

STarT Back Implementation Manual

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Short introduction of STarT Back

The stratified care approach to low back pain (STarT Back) was developed and tested in both randomised controlled trial and implementation studies and subsequently results published in 2011 and 2014 (1,2). It demonstrated that stratified care for low back pain is clinically and cost effective – critically improving patient outcomes whilst reducing waste and variation in practice (unnecessary consultations, investigations etc).

The STarTBack Screening Tool is a brief 9-items prognostic tool that is specifically designed to help a range of clinicians such as general practitioners, physiotherapists, osteopaths and pain management practitioners to systematically produce an index of treatment modifiable risk factors. It generates an overall score and psychosocial subscore that divides patients into low, medium and high risk **of developing persistent back pain-related disability** to be used to stratify individuals into one of the three appropriate targeted treatment pathways.

The objective of the STarT Back Screening approach is to facilitate this stratification at the point of first contact, which was demonstrated to improve patients' disability outcomes, reduce sickness absence and generate healthcare and societal costs savings.

Short introduction to Implementation

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“Evidence consistently suggests that spread depends on more than good ideas and willing adopters...it is a complex social process”-Buchanan et al 2007.

Notwithstanding the research evidence that stratified care for low back pain is clinically and cost effective and reduced imaging and consultations, the implementation of the innovation in NHS is proving challenging. This manual is designed to assist implementers on the all levels of engagement by providing them with useful and relevant guidelines and resources necessary to succeed. In its entirety it is encompassing all aspects of STarT Back implementation process but can be also used as reference for one particular aspect of it. There exist a plethora of resources that are pertinent in implementation, but due to varied points of interest

and professional vantage points it proves difficult to navigate through and use in an efficient way. This manual makes frequent references to them by attempting to put them together in coherent and pragmatic way that is useful purely from effective implementation of STarT Back point of view

Clinicians training:

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Physiotherapists- The crucial element of stratified care implementation is the existence of local physiotherapy service that is able to deliver the matched treatment for low (should patients have changed subgroups between seeing the GP and physiotherapist), medium risk and high risk patients. Some clinicians may already have the skills to deliver these matched treatments and may just need to be made aware of how to use the tool and ensure their pathway and service enables them to then deliver the appropriate matched treatment for each patient. Other clinicians may benefit from some knowledge and skills training in how to deliver the matched treatments. A training course is currently organised on a regular basis by the Arthritis Research UK Primary Care Centre, Keele University and can be booked online following this link <https://www.keele.ac.uk/sbst/training/>. The prerequisite to taking part in it is completion of online StarTBack training course (free of charge) which can be found on [STarTBack website](#) For enquiries please email health.iau@keele.ac.uk The course provides an overview of stratified care, the use of the Keele STarTBack tool and the management of the low and medium risk subgroups and then focuses specifically on how to manage the high risk subgroup using psychologically informed practice. There is also a session on the course about implementation of stratified care in routine clinical practice which highlights some of the innovations, tools and resources that can assist in this. The course is open to practicing musculoskeletal physical therapists.

GPs/ANPs- the use of IT STarTBack systems in LBP consultation.

The confident use of the stratified care approach in mechanical LBP presentation in primary care can be facilitated by a simple and short training session. For clinicians confident with the consultation of LBP and the use of their clinical system it should not pose any significant challenges. Furthermore the template ensures the screening for indicator of potential serious spinal pathology by prompting for Red Flag symptoms check. In keeping with “Make First Contact Count” principle it is crucial that first contact clinicians are well aware of what each of stratification treatment option consists of, convey consistent message to patients thus setting expectations appropriately. The mock consultation of non-specific LBP with the use of EMIS Web template facilitating the stratification and documenting in the patient's electronic medical record form part of online STArTBack training course. The full training sessions that include the theoretical and research background of stratified care in low back pain can be requested from Impact Accelerator Unit, Keele University.

Brief overview of STArTBack consultation

- History taking, clinical examination, exclusion of Red Flag symptoms, establishing the diagnosis of mechanical low back pain
- Risk assessment using STArT Back tool
 - Low risk: reassurance, encouragement to stay active, early managed return to work simple analgesia including weak opioids. The principles of managing ongoing analgesic therapy include the 4'A's: Analgesia, adverse effects, activity, and adherence. Provide patient information for education (automatically offered by IT clinical system), offer reassurance and allow for shared decision making.
 - Medium risk (and low risk non responders during consecutive consultations) above the low risk level of advice offer referral for physiotherapy (NICE CG56)
 - High risk should be referred to a psychologically informed physiotherapy
 - If symptoms still significant, despite the above management, refer to intermediate care.

Introduction of STarTBack in local clinical educational events: GP Locality Meetings, GP Federations, Clinical Council Meetings and Protected Learning Sessions (for all first contact clinicians that deal with LBP, not just GPs) should be arranged. To ensure good attendance several weeks notice is usually required for logistics reasons. Important to try and avoid introducing the STarTBack as one of several items on an already busy meeting's agenda as "add-on". In most cases GPs are pivotal to the success of this Pathway as they would initiate the patient's journey. Purpose of the Meetings is to have an in depth discussions with GPs and Clinicians about the Pathway.

Agenda needs to be submitted to the CCG well in advance of the event.

IT support systems

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The electronic versions of STarTBack in form of bespoke computer-based templates were developed and implemented in primary care clinical systems: Emis Health-EmisWeb and TPP- SystmOne. They can be activated free of charge upon request, streamlining and facilitating the use of STarT Back tool during primary care consultation. During clinical activity they are activated by the entry of LBP related clinical codes (currently Read codes, soon to be replaced by SNOMED- no actions required as they are mapped across automatically)

Full Step-by-step manual for EMIS Web

To install the EMIS protocol containing the STarT BACK Screening Tool onto your system please follow the brief steps below.

1. [Unzip the STarTBACK files](#)
2. [Create folders](#)
3. [Import the protocols](#)
4. [Import the Template](#)
5. [Link the template in the protocol](#)
6. [Import the physio letter](#)

7. Insert and link the physio letter into the protocol
8. Add triggers to the protocols

1. Unzip the STarTBACK files

Ensure you have downloaded the .zip file containing all the system files and associated word documents needed. The .zip file should contain the following files

Name	Date modified	Type	Size
 1 - Startback Tool Protocol v 3.3 (Part 1of3)	14/06/2017 08:50	XML Documemnt	26 KB
 2 - Startback Tool Protocol v3.0 (Part 2of3)	14/06/2017 08:50	XML Documemnt	19 KB
 3 - Startback physio letter trigger (Part3of3)	14/06/2017 08:50	XML Documemnt	7 KB
 4 - STarTBACK 9-item Template Mar17	14/06/2017 08:50	XML Documemnt	15 KB
 Physio referral form - EMIS STarTBACK.ewdt	14/06/2017 08:51	EWD File	47 KB
 STarT BACK Screening Tool installation instructions - Physio ref version	11/08/2017 11:12	Microsoft Word D...	1,623 KB
 Startback - Read code list to activate protocol	21/10/2015 14:22	Microsoft Word D...	12 KB

These files consist of:

- a. 3 x EMIS Protocols
- b. STarTBACK specific physio referral letter
- c. STarTBACK 9-item template
- d. Read code list for triggering the protocol

Unzip the files to a folder on the desktop

2. Create folders

Create “STarTBACK” storage folders within EMIS WEB. These will be used as locations when we import the various associated documents and files

- a. Templates & Protocols
- b. Documents
- c. Concepts

3. Import the protocols

Import each of the protocols in turn into the Protocol folder you created in the previous step.

