

Clinical Guidelines for Stroke Management 2017

Summary – General practice

This summary is a quick reference to the recommendations in the *Clinical Guidelines for Stroke Management 2017* most relevant to general practice.

Key points

- General practitioners play a critical role in the prevention, diagnosis, and long-term management of stroke.
- Education of staff in the Face, Arm, Speech, Time (FAST) stroke recognition message and to redirect any calls about suspected acute stroke to 000.
- All patients with suspected stroke or TIA should be managed as a time-critical emergency.
- Secondary prevention measures should be discussed with stroke survivor with a particular focus on lifestyle modification such as smoking cessation, appropriate diet and regular physical activity. Pharmacological measures should be monitored.
- Rehabilitation and community integration needs to be reinforced and supported with the stroke survivor and their family/carer.

While this summary focuses on relevant aspects of care, 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/en/Guidelines/Clinical-Guidelines-for-Stroke-Management-2017>.

The *Clinical Guidelines for Stroke Management 2017* is an update of the previous clinical guidelines published in 2010 and is based on the best evidence available. The new Clinical Guidelines use an internationally recognised guideline development approach called GRADE (Grading of Recommendations

Assessment, Development and Evaluation) and an innovative guideline development and publishing platform known as MAGICapp (Making Grade the Irresistible Choice). GRADE ensures a systematic process in developing recommendations, 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 recommendations, based on how confident the guideline developers are in that the “desirable effects of an intervention outweigh undesirable effects [...] 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 for the 2010 and 2017 versions to note changes easily, and are also presented in Chapter order for easier reference to the relevant section of the full Clinical Guidelines.

2010 Clinical Guidelines	2017 Clinical Guidelines
Chapter 2: Stroke recognition and pre-hospital care	Chapter 1: Pre-hospital care
Stroke patients should be assigned a high priority by ambulance services.	<p>Strong recommendation Updated</p> <p>All stroke patients should be managed as a time critical emergency. The dispatch of ambulances to suspected stroke patients who may be eligible for reperfusion therapies requires the highest level of priority.</p>
Health and ambulance services should develop and use pre-notification systems for stroke.	<p>Strong recommendation Updated</p> <ul style="list-style-type: none"> • Ambulance services should preferentially transfer suspected stroke patients to a hospital capable of delivering reperfusion therapies as well as stroke unit care. • Ambulance services should pre-notify the hospital of a suspected stroke case where the patient may be eligible for reperfusion therapies.
Ambulance services should preferentially transfer suspected stroke patients to a hospital with stroke unit care.	
	<p>Info Box Practice point New</p> <p>General practitioners are encouraged to educate reception staff in the FAST stroke recognition message and to redirect any calls about suspected acute stroke to 000.</p>
The general public should receive ongoing education on how to recognise the symptoms of stroke and the importance of early medical assistance.	-
Ambulance services should use a validated rapid pre-hospital stroke-screening tool and incorporate such tools into pre-hospital assessment of people with suspected stroke.	-

Chapter 3: Early assessment and diagnosis	Chapter 2 of 8: Early assessment and diagnosis
Transient ischaemic attack	Transient ischaemic attack
<p>All patients with suspected TIA should have a full assessment that includes a detailed history and clinical, prognostic (e.g. ABCD2 score) and investigative tests (e.g. blood tests, brain and carotid imaging and ECG) at the initial point of healthcare contact, whether first seen in primary or secondary care.</p>	<p>Strong recommendation Updated</p> <ul style="list-style-type: none"> • All patients with suspected transient ischaemic attack (TIA), i.e. focal neurological symptoms due to focal ischaemia that have fully resolved, should have urgent clinical assessment. • Patients with symptoms that are present or fluctuating at time of initial assessment should be treated as having a stroke and be immediately referred for emergency department and stroke specialist assessment, investigation and reperfusion therapy where appropriate. • In pre-hospital settings, high risk indicators (e.g. crescendo TIA, current or suspected AF, current use of anticoagulants, carotid stenosis or high ABCD² score) can be used to identify patients for urgent specialist assessment.
	<p>Strong recommendation New</p> <p>When TIA patients present to primary care, the use of TIA electronic decision support, when available, is recommended to improve diagnostic and triage decisions.</p>
	<p>Weak recommendation AGAINST New</p> <p>In TIA patients, use of the ABCD² risk score in isolation to determine the urgency of investigation may delay recognition of atrial fibrillation and symptomatic carotid stenosis in some patients and should be avoided.</p>
<p>Patients identified as high risk (e.g. ABCD2 score >3 and/or any one of AF, carotid territory symptoms or crescendo TIA) should undergo:</p> <ul style="list-style-type: none"> • urgent brain imaging (preferably MRI with DWI), 'urgent' being immediately where available, but within 24 hours) 	<p>Strong recommendation Updated</p> <p>All TIA patients with anterior circulation symptoms should undergo early carotid imaging with CT angiography (aortic arch to cerebral vertex), carotid Doppler ultrasound or MR angiography. Carotid imaging should</p>

<ul style="list-style-type: none"> • carotid imaging should also be undertaken urgently in patients with anterior circulation symptoms who are candidates for carotid re-vascularisation. In settings with limited access to these investigations, referral within 24 hours should be made to the nearest centre where such tests can be quickly conducted. 	<p>preferably be done during the initial assessment but should not be delayed more than 2 days.</p>
	<p>Weak recommendation Updated Patients with TIA should routinely undergo brain imaging to exclude stroke mimics and intracranial haemorrhage. MRI, when available, is recommended to improve diagnostic accuracy.</p>
	<p>Strong recommendation New Patients with suspected TIA should commence secondary prevention therapy urgently.</p>
	<p>Strong recommendation New</p> <ul style="list-style-type: none"> • All patients with TIA should be investigated for atrial fibrillation with ECG during initial assessment and referred for possible prolonged cardiac monitoring as required. • TIA patients with atrial fibrillation should commence anticoagulation therapy early after brain imaging has excluded haemorrhage, unless contraindicated.
	<p>Practice statement Consensus-based recommendations New</p> <ul style="list-style-type: none"> • All patients and their family/carers should receive information about TIA, screening for diabetes, tailored advice on lifestyle modification strategies (smoking cessation, exercise, diabetes optimisation if relevant), return to driving and the recognition of signs of stroke and when to seek emergency care.

