



# About the Australian Stroke Coalition

The Australian Stroke Coalition (ASC) was established in 2008 and is an alliance of organisations and groups working in the stroke field, such as clinical networks and professional organisations and colleges.

The group is galvanised by their common mission to improve stroke care, reduce duplication amongst groups and strengthen the voice for stroke care at a national and state level.

The ASC achieves this by setting agreed priorities annually in the following six identified priority areas:

1. Acute stroke including TIA, thrombolysis and stroke unit care.
2. Rehabilitation.
3. Community.
4. Workforce, training and professional development.
5. Data and quality improvement.
6. E-health.

Through the work of the ASC membership including the working groups and project teams, the ASC provides a critical communication link between organisations and their members regarding stroke care in Australia

## *Acknowledgements*

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# 1.0 Background

The Australian Stroke Coalition (ASC) Rehabilitation Working Group (a national multi-disciplinary group set up in 2009) developed the Assessment for Rehabilitation: Pathway and Decision-Making Tool with input from the South Australian (SA) Stroke Network Rehabilitation Working Group. Members of the working groups are listed in Appendix 1.

These groups were given the task of developing a comprehensive process to ensure fair and accountable decision making when assessing patients in acute care for stroke rehabilitation. This involved an extensive survey of current best practice in stroke units across Australia and a systematic search of the literature to determine evidence for decision making about the rehabilitation needs of people with stroke. A summary of this research is available on the ASC website at [www.australianstrokecoalition.com.au](http://www.australianstrokecoalition.com.au)

The rehabilitation literature, internationally and within Australia, consistently demonstrates that the assessment of people with stroke for rehabilitation is not performed routinely. Data from the National Stroke Audit reveals that less than 50% of people with stroke are assessed for rehabilitation. Further, the processes for assessment are highly variable, are inconsistent between individual assessors<sup>1</sup>, are often based on non-clinical factors<sup>2</sup> or are based on clinical factors that do not have a relationship with rehabilitation outcomes or capacity to improve.<sup>3</sup> Assessment processes are poorly documented, which supports the view that assessment and decision making is likely to be ad hoc and potentially unfair.

Based on consultations with consumers and health professionals and pilot surveys, it appears that people with stroke may be rejected (or never considered) for rehabilitation because of age, the inability of rehabilitation services to cater for their co-morbidities or severity, the fact that they lived alone prior to the stroke, their potential for longer stay or poor relationships between service providers. Inappropriate early discharge to high-dependency aged care facilities or 'cherry picking' of mild presentations for rehabilitation are the anecdotal effects of discriminatory practices. Further to this, people may be assessed as 'not likely to benefit from rehabilitation' when the reality is that an appropriate service is not available.

As we cannot predict with confidence at onset how much function can be recovered after stroke, it is best practice to arrange for expert assessment for rehabilitation for all stroke survivors (apart from those specified under exceptions in the Decision-Making Tool), and to produce an individualised rehabilitation plan for each patient.

## 2.0 Aims

The Assessment for Rehabilitation project began with the aim of producing clear processes to ensure **all stroke survivors in Australia are assessed for rehabilitation**, and in a manner which is:

- Accountable and transparent.
- Fair and consistent.
- Timely.
- Based on the person's needs in the first instance, rather than service availability.
- Considers the whole person.
- Inclusive of the opinions of the whole team, which includes the person and the family (significant others).
- Based on the best available evidence.
- Aspirational.

The overall goal is **everyone with stroke receives an assessment for rehabilitation**.

To achieve this goal, the working groups devised a rehabilitation Pathway with recommended processes and an appropriate Decision-Making Tool.

## 3.0 Assessment for Rehabilitation: Pathway

The Assessment for Rehabilitation: Pathway (Appendix 2) is the recommended model for assessment that is based on the evidence and pilot work at stroke units across Australia.

The literature review failed to identify any clear indicators (clinical or otherwise) that could be used to definitively confirm someone as ineligible or unlikely to benefit from rehabilitation.

**Based on this, it is recommended that all stroke survivors be considered for rehabilitation unless they meet one of four exceptions (Table 1).**

### Table 1. Exceptions to rehabilitation (based on consensus opinion)

- 1. Return to pre-morbid function:** Stroke survivor has made a full recovery in all aspects including physical, emotional, psychological and cognitive. This would be determined by the Decision-Making Tool indicating no areas of need.
- 2. Palliation:** Death is imminent; refer to the palliative care team.
- 3. Coma and/or unresponsive, not simply drowsy:** Determined by criteria for minimally responsive, i.e. responds to stimuli meaningfully as able.
- 4. Declined rehabilitation:** Stroke survivor does not wish to participate in rehabilitation.

If the stroke survivor meets any of these exceptions, they should be monitored regularly to evaluate whether the exception is ongoing (i.e. they have residual difficulties that only became apparent on returning home or to work, the stroke survivor has emerged from coma or they have changed their mind and now wish to undergo rehabilitation).

