeking out opportunities to increase their education, coping skills and employability.

It was of note that some participants were keen to maintain the social network they had developed whilst attending the Breeze course.

Participants were fairly unanimous in wishing that they could continue to meet up:

*“We’ve been meeting up for a coffee over the last few weeks”* (Female, 57)

*“The three of us have just been to the gym together & used our free Breeze leisure pass”* (Female, 51)

### **4.5 Implications of Qualitative Findings**

The results of the qualitative interviews have clearly indicated that, whilst the physical impact of living with a long term health condition/s are difficult to manage, the impact on patients’ health-related quality of life is equally detrimental, with symptoms resulting in impaired physical functioning, occupational capability and a severe negative affect on psychosocial domains.

An important finding to emerge from this evaluation was that some problems, for example depression and lack of social support, are not routinely discussed either in GP’s surgeries or outpatient clinics, with the consequence that individuals are left feeling isolated and lacking support.

In an effort to address the issue of social isolation, practitioners should aim to identify loneliness and social isolation in assessments before it becomes chronic and affects mental health, whilst strategic and planning priorities for the future need to include an awareness of the widespread impact of loneliness and isolation in society, with commissioners considering interventions aimed at alleviating

or preventing chronic loneliness, perhaps through the use of peer mentors that encourage face-to-face contact in communities as they could play an important role.

Breeze provides evidence that the community-based, group format of patient education combined with various psychosocial elements supports and encourages self-management techniques and improves people's confidence. The Breeze groups allowed participants to provide, as well as receive help, making them feel in control of their health, clearly, supporting one and other impacted on self-confidence.

One of the interesting findings to emerge was the behavioural change which was evident amongst participants, in particular the desire to continue with some form of physical intervention. Given that the mean age of the participants was 51 and the majority were not engaging in any form of physical exercise or activity at the point of commencing the Breeze programme, this is an important result. Once again, the group format played a major role in creating a supportive and encouraging environment in which this could occur.

Health is the largest predictor of movement back into employment so tackling the health needs of those with long-term illness or disability is important.

Every year 300,000 people are estimated to stop work and become reliant upon health-related state benefits. As the population ages and the average retirement age increases, supporting people with long-term conditions in the workplace will become increasingly important. It is estimated that approximately 21 million people of working-age will have at least 1 long-term condition by 2030 (Healthy work: evidence into action The Work Foundation).

## 4.6 Quantitative Results

As detailed in Section 3.2.2, participants completed baseline questionnaires at the start of the Breeze programme (session 1) and at end of programme (session 6). The questionnaires consisted of a demographic sheet and four validated, patient reported outcome measures - The Patient Health questionnaire (PHQ-9), Self-Efficacy for Managing Chronic Diseases (SEM-CD), Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) and The Multidimensional Scale of Perceived Social Support (MSPSS).

**Note: The quantitative data analysis was conducted by Dr David Babajide Oni who is currently completing training to become an Accident and Emergency Consultant. He has a particular interest in the role of self-efficacy with long-term conditions and has used the data for his dissertation, which he recently submitted as part requirement for his MSc in Economic Evaluation of Healthcare at City University, London.**

### 4.6.1 Data Analysis

The required data was exported from the comprehensive Breeze LTC programme dataset and streamlined to the most appropriate data for entry into the data editor of STATA, STATA Corp LP version 13, for further analysis.

The group of 163 participants were divided into two groups: those that had completed the entire six week Breeze<sup>®</sup> LTC programme were deemed to be in the "treated" group and those participants

who had not completed the entire programme, but who had completed the pre-programme SE-MCD questionnaire were deemed to be in the “untreated” group.

Economic results are presented as coefficient with the standard error (SD Error), confidence intervals at 95% (CI), degrees of freedom (df) and probability ( $P > z/t$ ,  $\Pr(|T| > |z/t|)$ ,  $P < z/t$ ).

#### **4.6.1.2 T-test**

An independent t-test was used for the analysis on the 163 participants in the Breeze<sup>®</sup> LTC programme to determine whether there was a difference in the demographic features between the treated (1) and untreated (0) population prior to starting the Breeze<sup>®</sup> LTC programme. This was done to check whether there was any statistically significant selection bias that may affect the outcome of the further analysis between the two groups.