	<ul style="list-style-type: none"> All health services should develop and use a local TIA pathway covering primary care, emergency and stroke specialist teams to ensure patients with suspected TIA are managed as rapidly and comprehensively as possible within locally available resources.
Patients classified as low-risk (e.g. ABCD2 score <4 without AF or carotid territory symptoms or who present more than one week after last symptoms should have brain and carotid imaging (where indicated) as soon as possible (i.e. within 48 hours).	-
The following investigations should be undertaken routinely for all patients with suspected TIA: full blood count, electrolytes, erythrocyte sedimentation rate (ESR), renal function, lipid profile, glucose level, and ECG.	-
Rapid assessment in the emergency department	Rapid assessment in the emergency department
Initial diagnosis should be reviewed by a clinician experienced in the evaluation of stroke.	<p>Strong recommendation Updated</p> <p>All suspected stroke patients who have been pre-notified to the stroke or ED team, and who may be candidates for reperfusion therapy, should be met at arrival and assessed by the stroke team or other experienced personnel.</p>
Chapter 4: Acute medical and surgical management	Chapter 3 of 8: Acute medical and surgical management
	Stroke unit care
	<p>Strong recommendation</p> <p>All stroke patients should be admitted to hospital and be treated in a stroke unit with an interdisciplinary team.</p>

	<p>Info Box Practice points</p> <ul style="list-style-type: none"> • 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.
<p>Chapter 5: Secondary prevention</p>	<p>Chapter 4 of 8: Secondary prevention</p>
<p>Lifestyle modification</p>	<p>Lifestyle modification</p>
<p>Every stroke patient should be assessed and informed of their risk factors for a further stroke and possible strategies to modify identified risk factors. The risk factors and interventions include:</p> <ul style="list-style-type: none"> • stopping smoking: nicotine replacement therapy, bupropion or nortriptyline therapy, nicotine • receptor partial agonist therapy and/or behavioural therapy • improving diet: a diet low in fat (especially saturated fat) and sodium but high in fruit and vegetables • increasing regular exercise • avoiding excessive alcohol (i.e. no more than two standard drinks per day). 	<p>Info Box Practice point Updated</p> <p>All people 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.</p>
<p>Interventions should be individualised and delivered using behavioural techniques such as educational or motivational counselling.</p>	

	Smoking
	<p>Info Box Practice point New</p> <p>People with stroke or TIA who smoke should be advised to stop and assisted to quit in line with existing guidelines, such as Supporting smoking cessation: a guide for health professionals.</p>
	Diet
	<p>Info Box Practice points New</p> <ul style="list-style-type: none"> • People with stroke or TIA should be advised to manage their dietary requirements in accordance with the Australian Dietary Guidelines. • All stroke survivors should be referred to an Accredited Practising Dietitian who can provide individualised dietary advice.
	Physical activity
	<p>Info Box Practice point New</p> <p>People with stroke or TIA should be advised and supported to undertake appropriate, regular physical activity as outlined in one of the following existing guidelines:</p> <ul style="list-style-type: none"> • Australia’s Physical Activity & Sedentary Behaviour Guidelines for Adults (18-64 years) OR • Physical Activity Recommendations for Older Australians (65 years and older).
	Obesity
	<p>Info Box Practice point New</p> <p>People with stroke or TIA who are overweight or obese should be offered advice and support to aid weight loss as outlined in the Clinical Practice</p>

	Guidelines for the Management of Overweight and Obesity in Adults, Adolescents and Children in Australia.
	Alcohol
	Info Box Practice point New People with stroke or TIA should be advised to avoid excessive alcohol consumption (>2 standard drinks per day) in line with the Australian Guidelines to Reduce Health Risks from Drinking Alcohol .
Adherence to pharmacotherapy	Adherence to pharmacotherapy
Interventions to promote adherence with medication regimes are often complex and should include combinations of the following: <ul style="list-style-type: none"> reminders, self-monitoring, reinforcement, counselling, family therapy, telephone follow-up, supportive care and dose administration aids information and education in hospital and in the community. 	Weak recommendation Updated Interventions to promote adherence with medication regimes may be provided to all stroke survivors. Such regimes may include combinations of the following: <ul style="list-style-type: none"> reminders, self-monitoring, reinforcement, counselling, motivational interviewing, family therapy, telephone follow-up, supportive care and dose administration aids development of self-management skills and modification of dysfunctional beliefs about medication.
Blood pressure lowering	Blood pressure lowering therapy
	Long term blood pressure management
New blood pressure lowering therapy should commence before discharge for those with stroke or TIA, or soon after TIA if the patient is not admitted.	Strong recommendation Updated <ul style="list-style-type: none"> All stroke and TIA patients, with a clinic blood pressure of >140/90mmHg should have long term blood pressure lowering therapy initiated or intensified.