As the literature supports that all stroke survivors can benefit from rehabilitation – and there is no evidence that particular groups do not benefit from rehabilitation – the default is that all stroke survivors should receive rehabilitation unless an exception applies. (Please refer to the ASC website for the literature review summary.)

Once exceptions are considered, the next decision is to determine the rehabilitation **setting** and the degree and nature of rehabilitation (**domains**).

The rehabilitation setting should be determined by:

- Client preference and need, i.e. ability to function in their own versus an alternate environment.
- Expert opinion.
- Best available evidence.

This process provides flexibility and is inclusive. Where it is not possible to make a decision based on these factors, it is recommended that services maintain a record of this for future service development.

Using the Assessment for Rehabilitation: Decision-Making Tool assists in determining where rehabilitation occurs. This requires analysis of where the identified needs are best met for the various domains, that is, whether the stroke survivor can be managed at home, in the community/outpatients or in an inpatient (IP) setting. The Decision-Making Tool can be used to formulate the **Rehabilitation plan** and should form the basis for all subsequent reviews.

The evidence supports that early supported discharge to home is preferable where possible. The aim for discharge (transition) is for the stroke survivor to return home either directly from the stroke unit with early supported discharge OR via an inpatient rehabilitation unit. Early supported discharge presumes access to rehabilitation either at home or as an outpatient or day patient as appropriate. Home may be a residential aged care facility and, if there is no access to rehabilitation and other necessary resources in the aged care facility, then the stroke survivor may access the other options for rehabilitation such as rehabilitation in the home, or outpatients or day hospital rehabilitation services.

Feedback from the pilot sites confirms that the Assessment for Rehabilitation: Pathway and Decision-Making Tool can be used to structure discussions about options for the stroke survivor, particularly with the family. Some pilot sites also found it useful to give the tool to the stroke survivor/family. Sites are encouraged to use the tool within their local processes while maintaining the concepts within the tool, which are based on best practice evidence.

## Special needs and cautionary flags

To fulfil the aims of fairness and evidence-based care, the following are included as part of the tool as flags for special needs. These flags are not valid criteria for exclusion from rehabilitation and a needs-based assessment. They may indicate the need for referral to specialist areas such as psychiatry or other government departments such as housing.

## Summary of recommended Assessment for Rehabilitation

### 1. Consider exceptions.

- If exceptions – record exception and establish a process for monitoring and reassessment
- If no exceptions – apply Assessment for Rehabilitation: Decision-Making Tool (see Appendix 3)

### 2. Assess for rehabilitation

- Use the Decision-Making Tool within the first week of admission – The pilot results suggest commencing the process 48 hours after admission to help guide patient management. Update the tool during multi-disciplinary team (MDT) and family meetings.
- Consider and record the current level of function within all domains specified in the tool with input from MDT.
- Consider and record whether rehabilitation is indicated for the domain and whether the level of management required can be provided at home or within an inpatient setting. If even one domain requires an inpatient environment then transfer to inpatient rehabilitation. If **no** domains require management in inpatient then transfer home with referral to relevant services such as outpatients, day hospital and/or rehabilitation in the home.

Table 2.

### Flags for special needs

- Pre-morbid conditions
- Severe cognitive impairment
- High levels of medical or surgical acuity
- Non-compliance
- Decreased pre-morbid function
- Decreased social support
- Double incontinence
- Decreased engagement or apathy or ambivalence
- Somatoform disorders
- Decreased accommodation options
- Co-morbidities (especially those associated with ageing)

## 4.0 Assessment for Rehabilitation: Decision-Making Tool

### Process and personnel

The Decision-Making Tool should be used in stroke units, but it can be used in other settings. MDT members should complete the sections relevant to their practice. The tool can be completed at a meeting with the MDT and the family. Alternatively, it can be completed at ward rounds, formal or informal review meetings or within other local processes. If the Decision-Making Tool is completed during the stroke unit stay, then this meeting should be within the first one week of admission. The completed tool can form the basis for team communications as well as communication with the family and it should be updated throughout the inpatient stay. Feedback from the pilot indicates the tool can take up to 30 minutes to complete for each stroke survivor when learning to use it. Once the concepts and process are understood, the tool can be completed within 10 minutes, especially if it is done within a team meeting, which makes it easier to gather information. The use of brief comments and a checklist minimise the time required.

The environment and participation sections generally only need to be completed on admission and checked at discharge as they are unlikely to change (see below for further information).

The tool is recommended for use as a simple summary for external personnel (e.g. visiting rehabilitation specialists or discharge liaison staff).

We acknowledge that local documentation practices differ greatly, therefore the tool can be modified or adapted to suit local requirements. It is important to ensure the intent and integrity of the tool is preserved.

## 4.1 Part A: Domain

This section of the tool lists the key domains of interest for people with stroke, their significant others and service providers. It focuses on the domains relevant for the person with stroke and their support, rather than being based on disciplines. The domains are described below.

### Current level of function

In this column, you should describe each domain in terms of the person's CURRENT level of function and need (i.e. at time of assessment for rehabilitation).

