**Supplementary Table 1:** Synthesised guideline recommendations from those with the highest quality and broadest scope[9-11,27-29] and comparison between stroke guideline recommendations with top rated traumatic brain injury guideline[33].

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| 1.0 | MEDICATION MANAGEMENT THEME | | | | | | |
| 1.1 | General guidance | | | | | | |
| 1.1.1 | The following drugs should not be given with the goal of enhancing recovery outside the context of clinical trials: amphetamines, bromocriptine and other dopamine agonists, piracetam, meprobamate, benzodiazepines and chlormethiazole. | | | | | X | |
| 1.2 | Depression / mood management | | | | | | |
| 1.2.1 | Patients diagnosed with a depressive disorder should be given a trial of antidepressant medication, if no contraindication exists. No recommendation is made for the use of one class of antidepressants over another; however, side effect profiles suggest that selective serotonin reuptake inhibitors may be favoured in this patient population | X | | | X | | ● |
| 1.2.2 | In adult patients with severe, persistent or troublesome tearfulness, selective serotonin reuptake inhibitors) or tricyclic antidepressants are recommended. Treatment should be monitored and should continue for a minimum of six months if a good response is achieved | X | | | X | | |
| 1.2.3 | For stroke survivors, routine use of antidepressants to prevent post-stroke depression is not recommended. | X | X | X | X | X | |
| 1.2.4 | Patients prescribed antidepressant drug treatment for depression or anxiety should be monitored for known adverse effects, and treatment continued for at least 4 months beyond initial recovery. If the patient's mood has not improved 2–4 weeks after initiating | | | | | X | |

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| | treatment, check that the patient is taking the medicine as prescribed. If they are, then consider increasing the dose or changing to another antidepressant. | | | | | | |
| 1.3 | Aggression management | | | | | | |
| 1.3.1 | Minimize use of Benzodiazepines and Neuroleptic antipsychotic medications as animal studies suggest these medications may slow recovery after brain injury. | | | | | X | ● |
| 1.4 | Antiplatelet therapy | | | | | | |
| 1.4.1 | Antiplatelet therapy should be used for people with ischaemic stroke to help prevent deep vein thrombosis/ pulmonary embolism (DVT/PE) | X | | X | | | |
| 1.4.2 | Antithrombotic therapy is NOT recommended for the prevention of DVT/PE in haemorrhagic stroke patients. | X | | X | | | |
| 1.5 | Anti-coagulation therapy | | | | | | |
| 1.5.1 | For acute ischaemic stroke patients who are immobile, low molecular weight heparin in prophylactic doses may be used in the absence of contraindications. | X | X | X | | | |
| 1.6 | Pain | | | | | | |
| 1.6.1 | Patients with persistent Central Post Stroke Pain (CPSP) should receive a trial of low-dose, centrally acting analgesics | | | | X | | |
| 1.6.2 | Patients should receive an anticonvulsant (such as gabapentin or pregabalin) as a first-line treatment | | | | X | | |
| 1.6.3 | Patients should receive a tricyclic antidepressant (e.g., amitriptyline) or an SNRI (particularly duloxetine) as second-line treatment | | | | X | | |

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| 1.6.4 | Treatment for patients resistant to first and second line treatment can include opioids or tramadol. Caution is advised for the use of Opioids as there is a significant risk of physical dependency. | | | | X | | |
| 1.6.5 | People with stroke found to have unresolved central post-stroke pain should receive a trial of: a) tricyclic antidepressants e.g. amitriptyline first, followed by other tricyclic agents or venlafaxine b) anticonvulsants e.g. carbamazepine. If there is satisfactory improvement, continue the treatment; consider gradually reducing the dose over time if improvement is sustained | | X | X | | X | |
| 1.6.6 | Based on both the early and subsequent regular clinical reviews if amitriptyline as first-line treatment results in satisfactory pain reduction but the person cannot tolerate the adverse effects, consider oral imipramine or nortriptyline as an alternative | | | | | X | |
| 1.7 | Shoulder pain | | | | | | |
| 1.7.1 | If there are no contraindications, analgesics (such as acetaminophen or ibuprofen) can be used for pain relief | | | | X | | |
| 1.7.2 | Injections of botulinum toxin into the subscapularis and pectoralis muscles could be used to treat hemiplegic shoulder pain thought to be related to spasticity. | X | | | X | | |
| 1.7.3 | Subacromial corticosteroid injections can be used in patients when pain is thought to be related to injury or inflammation of the subacromial region (rotator cuff or bursa) in the hemiplegic shoulder | | X | | X | | |
| 1.7.4 | 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. | X | | | | | |

