Audit of the Stratified Approach to the Treatment of Adult Patients with non-specific low back pain (STarT Back) v5

Audit register number 23

Adult North and South Divisions

<table>
<thead>
<tr>
<th>Project team</th>
<th>Head of Professional Leads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hilary Bradbury</td>
<td>Professional Lead for Physiotherapy</td>
</tr>
<tr>
<td>Panos Sarigiovannis</td>
<td></td>
</tr>
</tbody>
</table>

| Data period            | December 2014 – March 2015                    |
| Report completion      | April 2015                                    |

This report was facilitated by

The Practice Audit Team
Edric House
Rugeley
Staffordshire
WS15 1UW
Acknowledgments

The preparation of this work would not have been possible without the assistance of many others. Particular thanks are expressed to Kay Stevenson, Consultant Physiotherapist, NIHR Knowledge Mobilisation Fellow and Helen Duffy, Manager, Primary Care Musculoskeletal Research Consortium. Our special appreciation is extended to the Audit Team for their continuous support and to the Physiotherapy Teams and the Therapy Referral Centres that participated. Without their support it would not have been possible to complete this audit.
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1. Background/rationale

In 2013 Physiotherapy clinical teams from North Staffordshire took part in the STarT Back Trial which introduced a stratified approach to managing back pain. 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 results of the trial, which was carried out by researchers from the ARUK Primary Care Centre at Keele, provided the first evidence that a stratified management approach to target the provision of primary care significantly improves patient outcomes and is associated with substantial economic benefits compared with current best practice (Hill et al, 2011). Specifically, the STarTBack 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. Since the publication of the trial in Lancet, 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 to implement the results of this study into clinical practice. Following the 2013 audit the STarTBack tool was rolled out to physiotherapy clinical teams across the Trust.

1.1 Aim

To ensure the roll out of the STarT Back across the Adult Musculoskeletal Physiotherapists is embedded and consistent following the 2013 local audit. To reaudit these results for a further 2 years to ensure further compliance.

1.2 Objectives

To check that the use of the STarT Back tool and results match the treatment to the risk group.

1.3 Standards/guidelines/evidence base
A stratified management approach to target provision of primary care was shown to be both clinically and cost effective offering an average saving of £34.30 per patient (Hill et al, 2011; Whitehurst et al, 2012).

- The audit standard was that for year 1 (2014/2015) 50% of the trust services used the tool 80% of the time and matched the treatment 80% of the time.

2. Methodology

The audit was based on the audit tool which was designed for the 2013 audit. The tool was amended to reflect the rollout of the STarT Back approach Trust wide (Appendix A). It included recording the EQ5D5L score at first and final visit and also the discharge pathway.

2.1 Sample

Clinical Physiotherapy Teams across the Trust were asked to audit the records using the audit tool (see Appendix) for all patients with non-specific Lower Back Pain assessed and discharged for primary care physiotherapy from 1st November 2014 to 31st January 2015. Once the audit began it was decided to extend the audit period until 10th March 2015 so that the patients who were discharged in February were included.

2.2 Data source

Data was collected from patient records and Lorenzo.

3. Findings

- The total number of audit tools received was N=210
  - North Staffordshire n=48
  - Stoke n=100
  - Stafford/Cannock n=62
• Chart 1 shows the age groups of the patients across all three locations.

Chart 1 (N=210)

Age groups

- 12% 12% 17% 22% 21% 16%
- 18 to 29 30 to 39 40 to 49 50 to 59 60 to 69 70 plus

- The gender split was:
  - Females 64%
  - Males 36%

- A GP used the STarT Back tool in 11% (n=24) of cases. Table 1 shows the number of STarT Back referrals received per GP surgery/practice and the percentage of STarTBack referrals from the total number of referrals for each surgery/practice.

Table 1 (n=24) Number of STarTBack tools from GP practices

<table>
<thead>
<tr>
<th>Clinic</th>
<th>Surgery</th>
<th>Number of referrals</th>
<th>As % of referrals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stafford/Cannock</td>
<td>Mansion House</td>
<td>7</td>
<td>50%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Holmcroft</td>
<td>4</td>
<td>57%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Wolverhampton Road</td>
<td>2</td>
<td>100%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Crown Surgery</td>
<td>2</td>
<td>66%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Cumberland House</td>
<td>2</td>
<td>14%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>John Amery Drive</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Eccleshall</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Great Haywood</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Millbank</td>
<td>1</td>
<td>50%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Rising Brook</td>
<td>1</td>
<td>100%</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>Weeping Cross</td>
<td>1</td>
<td>33%</td>
</tr>
<tr>
<td>North Staffs</td>
<td>Not Recorded</td>
<td>1</td>
<td>n/k</td>
</tr>
</tbody>
</table>
- When GPs used STarT Back the risk group was matched in 58.3% (n=14) of cases. It was not recorded in 33.3% (n=8) of audit tools.