For example, in the 'Specialty needs' domain, you may indicate that the person has an in-dwelling catheter (IDC) that requires nursing support twice a day or they may self-manage the IDC.

In addition to brief notes, you can indicate the level of independence using I (independent), A (light or minimal support, including supervision) or D (significantly dependent, moderate to maximal support).

### Rehabilitation indicated

You should use this column to indicate whether the domain requires further rehabilitation.

### Management level

You should indicate whether the domain can be managed in the home or inpatient setting. For activities of daily living (ADLs), for example, you might indicate:

- Home: the person needs assistance to shower, but this can be provided appropriately at home with domiciliary care visiting 4 times per week
- Inpatient: the person needs assistance to go to the toilet and this can only be achieved in an inpatient setting as there is no one at home to assist.

### Decision questions

These questions allow you to determine where the needs identified in the domains table are best met – home or inpatients.

Practically, if there is even one major domain that requires an inpatient environment to provide that level of support, then that becomes the rehabilitation destination. However, the overarching intention of the tool is that wherever possible the destination should be home and rehabilitation should be provided in that context (i.e. in the home as well or at a day hospital or outpatient clinic).

If the environment or rehabilitation service is recommended at one level but is not available due to bed shortages etc. (i.e. factors not related to the person with stroke themselves) this should also be noted to enable an ongoing gap analysis in service provision.

The decision is guided by these questions:

- **Decision = Where highest need can be met?**
- **Or Rehabilitation not indicated (circle exception): full recovery/palliative/declined/non-responsive.**
- **Optional: Are the rehabilitation services that were matched to the needs of the PWS able to be provided? If not, what services are not available and why?**

Examples of how the tool can be filled in are included as Appendix 4.

## Specific domains:

**Specialty needs (e.g. IV, PEG etc):** Does the person need to have treatment that requires medical staff or nursing staff to administer: e.g. IV or PEG procedures, specific skin integrity management etc.

**Swallowing:** An indication of current level of safe and effective swallowing. Include techniques used and aids.

**Hydration and nutrition:** This may overlap with specialised medical or nursing needs for augmented or supplementary processes and also encompasses adequate *knowledge* of nutrition and hydration needs.

**Continence:** What is the level of continence (bladder and bowel)? What is required for effective toileting? Are any aids required for maximising independence? This may overlap with medical and nursing needs or with ADLs.

**Mobility:** What is the level of in/dependence for mobility tasks including moving from one position to another (transfers), walking indoors or outdoors? Are they susceptible to falls? Do they use a wheelchair or other mobility aids?

**ADLs:** Use this section to consider all activities of daily living, personal and instrumental. For each relevant activity, briefly note the level of in/dependence with special attention to personal ADLs such as toileting, dressing etc. Participation restrictions (***such as domestic, vocational and social/recreational roles***) are noted in section B.

**Eating and drinking:** Does the person need assistance in the physical task/s of feeding and drinking, as distinct from hydration and nutrition which is specifically about actual intake?

**Communication:** What level of communication is possible – both receptive and expressive?

**Cognition:** Cognition includes a general description of higher cortical function and executive function. This includes attention, memory and problem solving. **Insight** must also be considered in this domain i.e. 'Client's Perception' of their current status and ability to recover, their expectations. Note their consent to participate in rehabilitation.

**Alertness and engagement:** Consider the level of alertness and/or arousal function when determining rehabilitation. Engagement may also be considered in the behavioural or emotional domain.

**Vision, sensory systems and perception:** Use this section to note level of function in the visual and other sensory systems. Perceptual issues can also be noted here – all indicating the impact on functioning (e.g. requires eye patch for safe mobilising etc).

**Behaviour:** Consider any behavioural issues that may influence decision making and ultimately the nature of rehabilitation. The full spectrum of behaviours should be considered from passivity through to aggression. There may be overlaps with the emotional domain.

**Emotional:** This domain covers the emotional status of the person and includes mood, depression and denial along with other determinates of emotional well being. This area is critical in decision making, e.g. their emotional well being may influence their rehabilitation and being at home may increase their ability to recover more quickly. Another consideration is to allow the person to have an overnight stay at home during inpatient rehabilitation if it means their emotional well being will benefit. Also give consideration to carer support if overnight stays are recommended.

**Need for assistance/support from carer:** This refers to the overall impact of any residual areas of limitation on the person and their significant others. Who supplies the assistance and assumes the majority of the burden of care? Carer support is an important part of determining where rehabilitation can be undertaken. The carer must have access to assistance with all domains identified above (e.g. toileting, showering, personal care and instrumental ADLs where required for the person to undertake rehabilitation at home). This includes ensuring the ability to provide the level of care is sustainable.

**Other:** There may be other important considerations when determining where rehabilitation needs to be undertaken, e.g. sexuality, driving, hearing etc.