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| 1.7.5 | For patients post stroke with complex regional pain syndrome, oral corticosteroids in tapering doses may be used to reduce swelling and pain in the shoulder-hand. | | | | X | | |
| 1.8 | Incontinence | | | | | | |
| 1.8.1 | For people with urge incontinence anticholinergic drugs can be trialled | X | | | | | ● |
| 1.9 | Spasticity | | | | | | |
| 1.9.1 | Chemodenervation using botulinum toxin can be used to increase range of motion and decrease pain for patients with focal and/or symptomatically distressing spasticity (in conjunction with rehabilitation therapy which includes setting clear goals) | X | X | X | X | X | |
| 1.9.2 | Oral medications can be prescribed for the treatment of disabling spasticity:<br>a. Tizanidine can be used to treat more generalized, disabling spasticity.<br>b. Baclofen can be used as a lower cost alternative but has not been studied in this population (note: Baclofen initial doseing should be low and titrated upwards slowly as tolerated by patient) | | | | X | X | ● |
| 1.9.3 | Intrathecal baclofen, intra-neural phenol and other rare procedures should only be used in the context of a specialist multidisciplinary spasticity service or a clinical trial | | | | X | X | |
| 1.9.4 | Recommend against prescription of benzodiazepines during stroke recovery period due to sedating side effects and impact on recovery. | | | | X | | |
| 1.10 | CRPS or Shoulder-Hand Syndrome | | | | | | |

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| 1.10.1 | Management of CRPS: An early course of oral corticosteroids, starting at 30–50mg daily for 3–5 days, and then tapering doses over 1–2 weeks can be used to reduce swelling and pain | | | | X | | |
| 1.11 | Activities of daily living (ADL) | | | | | | |
| 1.11.1 | Administration of amphetamines to improve ADL is not recommended. | X | | X | | | |
| 1.11.2 | For stroke survivors, selective serotonin reuptake inhibitors may be used to improve performance of ADL. | X | | | | | |
| 2.0 | ORGANIZATION OF SERVICES THEME | | | | | | |
| 2.1 | Initial Stroke Rehabilitation Assessment | | | | | | |
| 2.1.1 | An interprofessional team that is resourced to provide prescribed levels of rehabilitation therapy. | | | | X | | ● |
| 2.1.2 | A clear process referral of patients to rehabilitation professionals and programs after acute admission. | | | | X | | |
| 2.1.3 | Mechanisms to periodically re-evaluate those patients with severe stroke who are admitted to nursing homes, continuing care, or other settings to ensure that they have access to rehabilitation as appropriate, if the patient progresses sufficiently and has goals amenable to rehabilitation. | | | | X | | |
| 2.1.4 | Proportion of stroke patients with a rehabilitation assessment within 48 hours of hospital admission for acute stroke by at least one stroke rehabilitation specialist as appropriate to patient needs (core). | | | | X | | |
| 2.1.5 | Median time from hospital admission for stroke to initial rehabilitation assessment for each of the rehabilitation disciplines (Target is within 48 hours of hospital admission). | | | | X | | |
| 2.1.6 | Home-based rehabilitation may be considered as a preferred model for delivering rehabilitation in the community. Where home | X | | | | | |

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| | rehabilitation is unavailable, stroke patients requiring rehabilitation should receive centrebased care | | | | | | |
| 2.2 | Inpatient rehabilitation | | | | | | |
| 2.2.1 | An adequate number of geographically defined stroke rehabilitation units with a critical mass of trained staff with expertise in stroke rehabilitation; interprofessional team care during the rehabilitation period following stroke. | | | | X | | |
| 2.2.2 | To ensure all stroke patients receive early, active rehabilitation by a dedicated stroke team, health systems should have comprehensive services which include and link the fundamentals of acute and rehabilitation care. | | X | X | | | |
| 2.2.3 | Timely access to specialized, interprofessional stroke rehabilitation services, regardless of geographic location of the patients' home community and the patient's financial means. | | | | X | | |
| 2.2.4 | A critical mass of trained healthcare providers functioning as a coordinated interprofessional team during the rehabilitation period following stroke. | | | | X | | ● |
| 2.2.5 | If a stroke rehabilitation unit is not available then those with stroke who require ongoing inpatient rehabilitation should be transferred to a mixed rehabilitation unit with access specialist clinicians are available by consultation. | | X | X | X | | |
| 2.2.6 | Patients treated on general rehabilitation units should receive the same levels of care and interventions as patients treated on stroke rehabilitation units | | | | X | | |
| 2.2.7 | The staff should have specialist expertise in stroke and rehabilitation | | X | | X | X | ● |