	<ul style="list-style-type: none"> • Blood pressure lowering therapy should be initiated or intensified before discharge for those with stroke or TIA, or soon after TIA if the patient is not admitted. • Any of the following drug classes are acceptable as blood pressure lowering therapy; angiotensin-converting-enzyme inhibitor, angiotensin II receptor antagonists, calcium channel blocker, thiazide diuretics. Beta-blockers should not be used as first-line agents unless the patient has ischaemic heart disease.
	<p>Weak recommendation Updated</p> <ul style="list-style-type: none"> • In patients with a systolic blood pressure of 120-140mmHg who are not on treatment, initiation of antihypertensive treatment is reasonable, with best evidence for dual (ACEI/diuretic) therapy. • The ideal long term blood pressure target is not well established. A target of <130mmHg systolic may achieve greater benefit than a target of 140mmHg systolic, especially in patients with stroke due to small vessel disease, provided there are no adverse effects from excessive blood pressure lowering.
<p>Antiplatelet therapy</p>	<p>Antiplatelet therapy</p>
<p>Long-term antiplatelet therapy should be prescribed to all people with ischaemic stroke or TIA who are not prescribed anticoagulation therapy.</p>	<p>Strong recommendation Updated</p> <p>Long-term antiplatelet therapy (low-dose aspirin, clopidogrel or combined low-dose aspirin and modified release dipyridamole) should be prescribed to all people with ischaemic stroke or TIA who are not prescribed anticoagulation therapy, taking into consideration patient co-morbidities.</p>
<p>Low-dose aspirin and modified release dipyridamole or clopidogrel alone should be prescribed to all people with ischaemic stroke or TIA, taking into consideration patient co-morbidities.</p>	

	<p>Strong recommendation New</p> <p>All ischaemic stroke and TIA patients should have antiplatelet therapy commenced as soon as possible once brain imaging has excluded haemorrhage unless thrombolysis has been administered, in which case antiplatelet therapy can commence after 24-hour brain imaging has excluded major haemorrhagic transformation.</p>
	<p>Weak recommendation New</p> <p>For high risk patients with minor ischaemic stroke or TIA, aspirin plus clopidogrel may be used in the short term (first three weeks) to prevent stroke recurrence.</p>
<p>The combination of aspirin plus clopidogrel is NOT recommended for the secondary prevention of cerebrovascular disease in people who do not have acute coronary disease or recent coronary stent.</p>	<p>Strong recommendation AGAINST</p> <p>The combination of aspirin plus clopidogrel should not be used for the long-term secondary prevention of cerebrovascular disease in people who do not have acute coronary disease or recent coronary stent.</p>
	<p>Strong recommendation AGAINST New</p> <p>Antiplatelet agents should not be used for stroke prevention in patients with atrial fibrillation.</p>
<p>Aspirin alone can be used, particularly in people who do not tolerate aspirin plus dipyridamole or clopidogrel.</p>	-

Anticoagulation therapy	Anticoagulant therapy
<p>Anticoagulation therapy for secondary prevention for people with ischaemic stroke or TIA from presumed arterial origin should NOT be routinely used.</p>	<p>Strong recommendation Updated</p> <ul style="list-style-type: none"> • For ischaemic stroke or TIA patients with atrial fibrillation (both paroxysmal and permanent), oral anticoagulation is recommended for long-term secondary prevention. • Direct oral anticoagulants (DOACs) should be initiated in preference to warfarin for patients with non-valvular atrial fibrillation and adequate renal function. • For patients with valvular atrial fibrillation or inadequate renal function, warfarin (target INR 2.5, range 2.0-3.0) should be used. Patients with mechanical heart valves or other indications for anticoagulation should be prescribed warfarin.
<p>Anticoagulation therapy for long-term secondary prevention should be used in people with ischaemic stroke or TIA who have atrial fibrillation or cardioembolic stroke.</p>	<p>Practice statement Consensus-based recommendation</p> <p>For ischaemic stroke patients, the decision to begin anticoagulant therapy can be delayed for up to two weeks but should be made prior to discharge.</p>
<p>In stroke patients, the decision to begin anticoagulation therapy can be delayed for up to two weeks but should be made prior to discharge.</p>	<p>Info Box Practice points New</p> <ul style="list-style-type: none"> • Concurrent antiplatelet therapy should not be used for patients who are anticoagulated for atrial fibrillation unless there is clear indication (e.g. recent coronary stent). Addition of antiplatelet for stable coronary artery disease in the absence of stents should not be used. • For patients with TIA, anticoagulant therapy should begin once CT or MRI has excluded intracranial haemorrhage as the cause of the current event. • For patients with ischaemic stroke due to atrial fibrillation and a genuine contraindication to long-term anticoagulation, percutaneous left atrial appendage occlusion may be a reasonable treatment to reduce recurrent stroke risk.

Cholesterol lowering	Cholesterol lowering therapy
Therapy with a statin should be used for all patients with ischaemic stroke or TIA.	<p>Strong recommendation Updated</p> <p>All patients with ischaemic stroke or TIA with possible atherosclerotic contribution and reasonable life expectancy should be prescribed a high-potency statin, regardless of baseline lipid levels.</p>
Statin should NOT be used routinely for haemorrhagic stroke.	<p>Weak recommendation AGAINST</p> <p>Statins should not be used routinely for intracerebral haemorrhage.</p>
	<p>Weak recommendation AGAINST New</p> <p>Fibrates should not be used routinely for the secondary prevention of stroke.</p>
Carotid surgery	Carotid surgery
Carotid endarterectomy should be undertaken in patients with non-disabling carotid artery territory ischaemic stroke or TIA with ipsilateral carotid stenosis measured at 70–99% (NASCET criteria) only if it can be performed by a specialist surgeon with low rates (<6%) of peri-operative mortality/morbidity.	<p>Strong recommendation Updated</p> <ul style="list-style-type: none"> • Carotid endarterectomy is recommended for patients with recent (<3 months) non-disabling carotid artery territory ischaemic stroke or TIA with ipsilateral carotid stenosis measured at 70-99% (NASCET criteria) if it can be performed by a specialist team with audited practice and a low rate (<6%) of perioperative stroke and death.
Carotid endarterectomy can be undertaken in highly selected ischaemic stroke or TIA patients (considering age, gender and co-morbidities) with symptomatic carotid stenosis of 50–69% (NASCET criteria) or asymptomatic carotid stenosis >60% (NASCET criteria) only if it can be performed by a specialist surgeon with very low rates (<3%) of peri-operative mortality/morbidity.	<ul style="list-style-type: none"> • Carotid endarterectomy can be considered in selected patients with recent (<3 months) non-disabling ischaemic stroke or TIA patients with symptomatic carotid stenosis of 50–69% (NASCET criteria) if it can be performed by a specialist team with audited practice and a very low rate (<3%) of perioperative stroke and death.

