

## Standards of Physiotherapy practice and stroke care

### Physiotherapy: Chartered Society of Physiotherapy Stroke audit

#### Rationale for the standards of physiotherapy practice in stroke care

This section is designed as a profession specific addition for the multidisciplinary audit. It is recommended that it be used alongside the main audits to give a complete picture of physiotherapy service provision. It is presented in a format similar to that of the main audits, i.e. organisation of care, assessment and planning, follow-up and review, and patient/carer opinion.

This physiotherapy audit form, originally devised in 1996, was prepared by the Chartered Society of Physiotherapy (CSP) representatives on the Intercollegiate Working Party for Stroke. These were Sheila Lennon, also representing the Association of Chartered Physiotherapists in Neurology (ACPIN), and Margaret Hastings, also representing Chartered Physiotherapists Working with Older People (AGILE). The rationale underlying the original development of these standards is discussed in depth in Lennon & Hastings.<sup>1</sup>

During the original development the audit was reviewed by:

- The national executive committees of ACPIN and AGILE
- A peer review group of expert physiotherapists in stroke care
- A group of 60 self-selected physiotherapy colleagues working in stroke rehabilitation across the United Kingdom
- The CSP Clinical Effectiveness Development Group (CEDG).

The audit form was then formally piloted at three different clinical sites on 59 patients following stroke. The sites were a rehabilitation unit for older people, a designated stroke unit and a combined acute and community service.<sup>1</sup>

Since 1996, there have been several developments. The CSP has updated its standards of physiotherapy practice, amalgamating the special interest group standards within the core standards of physiotherapy<sup>2</sup> and adding a clinical audit tools pack. The *National clinical guidelines for stroke*, which give evidence-based recommendations for practice, were published in 2000<sup>3</sup>. In the light of these recent developments, this audit form has been checked for currency by Margaret Hastings, Sheila Lennon, and Ralph Hammond (CSP Professional Adviser).

These standards apply to patients with acute stroke from onset, through rehabilitation, to the longer term<sup>3</sup>. While some of the physiotherapy standards are monitored within the main audits, others are more appropriate for a profession-specific audit. Therefore a complementary physiotherapy audit form has been designed. However, it can also be used as a stand-alone document for a physiotherapy service.

#### Outcome measures of physiotherapy in stroke rehabilitation

To monitor the results of care, physiotherapists should use published, standardised outcome Measures<sup>4</sup>. Any outcome measure used to demonstrate treatment effects should be linked to the aims of physiotherapy. These are, broadly, to promote recovery of motor control of the hemiplegic side, and to re-educate the sensorimotor components that contribute to functional skills in preparation for functional tasks such as rolling, lying to sitting, sitting to standing, and walking<sup>1</sup>.

It is essential that the measure take into account items of impairment and disability relevant to the aims of physiotherapy. However, clinicians may find some measures too time consuming and too specialised for routine clinical use, even if they are only measured on initial assessment and on discharge from an episode of care<sup>1</sup>. Lennon and Hastings have identified two measures to help the clinician: the Sodring Scale<sup>5</sup>, and the Rivermead Mobility Index (RMI)<sup>6</sup>. The Sodring scale aims to give some indication of the recovery of movement of the affected side. The Rivermead Mobility Index documents change in 15 items of functional ability. Lennon and Johnson have proposed a modified version (the Modified RMI) with eight items and using a six point scoring system. This enhances its sensitivity<sup>7</sup>.

The selected items from the Sodring scale and the MRMI are presented for reference at the end of this profession specific audit.

It is acknowledged that different physiotherapy departments will select different outcome measures according to their own needs. However, these measures should be standardised, of published validity and reliability, and sensitive to physiotherapy treatment effects.<sup>2,4</sup>

Some suggestions are listed below; further suggestions can be accessed on the CSP outcome measures database ([www.csp.org.uk](http://www.csp.org.uk)) and in Wade.<sup>8</sup>

### **Some suggested outcome measures of physiotherapy in stroke rehabilitation**

Outcome measures might include:

- The Modified Rivermead Mobility Index<sup>7</sup>
- The Motor Assessment Scale<sup>9</sup>
- The Rivermead Mobility Index<sup>6</sup>
- The Rivermead Motor Assessment<sup>10</sup>
- The Sodring Scale<sup>5</sup>

### **How to perform an audit using the physiotherapy audit form**

The audit of service organisation (questions 1&5) will require only one proforma per department.

The audit of the process of care (questions 6&35) will require a separate proforma to audit the records of each case.

For the audit of the process of care:

1. Select the physiotherapy records of a random sample of 20 patients with acute stroke who were discharged from your service more than six months ago.
2. Fill in one audit form for each patient for a total of 20 patients.