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| 2.2.8 | The interprofessional rehabilitation team follows evidence-based best practices as defined by current consensus-based clinical practice guidelines | | | | X | | |
| 2.2.9 | Resources to enable patient access to appropriate type and intensity of rehabilitation professionals throughout their stay (including weekends when required). | | | | X | | |
| 2.2.10 | The unit should have agreed management protocols for common problems and complications, based on available evidence and communicated to all staff | | | | X | X | ● |
| 2.2.11 | The inter-professional rehabilitation team should consist of appropriate staffing: physician, nurse, physical therapist, occupational therapist, speech-language pathologist, psychologist, recreational therapist, patient, and family and/or carers | | X | | X | X | |
| 2.2.12 | System and process changes to allow therapists to ensure effective therapist to patient rations in rehabilitation settings, with the goal of therapists spending approximately 80% of their time providing direct care to patients. | | | | X | | |
| 2.2.13 | Patients should be transferred to a stroke specialist rehabilitation unit if inpatient rehabilitation is required. If a stroke rehab unit is not available, patients who required ongoing inpatient rehabilitation should be transferred to a conventional rehabilitation unit where staff have stroke-specific expertise. | | X | X | X | X | |
| 2.2.14 | Younger adults who have had a stroke should be managed within specialist medical and rehabilitation services that: recognise and manage the particular physical, psychological and social needs of younger patients with stroke (eg vocational rehabilitation, childcare activities) and are provided in an environment suited to their specific social needs. | | | | | X | |

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| 2.2.15 | The inter-professional rehabilitation team should assess patients within 24 to 48 hours of admission and develop a comprehensive individualized rehabilitation plan which reflects the severity of the stroke and the needs and goals of the patient, the best available research evidence, and clinical judgement. | | | | X | | |
| 2.2.16 | Members of the core team should identify problems and ensure that the appropriate allied healthcare professionals contribute to the treatment and rehabilitation of their patients as appropriate | | X | | | | |
| 2.2.17 | At all times the views of the patient on the involvement of their carers should be sought, to establish if possible the extent to which the patient wants family members and others involved. Patients and carers should have an early active involvement in the rehabilitation process. Carers should be invited to attend therapy sessions at an early stage. Care should follow a client centered approach responding to the needs and choices of persons with moderate to severe Acquired Brain Injury (ABI) as they evolve over time | | X | | | X | ● |
| 2.3 | Telehealth | | | | | | |
| 2.3.1 | Telestroke services should be part of an integrated stroke services delivery plan that addresses hyperacute stroke care, acute stroke care, stroke prevention, rehabilitation, home-based, and ambulatory care to support optimal patient recovery and family support regardless of geographic location | | | X | X | | |
| 2.3.2 | Telehealth enabling technologies, including real-time two-way video-conferencing with or without medical peripheral devices and potentially asynchronous (store-forward) tools, such as an e-referral system for non-urgent consultations and remote patient monitoring devices, can be used to enable consultations and/or service delivery regarding: | | | | X | | |

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| | a. Optimal in-hospital stroke care (virtual stroke unit) including medical decision making and rehabilitation treatment<br>b. Stroke rehabilitation services (Telestroke-rehabilitation), where all rehabilitation disciplines should consider the use of telemedicine technology for patient assessment and clinical therapies (e.g., exercise monitoring and intensity adjustments, speech therapies for aphasia)<br>c. Secondary prevention consultation and follow-up services (virtual neurovascular clinic or stroke prevention clinic) in communities where these services do not exist<br>d. Home-based patient monitoring through web-based applications may be considered as an alternative to face-to-face clinic visits in instances where frequent patient monitoring is necessary, such as for out-patient rehabilitation services<br>e. Patients with reduced mobility in long-term care facilities, or those living at a prohibitive distance from the clinic/hospital. | | | | | | |
| 2.3.3 | Clearly defined criteria and protocols or algorithms should be available for referring sites to determine when and how to access these rehabilitation, prevention, and ambulatory services for stroke patients | | | | X | | |
| 2.3.4 | The consulting healthcare provider may provide documentation to the referring site to be included in the patient medical record, regarding patient progress, treatment plans, plans for ongoing follow-up, and discharge recommendations (in accordance with clinical care processes, organizational requirements, jurisdictional legislation, and regulatory bodies) | | | | X | | |

