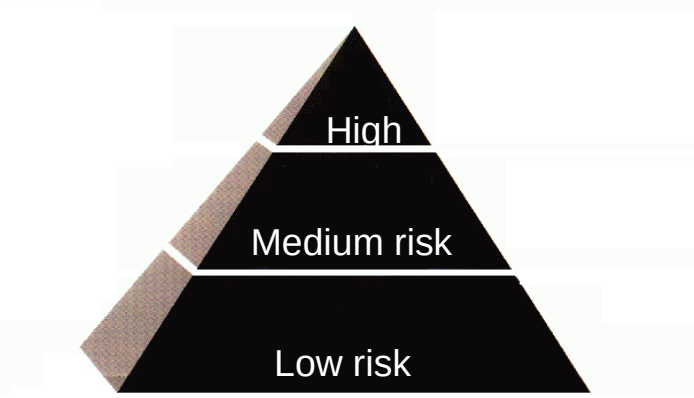
Staffordshire and Stoke on Trent Partnership NHS Trust

A Stratified Approach to the Treatment of Low Back Pain



By
Hilary Bradbury
Professional Lead for Physiotherapy

Oct 2012 – February 13

Facilitated by
Clinical Audit Facilitation Service

Contents

Introduction

Physiotherapy clinical teams from North Staffordshire took part in the **STarT Back Trial** a new approach to managing back pain, the results of which have recently been published in The Lancet. Carried out by the ARUK Primary Care Centre at Keele, the study has found that the **STarT Back** approach resulted in significantly reduced levels of pain and distress; patients took less time off work, the new treatment approach cost less than current care (e.g. reduced follow ups for low risk patients, reduced secondary care referrals, reduced investigations/medication) and led to improved patient satisfaction. Using a simple risk stratification tool, patients are assessed as being either at low, medium or high risk of having persistent, disabling symptoms from their back pain. According to their risk score patients then receive an appropriate 'matched' treatment (physiotherapy advice for the low risk group, manual therapy for the medium risk group, manual therapy plus CBT informed psychological therapy for the high risk group). The study has attracted interest both nationally and internationally. At a local level the physiotherapists from the Staffordshire and Stoke on Trent Partnership Trust led by Hilary Bradbury, took a proactive approach in grasping this exciting opportunity taking the results of this study into practice with our research partners. Local GPs in Leek and Biddulph, along with our physiotherapists, are early implementers of the use of the 9 item STarT Back tool and raising awareness of the importance of risk stratification and its implications on the development of back pain pathway. During the period leading up to the pilot two quality measures were introduced, the use of therapy outcome measures and the review of discharge letters, it was agreed that this would be continued and give added value to the ability to measure the effectiveness of the implementation.

Aim of the project

To determine whether the research can be implemented into a primary care setting and benchmark the effectiveness of the STarT Back programme.

Standard being measured to

Comparison of stratified primary care management for low back pain with current best practice (STarT Back): a randomised controlled trial - a stratified

management approach to target provision of primary care physiotherapy significantly improves patient outcomes and offers an average saving of £34.30 per patient (Lancet 2011)

100% improvement in Therapy Outcome Measures

Methodology

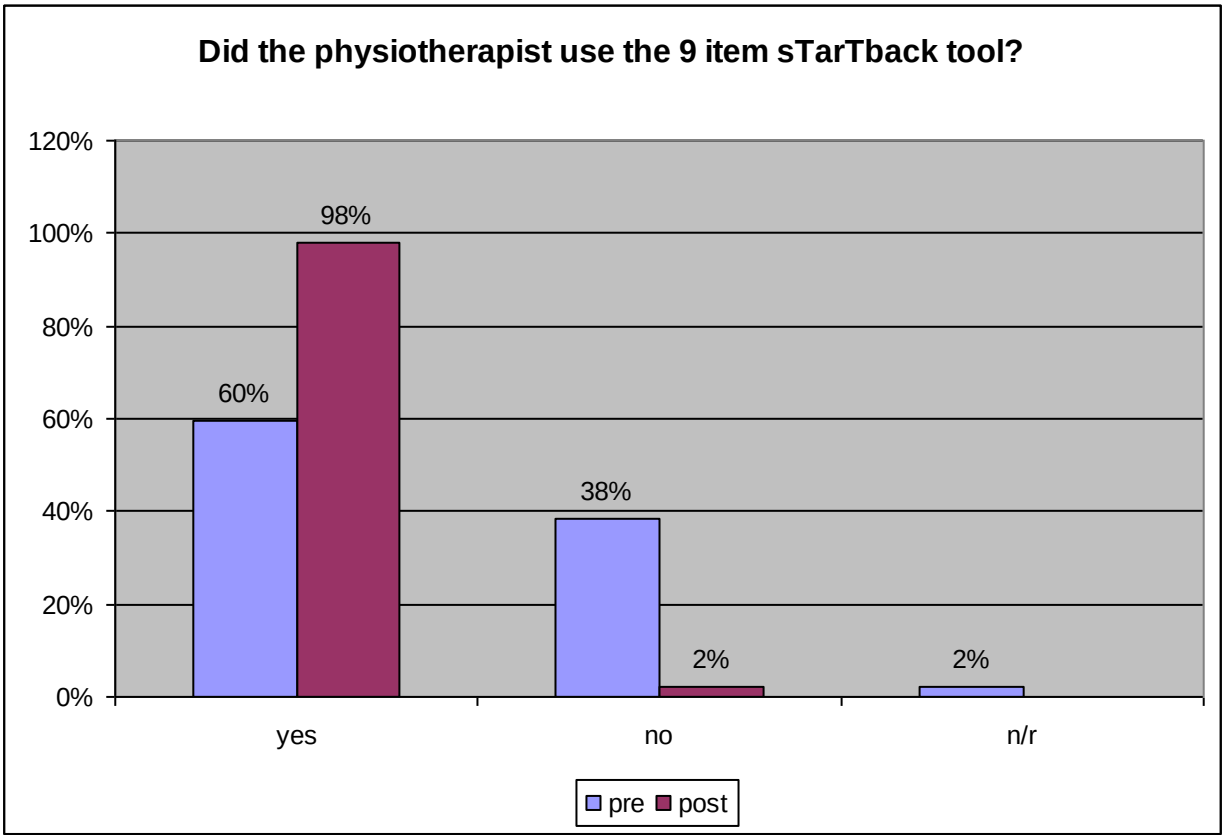
Forms were collected from the Biddulph and Leek teams both prior to commencement of STarT Back pilot and, for comparison, afterwards. The data collected reflected therapy outcome measures for individual patients. The data was collected using an audit tool prepared with the aid of the clinical audit team (Appendix A)