Name
 1 - Startback Tool Protocol v 3.3 (Part 1of3)
 2 - Startback Tool Protocol v3.0 (Part 2of3)
 3 - Startback physio letter trigger (Part3of3)

Please note only import the xml file; **3 - Startback Physio letter trigger (Part3of3)** if you wish to automate physio referral options. Parts 1 and 2 will still work if you only wish those components. Concepts will be imported as part of this process.

4. Import the 9-item Template

Import the “**STarTBACK Tool 9-item Template Mar 17**” into the STarTBACK template folder you created at step 2.

5. Link the 9-item template in the protocol

Open and Edit the Protocol ‘**1 - Startback Tool Protocol v3.3 (Part1of3)**’

Double click the Launch Template node and from the template picker select the 9-item template you have just imported. For further information / screenshot see Figure 1 on Page 4.

NOTE: If you have decided not to use the automated physio referral letter protocol - **Startback physio letter trigger (Part3of3)** skip to stage 8

6. Import the physio letter

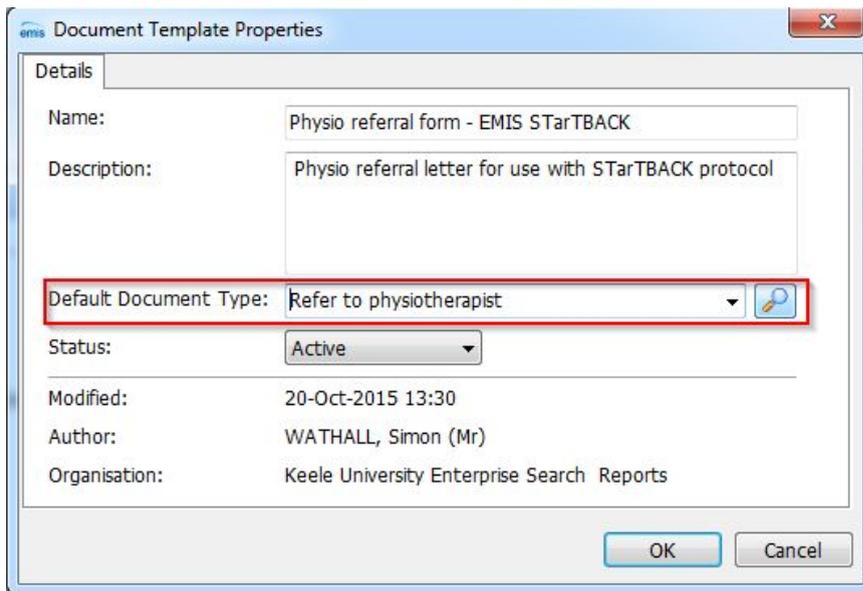
Import the STarTBACK specific physio letter into the STarTBACK documents folder.

Filename: **Physio referral form - EMIS STarTBACK.ewdt**

Access Document properties

Under ‘Default Document Type”

Set the type to Refer to physiotherapist – Read code 8H77



7. Insert the physio letter into the protocol

- Open and Edit the Protocol - **3 - Startback physio letter trigger (Part3of3)**.
- The Physio referral letter needs to be added to the protocol.
- On the protocol map find the location to insert, the location is roughly where the red cross as shown in Figure 1
- Using Insert an Action node – Create Letter - For further information / screenshot See Page 4 - Figure 2 & Page 5 - Figure 3
- Select the imported STarTBACK Physio letter.
- Link the Yes / No prompt node to the new create letter box and then link that to the End node data.
- See Page 5 - Figure 4 for final layout.

8. Add triggers to the protocols

The Read code triggers now need to be added to the first protocol –

1 - Startback Tool Protocol v3.3 (Part1of3)

- Using the list of Read codes below, link the set of read codes to trigger the protocol.
- From the protocol list screen, select the protocol to add triggers to then right click and select 'properties'

- Select tab 'Triggers' and click Add
- Then set System trigger to Add a code and Run mode = Always run
- Then click Add and select each of the Read codes on the list below.

Read Code	Read Term	Read Code	Read Term
N142	Pain in lumbar spine	16C5	C/O Low Back Pain
N1420	Lumbago with sciatica	16C6	Back pain without radiation
N143	Sciatica	NOS	
N145	Backache, unspecified	16C7	C/O upper back ache
S57z	Back sprain NOS	16C8	Exacerbation of backache
S57z0	Pulled back muscle	16C9	Chronic low back pain
16C2	Backache	16CA	Mechanical low back pain
16C3	Backache with radiation	16CZ	Backache symptom NOS

Finally set the protocol so that only certain people are allowed to trigger the protocol.

- Select the 2nd tab 'Job Categories'
- Change to Specific Job categories and select Clinical Practitioner and Nurse.
This will ensure it will not trigger when admin staff enter a back pain code etc.

The Read code triggers now need to be added to the second protocol –

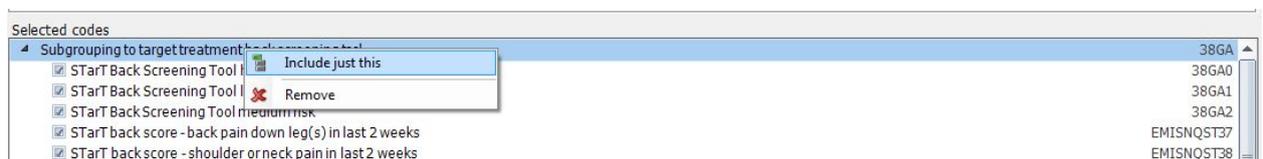
2 - Startback Tool Protocol v3.0 (Part2of3)

- Repeat process as above. Select 'Properties' then 'Triggers' tab and click Add
- Then set System trigger to Add a code and Run mode = Always run
- Then click Add and select Read code

38GA – Subgrouping to target treatment back screening tool

Note: Select this single Read code **ONLY**.

Once you have selected the code right click and select 'Include just this'



NOTE: ONLY if using Physio letter option

The Read code triggers now need to be added to the third protocol – 4 - Startback Physio letter trigger

- Repeat process as previously. Select 'Properties' then 'Triggers' tab and click Add
- This time set System trigger to Save Consultation and Run mode = Always run

Final Check

Ensure all three protocols are set to 'Active'. If not just select each protocol in turn and click

 on the top ribbon, the STarTBACK Tool should now be ready for use.