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| 2.3.5 | The need for all users of a Telestroke system to be aware of their roles and responsibilities, and be familiar with operating the technology, including regular updates to maintain competence. | | | | X | X | |
| 2.3.6 | These networks should be used to help establish appropriate stroke services along with protocols governing rapid assessment, telestroke services and rapid transfers. Telestroke can be used to improve assessment and management of rehabilitation where there is limited access to on-site stroke rehabilitation expertise. | | | X | | | |
| 2.3.7 | The quality of decisions made through telemedicine should be regularly audited | | | | | X | |
| 2.3.8 | It is recommended that Telestroke care providers attain and maintain the necessary competencies required in telemedicine in order to provide safe, competent care and to create a satisfactory telehealth encounter for both the patient and the healthcare provider | | | | X | | |
| 2.3.9 | Training should include physicians, nurses, therapists, and any support staff (such as members of technology department), who may be involved in any Telestroke consultation or therapy appointment | | | | X | | |
| 2.3.10 | Ongoing Telestroke training and education with a regular update cycle is useful to ensure competency of providers. Refer to Telestroke Resource Toolkit Technical section (online supplementary material) for additional information and resources for staff training | | | | X | | |
| 2.3.11 | Consulting physicians and other healthcare professionals involved in Telestroke consults should have expertise and experience in managing stroke patients | | | | X | | |
| 2.3.12 | Continuing education in online and face-to-face formats is useful to ensure remote-based practitioners have access to ongoing education | | | | X | | |
| 2.4 | Discharge planning | | | | | | |

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| 2.4.1 | An inpatient stroke care coordinator / discharge planner should be used to coordinate services and assist in discharge planning | X | | X | | | ● |
| 2.4.2 | A locally developed protocol may assist in implementation of a safe discharge process | X | | X | | | |
| 2.4.3 | Establishment of protocols and partnerships between inpatient rehabilitation and community care providers to ensure safe and efficient transitions between hospital and community. Particular considerations should be made for patients residing in more rural or remote locations. | | | | X | | |
| 2.4.4 | All patients who are not receiving palliative care should be assessed by the specialist rehabilitation team prior to discharge from hospital regarding their suitability for ongoing rehabilitation | | | X | X | | |
| 2.4.5 | Discharge planning should commence as soon as possible after the stroke patient has been admitted to hospital. | X | | | | | |
| 2.4.6 | 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. | X | | | | | |
| 2.4.7 | All stroke survivors and their families/carers should be offered information tailored to meet their individual needs using relevant language and communication formats. A) Information should be provided at different stages in the recovery process. B) 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. | X | | | | | |
| 2.4.8 | 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. | X | | | | | |

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| | The need for education, information and behaviour change to address long-term secondary stroke prevention should be emphasised. | | | | | | |
| 2.4.9 | Prior to hospital discharge, all patients should have a pre-discharge needs assessment to ensure a smooth transition from rehabilitation to the community: this should include the need for a home visit, which many be carried out to ensure safety and provision of appropriate aids, support and community services | X | X | X | X | X | |
| 2.4.10 | Patients and families/carers have the opportunity to identify and discuss their post-discharge needs with relevant members of the MDT | X | X | X | X | | |
| 2.4.11 | Patients may be transferred back to the community, once appropriate specialized rehabilitation and support needed can be continued in that environment without delay | | X | X | | | |
| 2.4.12 | To ensure a safe discharge process occurs, hospital services should ensure the following steps are completed prior to discharge: A) 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. B) General practitioners, primary healthcare teams and community services are informed before or at the time of discharge. C) All medications, equipment and support services necessary for a safe discharge are organised. D) Any necessary continuing specialist treatment required has been organised. E) 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 | X | X | X | | | |