#### **4.6.1.3 Difference in difference models**

The difference in difference analysis (Villa 2015) is used to test the statistical significance between two or more groups following an intervention or treatment. Observations are made for two groups over a time period(s) (in this case treated and untreated over a six week period). One group (treated) is exposed to a treatment (in this case the Breeze LTC programme) over the set time period. The second group (untreated) is not exposed to the treatment at any point during the set time period. The average gain or loss of the first group (treated) is then subtracted from the average of the second group (untreated) to find the average effect of the intervention/ treatment and whether or not it is statistically significant.

After using a standard model for difference in difference analysis, the model will be run controlling for the covariates to demonstrate any statistical significance and then run using bootstrapping to improve the reliability of the model.

#### **4.6.1.4 Inverse probability weighted regression adjustment ATET**

The Inverse probability weighted regression adjustment (IPWRA) is a double-robust estimator; it will allow an estimation to be made of what the treatment effect of the programme may be on a different population, excluding confounding factors and test the statistical significance of the effect. An estimation of the average treatment on the treated was calculated. *Nearest-neighbour matching ATET*

If there is potential bias in the selection of the treated and untreated group, matching participants from each group with a set of characteristics can help to improve the accuracy of the estimate of the treatment effect for any confounding variables that the other models have not taken into account. The variables chosen will be those that have the smallest/ most negative coefficient from the difference in difference models.

#### **4.6.1.5 Propensity-score matching ATET**

If there is potential bias in the selection of the treated and untreated group, matching participants from each group on the estimated propensity score i.e. the probability of each participant to complete the programme, can help to improve the accuracy of the estimate of the treatment effect for any confounding variables that the other models have not taken into account (Rosenbaum & Rubin, 1983; Stone et al, 1995)..

#### 4.6.1.6 Sensitivity analysis

The sensitivity of the difference in difference model was analysed using an outcome variable that should not be affected by the treatment, in this case we used age and whether the participant is in receipt of benefits. The post course SE-MCD was taken shortly after the final session and presumed to not have allowed sufficient time for the participant to have aged significantly or have stopped their benefits if they were already in receipt of them.

#### 4.6.2 Patient Health Questionnaire (PHQ-9) Results

The difference in difference model with covariates was used to test the statistical significance between the treated and untreated groups following Breeze<sup>®</sup> LTC programme. The difference in difference with covariates model demonstrates an increase in the PHQ score of the treated group of -3.00 (SE  $\pm$  1.47,  $t = -2.03$ ,  $P > |t| = 0.043$ ), which is statistically significant at the 0.5% level.

**IPWRA (ATET)** - The average loss in PHQ score from the programme for those participants who completed the programme is -3.33 ( $\pm$  SD Error 0.80, CI -4.19 - -1.77,  $z = -4.19$ ,  $P > z 0.00$ ), therefore there is a statistically significant decrease in the treated participants PHQ score at the 0.5% level.

#### 4.6.3 Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) Results

The difference in difference model with covariates was used to test the statistical significance between the treated and untreated groups following Breeze<sup>®</sup> LTC programme. The difference in difference with covariates model demonstrates an increase in the WEMWBS score of the treated group of 3.952 (SE  $\pm$  2.56,  $t = 1.54$ ,  $P > |t| = 0.124$ , which is statistically significant at the 5% level.

**IPWRA (ATET)** - The average gain in WEMWBS score from the programme for those participants who completed the programme is 4.01 ( $\pm$  SD Error 1.26, CI 1.53 - 6.48,  $z = 3.18$ ,  $P > z 0.01$ ), therefore there is a statistically significant increase in the treated participants WEMWBS score at the 0.5% level.

#### 4.6.4 Multiple Dimension of Perceived Social Support Scale (MSPSS) Results

The difference in difference model with covariates was used to test the statistical significance between the treated and untreated groups following Breeze<sup>®</sup> LTC programme. The difference in difference with covariates model demonstrates an increase in the MD Scale score of the treated group of 0.88 (SE  $\pm$  4.79,  $t = 0.18$ ,  $P > |t| = 0.85$ ), which is statistically significant at the 1% level.