## 4.2 Part B: Participation

The participation section allows you to document previous roles (level of participation). Consistent with the World Health Organisation's International Classification of Functioning, Disability and Health (ICF) framework, this includes vocational role/s, social and recreational or may include domestic roles such as parenting, care giver etc.

Participation (consistent with ICF Framework)	Role/s pre-stroke	Need for rehabilitation/intervention? Y/N and if yes plan
<b>Domestic</b>		
<b>Vocational</b>		
<b>Recreational</b>		
<b>Social</b>		

## 4.3 Part C: Environment

You should use the environment table to document background information relevant for rehabilitation for subsequent referral and to reduce duplication of assessment.

Environment	Pre-stroke (note barriers and facilitators)	Need for intervention? Y/N and if Yes – plan?
<b>Home</b>		
<b>Extended</b>		

**Home:** In this section, you should describe the pre-stroke home environment. This includes the nature of the person's pre-existing home (type and rental/owned), locale and proximity, physical environment in terms of access inside and outside for all key areas (particularly bathroom). You should also include a description of the people who reside in the home and their relationship and level of availability for support for the person with stroke (this overlaps with support of carer in the domains of 4.1.)

**Extended:** This section allows you to note details about the extended environment of the person, such as those relevant for their previous roles (Participation – see above) such as work environments, social environments and the ease of access and other facilitators/barriers. You can also list pre-existing formal supports and informal supports (people) from outside of the home.

Parts A–C form the rehabilitation assessment and a rehabilitation plan can emerge from the completed document. Appendix 5 includes an example of a generic rehabilitation plan with prompts for goal setting and progress from the Australasian Rehabilitation Outcomes Centre (AROC) that can be used as another structured tool.

## 5.0 Implementation methods to promote uptake

The goal for implementation is for every stroke unit to use the Assessment for Rehabilitation: Pathway and Decision-Making Tool. The implementation method will be tailored according to each site and the relevant discipline/s at that site.

### Raise awareness

- ASC newsletter.
- Professional discipline newsletters.
- Professional conferences and meeting/study days.
- Clinical networks (newsletters, forums and workshops).
- ASC, SSA and NSF website.
- Posters, abstracts, workshops at conferences (SSA and SmartStrokes, Australasian Faculty of Rehabilitation Medicine).

### Education

- Use different delivery methods and local champion/s, people on the ground to educate and deliver with support from the ASC working group.
- All stroke units will be supplied with:
  - Manual.
  - Tool.
  - Access to a webinar or podcast.
  - PowerPoint presentations.

### Evaluation

As part of implementation, several modes of evaluation may be incorporated. Some aspects of these processes will form part of a PhD project (auspiced by University of South Australia and with input from NSF/ASC) and others may require funding.

The basic level of evaluation will be quality assurance based, using process indicators for the uptake of the pathways. An indication of the success of the project in the long term will be the NSF National Stroke Audit (number of people assessed for rehabilitation). In the short term, sites can perform their own evaluation using the most basic process indicator obtained by case note audit:

- Has the person received a documented assessment for rehabilitation? Yes/No

Further qualifiers may include:

- Has a team meeting been held to discuss the assessment for rehabilitation and decision? Yes/No
- Has the family been involved in this? Yes/No
- Has the rehabilitation destination recommended been achieved? Yes/No

Formal site evaluations will be conducted before, during and after initial implementation, using mixed methods to quantify impact on all stakeholders and explore barriers and enablers to implementation. This action-based research model will enable evaluation of different approaches at different points in time. This aspect of evaluation will occur at all South Australian sites and volunteer (opt-in) sites from other states (PhD project – UniSA) and will be conducted as a cluster randomised controlled trial with process indicators as the outcomes.

An alternate formal evaluation that may entail more tightly controlled research conditions (randomised control trial) to evaluate the effectiveness at a selected site/s in Victoria and using patient outcomes may take place (requires funding).

For further information contact Susan Hillier  
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## Appendix 1 – Working group representatives