<p>Eligible stable patients should undergo carotid endarterectomy as soon as possible after the stroke event (ideally within two weeks).</p>	<ul style="list-style-type: none"> • Carotid endarterectomy should be performed as soon as possible (ideally within two weeks) after the ischaemic stroke or TIA. • All patients with carotid stenosis should be treated with intensive vascular secondary prevention therapy.
	<p>Weak recommendation Updated</p> <ul style="list-style-type: none"> • Carotid endarterectomy should be performed in preference to carotid stenting due to a lower perioperative stroke risk. However, in selected patients with unfavourable anatomy, symptomatic re-stenosis after endarterectomy or previous radiotherapy, stenting may be reasonable. • In patients aged <70 years old, carotid stenting with an experienced proceduralist may be reasonable.
<p>Carotid endarterectomy is NOT recommended for those with symptomatic stenosis <50% (NASCET criteria) or asymptomatic stenosis < 60% (NASCET criteria).</p>	<p>Weak recommendation AGAINST Updated</p> <p>In patients with asymptomatic carotid stenosis, carotid endarterectomy or stenting should not be performed.</p>
<p>Carotid stenting should NOT routinely be undertaken for patients with carotid stenosis.</p>	
	<p>Strong recommendation AGAINST New</p> <p>In patients with symptomatic carotid occlusion, extracranial/ intracranial bypass is not recommended.</p>
<p>Carotid endarterectomy should only be performed by a specialist surgeon in centres where outcomes of carotid surgery are routinely audited.</p>	<p>-</p>

	<p>Cervical artery dissection</p> <p>Strong recommendation New</p> <p>Patients with acute ischaemic stroke due to cervical arterial dissection should be treated with antithrombotic therapy. There is no clear benefit of anticoagulation over antiplatelet therapy.</p>
	<p>Cerebral venous sinus thrombosis</p> <p>Strong recommendation New</p> <p>Patients with cerebral venous sinus thrombosis (CVST) without contraindications to anticoagulation should be treated with either body weight-adjusted subcutaneous low molecular weight heparin or dose-adjusted intravenous heparin, followed by warfarin, regardless of the presence of intracerebral haemorrhage.</p>
	<p>Practice statement Consensus-based recommendations Updated</p> <ul style="list-style-type: none"> • In patients with CVST, the optimal duration of oral anticoagulation after the acute phase is unclear and may be taken in consultation with a haematologist. • In CVST patients with an underlying thrombophilic disorder, or who have had a recurrent CVST, indefinite anticoagulation should be considered. • In patients with CVST, there is insufficient evidence to support the use of either systemic or local thrombolysis. • In patients with CVST and impending cerebral herniation, craniectomy can be used as a life-saving intervention. • In patients with the clinical features of idiopathic intracranial hypertension, imaging of the cerebral venous system is recommended to exclude CVST.

<p>Diabetes management</p>	<p>Diabetes management</p>
<p>Patients with glucose intolerance or diabetes should be managed in line with national guidelines for diabetes.</p>	<p>Info Box Practice point Patients with glucose intolerance or diabetes should be managed in line with Diabetes Australia Best Practice Guidelines.</p>
<p>Patent foramen ovale</p>	<p>Patent foramen ovale management</p>
<p>All patients with ischaemic stroke or TIA, and a PFO should receive antiplatelet therapy as first choice.</p>	<p>Strong recommendation Updated Patients with ischaemic stroke or TIA and PFO should receive optimal medical therapy including antiplatelet therapy or anticoagulation if indicated.</p>
<p>Anticoagulation therapy can also be considered taking into account other risk factors and the increased risk of harm.</p>	
<p>There is insufficient evidence to recommend PFO closure.</p>	<p>Weak recommendation AGAINST Updated Routine endovascular closure of patent foramen ovale is not recommended. Endovascular closure may be reasonable in highly selected young ischaemic stroke patients after thorough exclusion of other stroke aetiologies.</p>
<p>Hormone replacement therapy</p>	<p>Hormone replacement therapy</p>
<p>Following a stroke event, HRT should be stopped. The decision whether to start or continue HRT in patients with a history of previous stroke or TIA should be discussed with the individual patient and based on an overall assessment of risk and benefit.</p>	<p>Practice statement Consensus-based recommendation In stroke and TIA patients, continuation or initiation of hormone replacement therapy is not recommended, but will depend on discussion with the patient and an individualised assessment of risk and benefit.</p>

<p>Oral contraception</p>	<p>Oral contraception</p>
<p>The decision whether to start or continue oral contraception in women of child-bearing age with a history of stroke should be discussed with the individual patient and based on an overall assessment of risk and benefit. Non-hormonal methods of contraception should be considered.</p>	<p>Weak recommendation Updated For women of child-bearing age who have had a stroke, non-hormonal methods of contraception should be considered. If systemic hormonal contraception is required, a non-oestrogen containing medication is preferred.</p>
	<p>Practice statement Consensus-based recommendation For women of child bearing age with a history of stroke or TIA, the decision to initiate or continue oral contraception should be discussed with the patient and based on an overall assessment of individual risk and benefit.</p>
<p>Chapter 6: Rehabilitation</p>	<p>Chapter 5 of 8: Rehabilitation</p>
	<p>Early supported discharge services</p>
	<p>Strong recommendation Updated Where appropriate stroke services are available, early supported discharge services should be offered to stroke patients with mild to moderate disability.</p>
	<p>Home-based rehabilitation</p>
	<p>Weak recommendation Updated 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.</p>