Figure 1

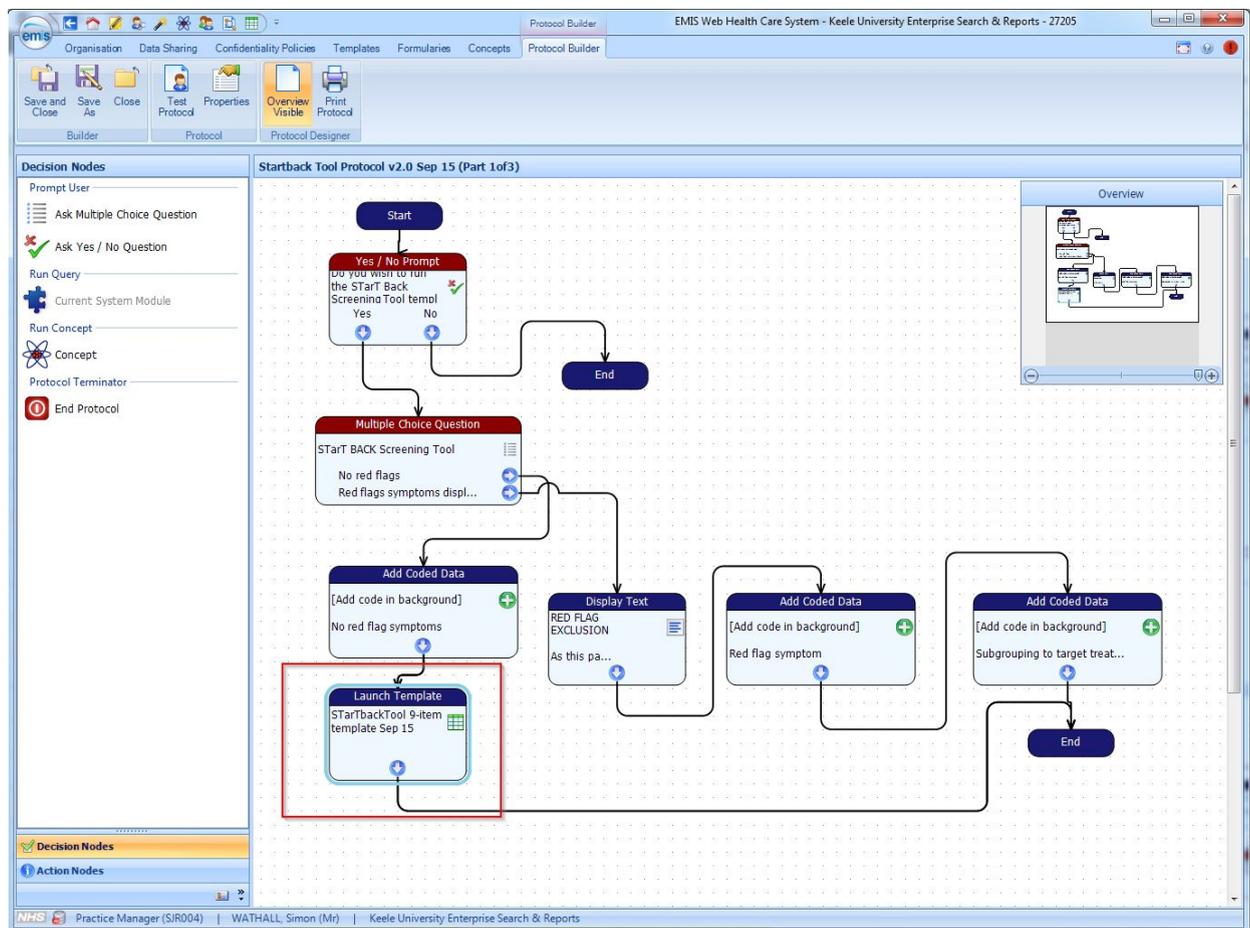


Figure 2

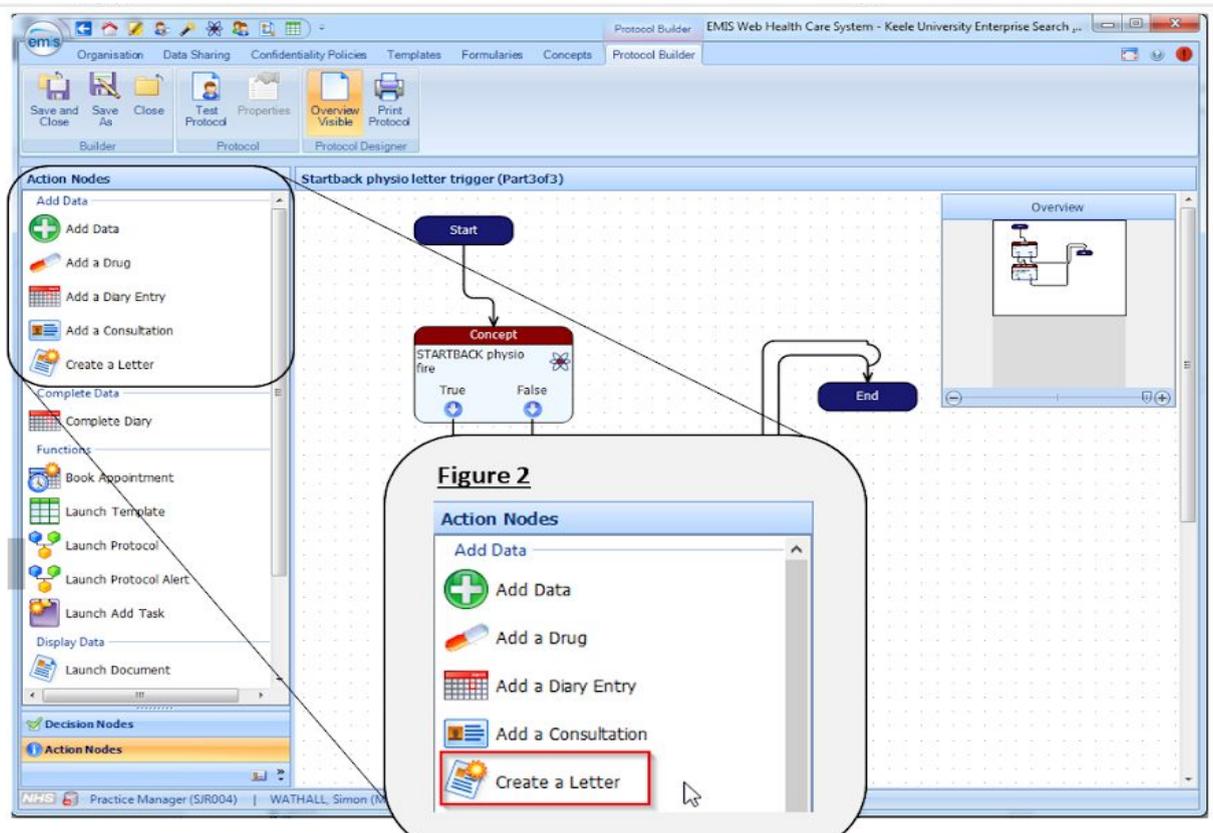


Figure 3

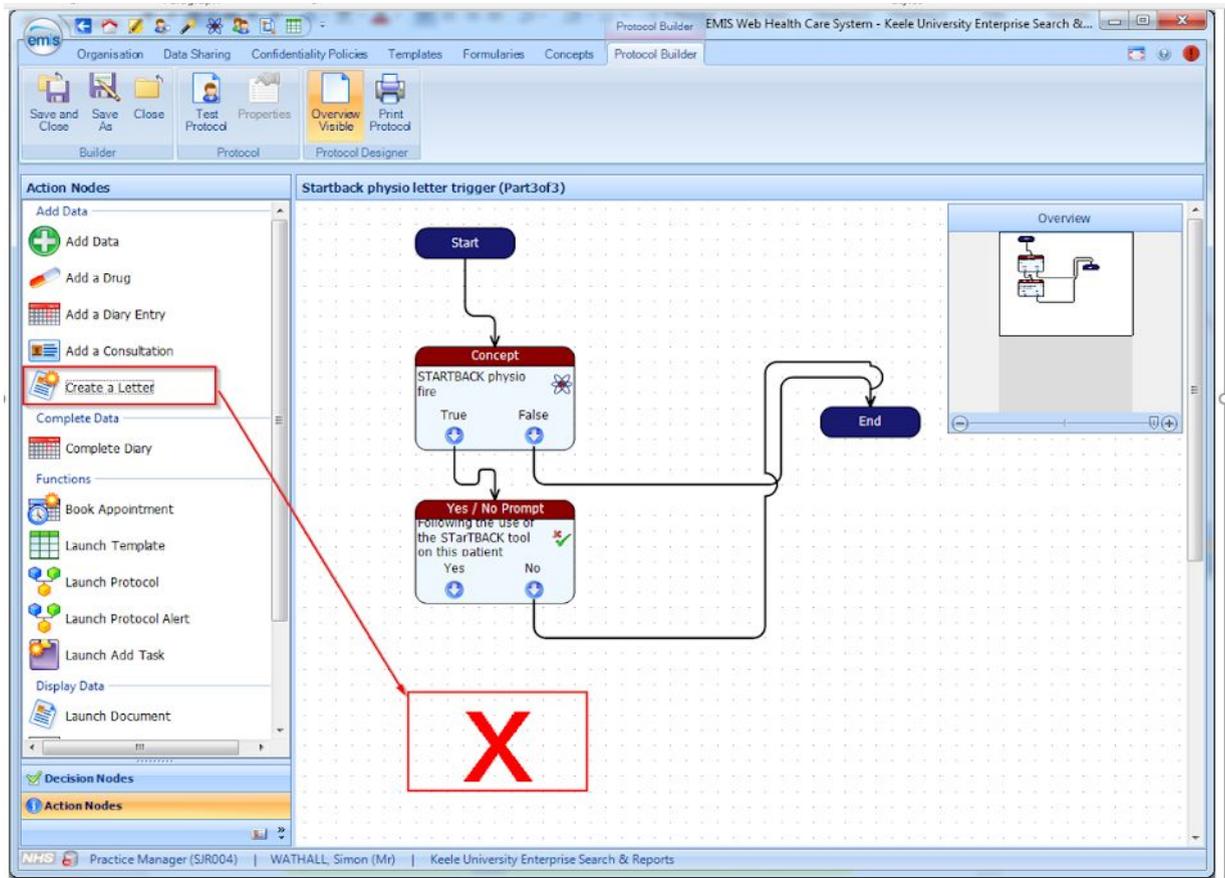
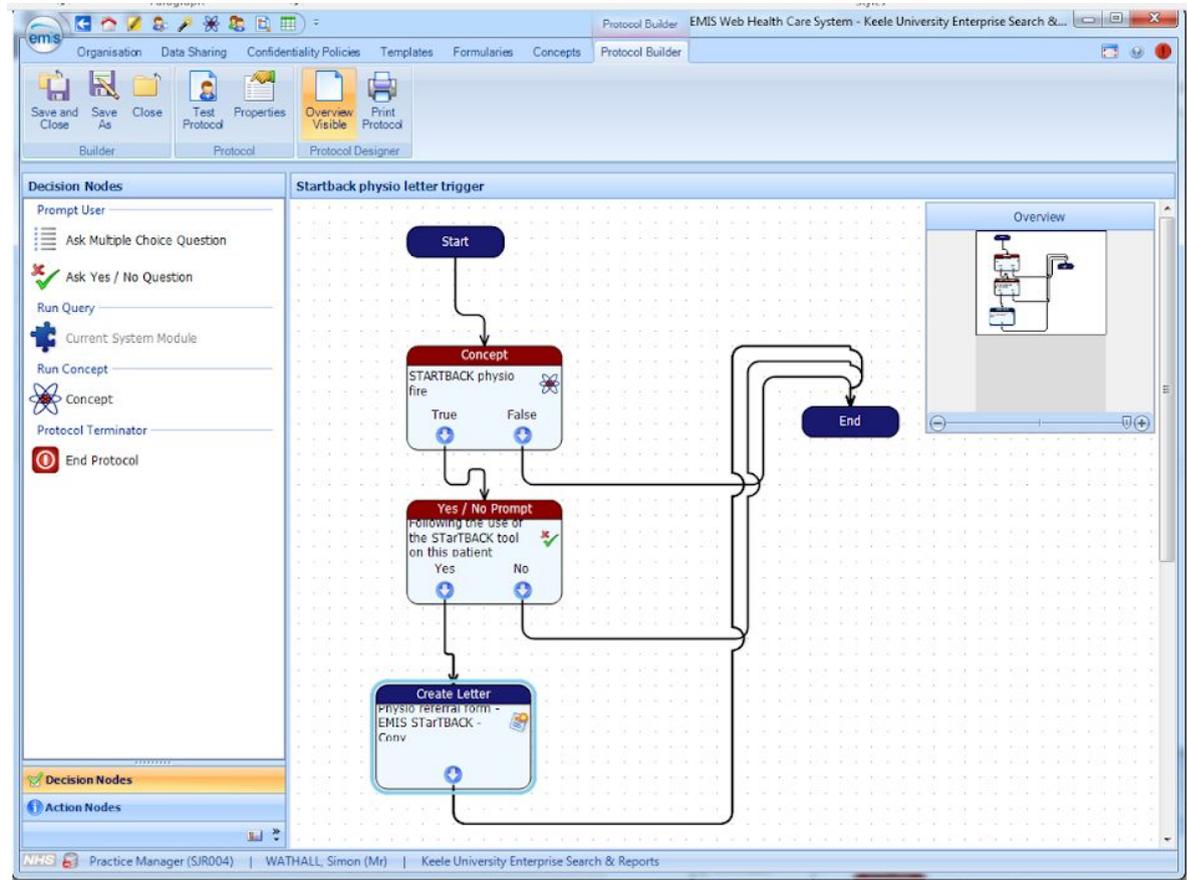


Figure 4



Brief installation manual for SystemOne

1. Import template - The Keele STarT Back Screening Tool Keele/GCS
2. Import protocol - Keele StartBack Protocol Nov 16
3. Insert the template into the protocol and link it to the previous and next steps.
The template is the very last action of the protocol.
4. Insert the 'Action' into the protocol - Patient Action - Templates and find the database link template you imported earlier.

5. Link template to the steps before so it all flows.
6. Under the triggers set Restrict triggering to specific staff roles (e.g GP/ANP depending on which type of clinicians sees patients with LBP).
7. Publish

Setting up links between GP surgeries and local physiotherapist centres offering stratified care approach

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- Federation/Localities engagement in identifying locally adequate referral pathways
- Use of local physiotherapy referral proforma linked with electronic STarTBack template to ensure the STarTBack score is automatically recorded in consultation and subsequently in referral to inform physiotherapy treatment decision. This usually involve GP surgery in-house IT expertise or the use of CCG specific data facilitators. The template installation manual which can be found in **IT Support systems** chapter offers some advice, but local variability may require additional input

CCG commissioning implementation of STarTBack

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- [National Back Pain and Radicular Pain Pathway Savings Calculator](#)
- [CCG Pathway Implementation Kit](#)
- Public Health England- [Return on Investment Tool](#)
- NICE guidelines/STarT Back endorsement/National Pathfinder Project
- Specific introduction date for STarT Back but allowing lead-in “grace” period for non-STarT Back LBP referrals to be valid to allow for gradual uptake and to avoid resentment (learning the lesson from Liverpool and Sheffield CCGs who allowed non STarT Back referrals for a period before mandating the use of the tool)
- The impending discontinuation of Map of Medicine necessitated the alternative, the introduction of STarTBack should be communicated to its administrator in advance to allow adequate time for the amendment of physiotherapy proforma.
- Audit system should be set up in place prior to implementation going live (collate pre and post implementation data), to monitor and capture the data with subsequent findings presentation to local clinicians to demonstrate effectiveness.