**IPWRA (ATET)** - The average gain in MD scale score from the programme for those participants who completed the programme is 2.57 ( $\pm$  SD Error 2.56, CI -2.45 - 7.59,  $z = 1.00$ ,  $P > z 0.32$ ), therefore there is no statistically significant increase in the treated participants MD scale score.

#### 4.6.5 Self-efficacy for managing Chronic Diseases Scale (SE-MCD) Results

The independent t-test was used to analyse the 163 participants of the Breeze LTC programme to determine whether there was a statistically significant difference in the SE-MCD scores between the treated (1) and untreated (0) groups prior to starting the Breeze LTC programme.

The results demonstrate that there was no statistically significant difference in the pre-programme SE-MCD scores between the treated ( $14.76 \pm 0.75$ , CI 13.26 - 16.25) and the untreated groups ( $13.47 \pm 0.71$ , CI 12.07 - 14.88),  $t(161) = -1.24$ ,  $\Pr(|T| > |t|) = 0.22$ .

#### *Difference in difference models*

The difference in difference model without accounting for covariates was used to test the statistical significance between the treated and untreated groups following Breeze LTC programme. The difference in difference model demonstrates an increase in the SE-MCD score of the treated group of 2.72 (SE  $\pm$  1.44,  $t= 1.88$ ,  $P>|t| = 0.06$ ), which is statistically significant at the 1% level, with an R-squared value of 60% (i.e. 60% of the variable variation can be explained by the model).

#### *Difference in difference with covariates model*

The difference in difference model with covariates was used to test the statistical significance between the treated and untreated groups following Breeze<sup>®</sup> LTC programme. The difference in difference with covariates model demonstrates an increase in the SE-MCD score of the treated group of 2.74 (SE  $\pm$  1.52,  $t= 1.81$ ,  $P>|t| = 0.072$ ), which is statistically significant at the 1% level, with an R-squared value of 80% (i.e. 80% of the variable variation can be explained by the model).

#### *Difference in difference with covariates model with individual reports*

The data reveals that the only statistically significant covariate affecting the model is that of participants who were categorised as being cared for by others, the other variables appear not be statistically significantly affecting this model. This variable demonstrates an increase in the SE-MCD score of the treated group of 2.08 (SE  $\pm$  1.00),  $t= 2.08$ ,  $P>|t| = 0.039$ ), which is statistically significant at the 1% level.

#### *Difference in difference model with covariates and bootstrapping*

The difference in difference with covariates and bootstrapping (rep 100) model demonstrates an increase in the SE-MCD score of the treated group of 2.74 (SE  $\pm$  1.37,  $t= 2.00$ ,  $P>|t| = 0.046$ ), which is statistically significant at the 0.5% level, with an R-squared value of 81% (i.e. 81% of the variable variation can be explained by the model).

#### *Inverse probability weighted regression adjustment (ATET)*

The average gain in SE-MCD score from the programme for those participants who completed the programme is 2.55 ( $\pm$  SD Error 0.80, CI 0.97 - 4.12,  $z = 3.16$ ,  $P>z 0.00$ ), therefore there is a statistically significant increase in the treated participants SE-MCD score at the 0.5% level.

#### *Nearest-neighbour matching (ATET)*

The average gain in SE-MCD score from the programme for those participants who completed the programme and who were nearest neighbour matched with participants that did not complete the programme (matched by number of long term conditions, higher education status and whether they were a single parent or not) is 2.79 ( $\pm$  SD Error 0.77, CI 1.28 - 4.29,  $z = 3.63$ ,  $P>z 0.00$ ), therefore there is a statistically significant increase in the nearest-neighbour matched treated participants SE-MCD score at the 0.5% level.

#### *Propensity-score matching (ATET)*

The average gain in SE-MCD score from the programme for those participants who completed the programme is 2.42 ( $\pm$  SD Error 0.57, CI 1.30 - 3.55,  $z = 4.23$ ,  $P>z 0.00$ ), therefore there is a statistically

significant increase in the treated participants SE-MCD score at the 0.5% level even adjusting for the estimated propensity score

### *Sensitivity analysis*

This was performed using the two variables: the age of the participant and whether the participants were in receipt of benefits at the time of the programme. Neither of these variables were deemed to have realistically been able to change significantly during the six week programme.