Results

A total of 149 data forms were collected. The number of forms collected prior to sTarT Back commencement was 47 whilst 102 were collected after the programme had started. Total forms 149

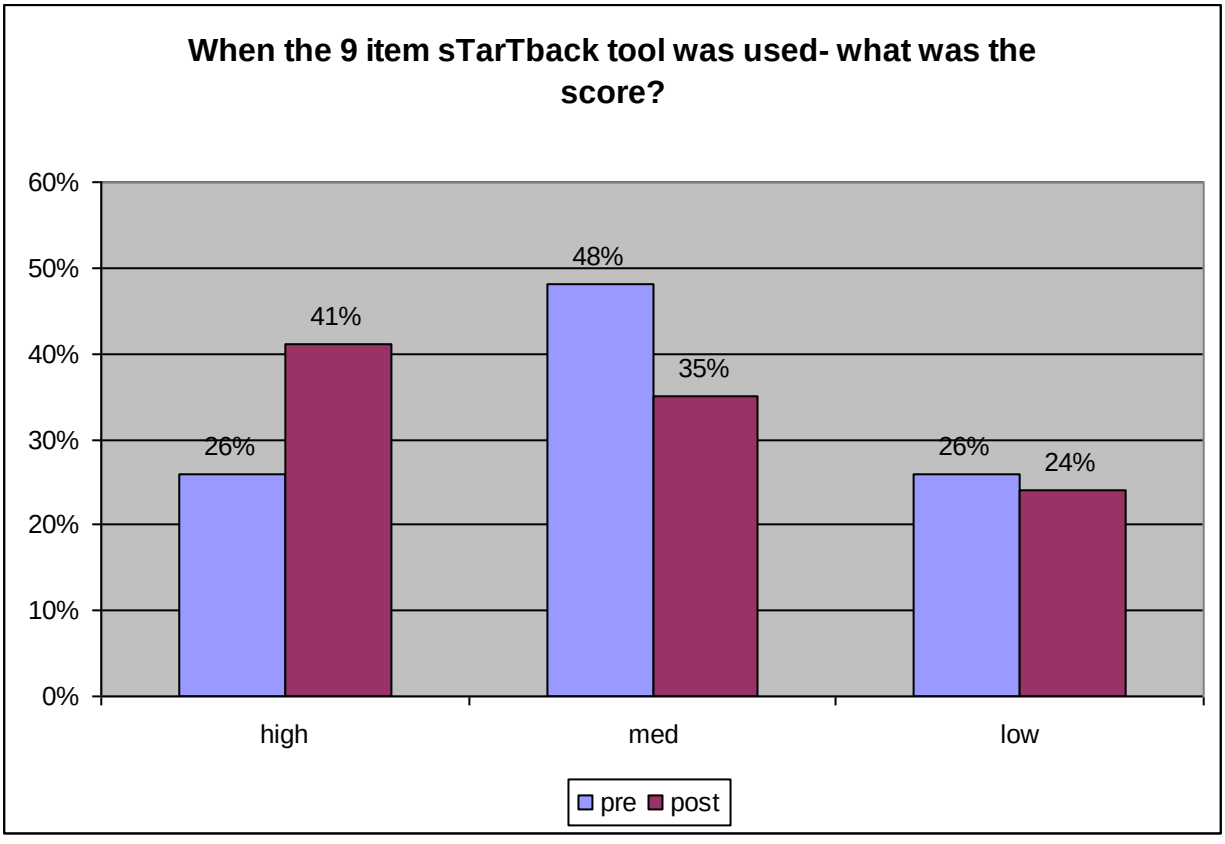
- The average age for the pre sTarTback was 54 with a median of 51 (range 26-88). Of these 47% lived in Biddulph and 53% in Leek
- Post –sTarTback average age was 49; median 46 (range 17-84). Those who lived in Biddulph accounted for 52% and remainder lived in Leek
- The gender mix for both cohorts was exactly the same at 62% female and 38% male
- After sTarTback was introduced 7 GPs used the tool and scored High x 3, medium x 1 and low x 1 (2 were not recorded)
- Chart 1 compares the number of times the physiotherapist used the tool between the two cohorts. The tool was used 28/47 times before the programme commenced