Audit tool can be found [here](#) for download (registration required- free of charge for NHS)

h. Business case

BRIEFING PAPER/STATEMENT OF NEED/BUSINESS CASE

EXECUTIVE SUMMARY

Implementation of a Stratified Care Approach to the Management of Patients with Low Back Pain – xxxxx Community Physiotherapy Service/CCG

Background

Back pain is a common problem with 8% of adults visiting their GP each year. The health, social and economic burden of low back pain is well documented, in the UK annual costs attributable to low back pain have been estimated at £12.3billion, with £1.5 billion for direct healthcare resources, £1.6 billion related to informal care and £9.1 billion through production loss. Provision of care for low back pain by primary care practitioners and physiotherapists contributes 25%-30% of direct healthcare costs. There is clear support for active intervention over 'no treatment' for patients suffering low back pain. However there is also clear support that one size does not fit all. Recent research has shown that adopting a stratified primary care management approach based on the use of a prognostic screening tool to estimate risk of poor prognosis combined with matched treatment pathways improves **clinical and cost** outcomes.

Stratified Care utilises a prognostic screening tool to allocate patients into one of three risk defined groups (low, medium or high risk of persistent disabling problems); and then patients are offered matched treatment pathways in accordance with their prognosis. Patients in the low risk subgroup receive an evidence based consultation (reassurance about good overall prognosis, simple messages about pain relief, advice to keep active, evidence based information, written and verbal) and are discharged after 1 session. Patients in the medium risk group receive upto six sessions of evidence based physiotherapy aimed at reducing pain and disability and in supporting patients to stay at or return to work. Patients in the high risk group receive upto 6 sessions of psychologically informed rehabilitation delivered by suitably trained physiotherapists with the aim of reducing pain, disability and distress. The STarT Back trial¹ demonstrated that stratified care results in greater health benefits at a lower average health care costs with an **average saving** to health services of **£34.39 per patient** (and societal savings of £675 per patient). Patients receiving stratified care also reported fewer back pain related days off work in all three subgroups. Public Health England's Report on Return on Investment for

Musculoskeletal Interventions reported that for every £1 spent there is a saving of £226.23 when implementing STarT Back.

Locally within (INSERT LOCAL PARTICULARS-CCG/health area) the Physiotherapy Service has had long outpatient waiting times due to demand outstripping facilities and the workforce. Low back pain referrals account for (INSERT LOCAL DATA) of the referrals within (INSERT LOCAL) service per annum. In addition it is clear that low back pain referrals are also being received by (specify – rheumatology, rehabilitation, trauma and orthopaedics, specialist pain) services. It is clear that a review of the pathway for the management of patients with low back pain is required, and adopting an evidence based approach to this review through the implementation of a stratified care approach to the management of these patients could result in cost savings across the health and social care spectrum.

This paper sets out a review of current referral pathways and the costs associated with these, and recommends the implementation of a new referral pathway for patients with low back pain, based on adopting a stratified care approach to the management of these patients.

Current Position – overview of activity and finance

[It would be helpful to provide an overview of the existing pathways/services that are being delivered, with a diagram in appendix 1a of the current pathway in place for patients]

The (INSERT LOCAL) service continues to provide a musculoskeletal physiotherapy service to (INSERT LOCAL) population. The service deliver (INSERT LOCAL DATA) new outpatient appointments each year and (INSERT LOCAL DATA) follow up appointments; on average each patient will have (INSERT LOCAL DATA) follow ups during an episode of care. Within this low back pain referrals account for xx.

[If possible also provide activity data for LBP referrals to other services such as rheumatology, orthopaedics, specialist pain services].

The cost of this service is (INSERT LOCAL DATA)

The cost of low back pain referrals under payment by results (based on tariff for new outpatient for adults, 2017/8) is £152-246 (Orthopaedics/Rheumatology outpatients).

Proposal

Appendix 1b sets out the preferred referral route for low back pain patients. A fundamental part of this proposal means that all patients with low back pain referred by a general practitioner will have a STarT Back assessment, with each referral clearly indicating the STarT Back score for that patient. Patients will then receive treatment according to their risk of longer term problems (low, medium or high risk). Only those patients clearly requiring secondary services (e.g.surgical intervention or inflammatory) will be referred directly to trauma and orthopaedics/rheumatology services.

As part of this proposal a number of options were considered as follows:

- Option 1: Do Nothing – current referral pathways confused, long waiting times for physiotherapy, high costs for secondary care services (PbR tariff), lack of evidence based approach;
- Option 2: Ensure all patients presenting with non specific low back pain have a STarT Back assessment completed by their General Practitioner (utilising STarT Back tool) with physiotherapy providing matched interventions. This has been shown to be clinically and cost effective with high patient satisfaction.

Option 3: Ensure all patients presenting with non specific low back pain have a STarT Back assessment (utilising STarT Back tool) with General Practitioners managing patients identified at 'low risk, and all medium and high risk patients being referred to physiotherapy for matched interventions. Clinically and cost effective model with high patient satisfaction.

Cost of Proposal

The costs of the existing model of care has been calculated utilising Department of Health (2011) costs for physiotherapy (find out local reference costs) This assumes a cost of £49 per new patient and £35 per follow up patient. The cost of referrals to secondary care services have been calculated utilising the Department of Health Payment by Results tariff (see appendix 2).

Utilising figures derived from the STarT Back Trial (Hill et al., Lancet, 2011), the proportion of patients and associated appointments required per stratified care group is as follows:

Risk Group	% of Referrals	No. of appointments
Low Risk	26%	1 = assessment, advice, discharge
Medium Risk	46%	5 = 1 new, 4 follow up
High risk	28%	6 = 1 new, 5 follow up

Applying these proportions to the proposed pathways considered above implies service costings as follows: *please note costings need to be based on PbR Tariffs and local costs for physiotherapy services*

Activity	New appts	Follow up	Contract Type	COST FYE
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Year	1000	5000	Block contract	£
Physiotherapy activity (low back pain)				
Option 1 - LBP Continue as now.				£302,500
Physiotherapy	1000	5000	Block	
T&O Referrals	100	200	PbR	
Rheumatology Referrals	100	300	PbR	
Option 2: All low back pain referrals to physiotherapy	1200	6000*	SLA	£194,880
	Low = 312	0		15,288
	Med = 552	2208		104,328
	High= 336	1680		75,264
Option 3: Low risk managed by GP; medium & high risk groups managed by physiotherapy			SLA	£179,592
	Med = 552	2208		104,328
	High= 336	1680		75,264

These costs represent the direct costs associated with physiotherapy services. The STarT Back Trial identified broader health and social care savings across a spectrum of areas including: reduction in the number of GP consultations, reduction in the number of visits to NHS consultants, reduced investigations (MRI/x-rays), reduction in epidural injections and medication usage (Whitehurst et al., 2012). No attempt has been made to quantify the reduction in these costs as part of this business plan.