- In the remaining 2 cases (8.3%) the risk group was not matched because:
  - The patient was recovering so not high risk (n=1)
  - A second appointment was not required so low risk and discharged (n=1)

- The STarTBack tool was used by physiotherapists in 98% (n=182) of the remaining n=186 of referrals (N.B. n=4 neither GP nor physiotherapist used tool)
  - North Staffs used it in 98% (n=46/47) of cases when a GP had not
  - Stoke used it in 98% (n=98/100) of their cases
  - Stafford/ Cannock used it in 97% (n=38/39) of cases when a GP had not

- The tool matched the risk group in 68% (n=126) overall
  - North Staffs matched the risk group in 76% of cases when the STarTBack was completed
  - Stoke matched the risk group in 63% of cases
  - Cannock/Stafford matched the risk group in 74% of cases were they had completed STarTBack

- On 5 occasions both GP and physiotherapists completed the STarT Back tool. On 3 of these (2 x medium, 1 x high) both GPs and physiotherapists matched the risk. On the remaining 2 they did not (both GP=medium, Physiotherapists =low).

- Table 2 shows the reasons given as to why it did not match the risk group and the original risk

### Table 2 (n=56) Reasons why risk group did not match original risk

<table>
<thead>
<tr>
<th>Reasons given</th>
<th>North Staffs</th>
<th>Stoke</th>
<th>Stafford/Cannock</th>
<th>Total</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Reason given</td>
<td>0</td>
<td>23</td>
<td>2</td>
<td>25</td>
<td>8</td>
<td>2</td>
<td>15</td>
</tr>
<tr>
<td>Offered follow-up</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>8</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Short Appointment/No Time</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>0</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Offered Other treatment</td>
<td>1</td>
<td>5</td>
<td>2</td>
<td>8</td>
<td>6</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Not trained yet/Student</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>DNA</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>
Table 3 compares the number of contacts, both average and median by each risk and also by whether the original risk was matched when physiotherapist used the tool.

Table 3 (n=182) Results for Physiotherapist use of STarTBack tool

<table>
<thead>
<tr>
<th>Risk Group</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall number</td>
<td>66</td>
<td>66</td>
<td>50</td>
</tr>
<tr>
<td>Overall Average contacts</td>
<td>1.9</td>
<td>2.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Overall Median contacts</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Overall median range</td>
<td>1 to 7</td>
<td>1 to 5</td>
<td>1 to 8</td>
</tr>
<tr>
<td>Matched number</td>
<td>42 (64%)</td>
<td>60 (91%)</td>
<td>23 (46%)</td>
</tr>
<tr>
<td>Matched average contacts</td>
<td>1.5</td>
<td>2.7</td>
<td>2.2</td>
</tr>
<tr>
<td>Matched median contacts</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Matched median range</td>
<td>1 to 5</td>
<td>1 to 6</td>
<td>1 to 8</td>
</tr>
<tr>
<td>Not matched number</td>
<td>24 (36%)</td>
<td>6 (9%)</td>
<td>27 (54%)</td>
</tr>
<tr>
<td>Not matched average contacts</td>
<td>2.5</td>
<td>1.3</td>
<td>3</td>
</tr>
<tr>
<td>Not matched median contacts</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Not matched range</td>
<td>1 to 7</td>
<td>1 to 2</td>
<td>1 to 7</td>
</tr>
</tbody>
</table>

Table 4 shows the number of different risks assessed for each staff banding and the percentage of successful risk matches to treatment (N.B. match not recorded n=2)