	<p>Goal setting</p> <p>Strong recommendation Updated</p> <ul style="list-style-type: none"> • 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. • 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.
Activities of daily living	Activities of daily living
Patients with difficulties in performance of daily activities should be assessed by a trained clinician.	<p>Strong recommendation Updated</p> <ul style="list-style-type: none"> • Community-dwelling stroke survivors who have difficulties performing daily activities should be assessed by a trained clinician. • Community-dwelling stroke survivors with confirmed difficulties in personal or extended ADL 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.
Patients with confirmed difficulties in personal or extended ADL should have specific therapy (e.g. task-specific practice and trained use of appropriate aids) to address these issues.	
The routine use of acupuncture alone or in combination with traditional herbal medicines is NOT recommended in stroke rehabilitation.	<p>Strong recommendation AGAINST Updated</p> <p>For stroke survivors in the acute, sub-acute or chronic phase post-stroke, acupuncture should not be used to improve ADL.</p>
Administration of amphetamines to improve ADL is NOT recommended.	<p>Strong recommendation AGAINST</p> <p>Administration of amphetamines to improve ADL is not recommended.</p>

	<p>Weak recommendation New</p> <p>For stroke survivors, selective serotonin reuptake inhibitors may be used to improve performance of ADL.</p>
	Communication
Aphasia	Aphasia
For patients undergoing active rehabilitation, as much therapy for dysphagia or communication difficulties should be provided as they can tolerate.	<p>Weak recommendation Updated</p> <p>For stroke survivors with aphasia, intensive aphasia therapy (at least 45 minutes of direct language therapy for five days a week) may be used in the first few months after stroke.</p>
People with chronic and persisting aphasia should have their mood monitored.	<p>Info Box Practice points New</p> <ul style="list-style-type: none"> • Stroke survivors with chronic and persisting aphasia should have their mood monitored. • Environmental barriers facing people with aphasia should be addressed through training communication partners, raising awareness of and educating about aphasia to reduce negative attitudes, and promoting access and inclusion by providing aphasia-friendly formats or other environmental adaptations. People with aphasia from culturally and linguistically diverse backgrounds may need special attention from trained healthcare interpreters. • The impact of aphasia on functional activities, participation and quality of life, including the impact upon relationships, vocation and leisure, should be assessed and addressed as appropriate from early post-onset and over time for those chronically affected.
Environmental barriers facing people with aphasia should be addressed through training communication partners, raising awareness of and educating about aphasia in order to reduce negative attitudes, and promoting access and inclusion by providing aphasia-friendly formats or other environmental adaptations. People with aphasia from culturally and linguistically diverse backgrounds may need special attention, for example, from trained healthcare interpreters.	
The impact of aphasia on functional activities, participation and quality of life, including the impact upon relationships, vocation and leisure, should be assessed and addressed as appropriate from early post-onset and over time for those chronically affected.	

Chapter 7: Managing complications	Chapter 6 of 8: Managing complications
Spasticity	Spasticity
<p>In stroke survivors who have persistent moderate to severe spasticity (i.e. spasticity that interferes with activity or personal care):</p> <ul style="list-style-type: none"> • botulinum toxin A should be trialled in conjunction with rehabilitation therapy which includes setting clear goals • electrical stimulation and/or EMG biofeedback can be used. 	<p>Weak recommendation Updated 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.</p> <p>Weak recommendation Updated 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.</p>
	<p>Weak recommendation AGAINST New 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.</p>
	<p>Weak recommendation Updated For stroke survivors with spasticity, adjunct therapies to Botulinum Toxin A, such as electrical stimulation, casting and taping, may be used.</p>
	<p>Weak recommendation AGAINST New For stroke survivors, the routine use of stretch to reduce spasticity is not recommended.</p>
Interventions to decrease spasticity other than an early comprehensive therapy program should NOT be routinely provided for people who have	-

<p>mild to moderate spasticity (i.e. spasticity that does not interfere with a stroke survivor's activity or personal care).</p>	
<p>Contracture</p>	<p>Contracture</p>
<p>For stroke survivors at risk of or who have developed contractures and are undergoing comprehensive rehabilitation, the routine use of splints or prolonged positioning of muscles in a lengthened position is NOT recommended.</p>	<p>Strong recommendation AGAINST Updated For stroke survivors at risk of developing contracture, routine use of splints or prolonged positioning of upper or lower limb muscles in a lengthened position (stretch) is not recommended.</p>
<p>Serial casting can be used to reduce severe, persistent contracture when conventional therapy has failed.</p>	<p>Practice statement Consensus-based recommendations Updated</p> <ul style="list-style-type: none"> • 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.
<p>Conventional therapy (i.e. early tailored interventions) should be provided for stroke survivors at risk of or who have developed contracture.</p>	
<p>Overhead pulley exercise should NOT be used routinely to maintain range of motion of the shoulder.</p>	<p>-</p>
<p>Subluxation</p>	<p>Subluxation</p>
<p>For people with severe weakness who are at risk of developing a subluxed shoulder, management should include one or more of the following interventions:</p> <ul style="list-style-type: none"> • electrical stimulation • firm support devices • education and training for the patient, family/carer and clinical staff on how to correctly handle and position the affected upper limb. 	<p>Weak recommendation Updated 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.</p>

	<p>Weak recommendation AGAINST New</p> <p>For stroke survivors at risk of shoulder subluxation, shoulder strapping is not recommended to prevent or reduce subluxation.</p>
For people who have developed a subluxed shoulder, management may include firm support devices to prevent further subluxation.	<p>Practice statement Consensus-based recommendation</p> <p>For stroke survivors at risk of shoulder subluxation, firm support devices (e.g. devices such as a laptray) may be used. A sling maybe used when standing or walking.</p>
	<p>Practice statement Consensus-based recommendation Updated</p> <p>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.</p>
Pain	
Shoulder pain	Shoulder pain
	<p>Weak recommendation Updated</p> <p>For stroke survivors with shoulder pain, shoulder strapping may be used to reduce pain.</p>
	<p>Weak recommendation New</p> <p>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.</p>

