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### Purpose

Persistent lower back pain (PLBP) is the leading cause of disability worldwide. Both disability and costs attributed to PLBP are projected to increase in the coming decades (Hartvigsen et al, 2018). Research has now established that for people with PLBP, their cognitions and coping mechanisms play a bigger role in the progression from acute to persistent pain than physical features (Wertli et al, 2014). Clinical guidance (NICE, 2016) recommends that service users (SUs) who are not responding to routine management or have significant psychosocial obstacles to recovery, should be considered for a combined physical and psychological programme (CPPP). However, there are no clear current guidelines on the best format for a CPPP. The Back in Action (BiA) programme was introduced in Cardiff and Vale UHB in 2012 to address the needs of these SUs. The 58 hour intensive intervention consists of psycho-education, interactive group sessions and a graded exercise programme. It is delivered by an multidisciplinary team (MDT) in nine days over three weeks at community based venues. This service evaluation aims to assess the effectiveness of the BiA format on SUs PLBP related cognitions and function and is it a robust format that could be replicated in other health boards.

### Conclusions

The table demonstrates that the BiA programme achieved consistent results over four consecutive years, significantly reducing Kinesiophobia, improving self-efficacy and increasing physical functionality in PLBP SUs. Below, the graph demonstrates the high percentage of SUs making a CSD in each outcome measure, across four consecutive years. A weakness of this evaluation is the loss of data from the 10 SUs that failed to complete the intervention and the number of incomplete data sets, which may have skewed the results. In the future, following up those that failed to complete the programme and capturing missing scores would allow for more accurate results and interpretation.

### Method

All BiA SUs complete six psychometric self-reported outcome measures at initial assessment, pre-programme and post-programme, and three physical outcome measures pre and post programme.

**Pain Related Fear**

- Tampa scale of kinesiophobia (TSK)
- Patient Catastrophizing Scale (PCS-EN)

**Pain Self Efficacy**

- Patient Self Efficacy Questionnaire (PSEQ)

**Mood**

- Generalised Anxiety Disorder (GAD-7)
- Patient Health Questionnaire (PHQ-9)

**Impact on Daily Living**

- Oswestry Disability Index (ODI)

**Function**

- 6 Minute Walk (6MW)
- 5 Repetition Sit to Stand (5RSTS)
- Fingertip to Floor (FTF)

Data was sampled from all SUs that completed the intensive component of the BiA programme between January 2015 and December 2018. Any incomplete data sets excluded from the analysis. The mean change was calculated between initial and post programme scores for the TSK and PSEQ, and between pre and post programme for the 5RSTS and 6MW.

### BiA Results 2015-2018

Outcome Measure	CSD	Mean Change Pre to Post				
		AVG	2015	2016	2017	2018
TAMPA	9.2	10.2	8.8	10.5	11.7	9.7
PSEQ	11	15.8	14.7	16.4	18.2	13.9
5RSTS	4.1s	7.8	7.0	7.0	6.8	8.3
6MW	54m	103.7	92.0	107.6	109.8	105.3