The difference in difference estimate for both variables is 0.00 ( $\pm$  SD Error 0.09,  $t = 0.00$   $P > |t| = 0.00$ ) meaning that there is no treatment effect on either the age or whether a participant is in receipt of benefits by the programme, thus suggesting that the model is not overtly sensitive to changes made in the profile of the covariates.

Using a basic difference in difference model, the results suggested that there was a statistically significant (1% level) increase in the SE-MCD score (and therefore an increase in the self-efficacy of the participants) for those participants that had undergone on average of 2.7 points ( $P > |t| = 0.06$ ). The difference in difference model was then strengthened using covariates, bootstrapping and individual reports for the covariates (Bertrand, Duflo et al. 2004), and the model consistently determined that the Breeze LTC programme demonstrated a statistically significant (1% level) increase in the SE-MCD score of 2.7 points. To confirm the robust nature of the results further statistical analysis was performed using inverse weighted probability regression adjustment (ATET), nearest-neighbour matching (ATET) and propensity-score matching (ATET). Both of these models confirmed that there was a statistically significant (0.5% level) increase in the SE-MCD score for the treatment group of 2.4 to 2.8. Finally the model was analyzed to demonstrate that the treatment effect of the programme on the treated group was not an anomaly due to unknown confounding factors, using both age and the receipt of benefits by the participants, the analysis demonstrated that there was no treatment effect on either the age nor the receipt of benefits within the six week duration of the programme, confirming prior findings.

Analysis of the data from the Breeze LTC programme demonstrates a statistically significant increase in the SE-MCD score (and hence the self-efficacy of the participants (Freund, Gensichen et al. 2013) following completion by participants of the programme even when adjusted for confounding factors. The study seems to suggest that the most significant variables in increasing the SE-MCD are the participant being cared for and their gender, however this will require further analysis.

## **4.7 Implications of Quantitative Results**

Several key points emerged from the analysis of both the demographic data and from the Patient Reported Outcomes (PRO's).

### **4.7.1 Demographic Data**

The Mean age of the participants was 51 – this is noteworthy because when considered in conjunction with data concerning their employment status, only 9.5% were employed. Whilst 18% of participants were retired, 82% were of working age, although 80% were claiming benefits – the majority of which were health-related benefits. Whilst a percentage of participants were clearly

never going to be fit to work (estimated to be 10%), this data highlights the economic impact and economic burden associated with long-term health conditions.

An unexpected result was that 64% of participants had no formal educational qualifications. This obviously has enormous implications in terms of how health literature and even health interventions, are designed, particularly in the light of a recent study that explored the level of health literacy among chronic disease patients in the Netherlands which found that a higher age, lower education, lower income, multi-morbidity and/or functional limitations were associated with lower levels of health literacy (Heijmans et al, 2015; Journal Patient Education & counselling).

#### **4.7.2 Symptoms of Depression (PHQ-9)**

Statistically significant improvements were reported in the PHQ-9 scores for those participants who completed the Breeze programme. This suggests that over the course of the six weeks of the programme, participants experienced improvements in their symptoms of depression including, sleep, appetite, fatigue, concentration and suicide ideation.

An improvement in depressive symptoms clearly has benefits for quality of life, but may have a greater reach as a recent study found that depressive symptoms were associated with increased BMI in women (Gretchen et al, 2014).

#### **4.7.3 Mental Wellbeing (WEMWBS)**

Participants reported improvements in their mental wellbeing, with a statistically significant increase in their pre and post Breeze programme scores noted. This finding indicates that participants were feeling more optimistic, confident, useful, relaxed, interested in others, had more energy, and were dealing with problems better.

#### **4.7.4 Perceived Social Support (MPSS)**

The statistically significant increase found between the pre and post measures for social support implies that participants were experiencing a greater sense of support from their family and friends and were feeling increasing levels of social engagement.

#### **4.7.5 Self-Efficacy (SE-MCD)**

Completion of the Breeze programme was associated with statistically significant improvements in self-efficacy which suggests that participants were feeling greater confidence in their ability to exert control over their own motivation, behaviour, and social environment.