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| | therapy to continue at home), stroke support services, any further rehabilitation or outpatient appointments, and an appropriate contact number for any post-discharge queries. | | | | | | |
| 2.4.13 | Upon transfer or discharge, there should be a written report which includes: A) The results of all recent assessments B) a summary of progress made and/or reasons for case closure C) Recommendations for future intervention D) Current needs E) Key contacts and referrals made F) Responsible services/professionals G) Sources of continued information, support and advice | | X | X | X | | ● |
| 2.5 | Service improvement: | | | | | | |
| 2.5.1 | A stroke service should agree on standard sets of data that should be collected and recorded routinely | | | | | X | |
| 2.5.2 | All stroke services should be involved in quality improvement activities that include regular audit and feedback (‘regular’ is considered at least every two years). | | | X | | | |
| 2.5.3 | Indicators based on nationally agreed standards of care should be used when undertaking any audit | | | X | | | |
| 2.5.4 | Clinical services should take responsibility for all aspects of data collection: keeping a stroke register of all patients admitted to their organisation with a stroke and providing leadership in clinical audit. | | | | | X | |
| 2.5.5 | Clinicians in all settings should participate in national stroke audit so that they can compare the clinical and organisational quality of their services against national data and use the results to plan and deliver service improvements | | | | | X | |
| 2.5.6 | GPs should keep a register which enables audit and review of relevant stroke and TIA management | | | X | | | |
| 2.5.7 | Health care service providers for persons with moderate to severe ABI should be given specialized training to develop competencies in | | X | | | | |

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| | evaluation and management related to moderate to severe ABI. This should be provided on an ongoing basis. | | | | | | |
| 2.5.8 | Educational programmes and information are provided for staff, patients and carers | | X | | | X | |
| 2.5.9 | All members of a stroke service should work within their own knowledge, skills, competence and limits in handling patients and using equipment, being taught safe and appropriate ways to move and handle specific patients if necessary | | | | | X | ● |
| 2.5.10 | Each specialist stroke rehabilitation service should have an education programme for all staff providing the stroke service and offer training for junior professionals in the specialty of stroke | | X | | | X | |
| 2.5.11 | The views of stroke patients and their carers should be considered when evaluating a service; one method that should be used is to ask about their experiences and which specific aspects of a service need improvement | | | | | X | |
| 2.5.12 | The planning process for any service development should include active involvement of stroke patients and carers, with particular consideration of the views of patients who are unable to participate in the planning process directly (Stroke patients should be offered any support needed to enable participation) | | | | | X | |
| 2.6 | Patient / carer education and support: | | | | | | |
| 2.6.1 | All stroke survivors and their families/carers should be offered information tailored to meet their needs using relevant language and common formats. | | X | X | | | ● |
| 2.6.2 | Information should be provided at different stages in the recovery process | | | X | | | ● |

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| 2.6.3 | Stroke survivors and their families/carers should be provided with routine, follow-up opportunities for clarification or reinforcement of the information provided. | | X | X | | | |
| 2.6.4 | Counselling services should be available to all Stroke survivors and their families/carers and can take the form of: an active educational counselling approach, information supplemented by family counselling, or a problem-solving counselling approach. | | | X | | | |
| 2.6.5 | Stroke survivors and their families/carers should have access to respite care options. The respite care may be provided in their own home or in an institution. | | | X | | | ● |
| 2.7 | Processes / delivery of rehabilitation services | | | | | | |
| 2.7.1 | Information shared across transitions should be complete, up-to-date, accurate and appropriate to the transition settings and information needs of the receiving healthcare providers | | | | X | | |
| 2.7.2 | The routine implementation of integrated care pathways for acute stroke management or stroke rehabilitation is not recommended where a well organised multidisciplinary model of care exists | | X | | | | |
| 2.7.3 | Consultants with an interest in stroke, after adequate training and with appropriate continuing professional development, should be available to coordinate every stroke service or unit. | | X | | | | |
| 2.7.4 | Clinicians should use standardised, validated and reliable assessment tools or measures that meet the needs of the patient to guide clinical decision-making. | | | X | X | | |
| 2.7.5 | The MDT stroke team should meet regularly (at least weekly) to discuss assessment of new patients, review patient management and goals, and plan for discharge. Individual rehabilitation plans should be regularly updated based on review of patient status. | | X | X | X | X | |