Any comments you may have on the audit form should be sent to Ralph Hammond, Professional Adviser at the Chartered Society of Physiotherapy.

**PLEASE NOTE: This audit tool has been adapted by a group of physiotherapists across Southern Derbyshire to meet with local service needs.**

## Stroke Audit: Physiotherapy

### Service Organisation

Standard	Criteria	Audit Question	Yes	No
There is a physiotherapy service agreement for stroke patients which provides information on access, staffing, location of service provision, response times and local standards of practice. <sup>3,4,11</sup>	There is written documentation available for consultation <sup>4</sup>	1 Is there a written service agreement with Information on:		
		(a) Access?	<input type="checkbox"/>	<input type="checkbox"/>
		(b) Staffing?	<input type="checkbox"/>	<input type="checkbox"/>
		(c) Location of service provision?	<input type="checkbox"/>	<input type="checkbox"/>
		(d) Response times?	<input type="checkbox"/>	<input type="checkbox"/>
		(e) Local standards of practice?	<input type="checkbox"/>	<input type="checkbox"/>
	Senior physiotherapists experienced in stroke rehabilitation are available for consultation with staff who are inexperienced in stroke care. <sup>3,4,11</sup>	2 Is there a senior physiotherapist available for consultation?	<input type="checkbox"/>	<input type="checkbox"/>
The senior physiotherapist available for consultation will have been qualified for a minimum of five years with three years experience in rehabilitation, including stroke care with evidence of continuing professional development. <sup>2,4,11</sup>		3 Is the senior physiotherapist qualified at least five years?	<input type="checkbox"/>	<input type="checkbox"/>
		4 Does the senior physiotherapist have three years experience in rehabilitation including stroke care?	<input type="checkbox"/>	<input type="checkbox"/>
		5 Does the senior physiotherapist have evidence of continuing professional development?	<input type="checkbox"/>	<input type="checkbox"/>

a) Case audit number \_\_\_\_\_

(Remember to respect confidentiality, use a special audit Id number which can only be traced to the client by the audit team)

b) Date of birth \_\_\_\_\_ c) specify the type of patient (choose 1 only) Inpatient  Outpatient  Community

### Process of care

Standard	Criteria	Audit Question	Yes	No	No.but
<b>Referral and Assessment</b>					
There will be accurate examination, assessment and recording of each patient's physical state, taking into account individual psychosocial and environmental needs and followed by continued reassessment and review. <sup>4,12</sup>	Following referral, initial assessment is commenced within a time scale guaranteed by the local physiotherapy service policy. <sup>3,11</sup>	<b>6</b> If the patient was newly diagnosed (and was an inpatient, or seen in the community), was the patient assessed within 72 hours? Answer 'No but...' if the patient died.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>7</b> If the patient was seen as an outpatient, was it within 15 working days?	<input type="checkbox"/>	<input type="checkbox"/>	
	There is written evidence of a database (record), which includes the following: home environment, mobility (indoor and outdoor), the patient's (and where appropriate the carer's) main concerns. <sup>2,11</sup>	<b>8</b> Is there a written database (record)?	<input type="checkbox"/>	<input type="checkbox"/>	
		<b>9</b> Does the database contain information on: Answer 'No but...' if this information is contained in a multidisciplinary record.			
		(a) Home environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		(b) Pre-stroke mobility indoors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		(c) Pre-stroke mobility outdoors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		(d) The problems according to the patient?			
		(e) The problems according to the carer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Standard	Criteria	Audit Question	Yes	No	No.but
Continued.	The assessment will consist of the following information, where appropriate: respiratory function, posture, postural control (balance), abnormal tone, volitional movement, sensory disturbances, perceptual disturbances, visual disturbances, gait, relevant functional abilities. <small>2,11</small>	<b>10</b> Is there a written assessment?	<input type="checkbox"/>	<input type="checkbox"/>	
		<b>11</b> Does it contain information on:			
		(a) Respiratory function?	<input type="checkbox"/>	<input type="checkbox"/>	
		(b) Posture?	<input type="checkbox"/>	<input type="checkbox"/>	
		(c) Postural control (balance)?	<input type="checkbox"/>	<input type="checkbox"/>	
		(d) Abnormal tone?	<input type="checkbox"/>	<input type="checkbox"/>	
		(e) Volitional movement?	<input type="checkbox"/>	<input type="checkbox"/>	
		(f) Sensory disturbances?	<input type="checkbox"/>	<input type="checkbox"/>	
		(g) Perceptual disturbance?	<input type="checkbox"/>	<input type="checkbox"/>	
		(h) Visual disturbances?	<input type="checkbox"/>	<input type="checkbox"/>	
		(i) Gait?	<input type="checkbox"/>	<input type="checkbox"/>	
		(j) Functional activities?	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	
<b>Treatment</b>					
There is written evidence of agreed, problem-oriented goals and related treatment plans. <sup>2</sup>	There is a problem list which demonstrates appropriate interpretation and analysis of the database. <sup>2</sup>	<b>12</b> Is there a problem list, which is linked to the database in question 8?	<input type="checkbox"/>	<input type="checkbox"/>	
	The time-related goals of physiotherapy are negotiated and agreed between the patient/relative/carers. <sup>2,3,11</sup>	<b>13</b> Is there written evidence of goals? Answer 'No but...' if only multidisciplinary goals are set.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Standard	Criteria	Audit Question	Yes	No	No.but
Continued.		<b>14</b> Do the goals have a time or date set for achievement? Answer 'No but...' if only multidisciplinary goals are set.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Newly diagnosed stroke patients will have a treatment plan appropriate to their individual problems and needs. <sup>2,3</sup>	<b>15</b> Is there evidence of a patient-centred treatment plan to achieve the goals?	<input type="checkbox"/>	<input type="checkbox"/>	
		<b>16</b> Is there evidence that carers were involved in the above treatment plan? 'No but...' if no carers required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>17</b> Did the patient receive physiotherapy input to the level specified in the local policy agreement?	<input type="checkbox"/>	<input type="checkbox"/>	
		<b>18</b> Did the patient continue outpatient physiotherapy following discharge from the acute setting? Answer 'No but...' if patient died, or moved outside catchment area, or follow up treatment was not required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The physiotherapy record shows the action to be taken in the prevention of complications such as painful shoulder, contractures, falls and chest infection. <sup>2,3,12</sup>	<b>19</b> Did the record document actions to be taken to prevent: (a) Shoulder pain? (b) Contractures? (c) Falls? (d) Chest infection?	<input type="checkbox"/>	<input type="checkbox"/>	