## **5. Breeze - What Went Well and What Didn't**

### **5.1 What Worked Well**

#### **5.1.1 Completion Rate**

The completion rate for the Breeze programme, which we based on participants having completed all 6 sessions, was 59.80% - this compares very favourably against those of two other UK self-management programmes, which reported completion rates of 60% and 51% respectively (Kennedy et al., 2007; Griffiths et al, 2005).

### **5.1.2 Venue (Europa Leisure Centre)**

Participants enjoyed the community-based setting as it was non-clinical and perceived to be non-threatening. For many, it was the first time they had visited the leisure centre and therefore Breeze introduced them to a new resource.

### **5.1.3 Referral Process**

A simple referral process was in place and proved key to encouraging Health Junction's partners to refer participants in to the Breeze programme.

### **5.1.4 Stakeholder Engagement**

Health Junction invested a great deal of time in developing appropriate referral pathways for Breeze. This involved establishing Service Level Agreements with partners and training their staff about long-term health conditions, the inclusion and exclusion criteria for Breeze and potential benefits that result from joined-up working. This was particularly successful with Job Centre Plus and the GP Health Trainers.

Following various requests for feedback concerning participants experience of long-term conditions, Health Junction has provided feedback from the Breeze programme into the Wirral Joint Strategic Needs Assessment (JSNA), three Steering Groups - Department Work and Pensions (DWP), Job Centre Plus (JCP) and Wirral Council (WMNC) - for the national Transformational Challenge Award Fund and also the external evaluation on patient's views of Wirral Clinical Commissioning Group.

### **5.1.5 Group Format of Breeze**

Participants were very vocal in their positive experience of being in a group setting, rather than being in a 1:1 scenario.

They suggested that the group setting enabled them to feel safe, which facilitated their feelings of empowerment and enabled them to engage in learning, share their own coping strategies, ask questions, discuss issues and plan.

Social isolation was one of the key concerns for participants as many felt their health conditions, often combined with being unemployed, resulted in them being disengaged from society. Many participants reported that they had limited social networks, didn't engage in socially-orientated hobbies, and had very little civic or cultural engagement with society, so they found the group format of Breeze served to reduce their feelings of social isolation and helped them engage with people and, indeed, life in a way that they hadn't been able to for a long time.

### **5.1.6 Peer Support**

One major theme to emerge was that of the benefit of peer support throughout the Breeze programme. A number of participants requested if they could use their skills, knowledge and experience to support others – indeed several of them returned to another Breeze programme and offered support and encouragement to other participants. This need presents Health Junction with a unique opportunity to develop Peer Educators/Support roles within the Breeze programme which would support shared learning, respect and mutual empowerment.

### **5.1.7 Breeze sessions**

Participants felt that the combination of sessions delivered on the Breeze course - which included mental health and wellbeing, First Aid, digital health resources, diet, effective use of the pharmacy

and pharmacist etc. - were appropriate and relevant, particularly as many had little or no awareness of the potential role and impact each could have on self-management of health conditions.

Participant feedback and discussions concerning content of the Breeze programme indicated that several additional sessions would be welcome, in particular, Pain Management, Sleep Hygiene and Supported Action Planning were identified as areas where participants felt appropriate information would further support their ability to self-manage symptoms.

## 5.2 Breeze - What Did Not Work Well

### 5.2.1 Participants Barriers

Some participants lacked motivation to attend every session however given the demographic of the groups and high levels of depression and social isolation, this was not unexpected.

### 5.2.2 Initial Referrals

GPs welcomed Initial discussions however due to time and resources there were slow take up of the programme. Going forwards discussions directly with the CCG to identify sites to support the Breeze programme would work to increase GP referrals.

## 6. Conclusions

It is clear that individuals with a chronic illness experience a permanent alteration in their way of life and a reappraisal of functional abilities that introduces significant psychosocial stressors and adaptive demands. Such illness-induced disruptions to lifestyle, relationships, employment, activities and interests has been shown to compromise psychosocial wellbeing and contribute to emotional distress in chronic disease.

There is now considerable evidence that individual and group interventions that emphasize patient empowerment and the acquisition of self-management skills are effective in diabetes, asthma, and other chronic conditions (Wagner et al, 2001). Most of these interventions are relatively brief and conducted outside of medical practice. They generally emphasize the patient's crucial role in maintaining health and function and the importance of setting goals, establishing action plans, identifying barriers, and obtaining social support.