Table 4 (n=180) Comparing risk match by Staff banding

<table>
<thead>
<tr>
<th>Band</th>
<th>low</th>
<th>% matched</th>
<th>medium</th>
<th>% matched</th>
<th>High</th>
<th>% matched</th>
<th>Overall %</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>21</td>
<td>52%</td>
<td>17</td>
<td>80%</td>
<td>20</td>
<td>35%</td>
<td>59%</td>
</tr>
<tr>
<td>6</td>
<td>26</td>
<td>62%</td>
<td>24</td>
<td>83%</td>
<td>20</td>
<td>50%</td>
<td>69%</td>
</tr>
<tr>
<td>7</td>
<td>20</td>
<td>80%</td>
<td>22</td>
<td>86%</td>
<td>9</td>
<td>56%</td>
<td>78%</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>n/a</td>
<td>1</td>
<td>100%</td>
<td>0</td>
<td>n/a</td>
<td>100%</td>
</tr>
</tbody>
</table>

At discharge 11 (5%) patients declined further input. Of the remaining 199

- 96% were discharged with a letter to GP
- 2% were referred to GP for a second opinion (all Stoke)
- 1% were referred to GP for medical advice
- 1% were left blank
Patients DNA in 20% (n=42) of cases

- This included the final appointment 17% (n=35). The breakdown for the patients by risk is shown in table 5

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Not assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Staffs</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Stoke</td>
<td>3</td>
<td>4</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Stafford/Cannock</td>
<td>2</td>
<td>6</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

DNA not including the final appointment was 3% (n=7). The breakdown for these patients by risk is shown in table 6

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Staffs</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Stoke</td>
<td>0</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

When recorded (n=28), the average overall number of DNAs per episode of care was 1.

4. Observations

- The standard for year one was partially met as all 3 locations used the tool 98% of the time.

- The risk did not match the treatment in >80% i.e. 68%.

- Those assessed as high risk were the least likely to have their treatment matched (46%) whilst medium risks were most likely (91%).

- All physiotherapists recorded high success rates in matching the medium risk patients to treatment.
• Band 7 physiotherapists demonstrated the highest success rates in matching the risk to treatment in all categories i.e. low, medium and high risk.

• There was a statistically significant difference in the success rate of the low risk patients between the band 7 physiotherapists and the lower grades clinicians. To demonstrate, band 5 physiotherapists had a success rate of 52% and band 6 physiotherapists 62% compared to the 80% success rate of the band 7 therapists for the low risk group. Although band 7 physiotherapists recorded higher matching rates in the medium risk group (86%) this was not statistically significant: band 6 physiotherapists had 83% success and band 5 clinicians 80%.

• All clinicians recorded the lowest success rates in the high risk group of patients. Since the concept of treating high risk patients was relatively new both in terms of treatment culture and clinical skills, it is expected that these rates will be higher in future audits as long as therapists gain more experience.

• Band 5 physiotherapists recorded relatively high success rates in matching the risk in 80% of patients in the medium group. The rate was lower in the lower risk group (52%) and even lower in the high risk group. This could be due to the lack of confidence in the decision making process that band 5 physiotherapists might have had in assessing and treating low risk patients based on the stratified approach and in the lack of experience and/or training in treating high risk patients. The treatment of medium risk patients was much closer to the traditional physiotherapy approach which could justify the high success rates recorded by the band 5 clinicians.

• The discharge pathway for patients who did not decline further treatment involved successful discharge with a letter to their GP in 96% of cases

5. Recommendations

START Back training for the high risk group should be extended to include experienced band 5 physiotherapists who assess and/or treat this group of patients.
Learning points

1. **Analysis of the data highlighted the different discharge pathways available which had not been captured in the current proforma**: i.e. referral for second opinion or specialist team. The latter was a route available within the South Division of the Trust. Therefore, the proforma should be updated.

2. **It is assumed that the higher percentage of staff of clinicians that have completed the Start Back training the higher the success rates should be in relation to matching the risk to treatment.** Currently this is not been captured therefore, the audit proforma should include whether the participating clinicians have completed the StarT Back training.

3. **Data for patients who do not attend their last appointment should be collected** (both DNA and UTA data) to help us understand why patients do not attend and whether they need further input or they are better etc. Additionally, the use of technology, such as FLO text messaging system, in the reduction of non-attendance and improving clinical outcomes and should be explored.

References


**Practice Audit Action Plan**

<table>
<thead>
<tr>
<th>Project title</th>
<th>Ensure this is exactly the same as the title detailed on the front cover and page 2 of the report.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action plan lead</td>
<td>Name:</td>
</tr>
</tbody>
</table>

Ensure that the recommendations detailed in the action plan mirror those recorded in the “Recommendations” section of the report. The “Actions required” should specifically state what needs to be done to achieve the recommendation. All updates to the action plan should be included in the “Comments” section.