Public Health England have recently made available a [Return on Investment Tool](#) which enables customisation of generic health economics predictions to local CCG population. The tool was designed to help local commissioners provide cost-effective interventions for the prevention and treatment of musculoskeletal conditions.

Recommendation

Following a review of the existing pathways for low back pain referrals from general practice through to community physiotherapy and secondary care services, it is proposed that option xx outlined above is adopted – effectively transferring existing outpatient consultations for orthopaedics/rheumatology to primary care, and ensuring that a **stratified care** approach for the management of low back pain patients is implemented in this locality. By adopting this approach it is estimated that savings of over £100,000 can be achieved. This is a conservative estimate based on activity figures available at this point in time. In order to manage this transition the following needed to be implemented:

- Reduction in T&O/rheumatology outpatient activity through 20xx SLA negotiations
- New SLA drawn up between (INSERT LOCAL) CCG and (INSERT LOCAL) community service in order to adopt a new pathway for low back pain referrals
- Development of a Musculoskeletal Board to oversee the management of the service and the transition over to primary care
- Development of further QiPP/QP plans to support the management of low risk back pain patients within primary care to achieve the savings set out in option 3.

NEXT STEPS

The (INSERT LOCAL) CCGs have recently met to discuss how they would monitor the musculoskeletal pathway for low back pain patients. Following discussion it was felt that it would be more cost effective to establish a centralised system for referral of these patients via the community physiotherapy service. In agreeing this new referral pathway the following principles have been agreed:

- (INSERT LOCAL) community services acts as the hub for receipt of all low back pain referrals with the proportionate costs of the administrative function for this being shared amongst all CCGs, reflecting the activity undertaken for each CCG. This function will include operational management of the referral pathway, appointment system and waiting list monitoring.
- Each CCG accepts responsibility for their own waiting list. If waiting lists are growing then each CCG will need to decide how they will increase capacity/manage waiting times.
- (INSERT LOCAL) community physiotherapy service is not responsible for the non completion of the STarT Back tool by general practitioners. Capacity issues, waiting times, referral rates, DNA rates remain the responsibility of each CCG.
- There will be a shared governance framework for the low back pain referral pathway with representatives from all CCGs to monitor its implementation.
- (INSERT LOCAL) community physiotherapy service will provide audit data for the purposes of monitoring the implementation of the referral pathway. (INSERT LOCAL) CCG will be responsible for monitoring of those patients who are directly referred to secondary care services outside of this agreed pathway.
- If any of the 4 CCGs wish to withdraw from the low back pain pathway then then they will incur the redundancy costs associated with withdrawal from the service (e.g. clinical and administration redundancy costs incurred).

References

1. Hill et al, 2011 Lancet
2. Whitehurst et al., 2012 Arthritis and Rheumatic Diseases
3. Public Health England 2017 - Return on Investment of Interventions for the Prevention and Treatment of Musculoskeletal Conditions

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/670211/musculoskeletal_conditions_return_on_investment_final_report.pdf

APPENDIX 1 – Low Back Pain Activity & Costs

Activity	New	Cost	Follow Up	Cost	Tariff	Total
Physiotherapy	1000*	49.00	5000*	35.00	Reference cost	224,000
Orthopaedics	100*	126.00	200*	111.00	PbR	0
Rheumatology	100*	246.00	300*	124.00	PbR	51,700
						302,500

*activity figures are purely for demonstration purposes

PbR costs based on 2017/18 prices.

Reference cost should be that applied for local physiotherapy service - these costs are as provided by DoH 2011.

How can patient involvement be used to implement STarTBack?

There are several ways in which patients and members of the public can work with you to implement STarTBack. It is important to seek out opportunities where service users and potential service users can be involved in the planning and/or delivery of a project such as STarTBack so that implementation strategies remain patient centered and relevant. This should be in a spirit of equality, valuing lived experience and mutual trust. In practical terms during the implementation members of Practice Participation Groups from local GP surgeries or Patient champions should be invited to meetings and talks as stakeholder's representatives to share their experience of being stratified by the STarT Back approach. This can be very empowering for clinicians to hear about patient's experience and improve the uptake of STarT Back implementation.

In STarT Back, patients and members of the public can:

- 1) Work with clinicians to co-produce evidence based, patient friendly information - for example leaflets, video clips, apps, websites etc**

For example: At Keele Primary Care and Health Sciences, a group made up of Research User Group members with low back pain and members of the Lay Involvement in Knowledge Mobilisation (LINK) group devised a patient facing back pain information leaflet, for patients in the UK and the USA. The leaflet is influenced by patient experience and incorporate real life patient stories. The information is aimed at back pain patients who are stratified into the 'low risk' category using the STarT Back tool.

Co-produced patient facing back pain information from Keele University LINK group:

Keele UNIVERSITY

So you have back pain?

Your guide to back pain and what you can do about it

Meet the patients:

Mark
22 year old Mark works full time in a call centre and sits a lot of the time. His doctor says he is overweight. He had a sudden episode of back pain but with movement and painkillers he felt better very soon.

Emily
Emily is a 36 year old office manager. She has had back pain on and off for years. It flares and settles and she needed to see a physiotherapist to help her.

Danny
Danny is 52 years old and is a builder. He has had several incidents of back pain over the years but recently experienced pain that went down his leg. He worries about his back pain and his future.

Faye
Faye is in her sixties now and has had back pain for many years. She has found it hard to cope with her back pain at times but by getting to know herself she has developed ways to cope with the pain and feel more positive.

Get moving, Know yourself, Tell others, Talk to your workplace....

Most people will experience back pain at some point in their lives. This leaflet will tell you; What back pain is; how it can affect your life; and what you can do about it

What causes my back pain?

There are lots of things that can lead to back pain such as poor posture, computer use, driving, lifting incorrectly and not being active enough. Very occasionally back pain is caused by an underlying condition and your doctor or therapist will consider this when they assess you.

How might it affect me?

Pain varies from person to person:

"I had an episode of back pain recently when I woke up one morning and got out of bed. I felt a sudden pain when I bent down to put on my slippers - it felt like a piece of elastic when the rubber perishes. It wasn't excruciating but it was bad enough to make me wince - I understand exactly what people meant by feeling as if something had gone in my back! Every other person I speak to has some back pain, so it is very common, but it affects some people more than others."

Burning
Aching
Shooting
Throbbing
Mild
Pulsing
Severe
Familiar
Gnawing
Cramping
Sharp
Stabbing

"I was in a traffic accident when I was in my 20s - A motorbike hit me in my lower back. The pain generally reduced over time but I have been left with it for the long term. I now feel constantly uncomfortable and for several years the persistent pain affected both my career and my social life. My self-esteem plummeted and I felt lost and alone."

For some it is severe and frightening, for others it is mild and familiar. For some it will get better quickly and for others it will stay persistent. Some people with persistent back pain may need additional help and support.

Does everyone feel back pain differently?