	<p>Weak recommendation New</p> <p>For stroke survivors with shoulder pain and upper limb spasticity, Botulinum Toxin A may be used to reduce pain.</p>
<p>The routine use of the following interventions is NOT recommended for people who have already developed shoulder pain:</p> <ul style="list-style-type: none"> • corticosteroid injections • ultrasound. 	<p>Weak recommendation AGAINST New</p> <p>For stroke survivors with shoulder pain, electrical stimulation is not recommended to manage pain.</p>
<p>For people with severe weakness who are at risk of developing shoulder pain, management may include:</p> <ul style="list-style-type: none"> • shoulder strapping • interventions to educate staff, carers and people with stroke about preventing trauma. 	<p>Practice statement Consensus-based recommendations Updated</p> <p>For stroke survivors with severe weakness who are at risk of developing shoulder pain, management may include:</p> <ul style="list-style-type: none"> • shoulder strapping; • education of staff, carers and stroke survivors about preventing trauma; • active motor training to improve function.
<p>For people who develop shoulder pain, management should be based on evidence-based interventions for acute musculoskeletal pain.</p>	<p>Info Box Practice point</p> <p>For stroke survivors who develop shoulder pain, management should be based on evidence-based interventions for acute musculoskeletal pain.</p>
<p>Central post-stroke pain</p>	<p>Not included in the scope of these Clinical Guidelines.</p>
<p>Swelling of the extremities</p>	<p>Swelling of the extremities</p>
<p>For people who are immobile, management can include the following interventions to prevent swelling in the hand and foot:</p> <ul style="list-style-type: none"> • dynamic pressure garments • electrical stimulation • elevation of the limb when resting. 	<p>Practice statement Consensus-based recommendation</p> <p>For stroke survivors with severe weakness who are at risk of developing swelling of the extremities, management may include the following:</p> <ul style="list-style-type: none"> • dynamic pressure garments; • electrical stimulation; • elevation of the limb when resting.

<p>For people who have swollen extremities, management can include the following interventions to reduce swelling in the hand and foot:</p> <ul style="list-style-type: none"> • dynamic pressure garments • electrical stimulation • continuous passive motion with elevation • elevation of the limb when resting. 	<p>Practice statement Consensus-based recommendation</p> <p>For stroke survivors who have swelling of the hands or feet management may include the following:</p> <ul style="list-style-type: none"> • dynamic pressure garments; • electrical stimulation; • continuous passive motion with elevation; • elevation of the limb when resting.
<p>Fatigue</p>	<p>Fatigue</p>
<p>Therapy for stroke survivors with fatigue should be organised for periods of the day when they are most alert.</p>	<p>Practice statement Consensus-based recommendations Updated</p> <ul style="list-style-type: none"> • 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 and education about 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 exercise and improving sleep hygiene.
<p>Stroke survivors and their families/carers should be provided with information and education about fatigue including potential management strategies such as exercise, establishing good sleep patterns, and avoidance of sedating drugs and excessive alcohol.</p>	
<p>Incontinence</p>	<p>Incontinence</p>
<p>Urinary incontinence</p>	<p>Urinary incontinence</p>
<p>All stroke survivors with suspected urinary continence difficulties should be assessed by trained personnel using a structured functional assessment.</p>	<p>Weak recommendation</p>

<p>A portable bladder ultrasound scan should be used to assist in diagnosis and management of urinary incontinence.</p>	<ul style="list-style-type: none"> • All stroke survivors with suspected urinary continence difficulties should be assessed by trained personnel using a structured functional assessment. • For stroke survivors, a portable bladder ultrasound scan should be used to assist in diagnosis and management of urinary incontinence.
<p>Stroke survivors with confirmed continence difficulties should have a continence management plan formulated, documented, implemented and monitored.</p>	<p>Weak recommendation</p> <ul style="list-style-type: none"> • Stroke patients in hospital with confirmed continence difficulties, should have a structured continence management plan formulated, documented, implemented and monitored. • A community continence management plan should be developed with the stroke survivor and family/carer prior to discharge, and should include information on accessing continence resources and appropriate review in the community. • If incontinence persists the stroke survivor should be re-assessed and referred for specialist review.
<p>A community continence management plan should be developed with the stroke survivor and family/carer prior to discharge and should include information on accessing continence resources and appropriate review in the community.</p>	
<p>If incontinence persists the stroke survivor should be re-assessed and referred for specialist review.</p>	
<p>For people with urge incontinence:</p> <ul style="list-style-type: none"> • anticholinergic drugs can be trialled • a prompted or scheduled voiding regime program/ bladder retraining should be trialled • if continence is unachievable, containment aids can assist with social continence. 	<p>Weak recommendation</p> <p>For stroke survivors with urge incontinence:</p> <ul style="list-style-type: none"> • anticholinergic drugs can be tried; • a prompted or scheduled voiding regime program/ bladder retraining can be trialled; • if continence is unachievable, containment aids can assist with social continence.
<p>For people with urinary retention:</p> <ul style="list-style-type: none"> • The routine use of indwelling catheters is NOT recommended. However if urinary retention is severe, intermittent catheterisation should be used 	<p>Practice statement Consensus-based recommendations Updated</p> <p>For stroke patients with urinary retention:</p>

