

# Clinical Guidelines for Stroke Management

## Summary – Physiotherapy

This summary is a quick reference to the recommendations in the Clinical Guidelines for Stroke Management most relevant to physiotherapy.

Physiotherapists address recovery of sensorimotor function in the upper and lower limbs, and work with stroke survivors and their families/carers to aid recovery of functional mobility (e.g. walking) in both hospital and community environments. They also assist in the treatment of musculoskeletal problems or complication (e.g. shoulder pain) and respiratory problems.

While this summary focuses on specific recommendations, stroke care is the most effective when all members of an interdisciplinary team are involved. For the comprehensive set of recommendations that covers the whole continuum of stroke care, please refer to further information on InformMe

<https://informme.org.au/Guidelines/Clinical-Guidelines-for-Stroke-Management>.

The Stroke Foundation in partnership with Cochrane Australia is testing a model of continually reviewing and updating recommendations for the Clinical Guidelines for Stroke Management in response to new evidence on a monthly basis. For changes to recommendations based on new research evidence, please refer to further information on InformMe <https://informme.org.au/Guidelines/Living-guidelines-for-stroke-management>

The Clinical Guidelines uses an internationally recognised guideline development approach called GRADE (Grading of Recommendations Assessment, Development and Evaluation) and an innovative guidelines development and publishing platform known as MAGICapp (MAKING Grade the Irresistible Choice). GRADE ensures a systematic process in developing recommendation, which are based on the balance of benefits and harms, quality of evidence, patient values, and resource considerations. MAGICapp enables transparent display of this process and access to additional practical information for recommendation implementation.

## Recommendations

Each recommendation is given a strength based on GRADE. GRADE methodology includes four factors to guide the development of a recommendation and determine the strength of that recommendation.

- The balance between desirable and undesirable consequences
- Confidence in the estimates of effect (quality of evidence)
- Confidence in values and preferences and their variability (clinical and consumer preferences)
- Resource use (cost and implementation considerations).

The GRADE process uses only two categories for the strength of recommendation, based on how confidence the guideline developers are in that the “desirable effects of an intervention outweigh undesirable effect [...] across the range of patients for whom the recommendation is intended” (GRADE Handbook):

- **Strong recommendations:** where guideline developers are certain that the evidence supports a clear balance towards either desirable or undesirable effects; or
- **Weak recommendations:** where guideline developers are not as certain about the balance between desirable and undesirable effects as the evidence base isn't as robust.

These strong or weak recommendations can either be for or against an intervention. If the recommendation is AGAINST an intervention this means it is recommended NOT to do that intervention.

**Consensus-based recommendations:** statements have been developed based on consensus and expert opinion (guided by any underlying or indirect evidence) for topics where there is either a lack of evidence or insufficient quality of evidence on which to base a recommendation but it was felt that advice should be made.

**Practice points:** for questions outside the search strategy (i.e. where no systematic literature search was conducted), additional considerations are provided.

Recommendations are presented as at December 2020 with a note if it has changed since the 2017 recommendations and are also presented in Chapter order for easier reference to the relevant section of the full Clinical Guidelines.

For the full list of references, please refer to the individual MAGICapp chapters through InformMe <https://informme.org.au/Guidelines/Clinical-Guidelines-for-Stroke-Management>.

## Chapter 3 of 8: Acute medical and surgical management

### Stroke unit care

#### Strong recommendation

All stroke patients should be admitted to hospital and be treated in a stroke unit with an interdisciplinary team. (Langhorne 2020)

#### Info box

#### Practice points

- All stroke patients should be admitted directly to a stroke unit (preferably within three hours of stroke onset).
- For patients with suspected stroke presenting to non-stroke unit hospitals, transfer protocols should be developed and used to guide urgent transfers to the nearest stroke unit hospital.
- Where transfer is not feasible, smaller isolated hospitals should manage stroke services in a manner that adheres as closely as possible to the criteria for stroke unit care. Where possible, stroke patients should receive care in geographically discrete units.