Chart 1



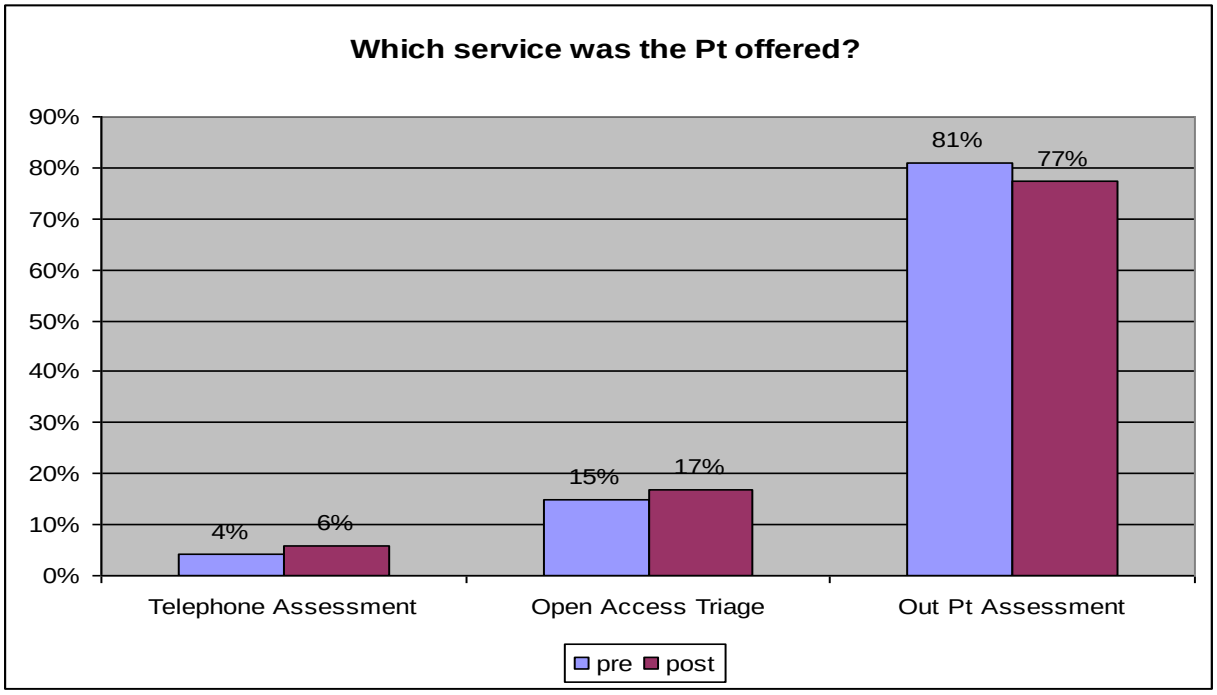
- When the tool was used by physiotherapist the breakdown and comparison is shown in Chart 2

Chart 2



- Q11 asked which service the patient was offered. The breakdown is shown in chart 3

Chart 3



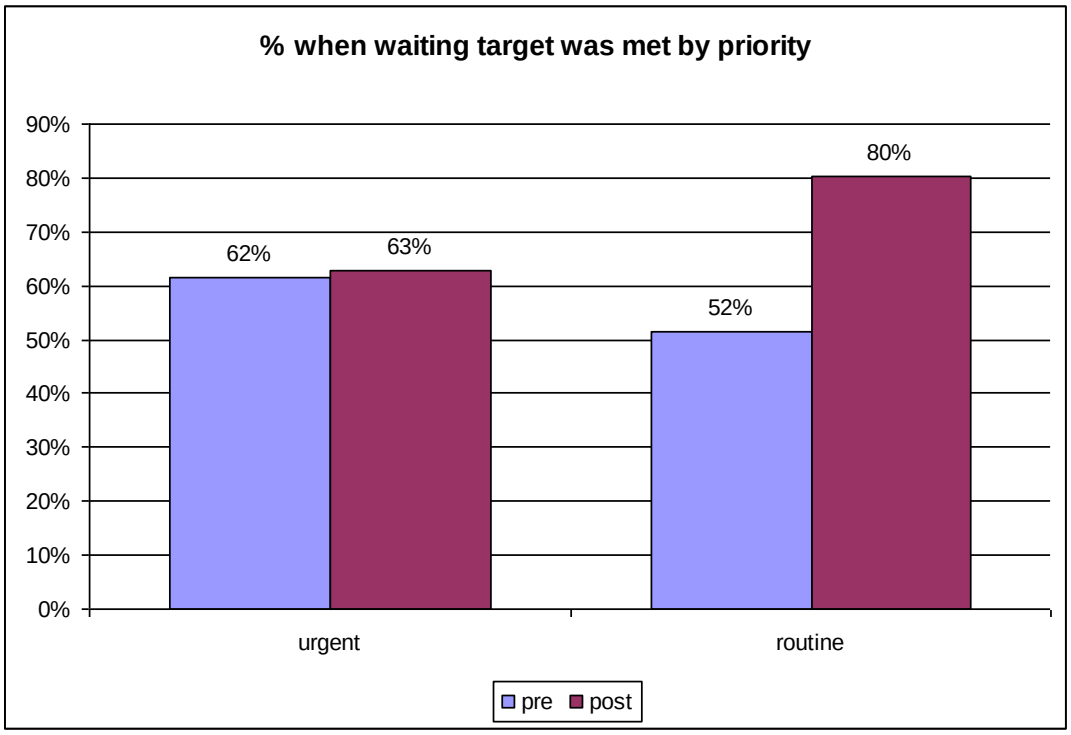
- The differences in whether they were triaged as urgent or routine are shown in table 1. NB some forms had “asap” written as a priority. For the purposes of this table they have been counted as urgent