Standard	Criteria	Audit Question	Yes	No	No.but
Continued.		<b>20</b> Did the patient experience: (a) Shoulder pain?  (b) Contractures?  (c) Falls?  (d) Chest infection?	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Patient/Carer Involvement</b>					
Contact with carers is made at the earliest opportunity. <sup>2,3</sup>	Contact with carers is made at the earliest opportunity. <sup>2,3</sup> Suggested guideline: within two weeks of the initial assessment.	<b>21</b> Was contact with the carer established within two weeks of the initial assessment? Answer 'No but...' if no carer is involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Relevant written information and explanation concerning physiotherapy provided to the patients and carers, where appropriate, is documented in the physiotherapy record. <sup>2</sup>	<b>22</b> Was information and an explanation concerning physiotherapy provided to the patient documented?	<input type="checkbox"/>	<input type="checkbox"/>	
		<b>23</b> Was information, an explanation, and advice concerning physiotherapy provided to carers, documented? Answer 'No but...' if no carer is involved, or patient is independently mobile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Where appropriate, a joint decision between the physiotherapist and the carers (including other team members and informal carers) is made regarding methods of moving and handling the patient, within the confines of the carer's capabilities. <sup>2,3,11</sup>	Carers will be advised how to assist the patient with tasks, whilst facilitating maximum independence, in accordance with local moving and handling policies. This information is written in the physiotherapy record. <sup>2,3,13</sup>	<b>24</b> Is it recorded that the carer attended any sessions for advice/instruction in moving and handling? Answer 'No but...' if no carer involved, or patient is independently mobile.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Standard	Criteria	Audit Question	Yes	No	No.but
Continued.	The carers are advised on the proper use and care of equipment provided by the physiotherapist and are given a contact name in case of difficulty. This information is written in the physiotherapy record. <sup>2,3,13</sup>	<b>25</b> Is there evidence that the carer was advised on the proper use and care of the equipment? Answer 'No but...' if no carer involved, or patient does not need equipment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Teamwork</b>					
Multidisciplinary teamwork is essential for intervention to be effective and efficient. <sup>2,3,12</sup>	There is evidence of participation in team meetings, i.e. ward rounds, case conferences, discharge planning. <sup>2</sup>	<b>26</b> Is there evidence of participation in team meetings throughout the episode of care? 'No but...' if only single discipline involved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The physiotherapist will communicate agreed goals to other professionals involved with the patient and will link physiotherapy goals with the team goals for that patient. <sup>2,3,12</sup>	<b>27</b> Is there evidence that the physiotherapist works with other team members in patient management? 'No but...' if only single discipline involved.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Outcome measures</b>					
The physiotherapist will review the outcome at the conclusion of the physiotherapy episode of care. <sup>2,3,12</sup>	A standardised measure of impairment of movement is recorded on initial assessment and discharge. <sup>2</sup>	<b>28</b> Is a standardised measure of impairment recorded: Answer 'No but...' if the chosen indicator combines impairment and disability; or the patient died or patient only seen once: (a) On initial assessment?  (b) On discharge?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>29</b> Is there an improvement in the impairment score between admission and discharge: Answer 'No but...' if patient died or patient only seen once	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Standard	Criteria	Audit Question	Yes	No	No.but
Continued.	A standardised measure of disability is recorded on initial assessment and discharge. <small>2,12</small>	<b>30</b> Is a standardised measure of disability recorded: Answer 'No but...' if patient only seen once			
		(a) On initial assessment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		(b) On discharge?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>31</b> Is there an improvement in the measure of disability score between admission and discharge? Answer 'No but...' if patient only seen once	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	A discharge summary records the following: the effectiveness of the intervention, whether or not goals have been achieved, exercises and advice given to the patient (and carer, where appropriate), equipment supplied, and plans for review. <small>2,3,12,13</small>	<b>32</b> Is there a discharge summary?	<input type="checkbox"/>	<input type="checkbox"/>	
		<b>33</b> Does the discharge summary record the following:			
		(a) The effectiveness of the intervention?	<input type="checkbox"/>	<input type="checkbox"/>	
		(b) Whether goals have been achieved?	<input type="checkbox"/>	<input type="checkbox"/>	
		(c) Exercises and advice given to the patient?			
		(d) Exercises and advice given to the carer?	<input type="checkbox"/>	<input type="checkbox"/>	
		(e) Equipment supplied?	<input type="checkbox"/>	<input type="checkbox"/>	
		(f) Plans for review?			
			<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	