#### Strong recommendation

All acute stroke services should implement standardised protocols to manage fever, glucose and swallowing difficulties in stroke patients. (Middleton et al. 2011)

### Assessment for rehabilitation

#### Info box

#### Practice points

- Every stroke patient should have their rehabilitation needs assessed within 24–48 hours of admission to the stroke unit by members of the interdisciplinary team, using the [Assessment for Rehabilitation Tool](#) (Australian Stroke Coalition Working Group 2012).
- Any stroke patient with identified rehabilitation needs should be referred to a rehabilitation service.
- Rehabilitation service providers should document whether a stroke patient has rehabilitation needs and whether appropriate rehabilitation services are available to meet these needs.

### Palliative care

#### Strong recommendation

Stroke patients and their families/carers should have access to specialist palliative care teams as needed and receive care consistent with the principles and philosophies of palliative care. (Gade et al. 2008)

## Practice statement

### Consensus-based recommendations

- For patients with severe stroke who are deteriorating, a considered assessment of prognosis or imminent death should be made.
- A pathway for stroke palliative care can be used to support stroke patients and their families/carers and improve care for people dying after stroke.

## Chapter 4 of 8: Secondary prevention

### Lifestyle modifications

#### Info box

#### Practice point

All patients with stroke or TIA (except those receiving palliative care) should be assessed and informed of their risk factors for recurrent stroke and strategies to modify identified risk factors. This should occur as soon as possible and prior to discharge from hospital.

### Physical activity

#### Info box

#### Practice point

Patients with stroke or TIA should be advised and supported to undertake appropriate, regular physical activity as outlined in one of the following existing guidelines:

- [Australia's Physical Activity & Sedentary Behaviour Guidelines for Adults \(18-64 years\)](#) (Commonwealth of Australia 2014) OR
- [Physical Activity Recommendations for Older Australians \(65 years and older\)](#) (Commonwealth of Australia 2005).

## Chapter 5 of 8: Rehabilitation

### Commencement of rehabilitation

#### **Strong recommendation AGAINST**

For stroke patients, starting intensive out-of-bed activities within 24 hours of stroke onset is not recommended. (Rethnam et al. 2020, Langhorne et al. 2018, Bernhardt et al. 2015)

#### **Strong recommendation**

All stroke patients should commence mobilisation (out-of-bed activity) within 48 hours of stroke onset unless otherwise contraindicated (e.g. receiving end-of-life care). (Bernhardt et al. 2015; Lynch et al. 2014)

### **Weak recommendation**

For patients with mild and moderate stroke, frequent, short sessions of out-of-bed activity should be provided, but the optimal timing within the 48-hour post-stroke time period is unclear. (Bernhardt et al. 2015)

## **Amount of rehabilitation**

### **Strong recommendation**

- For stroke survivors, rehabilitation should be structured to provide as much scheduled therapy (occupational therapy and physiotherapy) as possible. (Lohse et al. 2014; Schneider et al. 2016; Veerbeek et al. 2014)
- For stroke survivors, group circuit class therapy should be used to increase scheduled therapy time. (English et al. 2015)

### **Practice statement**

#### **Consensus-based recommendation**

Stroke survivors should be encouraged to continue with active task practice outside of scheduled therapy sessions. This could include strategies such as:

- self-directed, independent practice;
- semi-supervised and assisted practice involving family/friends, as appropriate.

### **Weak recommendation**

A minimum of three hours a day of scheduled therapy (occupational therapy and physiotherapy) is recommended, ensuring at least two hours of active task practice occurs during this time. (Lohse et al. 2014; Schneider et al. 2016)

## **Early supported discharge services**

### **Strong recommendation**

Where appropriate home-based coordinated stroke services are available (see Practical information section), early supported discharge services should be offered to stroke patients with mild to moderate disability. (Langhorne et al. 2017)

## **Home-based rehabilitation**

### **Weak recommendation**

Home-based rehabilitation may be considered as a preferred model for delivering rehabilitation in the community. Where home rehabilitation is unavailable, stroke patients requiring rehabilitation should receive centre-based care. (Rasmussen et al. 2016; Hillier et al. 2010)

## Goal setting

- Health professionals should initiate the process of setting goals, and involve stroke survivors and their families and carers throughout the process. Goals for recovery should be client-centred, clearly communicated and documented so that both the stroke survivor (and their families/carers) and other members of the rehabilitation team are aware of goals set. (Sugavanam et al. 2013; Taylor et al. 2012)
- Goals should be set in collaboration with the stroke survivor and their family/carer (unless they choose not to participate) and should be well-defined, specific and challenging. They should be reviewed and updated regularly. (Sugavanam et al. 2013; Taylor et al. 2012)

