

## Supplementary file S1

### Physiotherapy treatment

#### **Principles**

*[These principles are intended to provide the basis for and guide the individual physiotherapist's decisions for selecting treatment content, and deciding dose and progression of treatment etc].*

1. To provide a framework and, thereby, some standardisation for clinical decision-making for physiotherapists.
2. To enable flexibility of the intervention for the individual patient, to ensure patient centred practice.
3. To enable treatment according to assessment findings of the individual patient, through flexibility of the intervention.
4. To commence the intervention at approximately 4 weeks post surgery, to provide optimal care.
5. To allow for patient choice and variations in practice by delivering up to 8 physiotherapy sessions for each patient, over a period of up to 8 weeks (taking the patient up to 12 weeks post surgery).
6. To decide the number of contacts required, nature of the intervention, and speed of progression based on an initial assessment (and refined by subsequent re-assessment as appropriate).
7. To apply the intervention to patients alongside use of the post lumbar discectomy manual.
8. To use individualised goal setting as a strategy to guide progression.
9. To consider high intensity exercise for patients for whom this might be slightly more effective than low intensity for pain and improved functional status. Intensive interventions include approaches to physiotherapy through exercise, behavioural rehabilitation, or a multimodal approach. High intensity can be defined in terms of repetitions, effort, difficulty etc.
10. To follow a progressive approach to exercise with encouragement of early return to work and activity (or a graded return to work for those with jobs involving higher physical demands), to be in line with optimal care.

### Table detailing the proposed 1:1 intervention

*Table of dual purpose – to provide 1] a description of the intervention and 2] a structure to enable physiotherapists to record the delivered intervention.*

#### Instructions:

- Following your initial examination of the patient, please complete the first 4 sections of the table from 'participant number' to 'problem list'.
- For the first session please also detail under physiotherapy session 1 your interventions.
- For subsequent visits, please detail under the relevant session number your interventions.
- At discharge please complete the final 'discharge' box.
- At discharge, please reinforce that further support would be via their GP.
- The table is to document what you have done NOT to guide you in way as to what you should do.
- The list of interventions covers every intervention you might want to use, not what you should use.

Participant number:			
Physiotherapy diagnosis:			
Any reasons for caution:			
Problem list:	Problem	Session problem added (1-8)	Session problem resolved (1-8)
	1.		
	2.		
	3.		
	4.		
	5.		
	6.		
	7.		

	8.								
	9.								
	10.								
PROBLEM	Treatment intervention options <i>(under 'detail', please provide information regarding specific techniques, dosage, progression etc)</i>	Number of physiotherapy session <i>(please tick the intervention used for each physiotherapy session)</i>							
		1	2	3	4	5	6	7	8
	Please insert dates of physiotherapy sessions under the number of the session								
Reduced functional mobility	Advice to gradually increase walking distance <i>Detail:</i>								
	Advice re getting in and out of car <i>Detail:</i>								
	Walking activities <i>Detail:</i>								
	Stairs <i>Detail:</i>								
	Advice re how to manage foot drop <i>Detail:</i>								
	Other - please detail								
Reduced knowledge to enable self management	Explanation of healing, pain, recovery time, expectations of surgery <i>Detail:</i>								
	Discussion of aims and expectations of treatment <i>Detail:</i>								

	<p>Discuss any anxieties and explore any fear avoidance issues</p> <p><i>Detail:</i></p>								
	<p>Goal setting</p> <p><i>Detail:</i></p>								
	<p>Reinforcing functional advice from manual e.g. specific advice on driving, milestones etc</p> <p><i>Detail:</i></p>								
	<p>Discuss increasing activity and to plan to return to work (or normal activities) as soon as able</p> <p><i>Detail:</i></p>								
	<p>Discuss return to work plan and encourage patient to actively consider job/requirements +/- begin discussions with employer regarding graded return</p> <p><i>Detail:</i></p>								
	<p>Advice on general activities/ increasing other CV exercise e.g. gym, swim, cycle etc</p> <p><i>Detail:</i></p>								
	<p>Advice re smoking and bone healing</p> <p><i>Detail:</i></p>								
	<p>Tailored lifting advice</p> <p><i>Detail:</i></p>								
	<p>Tailored postural advice</p> <p><i>Detail:</i></p>								
	<p>Other - please detail</p>								
	<p>Accessory movements e.g. PA technique</p> <p><i>Detail:</i></p>								

Reduced spinal range of movement	Physiological movements / mobility exercises in weight bearing <i>Detail:</i>								
	Physiological movements in non weight bearing <i>Detail:</i>								
	Other - please detail								
Reduced trunk stabilisation	Transversus abdominis in neutral <i>Detail:</i>								
	Gluteal exercises <i>Detail:</i>								
	Progression of transversus abdominis <i>Detail:</i>								
	Non-specific core stability exercises <i>Detail:</i>								
	Multifidus retraining <i>Detail:</i>								
	Advanced trunk stabilisation <i>Detail:</i>								
	Other - please detail								
Reduced general strengthening	Lower limb strengthening exercises <i>Detail:</i>								
	Upper limb strengthening exercises <i>Detail:</i>								
	Other - please detail								

Reduced neural mobility	Specific cautious movements <i>Detail:</i>								
	SLR performed actively <i>Detail:</i>								
	SLR performed passively <i>Detail:</i>								
	Active slump <i>Detail:</i>								
	Passive slump <i>Detail:</i>								
	Other - please detail								
Reduced conditioning / fitness	Graded functional exercises <i>Detail:</i>								
	Paced increase in activity <i>Detail:</i>								
	General aerobic exercises <i>Detail:</i>								
	General strength training <i>Detail:</i>								
	Low intensity exercises <i>Detail:</i>								
	High intensity exercises <i>Detail:</i>								
	Other - please detail								

Reduced progress / plateau in improvement	Continue with exercises independently at home <i>Detail:</i>								
	Short and longer term goal setting <i>Detail:</i>								
	Planning for the future <i>Detail:</i>								
	Other - please detail								
Pain	Explanation of pain physiology <i>Detail:</i>								
	Advice on pain relief and who to contact <i>Detail:</i>								
	Advice re when to stop taking pain killers <i>Detail:</i>								
	Advice re how to manage flare ups <i>Detail:</i>								
	Pain control interventions e.g. Acupuncture, TENS <i>Detail:</i>								
	Other - please detail								
Impaired recovery owing to psychological factors	Cognitive behavioural approach <i>Detail:</i>								
	Pacing: <i>Detail</i>								
	Goal setting: <i>Detail:</i>								
	Other – please detail								

Patient not responding /condition deteriorating / experiencing complications	Liaise with surgical team to discuss case <i>Detail:</i>								
	Liaison with surgical team / colleagues <i>Detail:</i>								
	Other - please detail								

**Patient discharge:**

Please summarise the outcome of physiotherapy at the point of discharge and any specific advice that you have given to the patient.