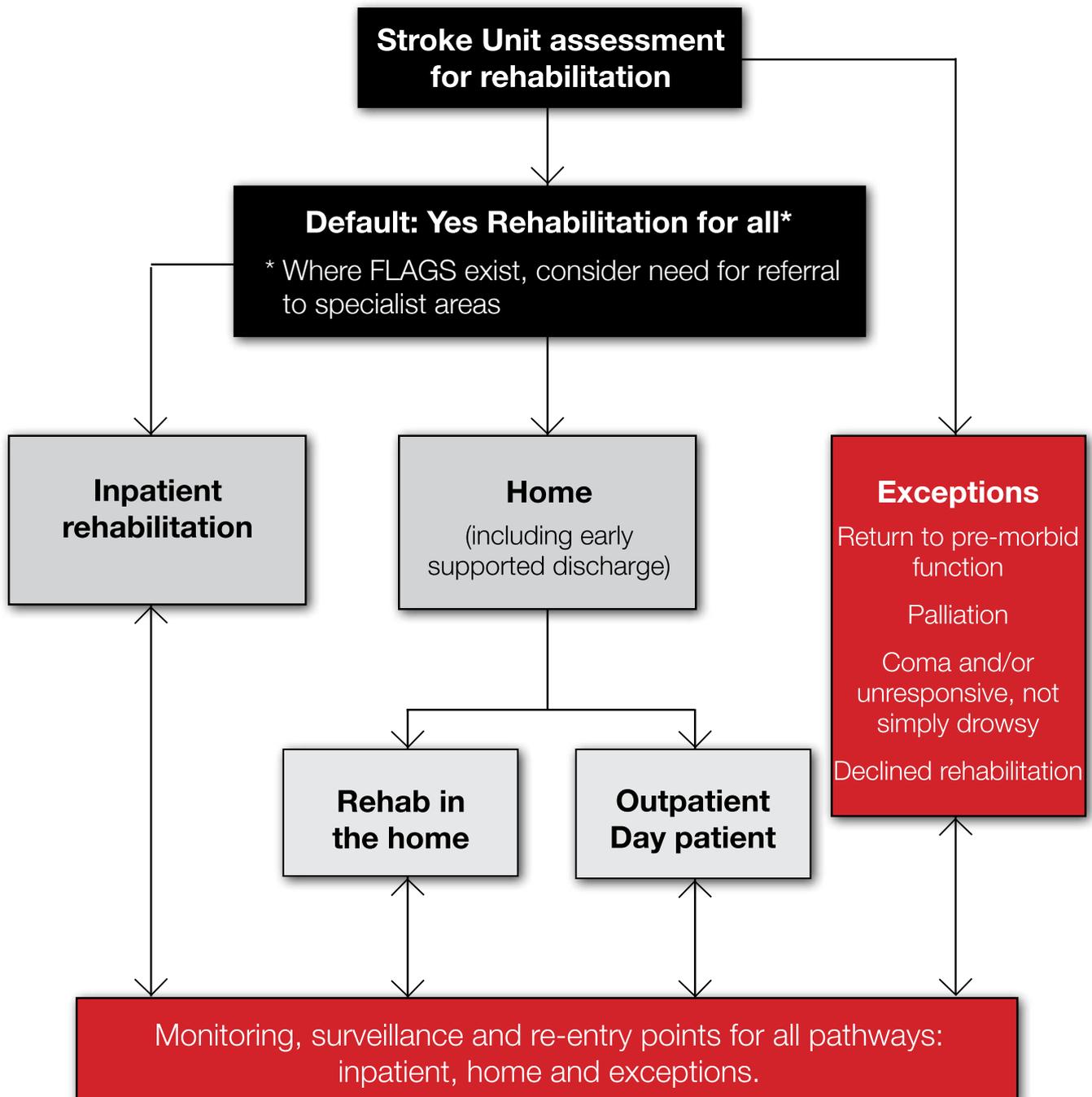
### Australian Stroke Coalition Rehabilitation Working Group Members

Dr Geoff Boddice, Dr Greg Bowring, Ms Cindy Dilworth, Dr David Dunbabin, Dr Steven Faux, Dr Howard Flavell, Ms Megan Garnett, Dr Erin Godecke, Dr Kong Goh, Dr Andrew Granger, A/Prof Susan Hillier (Chair), Ms Sandra Lever, Ms Alison Lunt, Dr Natasha Lannin, Mr Bill McNamara, Ms Jill McNamara, Mr Chris Price, Ms Frances Simmonds, Ms Leah Wright.

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## Appendix 2 – Assessment for Rehabilitation: Pathway



### Flags for special needs

- Pre-morbid conditions
- Severe cognitive impairment
- High levels of medical or surgical acuity
- Non-compliance
- Decreased pre-morbid function
- Decreased social support
- Double incontinence
- Decreased engagement or apathy or ambivalence
- Somatoform disorders
- Decreased accommodation options
- Co-morbidities (especially those associated with ageing)

# Appendix 3 – Assessment for Rehabilitation: Decision-Making Tool

## Assessment for Rehabilitation: Decision-Making Tool

**Name and history:**

**Date of completion:**

**Completed by:**

Domain	Current level of function (brief description plus I A D)	Rehab Indicated (Y/N)	Management level available at:		Initials
			Home	Inpatient	
Specialty needs (e.g. IV, PEGS)					
Swallowing					
Hydration, nutrition					
Continence					
Mobility - transfer, gait					
Activities of daily living (incl personal+/- instrumental)					
Eating and drinking					
Communication					
Cognition, insight					
Level of alertness, engagement					
Vision, sensory systems, perception					
Behaviour					
Emotional, psychological					
Need for assistance/ support from carer					
Other					

**Decision = Where highest need can be met:**

**Or Rehabilitation not indicated (circle exception): full recovery/palliative/declined/non-responsive**

Optional: Are the rehabilitation services that were matched to the needs of the PWS able to be provided? If not, what services are not available and why?