## Sensorimotor impairments

### Weakness

#### Strong recommendation

For stroke survivors with reduced strength in their arms or legs, progressive resistance training should be provided to improve strength. (Dorsch et al. 2018)

#### Weak recommendation

- For stroke survivors with arm weakness repetitive practice using assistive technology, constraint induced movement therapy (CIMT), and robotics may be used to improve arm strength. (de Sousa et al 2018)
- For stroke survivors with leg weakness task specific training, repetitive practice using cycling or electrical stimulation may be used to improve leg strength. (de Sousa et al 2018)

#### Weak recommendation

For stroke survivors with reduced strength in their arms or legs (particularly for those with less than antigravity strength), electrical stimulation may be used. (de Sousa et al. 2018; Nascimento et al. 2014)

## Loss of sensation

#### Weak recommendation

For stroke survivors with sensory loss of the upper limb, sensory-specific training may be provided. (de Diego et al. 2013; Carey et al. 2011; Doyle et al. 2010)

## Loss of cardiorespiratory fitness

#### Strong recommendation

For stroke survivors, rehabilitation should include individually-tailored exercise interventions to improve cardiorespiratory fitness. (Saunders et al. 2020)

## Practice statement

### **Consensus-based recommendations**

- All stroke survivors should commence cardiorespiratory training during their inpatient stay.
- Stroke survivors should be encouraged to participate in ongoing regular physical activity regardless of their level of disability.

## Activity limitations

### Sitting

#### **Strong recommendation**

For stroke survivors who have difficulty sitting, practising reaching beyond arm's length while sitting with supervision/assistance should be undertaken. (Veerbeek et al. 2014)

### Standing up from sitting

#### **Strong recommendation**

For stroke survivors who have difficulty in standing up from a chair, practice of standing up should be undertaken. (Pollock et al. 2014; French et al. 2016)

### Standing balance

#### **Strong recommendation** Draft update

For stroke survivors who have difficulty with standing balance, standing activities that are functional and challenge balance should be provided (French et al. 2016, van Duijnhoven et al. 2016, Hugues et al. 2019).

#### **Weak recommendation** Draft update

For stroke survivors who have difficulty with standing balance, one or more of the following interventions may be used in addition to practicing functional tasks:

- Virtual reality training, which may include treadmill training, motion capture or force sensing devices (e.g. Wii Balance Boards) (Corbetta et al. 2015; Laver et al. 2017; Mohammadi et al. 2019)
- Visual or auditory feedback e.g. force platform biofeedback (Veerbeek et al. 2014; Stanton et al. 2017)
- Electromechanically assisted gait or standing training (Zheng et al. 2019)

### Walking

#### **Strong recommendation**

Stroke survivors with difficulty walking should be given the opportunity to undertake tailored repetitive practice of walking (or components of walking) as much as possible. (French et al. 2016)

The following modalities may be used:

- Circuit class therapy (with a focus on overground walking practice) (Veerbeek et al. 2014);
- Treadmill training with or without body weight support (Mehrholtz et al. 2014).

#### **Weak recommendation**

For stroke survivors with difficulty walking, one or more of the following interventions may be used in addition to those listed above:

- Virtual reality training. (Corbetta et al. 2015)
- Electromechanically assisted gait training. (Mehrholtz et al. 2013)
- Biofeedback. (Stanton et al. 2017)
- Cueing of cadence. (Nascimento et al. 2015)
- Electrical stimulation. (Howlett et al. 2015)

#### **Weak recommendation**

For stroke survivors, individually fitted lower limb orthoses may be used to minimise limitations in walking ability. Improvement in walking will only occur while the orthosis is being worn. (Tyson et al. 2013)

## **Arm activity**

#### **Strong recommendation**

For stroke survivors with some active wrist and finger extension, intensive constraint-induced movement therapy (minimum 2 hours of active therapy per day for 2 weeks, plus restraint for at least 6 hours a day) should be provided to improve arm and hand use. (Corbetta et al. 2015)