Table 1

cohort	urgent	routine
Pre sTarT Back	28%	72%
Post sTarT Back	31%	69%

- Q13 asked whether the waiting target was met. This is broken down by cohort and priority in Chart 4

Chart 4

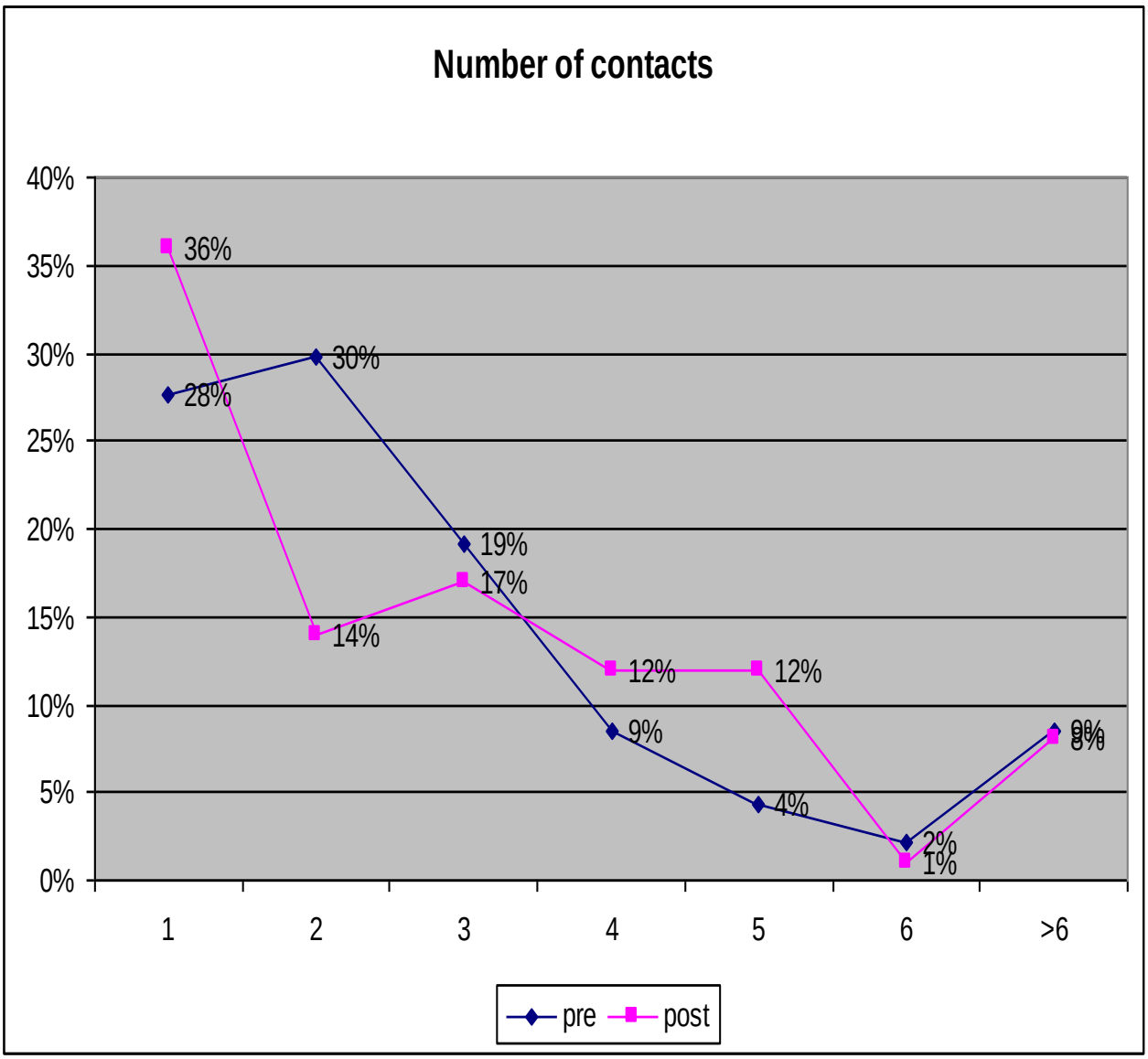


- The comparison when the treatment approach matched the risk group identified in the sTarTback study shows that pre –sTarTback it did on 47% of occasions whilst post it rose to 83%