*I=Independent; A=light or minimal support (including supervision); D=Significantly dependent (moderate to maximal support)*

## Assessment for Rehabilitation: Decision-Making Tool

Participation (consistent with ICF Framework)	Role/s pre-stroke	Need for rehabilitation/intervention? Y/N and if yes, plan?
Domestic		
Vocational		
Recreational		
Social		

Environment	Pre-stroke (note barriers and facilitators)	Need for intervention? Y/N and if yes, plan?
Home		
Extended		

## Appendix 4 – Examples

### Assessment for Rehabilitation: Decision-Making Tool

EXAMPLE

**Initials & History: Mr G. Rate; 56yo male; stroke 10th Jan 2011**

**Date of completion: 17 Jan 2011**

**Completed by: T.M. Worker**

Domain	Current level of function (brief description plus I A D)	Rehab Indicated (Y/N)	Management level available at:		Initials
			Home	Inpatient	
Specialty needs (e.g. IV, PEGS)	D: Support to take meds in evening	N	Dosette RDNS		ND
Swallowing	I: Full function	N			
Hydration, nutrition	I: Adequate	N			
Continence	A: Doubly continent but has urgency – needs to get to toilet quickly	Y (related to mobility)	Y		
Mobility - transfer, gait	A: Needs S/B standing up from low bed; walking 5m indoors I; needs S/B walking outdoors	Y	Family to help get out of bed, walk outside		
Activities of daily living (incl personal+/- instrumental)	A: S/B transfers in/out shower; L/A for socks/shoes; otherwise I though slow	Y	Family to assist morning/night		
Eating and drinking	A: One handed – requires special equipment/time assist with cutting	Y	Family to support if necessary		
Communication	A: Receptive: simple one part commands; Expressive: reliable yes/no	Y	Family trained		
Cognition, insight	A: Difficult to assess due to communication; attention for 20-30min; carryover from day to day. Understands effects of stroke and is safe	Y	Family understand		
Level of alertness, engagement	I: Able to attend and is motivated to work in rehab	-	-		
Vision, sensory systems, perception	I: Hemianopia resolving	Y	Monitor at home		
Behaviour	I: Frustrated by communication issues but keen to work	-	Monitor at home		
Emotional, psychological	I: As above	Y	-		
Need for assistance/ support from carer	A-D: Predominantly on family and wife. Wife taking 6/12 long service leave to support at home, adult children roster to support at critical times		Monitor at home		
Other	-	Y			

**Decision = Where highest need can be met: HOME with rehabilitation in the home / outpatient**

**Or Rehabilitation not indicated (circle exception): full recovery/palliative/declined/non-responsive**

Optional: Are the rehabilitation services that were matched to the needs of the PWS able to be provided? If not, what services are not available and why?

*I=independent; A=light or minimal support (including supervision); D=Significantly dependent (moderate to maximal support)*

# EXAMPLE

Participation (consistent with ICF Framework)	Role/s pre-stroke	Need for rehabilitation/intervention? Y/N and if yes, plan?
Domestic	Helped with cooking/cleaning Serviced cars and did majority of gardening	Y – incorporate raised bed gardening tasks in rehab
Vocational	Accountant	Y – incorporate book-keeping tasks in SP sessions
Recreational	Classic car club member	Y – attend meetings, friends rostered to assist with transport and access
Social	Local pub for Friday drinks	N – able to resume attendance (light beer)

Environment	Pre-stroke (note barriers and facilitators)	Need for intervention? Y/N and if yes, plan?
Home	Two storey house, bedroom upstairs; downstairs shower and toilet with guest bedroom accessible. Wife home for 6/12 LSL; family available on roster for respite One stair to backdoor; front door no steps. Shed accessible	Y – needs rails in downstairs toilet and bathroom; pole for bed; ramp +rail for backdoor.
Extended	Car club rooms two steps; car park 5m from room. Local pub – accessible Accountancy firm - accessible	N - but monitor and instigate plan as necessary

# Assessment for Rehabilitation: Decision-Making Tool

EXAMPLE

Initials & History: **Mr D.Rowsy; 88yo; stroke Dec 28 2010.**

Date of completion: **17 Jan 2011**

Completed by: **T.M. Worker**

Domain	Current level of function (brief description plus I A D)	Rehab Indicated (Y/N)	Management level available at:		Initials
			Home	Inpatient	
Specialty needs (e.g. IV, PEGS)	D: Catheter (urodome)	Y	RDNS		ND
Swallowing	D: unsafe unless intake modified Suspected aspirates on thin fluids if not prompted	Y			
Hydration, nutrition	A: Low fluid intake at times	Y	-	Monitor	
Continence	D: Catheter as above	Y	RDNS		
Mobility - transfer, gait	D: Lifter + 2 people; wheelchair at all times	Y		Requires lifter	
Activities of daily living (incl personal+/- instrumental)	D: Able to wash upper body with prompts; shower chair with arms for support; all else dependent	Y		1-2 assist for all PADL	
Eating and drinking	A: Thickened fluids; eating single handed	Y		s/b all meals	
Communication	A: Receptive: follows short conversations; slow to respond	Y	X		
Cognition, insight	D: Understands stroke and consequences; can attend for 5-10 min before becoming drowsy	Y	X		
Level of alertness, engagement	D: Takes a moment to rouse; can attend for short bursts; once fully awake is keen to work			X	
Vision, sensory systems, perception	I: NAD		X		
Behaviour	A: As above – can seem passive		X		
Emotional, psychological	A: As above		X		
Need for assistance/ support from carer	Lives alone – supportive neighbor/friend Daughter has 3 small children – only able to pop in for short visits weekly				
Other	-				