#### **Weak recommendation**

For stroke survivors with mild to severe arm weakness, mechanically assisted arm training (e.g. robotics) may be used to improve upper limb function. (Mehrholtz et al. 2015)

#### **Strong recommendation AGAINST**

Hand and wrist orthoses (splints) should not be used as part of routine practice as they have no effect on function, pain or range of movement. (Tyson et al. 2011)

#### **Weak recommendation**

For stroke survivors with mild to moderate arm impairment, virtual reality and interactive games may be used to improve upper limb function. Virtual reality therapy should be provided for at least 15 hours total therapy time and is most effective when used in the first six months after stroke. (Laver et al. 2015)



#### **Weak recommendation**

For stroke survivors with mild to severe arm or hand weakness, electrical stimulation in conjunction with motor training may be used to improve upper limb function. (Howlett et al. 2015; Yang et al 2019)

#### **Weak recommendation**

For stroke survivors with mild to moderate weakness of their arm, mental practice in conjunction with active motor training may be used to improve arm function. (Barcley-Goddard et al. 2020; Borges et al. 2018)

#### **Weak recommendation**

For stroke survivors with mild to moderate weakness, mirror therapy may be used as an adjunct to routine therapy to improve arm function after stroke. (Thieme et al. 2018)

#### **Weak recommendation**

For stroke survivors with at least some voluntary movement of the arm and hand, repetitive task-specific training may be used to improve arm and hand function. (French et al. 2016)

#### **Weak recommendation AGAINST**

Brain stimulation (transcranial direct stimulation or repetitive transcranial magnetic stimulation) should not be used in routine practice for improving arm function, and only used as part of a research framework. (Elsner et al. 2020 [176]; van Lieshout et al 2019; Hao et al. 2013)

## Participation restrictions

### Activities of daily living

#### **Strong recommendation**

- Community-dwelling stroke survivors who have difficulties performing daily activities should be assessed by a trained clinician. (Legg et al. 2017)
- Community-dwelling stroke survivors with confirmed difficulties in personal or extended activities of daily living should have specific therapy from a trained clinician (e.g. task-specific practice and training in the use of appropriate aids) to address these issues. (Legg et al. 2017)

#### **Weak recommendation AGAINST**

For older stroke survivors living in a nursing home, routine occupational therapy is not recommended to improve activities of daily living function. (Sackley et al. 2015)

#### **Weak recommendation AGAINST Draft update**

Acupuncture is not routinely recommended to improve activities of daily living. (Yang et al. 2016)

#### **Strong recommendation AGAINST**

Administration of amphetamines to improve activities of daily living is not recommended. (Martinsson et al. 2007)

**Weak recommendation AGAINST Draft update**

Selective serotonin reuptake inhibitors should not be used to reduce disability. (Legg et al. 2019; AFFINITY collaborators; EFFECTS collaborators)

**Weak recommendation**

For stroke survivors, selective serotonin reuptake inhibitors may be used to improve performance of activities of daily living. (Mead et al. 2012)

**Weak recommendation AGAINST**

Brain stimulation (transcranial direct stimulation or repetitive transcranial magnetic stimulation) should not be used in routine practice to improve activities of daily living and only used as part of a research framework. (Elsner et al. 2020; Hao et al. 2013)

**Weak recommendation**

For stroke survivors, virtual reality technology may be used to improve activities of daily living in addition to usual therapy. (Laver et al. 2017)

## Communication difficulties

### Assessment of communication deficits

#### Info box

#### Practice points

- All stroke survivors should be screened for communication deficits using a screening tool that is valid and reliable.
- Those stroke survivors with suspected communication difficulties should receive formal, comprehensive assessment by a specialist clinician to determine the nature and type of the communication impairment.

### Cognitive communication deficits

#### Practice statement

#### Consensus-based recommendations

Stroke survivors with difficulties in communication following right hemisphere damage should have input from a suitably trained health professional including:

- a comprehensive assessment,
- development of a management plan, and
- family education, support and counselling as required. (Lehman Blake et al. 2013; Ferre et al. 2011)

Management may include:

- Motoric-imitative, cognitive-linguistic treatments to improve use of emotional tone in speech production. (Rosenbek et al. 2006)

- Semantic-based treatment connecting literal and metaphorical senses to improve comprehension of conversational and metaphoric concept. (Lungren et al. 2011)

## Cognition and perception difficulties

### Assessment of cognition

#### Info box

#### Practice points

- All stroke survivors should be screened for cognitive and perceptual deficits by a trained person (e.g. neuropsychologist, occupational therapist or speech pathologist) using validated and reliable screening tools, ideally prior to discharge from hospital.
- Stroke survivors identified during screening as having cognitive deficits should be referred for comprehensive clinical neuropsychological investigations.