- Reasons given as to why it did not match included 3 x referred to outpatients

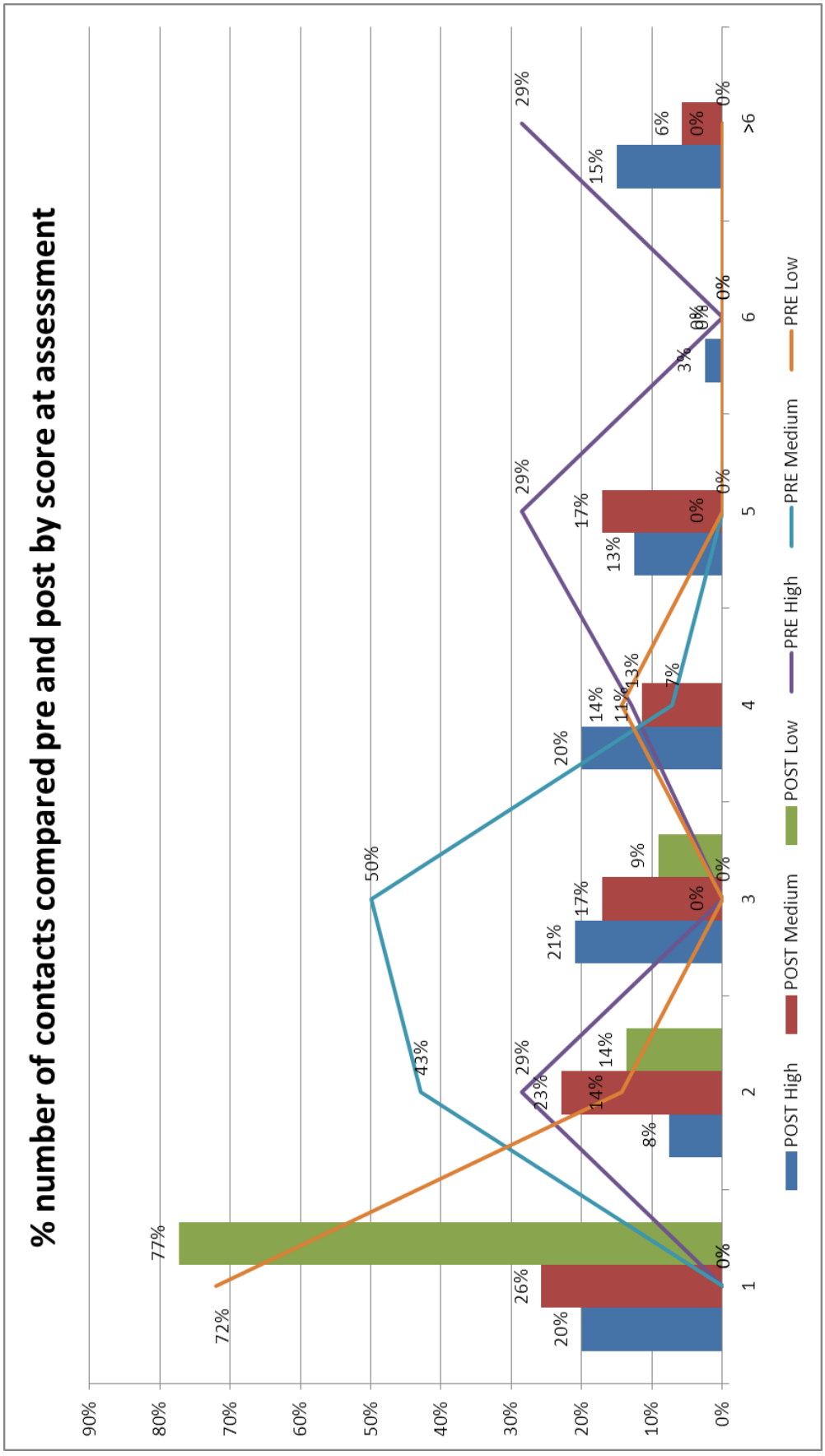
- The number of contacts seen in this episode of care is shown in Chart 5

Chart 5 (pre n=47, post n=100)



- Chart 6 shows the % number of contacts broken down by how they were assessed using the sTarTback tool (high, medium, low). The bar chart reflect post-sTarTback whilst the line chart show pre-sTarTback

Chart 6



- Post sTarTback at least 285 contacts were recorded (NB 8 patients have been recorded as having contacts numbering greater than 6 and

they have been counted as 7 contacts for the purpose). A total of 24 contacts DNA i.e. no more than 8% (285/24)

- The VAS score both initial (3) and final (1) was recorded on only 1 occasion pre sTarTback

- Post sTarTback it was recorded on 32 occasions. The VAS score had decreased on 30 and remained the same on 2 with a median improvement of 3 points

- The Function score was again only recorded on pre sTarTback once

- On post sTarTback it completed 31 times. The score fell on 25/31,rose on 1/31 and remained unchanged on 5/31