**Decision = Where highest need can be met: INPATIENT**

**Or Rehabilitation not indicated (circle exception): full recovery/palliative/declined/non-responsive**

Optional: Are the rehabilitation services that were matched to the needs of the PWS able to be provided? If not, what services are not available and why?

I=independent; A=light or minimal support (including supervision); D=Significantly dependent (moderate to maximal support)

# EXAMPLE

Participation (consistent with ICF Framework)	Role/s pre-stroke	Need for rehabilitation/intervention? Y/N and if yes, plan?
Domestic	Looked after own home etc had weekly cleaner and MoW	Y – consider alternate housing arrangement
Vocational	Retired merchant sailor	N
Recreational	Playing cards with neighbor	Y- encourage neighbor to resume card night in centre
Social	Had given up driving and used taxis to get to RSL once a month	monitor

Environment	Pre-stroke (note barriers and facilitators)	Need for intervention? Y/N and if yes, plan?
Home	Small cottage with courtyard garden; accessible all rooms.	Y- monitor during inpatient rehabilitation
Extended	Neighbour's house has one step up front door; bathroom accessible to WC. RSL accessible with appropriate toilet.	-

# Appendix 5 – Generic rehabilitation plan

## Anywhere hospital Multi-disciplinary Rehabilitation Plan

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DATE : \_\_\_ / \_\_\_ / \_\_\_

Reason for Rehab (Impairment Code): \_\_\_ / \_\_\_ / \_\_\_

Date of admission: \_\_\_ / \_\_\_ / \_\_\_

Expected LOS: \_\_\_ / \_\_\_ / \_\_\_

Expected D/C date: \_\_\_ / \_\_\_ / \_\_\_

Place Patient ID sticker here

Name:

Goals key:      A= achieved      O = ongoing  
                      N = nil progress, new goal OR

Date	Rehabilitation Issue (Activity limitation/ participation restriction)	Rehabilitation Goal	Intervention	By when? Person/s responsible

Leave Days: Y/N if Y \_\_\_ / \_\_\_ / \_\_\_ ; \_\_\_ / \_\_\_ / \_\_\_ ; \_\_\_ / \_\_\_ / \_\_\_ ; \_\_\_ / \_\_\_ / \_\_\_ ; \_\_\_ / \_\_\_ / \_\_\_ ;

Complications interfering in rehab program? Y/N if Y what for \_\_\_\_\_  
 \_\_\_\_\_

Co-morbidities interfering in rehab program,? Y/N if Y what for \_\_\_\_\_

Suspensions in rehab program? Y/N if Y from \_\_\_/\_\_\_/\_\_\_ to \_\_\_/\_\_\_/\_\_\_

Date	Rehabilitation Issue (Activity limitation/ participation restriction)	Rehabilitation Goal	Intervention	By when? Person/s responsible

# Frequently asked questions

## Question 1

There is no upper limb domain. I'm unsure why this has been omitted when other common impairments are listed. I think it is a strong indicator for the need for rehab – this is supported by the number of upper limb (UL) interventions recommended in the NSF *Clinical Guidelines for Stroke Management*. I concede UL impairment alone rarely justifies inpatient rehab where sufficient home-based support is available (however neither would some communication/cognitive issues, yet they are specified domains). But certainly home-based/outpatient rehab would be required for UL therapy. I also don't think UL impairment would necessarily be picked up in the ADL domain, as many people would use compensatory strategies/equipment to manage ADLs one-handed.

### Answer

We have kept the domains patient focussed, i.e. functions that are meaningful to them. 'Upper limb function' may not be particularly meaningful to the person with stroke (PWS). You may need to think of further defining ADLs to cover this. The equivalent would be if the physios want to have lower limb function instead of mobility (i.e. walking). Upper limb is not an impairment. This is not a replacement for an occupational therapy (OT) assessment, it is a patient-centred tool and is not a rehabilitation assessment; it is an assessment FOR rehabilitation.

## Question 2

Regarding time frame for completion – on the first page of the explanatory notes, it is suggested the meeting to complete the document should be within 1–2 weeks of admission. Over the page, under 'Current level of function', it states this should describe function at the time of assessment for rehabilitation. The latter time frame may be considerably later than 1–2 weeks post admission. Maybe this should be clarified?

### Answer

Feedback from the pilot suggests the tool should be completed possibly at the 48-hour mark and certainly within the first week. If the patient stay is longer, then the tool can be updated (for example at ward rounds or team meetings).