### Perception

#### Practice statement

#### Consensus-based recommendations

- Stroke survivors with identified perceptual difficulties should have a formal perceptual (i.e. neurological and neuropsychological) assessment.
- Stroke survivors with an identified perceptual impairment and their carer should receive:
  - verbal and written information about the impairment;
  - an assessment and adaptation of their environment to reduce potential risk and promote independence;
  - practical advice/strategies to reduce risk (e.g. trips, falls, limb injury) and promote independence;
  - intervention to address the perceptual difficulties, ideally within the context of a clinical trial.

### Attention and concentration

#### Practice statement

#### Consensus-based recommendation

For stroke survivors with attentional impairments or those who appear easily distracted or unable to concentrate, a formal neuropsychological or cognitive assessment should be performed.

#### **Weak recommendation**

For stroke survivors with attention and concentration deficits, cognitive rehabilitation may be used. (Loetscher et al. 2019; Rogers et al. 2018; Virk et al. 2016)

#### **Weak recommendation**

For stroke survivors with attention and concentration deficits, exercise training and leisure activities may be provided. (Liu-Ambrose et al. 2015)

## Memory

### Practice statement **Draft update**

#### **Consensus-based recommendations**

Any stroke survivor found to have memory impairment causing difficulties in rehabilitation or adaptive functioning should:

- be referred to a suitably qualified healthcare professional for a more comprehensive assessment of their memory abilities;
- have their nursing and therapy sessions tailored to use techniques that capitalise on preserved memory abilities;
- be notebooks, diaries, audio, and audio alarms;
- have therapy delivered in an environment as similar to the stroke survivor's usual environment as possible to encourage generalisation;
- be taught strategies aimed at assisting their memory, e.g. using a notebook, diary, mobile phone/audio alerts, electronic calendars and/or reminders;
- be taught approaches aimed at directly improving their memory, e.g. computerised memory training games and learning mnemonic strategies.

## Executive function

### Info box

#### **Practice points**

- Stroke survivors considered to have problems associated with executive functioning deficits should be formally assessed by a suitably qualified and trained person, using reliable and valid tools that include measures of behavioural symptoms.
- For stroke survivors with impaired executive functioning, the way in which information is provided should be tailored to accommodate/compensate for the particular area of dysfunction.

#### **Weak recommendation**

For stroke survivors with cognitive impairment, meta-cognitive strategy and/or cognitive training may be provided. (Zucchella et al. 2014; Skidmore et al. 2015)

## Limb apraxia

### Info box

#### Practice point

Stroke survivors who have suspected difficulties executing tasks but who have adequate limb movement and sensation should be screened for apraxia.

#### **Weak recommendation**

For stroke survivors with limb apraxia, interventions such as gesture training, strategy training and/or errorless learning may be provided. (Lindsten-McQueen et al. 2014)

## Neglect

### Info box

#### Practice point

Any stroke survivor with suspected or actual neglect or impairment of spatial awareness should have a full assessment using validated tools.

#### **Weak recommendation**

For stroke survivors with symptoms of unilateral neglect, cognitive rehabilitation (e.g. computerised scanning training, pen and paper tasks, visual scanning training, eye patching, mental practice) may be provided. (Bowen et al. 2013)

#### **Weak recommendation**

For stroke survivors with symptoms of unilateral neglect, mirror therapy may be used to improve arm function and ADL performance. (Thieme et al. 2018)

#### **Practice statement**

#### **Consensus-based recommendations**

Stroke survivors with impaired attention to one side should be:

- given a clear explanation of the impairment;
- taught compensatory strategies systematically, such as visual scanning to reduce the impact of neglect on activities such as reading, eating and walking;
- given cues to draw attention to the affected side during therapy and nursing procedures;
- monitored to ensure that they do not eat too little through missing food on one side of the plate.