- Charts 7 & 8 compare the sTarTback scores at relevant intervals

Chart 7

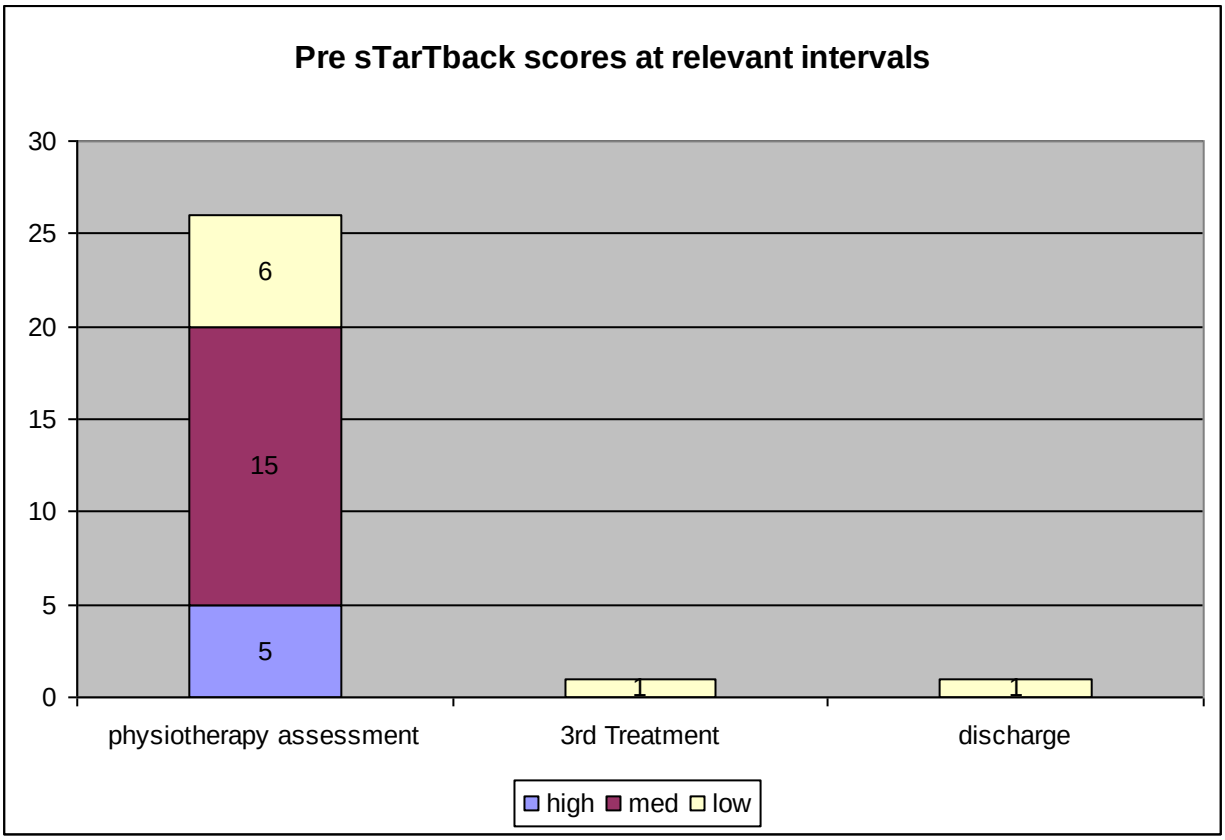
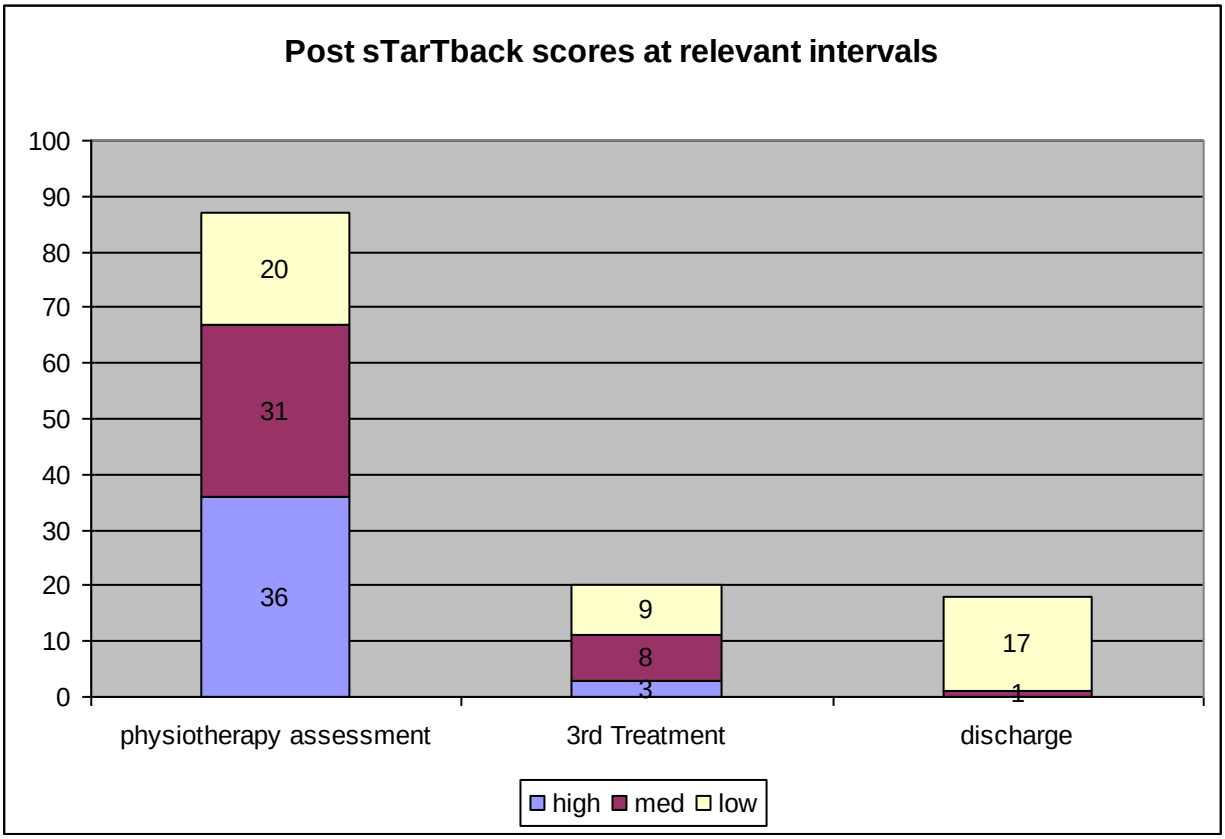