Standard	Criteria	Audit Question	Yes	No	No.but
Continued.	In line with local policy, ongoing physiotherapy review is provided for patients and carers. Either a review appointment is made at an appropriate specified time or provision is made to allow self-referral, when there is deterioration in the patient's level of independence or if further advice is required. <small>3,11,13</small>	<b>34</b> Was a review appointment made for six months following discharge. Answer 'No but...' if the patient can self-refer if experiencing problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<b>35</b> If not, is provision for how the patient might self-refer recorded?	<input type="checkbox"/>	<input type="checkbox"/>	

- 1 Lennon SM, Hastings M. Key physiotherapy indicators for quality of stroke care. *Physiotherapy* 1996;82:655D664.
- 2 Chartered Society of Physiotherapy. Core standards. London: Chartered Society of Physiotherapy, 2000.
- 3 Intercollegiate Working Party for Stroke. National clinical guidelines for stroke. London: Royal College of Physicians, 2000. Now includes a 2002 update.
- 4 Chartered Society of Physiotherapy. Service standards. London: Chartered Society of Physiotherapists, 2000.
- 5 Sodring KM, Bautz-Holter E, Ljunggren AE, Wyeller T. Description and validation of a test of motor function and activities in stroke patients: the Sodring Motor Evaluation of stroke patients. *Scandinavian Journal of Rehabilitation Medicine* 1995;27:211D217.
- 6 Collen FM, Wade DT, Robb GF, Bradshaw CM. The Rivermead Mobility Index: a further development of the Rivermead Motor Assessment. *International Disability Studies* 1991;13:50D54.
- 7 Lennon SM, Johnson L. The modified Rivermead Mobility Index; validity and reliability. *Disability and Rehabilitation* 2000;22:833D839.
- 8 Wade DT. Measurement in neurological rehabilitation. Oxford: Oxford University Press, 1992.
- 9 Carr JH, Shepherd RB, Nordholm L, Lynne D. Investigation of a new motor assessment scale for stroke patients. *Physical Therapy* 1985;65:175D180.
- 10 Lincoln N, Leadbitter. Assessment of motor function in stroke patients. *Physiotherapy* 1979;65:48D51.
- 11 Association of Chartered Physiotherapists in Neurology. Standards of physiotherapy practice in neurology. London: Chartered Society of Physiotherapy, 1995.
- 12 Chartered Physiotherapists Working with Older People. Physiotherapy with older people: standards of clinical practice. London: Chartered Society of Physiotherapy, 1991.
- 13 Association of Chartered Physiotherapists in Neurology (ACPIN). Recommendations for physiotherapy practice and service development in neurology. London: Chartered Society of Physiotherapy, 1995.