#### **Weak recommendation AGAINST**

Non-invasive brain stimulation should not be used in routine clinical practice to decrease unilateral neglect, but may be used within a research framework. (Salazar et al 2018; Kwon et al 2018; Fan et al 2018)

## Chapter 6 of 8: Managing complications

### Spasticity

#### Weak recommendation

For stroke survivors with **upper** limb spasticity, Botulinum Toxin A in addition to rehabilitation therapy may be used to reduce spasticity, but is unlikely to improve activity or motor function. (Foley et al 2013; Gracies et al 2014)

#### Weak recommendation

For stroke survivors with **lower** limb spasticity, Botulinum Toxin A in addition to rehabilitation therapy may be used to reduce spasticity but is unlikely to improve motor function or walking. (Wu et al 2016; McIntyre et al 2012; Olvey et al 2010)

#### Weak recommendation **AGAINST**

For stroke survivors with spasticity, acupuncture should not be used for treatment of spasticity in routine practice other than as part of a research study. (Lim et al 2015)

#### Weak recommendation

For stroke survivors with spasticity, adjunct therapies to Botulinum Toxin A, such as electrical stimulation, casting and taping, may be used. (Stein et al 2015; Mills et al 2016; Santamato et al 2015)

#### Weak recommendation **AGAINST**

For stroke survivors, the routine use of stretch to reduce spasticity is not recommended. (Harvey et al 2017)

### Contracture

#### Strong recommendation **AGAINST** Draft update

For stroke survivors at risk of developing contracture who are receiving comprehensive, active therapy the routine use of splints or stretch of the arm or leg muscles is not recommended. (Harvey et al 2017)

#### Practice statement

#### Consensus-based recommendations

- For stroke survivors, serial casting may be trialled to reduce severe, persistent contracture when conventional therapy has failed.
- For stroke survivors at risk of developing contracture or who have developed contracture, active motor training or electrical stimulation to elicit muscle activity should be provided.

### Subluxation

#### Weak recommendation

For stroke survivors at risk of shoulder subluxation, electrical stimulation may be used in the first six months after stroke to prevent or reduce subluxation. (Vafadar et al 2015; Lee et al 2017)

**Weak recommendation AGAINST**

For stroke survivors at risk of shoulder subluxation, shoulder strapping is not recommended to prevent or reduce subluxation. (Appel et al 2014)

**Practice statement**

**Consensus-based recommendation**

For stroke survivors at risk of shoulder subluxation, firm support devices (e.g. devices such as a laptray) may be used. A sling may be used when standing or walking.

**Practice statement**

**Consensus-based recommendation**

To prevent complications related to shoulder subluxation, education and training about correct manual handling and positioning should be provided to the stroke survivor, their family/carer and health professionals, and particularly nursing and allied health staff.

## Pain

### Shoulder pain

**Weak recommendation**

For stroke survivors with shoulder pain, shoulder strapping may be used to reduce pain. (Appel et al 2014)

**Weak recommendation**

For stroke survivors with shoulder pain, electrical stimulation may be used to manage pain. (Qiu et al 2019)

**Weak recommendation**

For stroke survivors with shoulder pain, shoulder injections (either sub acromial steroid injections for patients with rotator cuff syndrome, or methylprednisolone and bupivacaine for suprascapular nerve block) may be used to reduce pain. (Adey-Wakeling et al. 2013; Rah et al. 2012)

**Weak recommendation**

For stroke survivors with shoulder pain and upper limb spasticity, Botulinum Toxin A may be used to reduce pain. (Singh et al 2010)

**Weak recommendation**

For stroke survivors with shoulder pain, acupuncture in addition to comprehensive rehabilitation may be used to reduce pain. (Liu et al 2019)

**Practice statement**

**Consensus-based recommendations**

For stroke survivors with severe weakness who are at risk of developing shoulder pain, management may include:

- shoulder strapping;
- education of staff, carers and stroke survivors about preventing trauma;
- active motor training to improve function.

#### **Info box**

##### **Practice point**

For stroke survivors who develop shoulder pain, management should be based on evidence-based interventions for acute musculoskeletal pain.