Chart 8



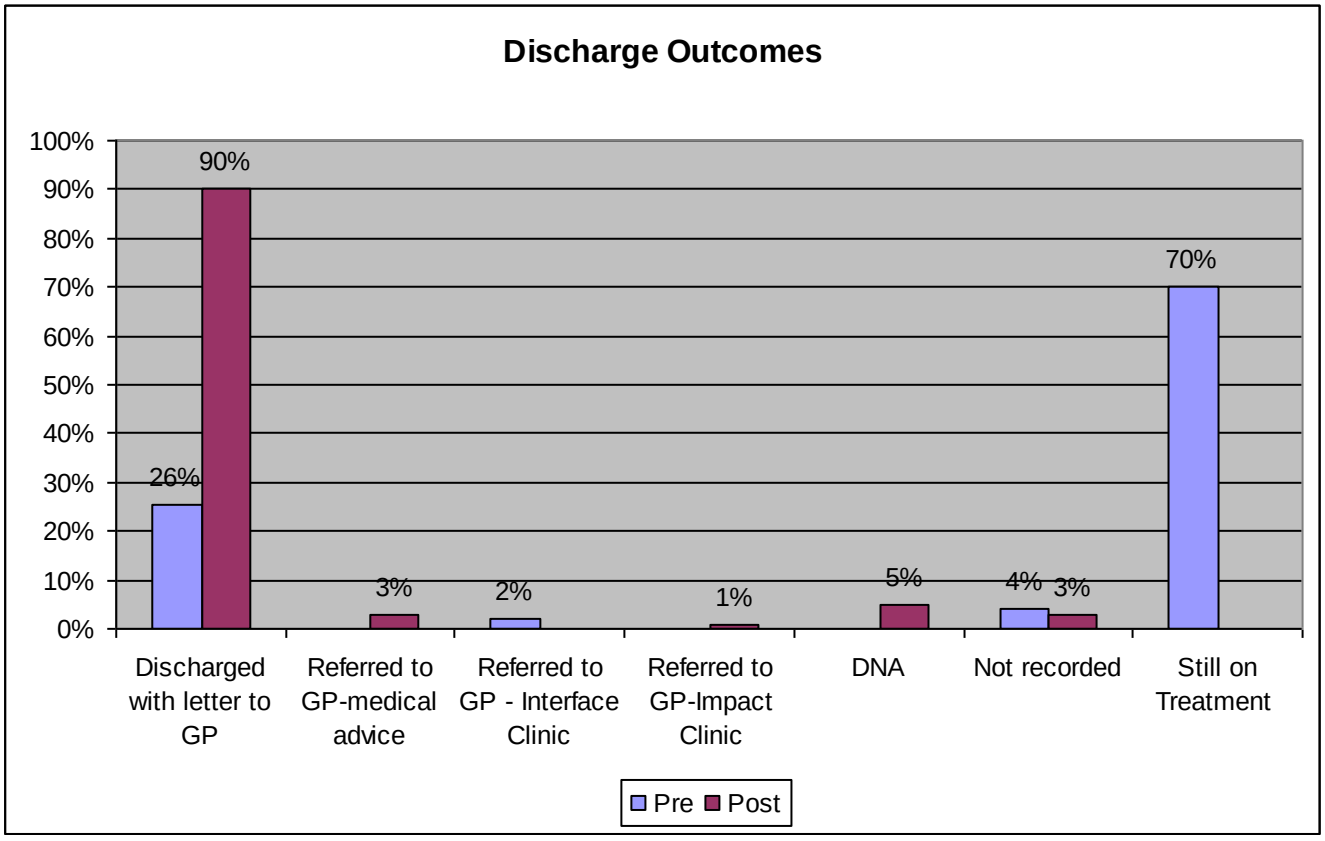
- When recorded, 100% of patients would recommend the service to a friend or family. Table 2 illustrates by cohort

Table 2

	yes	no	not recorded
pre	3	0	44
post	58	0	44

The discharge outcomes are shown in chart 8. For pre sTarTback 28/47 (70%) were noted as “on treatment” despite this not being an option. For post sTarTback no one recorded this. Neither cohort recorded “patient declined further input”

Chart 9 (pre n=47, post n=102)



Conclusions

- The audit showed a mixed result for differences when comparing post sTarTback and pre sTarTback
- The treatment approach matched the risk group identified in sTarTback on 83% of occasions compared to 47% previously
- When the tool was used there was a 63% increase in “high” scoring and a 17% reduction in “medium” compared with previous
- The service the patient was offered was comparable between the two
- This was also true of the priority assigned at triage assessment
- However, there was a 53% rise in routine priority patients that were seen within the target time
- The lack of complete VAS and Function scores meant comparison was difficult though overwhelmingly the score decreased in 55/63 (87%) and rose in only 1/63 (2%) for both scores post sTarTback
- Post sTarTback 90% of patients were discharged with a letter to GP compared to 26%- an increase of 280%

POST AUDIT ACTION 24th October 2013

Further conclusions

Review of the data post audit allowed for useful conclusions to be made from the pilot.

Chart 2 shows the breakdown by % of 102 patients in each risk group during the pilot.
Using these percentages this equates to:-

Low 24%= 24 patients
Med 35%= 35.7= 36
High 41%= 41.8 = 42

Chart 6 shows the number of treatments for each risk group

Low risk of the 24 patients, 18 had 1 treatments,(trts) 3.36 had 2 trt, 2.16 had 3trts, 0 had 4,5,6 6+ trts

Low risk new to follow up ratio = 1: 1.3

Medium 36 patients, 9 had 1trt, 8 had 2 trt, 6 had 3 trts, 5 had 4 trts, 0 had 5,6 trts , 6 had 6+
Average new to follow up = 2.21 (as the 6+ could be more than 7 this figure is taken as 3)

Medium risk average new to follow up ratio = 1: 3

High risk of the 42 patients, 8 had 1tr, 3.4 had 2trt, 8.8 had 3 trt, 8.4 had 4trt, 5.46 had 5trt, 1.26 had 6trts, 6.3 had 6+ trt (taken as 7)
High risk average new to follow up ratio= 3.66 (as the 6+ could be more than 7 this figure is taken as 4)