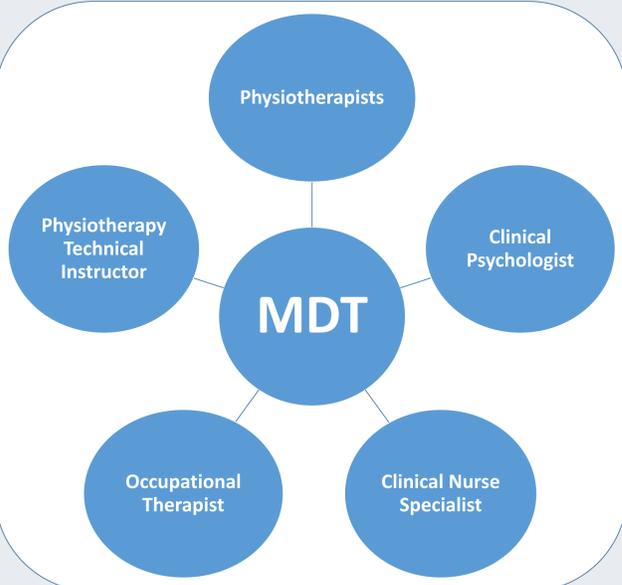
### Results

A total of 277 SUs started the intensive intervention with 10 failing to complete and 19 with incomplete data sets. Therefore, analysis was conducted on 248 SUs, with a mean age of 47.8 years (Range 22-78), comprising of 141 females and 107 males. All four outcome measures demonstrated a Clinically Significant Difference (CSD) in mean scores from 2015 to 2018. Mean scores in TSK reduced by 10.2 (CSD=9.2), the PSEQ increased by 15.8 (CSD=11), the 5RSTS reduced by 7.8s (CSD=4.1s) and the 6MW increased by 103.7m (CSD=54m). The table above demonstrates the mean outcomes for each of the four years.

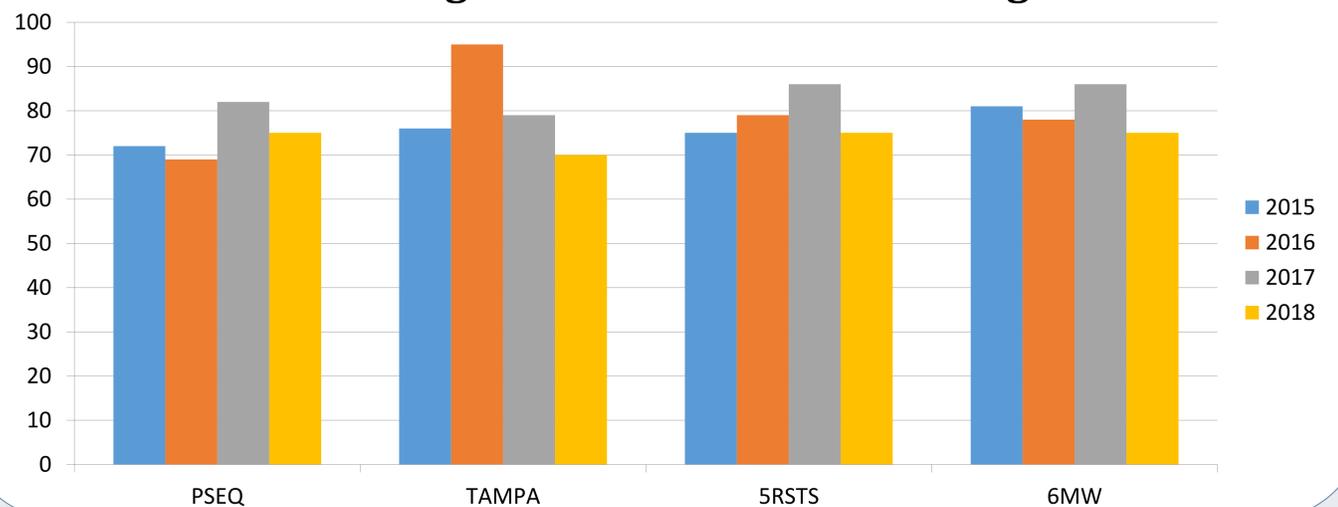
### Implications

The format used by BiA delivers consistent clinically significant changes in an increasingly complex group of PLBP SUs presenting with psychosocial obstacles to recovery. Despite the increasing prevalence, there are currently no detailed guidelines for the delivery of CPPPs.

**The format used by the BiA programme could be replicated across other health boards to address a common gap in the spinal pathway, with confidence in its outcomes, cost effectiveness and prudence.**



### The Percentage of Service Users Achieving a CSD



**Between 2015 and 2018, 99.5% of SUs achieved one or more CSD.**

**Between 2016 and 2018, 83% of SUs demonstrated a CSD in 5 or more of the 9 outcome measures collected.**

### Acknowledgements

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