## **Swelling of the extremities**

### **Practice statement**

#### **Consensus-based recommendations**

For stroke survivors with severe weakness who are at risk of developing swelling of the extremities, management may include the following

- dynamic pressure garments;
- electrical stimulation;
- elevation of the limb when resting.

### **Practice statement**

#### **Consensus-based recommendations**

For stroke survivors who have swelling of the hands or feet management may include the following:

- dynamic pressure garments;
- electrical stimulation;
- continuous passive motion with elevation;
- elevation of the limb when resting.

## **Fatigue**

### **Practice statement**

#### **Consensus-based recommendations** **Draft update**

- Therapy for stroke survivors with fatigue should be organised for periods of the day when they are most alert.
- Stroke survivors and their families/carers should be provided with information, education and strategies to assist in managing fatigue.



- Potential modifying factors for fatigue should be considered including avoiding sedating drugs and alcohol, screening for sleep-related breathing disorders and depression.
- While there is insufficient evidence to guide practice, possible interventions could include cognitive behavioural therapy (focusing on fatigue and sleep with advice on regular exercise), exercise and improving sleep hygiene.

## Falls

### Practice statement

#### Consensus-based recommendations

- For stroke patients, a falls risk assessment, including fear of falling, should be undertaken on admission to hospital. A management plan should be initiated for all patients identified as at risk of falls.
- For stroke survivors at high risk of falls, a comprehensive home assessment for the purposes of reducing falling hazards should be carried out by a qualified health professional. Appropriate home modifications (as determined by a health professional) for example installation of grab rails and ramps may further reduce falls risk.

#### **Weak recommendation**

For stroke survivors who are at risk of falling, multifactorial interventions in the community, including an individually prescribed exercise program and advice on safety, should be provided. (Denissen et al 2019; Gillespie et al 2012)

## Chapter 7 of 8: Discharge planning and transfer of care

### Information and education

#### **Strong recommendation**

- All stroke survivors and their families/carers should be offered information tailored to meet their individual needs using relevant language and communication formats. (Forster et al 2012)
- Information should be provided at different stages in the recovery process. (Forster et al 2012)
- An approach of active engagement with stroke survivors and their families/carers should be used allowing for the provision of material, opportunities for follow-up, clarification, and reinforcement. (Forster et al 2012)

#### **Info box**

#### **Practice points**

- Stroke survivors and their families/carers should be educated in the FAST stroke recognition message to maximise early presentation to hospital in case of recurrent stroke.
- The need for education, information and behaviour change to address long-term secondary stroke prevention should be emphasized (refer to [Secondary Prevention](#)).

## Discharge care plans

### **Strong recommendation**

Comprehensive discharge care plans that address the specific needs of the stroke survivor should be developed in conjunction with the stroke survivor and carer prior to discharge. (Johnston et al 2010; Goncalves-Bradley et al 2016)

### **Info box**

#### **Practice point**

Discharge planning should commence as soon as possible after the stroke patient has been admitted to hospital.

#### **Practice statement**

#### **Consensus-based recommendation**

A discharge planner may be used to coordinate a comprehensive discharge program for stroke survivors.

#### **Practice statement**

#### **Consensus-based recommendations**

To ensure a safe discharge process occurs, hospital services should ensure the following steps are completed prior to discharge:

- Stroke survivors and families/carers have the opportunity to identify and discuss their post-discharge needs (physical, emotional, social, recreational, financial and community support) with relevant members of the multidisciplinary team.
- General practitioners, primary healthcare teams and community services are informed before or at the time of discharge.
- All medications, equipment and support services necessary for a safe discharge are organised.
- Any necessary continuing specialist treatment required has been organised.
- A documented post-discharge care plan is developed in collaboration with the stroke survivor and family and a copy provided to them. This discharge planning process may involve relevant community services, self-management strategies (i.e. information on medications and compliance advice, goals and therapy to continue at home), stroke support services, any further rehabilitation or outpatient appointments, and an appropriate contact number for any post-discharge queries

A locally developed protocol or standardised tool may assist in implementation of a safe and comprehensive discharge process. This tool should be aphasia and cognition friendly.