Yes, and it affects various aspects of peoples' lives:

"My back pain started years ago. It was a cold wet night and I had to stop the car to change a flat tyre far from home. I changed the wheel at the side of the road and then discovered that I couldn't stand up straight again. Back pain is very common. A sore back may last for just a day or two. But a more severe episode can last for a few weeks or more and mine certainly flares and settles. There does not seem to be any pattern, sometimes I have no pain at all, but sometimes I have moderate pain."

career
Travel
family
friends
Self-esteem
Appetite
Work
hobbies
aspirations
Sleep
support
education

"I was quite young when my back pain started. I think it was around about my late teens. I had a heavy, manual job at the time and it happened at work. Four of us had been tasked with carrying some heavy equipment through a narrow doorway, but it was awkward to manoeuvre and unfortunately the weight of the equipment shifted on to me when my back was bent. Since then I have had pain that comes and goes. Now it varies from a dull ache to full on pain, and I now get shooting, burning pain which goes down my leg. Life is not as happy as it should be because of the pain and although you learn to tolerate some of it, it can make me feel quite anxious and worried about the future."

What can I do about my back pain?

Although health care professionals will support you, the most important thing is for you to feel in charge of the pain, and not let the pain be in charge of you.

There are many effective things that you can do to manage your back pain:

1) Get moving

It's natural when back pain is bad for you to try resting or lying down, but it's really important to get active again as soon as you can. Start gradually and don't worry if it's uncomfortable to start with. Remember **hurt doesn't mean harm**.

"I understood that keeping active is crucial to recovery. I took painkillers at first but what really helped was that I kept moving by doing gentle stretching, strengthening my core muscles, walking and swimming and I think exercise also helps if you are feeling low from the pain. Being over-weight can aggravate all kinds of problems, especially in your back, so I know now to keep my weight healthy. I have a desk job, so I made sure that I went for regular walks away from my desk. I still do this now!"

"Every person is different with their pain and how they deal with it. I have really had to get to know myself and listen to my body to understand my pain. I attend a local pain clinic. For me, learning to pace myself has been a huge help. I have to plan tasks and think of my limitations - I have to think before I act! The pain is annoying but I know how to manage it now. By learning about my back pain and knowing what I need to do, I feel like I am proactively doing something to help myself, which gives me a more positive outlook on my condition."

2) Everyone is different

How you experience pain will depend on what's going on in your life and how you are feeling generally. Being stressed, tired or feeling down doesn't cause back pain, but can make it seem worse. Becoming more aware of these things will help you manage your pain better. So keep a diary and learn more about yourself.

3) Telling others

It can be hard feeling that people may not believe you. Often there are no visible signs, however most people have had back pain at some point in their life and know what it feels like. Try to explain how your back pain affects your life.

"Having back pain can make you feel very down and if you're not careful you could feel isolated and it can be upsetting. But if you have support from family and friends it can help so much. It also helped me immensely to speak to other people who have been through the same as me."

"I was worried about telling work, but my physiotherapist advised me to talk to my line manager and it went very well - I had my duties minimised after my initial absence to allow a mixture of activity and rest. This allowed me to do the essentials of my job whilst making a good recovery. I found the experience of seeing a physiotherapist excellent. I was given reassurance, advice and exercises to help my recovery."

4) Talk to work

Getting back to work is important and you can talk to your workplace about this. It is not necessary to stay off work until the pain has completely gone and your GP can give you a Fit Note that advises a gradual return with shorter hours or lighter duties.

You may have some questions....

Having back pain can be upsetting and frustrating. You may have questions. Below are three of the most frequently asked questions about back pain and some advice for these. However, remember that your health care professional can answer your own personal questions.

Do I need painkillers?

- Painkillers are not a cure for back pain.
- Talk to your pharmacist, doctor or nurse about which painkiller to choose in the short term to help you get moving again.
- Long term and regular use of painkillers could cause harm, so remember - exercise works better.

"A combination of a little bit of rest, exercise and painkillers worked for me. I feel it's important to keep moving as much as I can, I watch my posture and generally think about what I am doing more, mostly I just get on with it."

"I went to the doctor who examined my back and listened to me talk. She said that tests are only needed if a fracture or something more sinister is suspected, so I knew that xrays or blood tests were not going to help."

Do I need tests?

- Your doctor or health care professional can assess you properly by listening to your story and by examining you. Usually this is enough without doing further tests to work out how best to help you and is more important than a scan.
- The back is made of many things such as bones, discs, ligaments and nerves and all of these can be the source of pain, often in combination, but this doesn't always show up on tests.
- What's important now is that you invest your energy into helping yourself manage and cope with the pain.

REMEMBER: Contact your health care professional if you feel things aren't going according to plan

Why has my back pain lasted for months?

Your back pain is not getting better and your doctor or physiotherapist has reassured you there's no underlying spinal condition. You are not alone. Many people with back pain find it persists longer after that first episode. Like you, many people find the pain is still stopping them doing the things they'd like to do or they enjoyed doing before the back pain.

The feeling of pain takes place in the brain's pain centre and acts like a burglar alarm. It sends out loud signals if it gets disturbed, so that you can take action.

But like a burglar alarm, the pain centre can go wrong and can go on producing pain even if the source of pain has gone away. It is important that you keep active and try to do and enjoy things because this helps to 're-set' the pain centre. You will not be harming your back by doing this even if you still have pain. Hurt doesn't always mean harm. There is no quick and easy way to switch the pain centre off, but over time, you can reset and quieten it down. There are health care professionals who can help you with this.

In the meantime:

Get moving, Know yourself, Tell others, Talk to your workplace....

www.keele.ac.uk/sbst/patients/ @KeeleStartBack

You may find these YouTube videos helpful. Scan your smartphone over the QR codes to go directly to the videos.

This leaflet has been designed by patients who are part of the LINK group (Lay Involvement in Knowledge Mobilisation) at the Research Institute for Primary Care and Health Sciences, Keele University, UK. Email: l.campbell@keele.ac.uk for more information on the LINK group.
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Patient groups can be consulted with to identify ways to disseminate resources such as these further and they can advise on how to raise awareness amongst peers about why and how the STarT Back approach can help lower back pain patients.

2) Share experiences of new ways in which care is delivered

Patients can provide a completely different perspective on proposed treatments and their implementation into NHS services, which can potentially provide solutions or ideas for implementation barriers

3) Anticipate the questions patients would ask a clinician and advise appropriately

During a STarT Back consultation, questions from patients could include; How quickly will I feel better? Why do / don't I need to go to see a physiotherapist? What exactly is causing my back pain? How will it affect my life? What can I do about it? Does everyone feel back pain differently? Do I need painkillers? Do I need tests? Do I need scans? Why should I get moving? Why should I talk to work? Why should I tell family and friends? What does 'get to know yourself' mean? Why has my back pain lasted for so long? What is stratified care? (However this term is not likely to come up in consultation) How long is a short walking distance? Why are you asking me about worrying thoughts when I came in for back pain?

(These questions include those raised in LINK meetings when the patient information leaflet was developed. The leaflet answers some of these questions.)

Explain in lay terms why you are asking the patient these nine questions, what STarT Back is and how it can help. This could be something like: "I am going to ask you nine questions about your back pain. This will enable me to work out how best to treat your back pain. These questions have been developed to help me to find out not only how bad your back pain is, but also how it affects your mood and every day activities. Having this information means that I can give you the most appropriate treatment quickly and help you to feel better.'