## Question 3

We are unlikely to have a family meeting within 1–2 weeks of admission. Staffing limitations and short admission stays would make this inconsistent and perhaps rare. Case conference could be an alternative forum for completion, but this may not allow sufficient time to complete the tool with detail. It would also obviously lack family input. Failing this, individual team members could perhaps complete sections; if this were the case, perhaps discipline-specific sections would be helpful.

### Answer

Yes, we know this is a big ask, but it is in the recommendations and we are being aspirational. We anticipate individual team members will fill in sections and then one will collate +/- a meeting. There is strong consensus we do not go down discipline lines. As mentioned, this is patient focussed not health worker focussed.

## Question 4

My concerns are around the impact on the allied health staff here and what changes we will need to make to current processes.

### Answer

We hope no major changes – just collating your thoughts/

observations in one place. We are hoping for most sites it won't require major changes, rather it will help make things more consistent, inclusive and streamlined.

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### Question 5

We routinely have team meetings twice a week between nursing, medical and allied health, but the whole team is not always present with the patient/family at once, i.e. might be just medical or just allied health etc. Can we collect the information needed at the team meeting/case conference after the preferences are gathered from the patient?

#### *Answer*

Yes

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### Question 6

Documentation looks bulky in addition to current clinical practice, documentation etc and I appreciate you are collecting feedback on ease of use and time required at the end. Do you have a preference on how/when the information is gathered?

#### *Answer*

We would like to find out the best ways for teams to gather this information It should be a one pager only. We imagine one person taking responsibility for either collecting the information and plugging in or passing it around to team members to complete. Yes, the evaluation will take time, but feedback supports the process becomes very quick and efficient after the first few times.

### Question 7

We currently collect functional independence measure (FIM) at case conference twice a week and the domains listed in the tool generally align with those. Do you have a directive regarding who fills in what domain or can it be team orientated like FIM data collection?

#### *Answer*

Yes team oriented. It is great that things align.

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### Question 8

What are your outcome measures? How will you determine if this tool is useful?

#### *Answer*

We haven't stipulated any particular ones for people to use within this tool (we felt we were already 'dictating' enough). In future, we would like to broaden the project to consider recommending some common measures for use across the country in our aim for consistency of stroke care. This will be controversial no doubt because everyone has their favourites. If you are interested in being part of the future discussion, we would really welcome your input.

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### Question 9

I am worried about the paradigm which says everyone will be deemed suitable for rehab except for the stated exceptions. So the person with pre-morbid dementia, multiple co-morbidities, severe stroke, no home supports etc. will be presumed okay for rehab? Is a covert aim (possibly laudable) to show a need for increased staffing and funding and beds to allow provision of service for these challenging patients? Is the expectation that length of stay should be adjusted accordingly?

## Answer

Yes, the paradigm that everyone is eligible for rehabilitation (bar the 4 exceptions) is bold and controversial! We have obviously discussed this at length in the working group and looked carefully at the literature to support the idea that everyone (bar exceptions) has the potential to benefit. It is clearly aspirational and you are right in thinking we want this to ultimately be a platform to assist local stroke networks to work towards better resourcing. The stance we are taking is that currently people are assessed as 'not appropriate for rehab' when the more accurate term is 'current rehabilitation facilities can't cope with this person's needs' (e.g. due to co-morbidities etc.). So we are saying even someone with dementia and so forth may have the potential to learn how to transfer with less assistance; the improvements in rehabilitation are relative to their capacity, but still worthwhile.

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## Question 10

I applaud any attempt to broaden access for people with stroke to rehabilitation services. However, I'm still not sure how you will assess the success or otherwise of your assessment tool and project if there are no outcome measures (e.g. reliability of the tool, more people admitted to rehab, people admitted with low FIMS who make worthwhile gains, FIM changes, LOS changes, QOL indicators) some assessors using the tool and some not, and comparing assessment outcome).

## Answer

At this stage we have piloted for pragmatic reasons, i.e. to see if the process is user friendly and time efficient. As part of the roll-out we will be suggesting ways for sites to evaluate local practice change and at selected sites we will be running formal pre/post evaluation using process indicators. There is also the possibility of running a formal RCT with patient outcomes as endpoints in the future. However in the main we will encourage individual sites to self-evaluate.

## References

1. Kennedy GM, Brock KA, Lunt AW, Black SJ. Factors Influencing Selection for Rehabilitation after Stroke: A Questionnaire Using Case Scenarios to Investigate Physician Perspectives and Level of Agreement. Arch Phys Med Rehabil, in press.
2. Hakkennes SJ, Brock K, Hill KD. Selection for inpatient rehabilitation after acute stroke: a systematic review of the literature. Arch Phys Med Rehabil 2011; 92: 2057–70.
3. Ilett PA, BrockKA, Graven CJ, Cotton SM. Selecting patients for rehabilitation after acute stroke: are there variations in practice? Arch Phys Med Rehabil 2010; 91: 788–93.