## Patient and carer needs

### Practice statement

#### **Consensus-based recommendation**

Hospital services should ensure that stroke survivors and their families/carers have the opportunity to identify and discuss their post-discharge needs (including physical, emotional, social, recreational, financial and community support) with relevant members of the interdisciplinary team.

## Home assessments

### Practice statement

#### **Consensus-based recommendation**

Prior to hospital discharge, all stroke survivors should be assessed to determine the need for a home visit, which may be carried out to ensure safety and provision of appropriate aids, support and community services.

## Carer training

#### **Weak recommendation**

Relevant members of the interdisciplinary team should provide specific and tailored training for carers/family before the stroke survivor is discharged home. This training should include, as necessary, personal care techniques, communication strategies, physical handling techniques, information about ongoing prevention and other specific stroke-related problems, safe swallowing and appropriate dietary modifications, and management of behaviours and psychosocial issues. (Forster et al 2013)

## Chapter 8 of 8: Community participation and long-term care

## Self-management

#### **Weak recommendation**

- Stroke survivors who are cognitively able and their carers should be made aware of the availability of generic self-management programs before discharge from hospital and be supported to access such programs once they have returned to the community.
- Stroke-specific self-management programs may be provided for those who require more specialised programs.

- A collaboratively developed self-management care plan may be used to harness and optimise self-management skills.

(Fryer et al 2016; Pedersen et al 2020)

## Community mobility and outdoor travel

### Weak recommendation

Stroke survivors who have difficulty with outdoor mobility in the community should set individualised goals and get assistance with adaptive equipment, information and referral on to other agencies. Escorted walking practice may be of benefit to some individuals and if provided, should occur in a variety of community settings and environments, and may also incorporate virtual reality training that mimics community walking. (Barclay et al 2015; Logan et al 2014)

## Leisure

### Weak recommendation

For stroke survivors, targeted occupational therapy programs including leisure therapy may be used to increase participation in leisure activities. (Dorstyn et al 2014; Walker et al 2004)

## Return to work

### Weak recommendation

- All stroke survivors should be asked about their employment (paid and unpaid) prior to their stroke and if they wish to return to work.
- For stroke survivors who wish to return to work, assessment should be offered to establish abilities relative to work demands. In addition, assistance to resume or take up work including worksite visits and workplace interventions, or referral to a supported employment service should be offered. (Ntsiea et al 2015)

## Sexuality

### Practice statement

#### Consensus-based recommendations

Stroke survivors and their partners should be offered:

- the opportunity to discuss sexuality and intimacy with an appropriate health professional; *and*
- written information addressing issues relating to sexual intimacy and sexual dysfunction post stroke.

Any discussion or written information should address psychosocial as well as physical function.

## Support

### Peer support

#### Weak recommendation

Stroke survivors and their families/carers should be given information about the availability and potential benefits of a local stroke support group and/or other sources of peer support before leaving hospital and when back in the community. (Kruithof et al 2013)

### Carer support

#### Strong recommendation

Carers of stroke survivors should be provided with tailored information and support during all stages of the recovery process. This support includes (but is not limited to) information provision and opportunities to talk with relevant health professionals about the stroke, stroke team members and their roles, test or assessment results, intervention plans, discharge planning, community services and appropriate contact details. Support and information provision for carers should occur prior to discharge from hospital and/or in the home and can be delivered face-to-face, via telephone or computer. (Legg et al 2011; Eames et al 2013)

#### Practice statement

#### Consensus-based recommendations

- Carers should receive psychosocial support throughout the stroke recovery continuum to ensure carer wellbeing and the sustainability of the care arrangement. Carers should be supported to explore and develop problem solving strategies, coping strategies and stress management techniques. The care arrangement has a significant impact on the relationship between caregiver and stroke survivor so psychosocial support should also be targeted towards protecting relationships within the stroke survivors support network.
- Where it is the wish of the stroke survivor, carers should be actively involved in the recovery process by assisting with goal setting, therapy sessions, discharge planning, and long-term activities.
- Carers should be provided with information about the availability and potential benefits of local stroke support groups and services, at or before the person's return to the community.
- Assistance should be provided for families/carers to manage stroke survivors who have behavioural problems.

For access to the full Clinical Guidelines and further information refer to InformMe <https://informme.org.au/Guidelines/Clinical-Guidelines-for-Stroke-Management>.