<p>to assist bladder emptying during hospitalisation. If retention continues, intermittent catheterisation is preferable to indwelling catheterisation.</p> <ul style="list-style-type: none"> • If using intermittent catheterisation, a closed sterile catheterisation technique should be used in hospital. • Where management of chronic retention requires catheterisation, consideration should be given to the choice of appropriate route, urethral or suprapubic. • If a stroke survivor is discharged with either intermittent or in-dwelling catheterisation, they and their family/carer will require education about management, where to access supplies and who to contact in case of problems. 	<ul style="list-style-type: none"> • The routine use of indwelling catheters is not recommended. However if urinary retention is severe, intermittent catheterisation should be used to assist bladder emptying during hospitalisation. If retention continues, intermittent catheterisation is preferable to indwelling catheterisation. • If using intermittent catheterisation, a closed sterile catheterisation technique should be used in hospital. • Where management of chronic retention requires catheterisation, consideration should be given to the choice of appropriate route, urethral or suprapubic. • If a stroke survivor is discharged with either intermittent or indwelling catheterisation, they and their family/carer will require education about management, where to access supplies and who to contact in case of problems.
<p>For people with functional incontinence, a whole-team approach is recommended.</p>	<p>Practice statement Consensus-based recommendation For stroke survivors with functional incontinence, a whole-team approach is recommended.</p>
<p>The use of indwelling catheters should be avoided as an initial management strategy except in acute urinary retention.</p>	<p>Practice statement Consensus-based recommendation For stroke survivors, the use of indwelling catheters should be avoided as an initial management strategy except in acute urinary retention.</p>
<p>Faecal incontinence</p>	<p>Faecal incontinence</p>
<p>All stroke survivors with suspected faecal continence difficulties should be assessed by trained personnel using a structured functional assessment.</p>	<p>Weak recommendation</p> <ul style="list-style-type: none"> • All stroke survivors with suspected faecal continence difficulties should be assessed by trained personnel using a structured functional assessment.

<p>For those with constipation or faecal incontinence, a full assessment (including a rectal examination) should be carried out and appropriate management of constipation, faecal overflow or bowel incontinence established and targeted education provided.</p>	<ul style="list-style-type: none"> • For stroke survivors with constipation or faecal incontinence, a full assessment (including a rectal examination) should be carried out and appropriate management of constipation, faecal overflow or bowel incontinence established and targeted education provided.
<p>Bowel habit retraining using type and timing of diet and exploiting the gastro-colic reflex should be used for people who have bowel dysfunction.</p>	<p>Weak recommendation</p> <p>For stroke survivors with bowel dysfunction, bowel habit retraining using type and timing of diet and exploiting the gastro-colic reflex should be used.</p>
<p>Education and careful discharge planning and preparation are required for any patient discharged with bowel incontinence.</p>	<p>Practice statement Consensus-based recommendations Updated</p> <p>For stroke survivors with bowel dysfunction:</p> <ul style="list-style-type: none"> • Education and careful discharge planning should be provided. • Use of short-term laxatives may be trialled. • Increase frequency of mobilisation (walking and out of bed activity) to reduce constipation. • Use of the bathroom rather than use of bed pans should be encouraged. • Use of containment aids to assist with social continence where continence is unachievable.
<p>If continence is unachievable, containment aids can assist with social continence.</p>	
<p>Mood disturbance</p>	<p>Mood disturbance</p>
<p>Identification</p>	<p>Mood assessment</p>
<p>All patients should be screened for depression using a validated tool.</p>	<p>Info Box Practice points Updated</p> <ul style="list-style-type: none"> • Stroke survivors with suspected altered mood (e.g. depression, anxiety, emotional lability) should be assessed by trained personnel using a standardised and validated scale. • Diagnosis should only be made following clinical interview.
<p>Patients with suspected altered mood (e.g. depression, anxiety, emotional lability) should be assessed by trained personnel using a standardised and validated scale.</p>	

Diagnosis should only be made following clinical interview.	
	Treatment for Emotional distress
	Weak recommendation Updated For stroke survivors with emotionalism, antidepressant medication such as selective serotonin reuptake inhibitors (SSRIs) or tricyclic antidepressants may be used.
Prevention	Prevention of depression
Routine use of antidepressants to prevent post-stroke depression is NOT recommended.	Weak recommendation AGAINST For stroke survivors, routine use of antidepressants to prevent post-stroke depression is not recommended.
Psychological strategies (e.g. problem solving, motivational interviewing) can be used to prevent depression after stroke.	Weak recommendation For stroke survivors, psychological strategies (e.g. problem solving, motivational interviewing) may be used to prevent depression.
Intervention	Treatment for depression
Antidepressants can be used for stroke patients who are depressed (following due consideration of the benefit and risk profile for the individual) and for those with emotional lability.	Strong recommendation Updated For stroke survivors with depression or depressive symptoms, antidepressants, which includes SSRIs should be considered. There is no clear evidence that particular antidepressants produce greater effects than others and will vary according to the benefit and risk profile of the individual.
	Weak recommendation New For stroke survivors with depression or depressive symptoms, structured exercise programs, particularly those of high intensity, may be used.

	<p>Weak recommendation New</p> <p>For stroke survivors with depression or depressive symptoms, acupuncture may be used.</p>
	<p>Weak recommendation AGAINST New</p> <p>For stroke survivors with depression, non-invasive brain stimulation (transcranial direct stimulation or repetitive transcranial magnetic stimulation) should not be used in routine practice and only used as part of a research framework.</p>
Psychological (cognitive-behavioural) intervention can be used for stroke patients who are depressed.	-
Behavioural change	Not included in the scope of these Clinical Guidelines.
Falls	Falls
<p>Falls risk assessment should be undertaken using a valid tool on admission to hospital.</p> <p>A management plan should be initiated for all those identified as at risk of falls.</p>	<p>Practice statement Consensus-based recommendations Updated</p> <ul style="list-style-type: none"> • 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.
Multifactorial interventions in the community, including an individually prescribed exercise program, should be provided for people who are at risk of falling.	<p>Weak recommendation Updated</p>

	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.
Sleep apnoea	Not included in the scope of these Clinical Guidelines.
	Chapter 7 of 8: Discharge planning and transfer of care
	Information and education
	<p>Strong recommendation New</p> <ul style="list-style-type: none"> • All stroke survivors and their families/carers should be offered information tailored to meet their individual needs using relevant language and communication formats. • Information should be provided at different stages in the recovery process. • 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.
	<p>Info Box Practice points New</p> <ul style="list-style-type: none"> • 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 emphasised.