The evidence provided by the Breeze programme, certainly supports the argument that well designed, co-produced, community-based programmes encourage, support and empower individuals to self-manage a long term condition.

It is clear that a long term condition presents a common set of challenges to the sufferers and their families—dealing with symptoms, disability, emotional impacts, complex medication regimens, difficult lifestyle adjustments, and obtaining helpful medical care. Many chronically ill persons wrestle with the physical, psychological, and social demands of their illness without much help or support from medical care. More often, the help received, while well intentioned, fails to meet persons' needs to be effective self-managers of their illness, however, Breeze addressed this gap and, through co-production with patients, has now evolved and developed to become an evidence-based, patient-driven programme.

Participant feedback has identified that there is clearly a lack of support for people who are managing multiple health conditions. Whilst participants acknowledged and understood the vital role that secondary care plays in diagnosing and treating conditions, they pinpointed two discernible

opportunities where support would be beneficial in terms of enhancing their abilities and confidence to self-manage health conditions.

The first opportunity occurs at the point of diagnosis, particularly where a GP is giving results – participants received varying levels and quality of patient education about their specific condition, indeed, for some, they were unable to understand the information, for others, they were in a state of anxiety so were unable to absorb the information being given.

A second opportunity exists - that of providing ongoing support, however, this was not envisaged as being clinical support, but rather support available at a community level. Participants felt that their ability to self-manage would be enhanced and developed if they were able to have contact with others who manage long-term health conditions.

Participants suggested that the Breeze programme fulfilled part of their healthcare needs as the broad approach to patient education helped support their self-management skills.

## 7. Recommendations

Based on evidence from the Breeze programme, it is clear that it provides an appropriate and effective intervention which impacts on the self-management of long-term condition/s, therefore there is a need to continue to develop and deliver this innovative approach.

The Breeze long term condition programme should continue to be informed by the Public Health Outcomes Framework, QOF (Quality Outcomes Framework) and NICE Guidelines.

There is an identified need to develop a Peer Mentor role for Breeze participants in order to develop shared learning and understanding between patients, clinicians, carers and families. This would support the national Recovery Agenda that emphasizes patients are assets and should be involved in the design and delivery of interventions which may lead to cost benefits through reductions of clinical time, shared experience and patient outcomes.

The development of referral pathways into Breeze has been established and needs to be extended to include secondary care and social care.

In order to further reduce health inequalities and improve patient access to health information and interventions, which they are currently unaware of, and/or unable to access, the Breeze digital inclusion programme needs to be expanded and developed.

Following completion of a six-week 'Breeze' programme, the need for ongoing support and contact was identified by patients. It is suggested that Breeze could offer an ongoing programme, such as a low intensity intervention as a way for patients to sustain behavioural change and self-management.

Finally, it is highly recommended that Breeze continues to work in conjunction with Public Health, Wirral Borough Council, Wirral NHS and the Department of Work and Pensions (DWP) to build on the good practice that has emerged so far.

## 8. And Finally... how has PHOF funding helped?

Through its support of the Breeze programme, the PHOF funding has made a real difference to people living with one or more long term conditions, but in particular, for those living in the bottom 20% of the deprived areas in the UK.

Furthermore, PHOF Funding has enabled the Breeze programme to clearly evidence how social enterprises can create choice for both patients and commissioners, add value and support the current health and social care systems to reduce pressures on services and improve outcomes.

The PHOF funding has enabled Health Junction to develop an entirely patient-driven programme which has reached 335 Wirral residents. The evidence provided by the Breeze programme clearly demonstrates that co-designed programmes can offer increased community-based support for people with long-term health conditions, leading to improvements in self-efficacy, mental wellbeing social isolation and engagement with exercise. These improvements combine to facilitate, enhance and develop patient self-management of both physical and mental health conditions whilst addressing the wider determinants of health.

The support given by PHOF has enabled Breeze to demonstrate that a biopsychosocial model of care can be used to enhance and extend traditional medical models and pathways, whilst offering a cost-effective way to increase support for chronic conditions within local communities.