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Actions required (specify “None”, if none required)</th>
<th>Action by date</th>
<th>Person responsible (Name and grade)</th>
<th>Comments/action status (Provide examples of action in progress, changes in practices, problems encountered in facilitating change, reasons why recommendation has not been actioned etc)</th>
<th>Change stage (see Key)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Experienced band 5 physiotherapists to complete the StaRTback training</td>
<td>Team Leaders to identify the band 5 physiotherapists, need to be identified in</td>
<td>End of Sept</td>
<td>Team Leaders</td>
<td>Meeting to be arranged by mid Sept</td>
<td>1 Recommendation agreed but not yet actioned</td>
</tr>
</tbody>
</table>

**KEY (Change status)**

1. Recommendation agreed but not yet actioned
2. Action in progress
3. Recommendation fully implemented
4. Recommendation never actioned (please state reasons)
5. Other (please provide supporting information)
2. The high success rates of band 7 physiotherapists should be taken into account in future skill mix/workforce analysis.

3. Change of the audit proforma before re-auditing based on the suggestions made above.

4. Link with operational leads to improve collection and analysis of DNA data especially around (DNA of final FU appointment)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>The high success rates of band 7 physiotherapists should be taken into account in future skill mix/workforce analysis.</td>
<td>End Sept</td>
</tr>
<tr>
<td>3.</td>
<td>Change of the audit proforma before re-auditing based on the suggestions made above.</td>
<td>End Sept</td>
</tr>
<tr>
<td>4.</td>
<td>Link with operational leads to improve collection and analysis of DNA data especially around (DNA of final FU appointment).</td>
<td>Meeting with Derek Young to be arranged</td>
</tr>
</tbody>
</table>

5. Share the audit results with ARC Centre (Keele)  

|   | Inform Keele (Consortium Board) | End Sept | AHP Lead |

AHP Lead to arrange a meeting.
Physiotherapy STarTBack Audit (No. 23): 2014-15

Please only complete for patients with non-specific LBP referred for primary care physiotherapy assessed from 1st November 2014 and who are discharged before 31st January 2015

Q1 Team base
- North Staffs ............................................
- Stoke ...................................................
- Lichfield/Tamworth .................................
- Stafford/Cannock ...................................
- Seisdon ................................................

Q2 Patient Age
- under 18.................................................
- 18-29...................................................
- 30-39..................................................
- 40-49....................................................
- 50-59....................................................
- 60-69....................................................
- 70 and over..........................................

Q3 Gender
- Male ....................................................
- Female ............................................... 

Q4 Name of referring GP Practice (not GP name)

Q5 Did the referring GP use the 9 item STarTback tool?
  Yes................................................................
  No (go to Question 7).................................

Q6 If Yes to Question 5, what was the score?
  High ......................................................
  Medium ............................................... 
  Low ......................................................

Q7 Did the Physiotherapist use the 9 item STarTback tool?
  Yes ......................................................
  No ......................................................
  If NO state reason then go to Question 11

Q8 If yes to Q7, what was the score
  High ....................................................
  Medium ............................................... 
  Low ....................................................

Q9 What was the banding of assessing clinician?
  Band 5...................................................
  Band 6..................................................
  Band 7..................................................
  Band 8..................................................

Q10 Did the treatment approach match the risk group according to the STarTBack study?
  Yes ......................................................
  No ......................................................
  If No, please state reasons why not

(Please go to Question 10)
Q11 How many contacts had been in this episode of care?
1. ..........................................................  
2. ..........................................................  
3. ..........................................................  
4. ..........................................................  
5. ..........................................................  
6. ..........................................................  
7. ..........................................................  
8. ..........................................................  
9. ..........................................................  
10. ..........................................................  
If more than 10 please state how many ............

Q12 Please give the EQSDL Scores at.....

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AT DISCHARGE

Q13 What was the Discharge Pathway?

- Discharged with letter to GP ..............................................
- Referred to GP for medical advice ......................................
- Referred to GP for second opinion ......................................
- Referred to GP for Pain Management Service........................
- Patient declined further input ........................................

Q14 Did the patient DNA any appointments?

- Yes but not final ..........................................................
- Yes including the final ...................................................
- No ..............................................................................

IF Yes, please state how many overall

---

Q15 Any further comments regarding this patient episode

Please return all completed forms to The Audit Dept, Edric House, Rugeley WS15 1UW by February 7th 2015- Thank You