	<p>Discharge care plans</p>
	<p>Practice statement <u>Consensus-based recommendations</u></p> <p>To ensure a safe discharge process occurs, hospital services should ensure the following steps are completed prior to discharge:</p> <ul style="list-style-type: none"> • 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.
	<p>Patient and carer needs</p>
	<p>Practice statement <u>Consensus-based recommendation</u></p> <p>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,</p>

	financial and community support) with relevant members of the interdisciplinary team.
	Home assessment
	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.

<p>Chapter 8: Community participation and long-term recovery</p>	<p>Chapter 8 of 8: Community participation and long-term care</p>
<p>Self-management</p>	<p>Self-management</p>
<p>Stroke survivors who are cognitively able 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.</p>	<p>Weak recommendation New</p> <ul style="list-style-type: none"> • 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.
<p>Stroke-specific programs for self-management should be provided for those who require more specialised programs.</p>	
<p>A collaboratively developed self-management care plan can be used to harness and optimise self-management skills.</p>	
<p>Driving</p>	<p>Driving</p>
<p>All patients admitted to hospital should be asked if they intend to drive again.</p>	<p>Practice statement Consensus-based recommendations Updated</p> <ul style="list-style-type: none"> • All stroke survivors or people who have had a transient ischaemic attack should be asked if they wish to resume driving. • Any person wishing to drive again after a stroke or TIA should be provided with information about how stroke may affect his/her driving and the requirements and processes for returning to driving. Information should be consistent with the Austroads standards and any relevant state guidelines. • For private licenses, stroke survivors should be instructed not to return to driving for a minimum of four weeks post stroke. People who have had
<p>Any patient who does wish to drive should be given information about driving after stroke and be assessed for fitness to return to driving using the national guidelines (Assessing Fitness To Drive) and relevant state guidelines. Patients should be informed that they are required to report their condition to the relevant driver licence authority and notify their car insurance company before returning to driving.</p>	

<p>Stroke survivors should not return to driving for at least one month post event. A follow-up assessment (normally undertaken by a GP or specialist) should be conducted prior to driving to assess suitability. Patients with TIA should be instructed not to drive for two weeks.</p>	<p>a TIA should be instructed not to drive for two weeks. For commercial licenses, stroke survivors should be instructed not to return to driving for a minimum of 3 months post stroke. People who have had a TIA should be instructed not to drive for four weeks.</p>
<p>If a person is deemed medically fit but is required to undertake further testing, they should be referred for an occupational therapy driving assessment. Relevant health professionals should discuss the results of the test and provide a written record of the decision to the patient as well as informing the GP.</p>	<ul style="list-style-type: none"> • A follow-up assessment should be conducted by an appropriate specialist to determine medical fitness prior to return to driving. • If a stroke survivor is deemed medically fit but has residual motor, sensory or cognitive changes that may influence driving, they should be referred for an occupational therapy driving assessment. This may include clinic based assessments to determine on-road assessment requirements (for example modifications, type of vehicle, timing), on-road assessment and rehabilitation recommendations.
	<p>Weak recommendation New</p> <p>For stroke survivors needing driving rehabilitation, driving simulation may be used. Health professionals using driving simulation need to receive training and education to deliver intervention effectively and appropriately, and mitigate driving simulator sickness.</p>
	<p>Practice statement Consensus-based recommendation New</p> <p>On-road driving rehabilitation may be provided by health professionals specifically trained in driving rehabilitation.</p>
	<p>Community mobility and outdoor travel</p>
<p>People faced with difficulties in community transport and mobility should set individualised goals and undertake tailored strategies such as multiple (i.e. up to seven) escorted outdoor journeys (which may include practice crossing roads, visits to local shops, bus or train travel), help to resume</p>	<p>Weak recommendation Updated</p> <p>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</p>

<p>driving, aids and equipment, and written information about local transport options/alternatives.</p>	<p>occur in a variety of community settings and environments, and may also incorporate virtual reality training that mimics community walking.</p>
<p>Leisure</p>	<p>Leisure</p>
<p>Targeted occupational therapy programs can be used to increase participation in leisure activities.</p>	<p>Weak recommendation For stroke survivors, targeted occupational therapy programs including leisure therapy may be used to increase participation in leisure activities.</p>
<p>Return to work</p>	<p>Return to work</p>
<p>Stroke survivors who wish to work should be offered assessment (i.e. to establish their cognitive, language and physical abilities relative to their work demands), assistance to resume or take up work, or referral to a supported employment service.</p>	<p>Weak recommendation</p> <ul style="list-style-type: none"> • 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.
<p>Sexuality</p>	<p>Sexuality</p>
<p>Stroke survivors and their partners should be offered:</p> <ul style="list-style-type: none"> • the opportunity to discuss issues relating to sexuality with an appropriate health professional • written information addressing issues relating to sexuality post stroke. <p>Any interventions should address psychosocial aspects as well as physical function.</p>	<p>Practice statement Consensus-based recommendations Stroke survivors and their partners should be offered:</p> <ul style="list-style-type: none"> • the opportunity to discuss issues relating to sexual intimacy with an appropriate health professional; <i>and</i> • written information addressing issues relating to sexual intimacy and sexual dysfunction post stroke. <p>Any interventions should address psychosocial as well as physical function.</p>

Support	Support
Peer support	Peer support
Stroke survivors and family/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.	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.
Carer support	Carer support
Carers should be provided with tailored information and support during all stages of the recovery process. This 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.	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.
Carers should be offered support services after the person's return to the community. Such services can use a problem-solving or educational-counselling approach.	Practice statement Consensus-based recommendations Updated <ul style="list-style-type: none"> 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

<p>Where it is the wish of the person with stroke, carers should be actively involved in the recovery process by assisting with goal setting, therapy sessions, discharge planning, and long-term activities.</p>	<p>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.</p>
<p>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.</p>	<ul style="list-style-type: none"> • 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.
<p>Assistance should be provided for families/carers to manage stroke survivors who have behavioural problems.</p>	<ul style="list-style-type: none"> • 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/en/Guidelines/Clinical-Guidelines-for-Stroke-Management-2017>.