This is a good lay summary of STarT Back which was included in MSK Matters Bulletin 9:

Most patients who present with back pain to primary care do not have a serious underlying condition. The STarT Back approach uses a brief easy-to-complete 9-item tick-box tool to assess risk (of persistent pain and disability) and support management. Evidence shows that using this stratified care approach to provide matched treatment for this group of patients is clinically and cost effective. (Stratifying care means assessing patient level of risk and then matching treatment to that risk). Clinicians said that a computer template, including the STarT Back tool, could assist them in their management of patients with low back pain.

STarT Back supporting Statement

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Overview of the STarT Back approach:

This overview includes both details about using the tool to identify back pain patients' risk-status and the matched targeted treatment pathways.

The STarT Back Screening Tool estimates around 85% of primary care consultants have "non-specific" back pain where the specific underlying disease or pathology remains unknown (3). For these patients guidelines highlight the importance of assessing a broad range of potential influences on prognosis including fears and anxieties about the pain, mood and motivation and work situation (5-6). However, this is often difficult to do in practice and until recently no validated tool has existed to inform clinicians or others about the risk-status of individual patients.

The STarTBack Screening Tool (freely available from www.keele.ac.uk/startback) is a brief prognostic tool that is specifically designed to help clinicians produce an index of treatment modifiable risk factors, to be used to stratify individuals into appropriate initial treatment pathways (7). The tool has been tested for psychometric properties, including reliability and validity in different settings internationally (7-14). In addition, a recent high quality randomised trial in the UK has demonstrated that using the tool along with targeted treatments improves efficiency regarding referral to physiotherapy, improves patients' clinical outcomes and reduces health care costs (15).

Due to the rapidly changing and multifactorial nature of acute back pain, clinicians need objective measures to help clarify the extent of improvement or deterioration. The STarTBack tool provides a consistent measure of the broad impact of the back problem for an individual. It also has an advantage over many other measures as it has established thresholds/cut-off levels which suggest alternative treatment pathways such as allocation to brief (minimal) care, or extra support from treatments delivered by physiotherapists.

Primary care data suggest that for first contact settings, such as GP consultations, around 55% of patients are at low risk of poor outcome (these are the patients who are likely to do well irrespective of treatment), 33% are at medium risk and 12% are

at high-risk of poor outcome. In physiotherapy outpatient settings the proportion of low risk patients decreases and medium and high risk increases. Patients at high risk of poor outcome are not only those that are emotionally distressed by their back pain but also include patients with the most complex pathology and social circumstances. They are also often acute patients struggling with their symptoms (7) in addition to those with long standing symptoms.

The tool contains 9 items and takes less than 2 minutes to complete. It can be immediately scored by the clinician and the patient's risk group (low, medium or high) established. Training to use the tool is not necessary as it is quick, simple and self-explanatory. Some therapists are also using a modified version of the tool not only for initial risk status assessment but to monitor treatment progress over time (see www.keele.ac.uk/startback). The tool is available in 9 languages and is increasingly being adopted internationally with very positive feedback from users. Over 50 Centres are using the tool in the UK alone. The British Pain Society and Royal College of General Practitioners have recently commissioned a spinal pathway

in collaboration with Map of Medicine and decided to embed the tool within this pathway. Some PCTs have made the STarTBack tool available online for GPs to use with patients (e.g. www.sheffieldbackpain.com).

The matched targeted treatment pathways

The STarTBack approach is not only about using the screening tool, but also about the use of matched treatment pathways that are guided by each patient's risk status. A summary of the targeted treatment pathways for patients at low, medium and high risk of poor outcome (13-17) is provided below.

Low-risk group: These patients are cost-effectively treated with a minimal package of good quality care. In the STarT Back trial (15) patients at low risk of poor outcome each received a 30 minute face to face appointment that consisted of a comprehensive assessment including a physical examination, individualised education and reassurance about diagnosis, prognosis and treatments and advice about medication, activity and work. This was supplemented with written materials (the Back Book (20)) and a leaflet about local exercise and activity facilities) and a 15-minute educational DVD („Get back active“ (21)). Patients were then discharged

after this one off consultation with advice to re-consult if necessary. This targeted treatment ensures that these patients have their concerns addressed, are reassured about their good prognosis and empowered to self-manage, but that they are not over-treated. The trial data suggest that multiple ongoing treatments for these patients results in them taking more time off work without any additional clinical benefits from this additional treatment.

Medium risk group: For these patients a referral to physiotherapy is beneficial both in terms of their clinical outcomes and cost savings. Physiotherapists negotiated an individualised treatment plan with the patient aiming to reduce symptoms, disability and promote self-management. They used a range of evidence based interventions including advice, explanation, reassurance, education, manual therapy and exercises. Acupuncture treatment was provided at the discretion of the physiotherapist and patient. Consistent with evidence based guidelines (4-6) bed rest, traction, massage and electrotherapy were not recommended.

High-risk group: For these patients a referral to an appropriately skilled physiotherapist is beneficial both in terms of their clinical outcomes and cost savings. In the STarT Back trial it was cost-effective to allow longer appointments for high-risk patients. The high risk treatment (outlined below) is in addition to the treatments provided for medium risk patients.

1. Build rapport, validate and normalise the patient's experiences.
2. Conduct a comprehensive biopsychosocial assessment (physical examination, exploration of the impact that pain is having on the patient's physical and psychosocial functioning, identification of the patient's beliefs and expectations regarding LBP and its management and structured identification of potential obstacles to recovery).
3. Address gaps in patients knowledge, correct possible misunderstandings and provide a credible explanation for their pain (e.g. cause, mechanisms, prognosis, role of investigations and treatments),
4. Create opportunities for patient's to respond differently to difficult internal experiences (thoughts, feelings and bodily sensations) and to maintain or alter activity in keeping with their goals.
5. Provide guidance on a variety of pain rehabilitation techniques including pacing

and graded activity.

6. Provide support in returning to usual activities, sleep and work.

7. Specifically focus on the psychological prognostic indicators (catastrophizing, low mood, anxiety and pain related fear) with the adoption of simple cognitive behavioural techniques.

8. Encourage patients to put skills into practice between sessions, review and reinforce progress and problem solve difficulties.

9. Emphasise the role of active self-management of ongoing or future episodes.

This approach is underpinned by a specific focus on communication skills, with careful attention to language and by collaborative goal setting. In addition to the appropriate training (see www.keele.ac.uk/startback or contact g.sowden@cphc.keele.ac.uk for details about training), it is important that these physiotherapists receive ongoing clinical supervision from appropriately skilled personnel.

Figure to summarise treatments:

START BACK TOOL

Low-risk group	Medium-risk group	High-risk group
<ul style="list-style-type: none"> - 30-min assessment - Physical exam - Subjective history - Self management - Advice sheet - Local exs venues - 15-min DVD 	<ul style="list-style-type: none"> - 45 min assessment & up to 6 x 30-min Tx sessions - Promote self-mgt - Advice info (written) - Exs to increase function - Manual therapy - RTW advice - Pain medication compliance 	<ul style="list-style-type: none"> - 60 min assessment & up to 6 x 45-min Tx sessions - Physical Tx as per medium risk group - CBT approach to reduce disability and pain, improve psychological functioning and enable the patient to

		manage ongoing and/or future episodes.
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