High risk average new to follow up ratio = 1: 4

By implementing a high quality research trail into practice it can be concluded that physiotherapists

- Used the STarT Back risk tool 98% of time matching the treatment to the score in 83% of cases.
- ensured patient received appropriate treatment by highly trained physiotherapist
- Avoided over treating patients
- When recorded achieved 100% patient satisfaction and 87% reduction in numerical rating scale pain scores
- Reduced wait times
- Improved the discharge reporting process
- Reduced the number of patients being referred on for second opinion

Action Plan

Recommendation	How will this be implemented	By whom	Timescale
To include the pathway in Physiotherapy service specifications in North	Currently working with Commissioners to redesign the Musculo Skeletal Physiotherapy services, there is interest in including the pathway into the redesign.	Professional lead	Confirmation by end of Oct 13
Triangulate the findings with patient case studies of staff studies and staff studies	Develop a questionnaire for staff and collect patient case studies	Professional leads and team/clinical leads	Dec 13
To raise awareness of the results of the pilot across teams in Stoke and the South	Through professional forum meetings and cascading via clinical and team leads Involve AHP operational managers	Professional leads and team/clinical leads	Dec 13
To Increase the use of the risk tool in these areas	Through professional forum meetings and cascading via clinical and team leads Involve AHP operational managers To include the risk tool in suite of documents	PL and operational leads	Dec 13
To plan for the introduction of the pathway across the trust, working with commissioners and business teams and ensuring relevant training is put into place to meet the need of patients of high risk of chronicity	To influence inclusion into service specifications across the trust. Already in discussion for Stafford Cannock and North Working with Keele university, operational leads and training department to secure training in bio psychosocial skills.	PL	April 14
To continue to use therapy outcome measures (newly	PL to Drive and influence the commitment to CQUINS		April 14

introduced during the pilot)	All leads to reinforce the cquin targets		
To reaudit in 12 months	Work with audit team to re audit		
IT systems in place to capture relevant data from the pathway	Meet with IMT to implement a process for data collection allowing for performance reports on pathway		
POST AUDIT ACTION 24th October 2013			
Further recommendations are :-			
To roll out implementation of stratified approach across the trust	To share the success of the pilot, raise awareness of the pathway, include in all MSK development and commissioning work streams	Professional lead	April 14
To work with CCG leads to roll out the use of stratified care across Low back pain pathway	Regularly meetings booked, inclusion in the redesign of Physiotherapy services in the North division, SSOTP NHS Trust	Professional and team leads, AHP managers	April 14
To support innovative solutions for referral and training as part of the STarT Back exemplar for Academic Health Science Network (AHSN)….	Work collaboratively with Primary Care Musculoskeletal Research Consortium on developing new ways of training delivery and referral processes.	Professional lead with research lead.	April 14
To amend the audit tool to include exact numbers of follow up appointments.	Amend the tool and cascade to leads.	Professional lead and audit team.	Nov 13

References

The Lancet, Volume 378, Issue 9802, Pages 1560 - 1571, 29 October 2011

Appendices

Appendix A

Staffordshire and Stoke on Trent Partnership NHS Trust

Physiotherapy Startback Audit

Q1 Named Clinician

Q2 Patient I/D

Q3 Patient Age

Q4 Gender

- *Male* ☐
- *Female* ☐

Q5 Patient locality

- *Biddulph* ☐
- *Leek* ☐

Q6 GP Practice

Q7 Did the referring GP use the 9 item sTarTback tool

- *Yes* ☐
- *No* ☐

Q8 If Yes to Q7, what was the score

- *High* ☐
- *Medium* ☐
- *Low* ☐

Q9 Did the Physiotherapist use the 9 item sTarTback tool?

- *Yes* ☐
- *No* ☐

Q10 If yes to Q9, what was the score

- *High* ☐
- *Medium* ☐
- *Low* ☐

Q11 Which service was the patient offered

- *Telephone Assessment* ☐
- *Open Access Triage Assessment* ☐
- *Out Patient Assessment* ☐

Q12 What priority was the referral triaged

- *Urgent* ☐
- *Routine* ☐

Q13 Was the waiting target met (Urgent seen within 1 week, Routine seen within 4 weeks)

- *Yes* ☐
- *No* ☐

Q14 Did the treatment approach match the risk group according to the sTarTback study

- *Yes* ☐
- *No* ☐

If No, please state reasons why not

Q15 How many contacts had been in this episode of care

- *1* ☐
- *2* ☐
- *3* ☐
- *4* ☐
- *5* ☐
- *6* ☐
- *>6* ☐

Q16 Did the patient DNA any appointments

Yes ☐

No ☐

if Yes, please state how many

OUTCOMES

Q17 Please give the Initial and Final VAS and Function scores

	Initial	*Final*	*Not recorded*
VAS	☐	☐	☐
Function	☐	☐	☐

Q18 Please give the initial EQ5DL Scores

Q19 Please give the EQ5DL score at point of discharge

Q20 Please give the sTarTback scores at the relevant intervals

At Physiotherapy assessment ☐

At 3rd treatment ☐

At point of discharge ☐

Q21 Would the patient recommend the service to a friend or family

Yes ☐

No ☐

AT DISCHARGE

Q22 What was the discharge outcome

Discharged with letter to GP ☐

Referred to GP for medical advice ☐

Referred to GP for Interface Clinic ☐

Referred to GP for Impact Clinic ☐

Patient declined further input ☐

DNA ☐

Q23 Was any support accessed from Clinical Specialist

Yes ☐

No ☐

Q24 Any further comments regarding this patient episode