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| 2.7.6 | The stroke team should meet regularly with the patient and their family/carer to involve them in management, goal setting and planning for discharge. | | X | X | | | |
| 2.7.7 | The patient should have an up-to-date care plan defining ongoing medical, rehabilitation, psychosocial, and functional needs. The care plan should be culturally appropriate and take into consideration the patient and family‘s preferences and goals. The care plan should be available to everyone involved in the patient‘s care across the continuum | | | | X | | ● |
| 3.0 | REHABILITATION THERAPIES THEME | | | | | | |
| 3.1 | Rehabilitation treatment approach | | | | | | |
| 3.1.1 | For stroke survivors in the acute, sub-acute or chronic phase post-stroke, acupuncture should not be used to improve ADL. | X | | X | | X | |
| 3.1.2 | All members of a stroke service should use an agreed consistent approach for each problem faced by a patient, ensuring the patient is given the same advice and taught the same technique to ameliorate or overcome it | | | | | X | |
| 3.1.3 | For any treatments that involve significant risk/discomfort to the patient and/or resource use, specific goals should be set and monitored using appropriate clinical measures such as numerical rating scales, visual analogue scales, goal attainment rating or a standardised measure appropriate for the impairment. | | | | | X | |
| 3.2 | Amount and Intensity | | | | | | |
| 3.2.1 | Adequate clinician resources to provide the recommended intensity of individualized therapies for stroke patients. Current estimates suggest the ratio of patients to therapists should be no more than 6:1 in order to achieve these targets. | | | | X | | |

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| 3.2.2 | Stroke patients should receive, through an individualized treatment plan, a minimum of three hours of direct active task-specific therapy by the MDT [minimum of 5 days per week] at a level that enables the patient to meet their rehabilitation goals for as long as they are continuing to benefit from the therapy and are able to tolerate it. | X | X | X | X | X | |
| 3.2.3 | The team should promote the practice of skills gained in therapy in the patient's daily routine in a consistent manner and patients should be enabled and encouraged to practise that activity as much as possible | | | X | | X | |
| 3.2.4 | Therapy assistants and nurses should facilitate practice under the guidance of a qualified therapist | | | | | X | |
| 3.2.5 | Stroke survivors should be encouraged to continue with active task practice outside of scheduled therapy sessions. This could include strategies such as: a) self-directed, independent practice;<br>b) semi-supervised and assisted practice involving family/friends, as appropriate. | X | | X | X | X | ● |
| 3.3 | Timing | | | | | | |
| 3.3.1 | All patients admitted to hospital with acute stroke should start to be mobilized early (between 24 h and 48 h of stroke onset) if there are no contraindications. Contraindications to early mobilization include, but are not restricted to, patients who have had an arterial puncture for an interventional procedure, unstable medical conditions, low oxygen saturation, lower limb fracture or injury, palliation). | X | X | X | X | | |
| 3.3.2 | All patients with stroke should receive rehabilitation therapy as early as possible once they are determined to be rehabilitation ready and they are medically able to participate in active rehabilitation, within an active and complex stimulating environment | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| 3.3.3 | Frequent, out-of-bed activity in the very early time frame (within 24 h of stroke onset) is not recommended. Mobilization may be reasonable for some patients with acute stroke in the very early time frame and clinical judgment should be used | | | | X | | |
| 3.3.4 | 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. | X | | | | | |
| 3.3.5 | Patients should receive a recommended three hours per day of direct task-specific therapy, five days a week, delivered by the interprofessional stroke team; more therapy results in better outcomes. | | | | X | | |
| 3.3.6 | Patients should receive rehabilitation therapies of appropriate intensity and duration, individually designed to meet their needs for optimal recovery and tolerance levels. | | | | X | | |
| 3.3.7 | Persons with aphasia should have early access to a combination of intensive language and communication therapy according to their needs, goals and impairment severity | X | | X | X | | |
| 3.3.8 | Upper limb training should commence early. Upper limb training using constraint-induced movement therapy (CIMT) can commence within the first week of stroke for highly-selected patients, however, early high-intensity CIMT may be harmful (within the first 4 weeks). | X | | X | X | | |
| 3.4 | Loss of sensation | | | | | | |
| 3.4.1 | All patients should be assessed for alteration in sensation (including hypersensitivity). If indicated, a more formal assessment of sensory loss should be undertaken. This information should be shared with the person, their family/carers and the interdisciplinary team in order to implement specific strategies for optimising function and safety. | | | X | | X | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.4.2 | Any patient who has sensory loss should be taught how to take care of the limb and avoid injury. | | | | | X | |
| 3.4.3 | For stroke survivors with sensory loss of the upper limb, sensory-specific training may be provided. | X | | X | | X | |
| 3.5 | Communication | | | | | | |
| 3.5.1 | It is recommended that all health care providers working with persons with stroke across the continuum of care be trained about aphasia including the recognition of the impact of aphasia and methods to support communication such as Supported Conversation for Adults with Aphasia. | | | | X | | |
| 3.5.2 | It is recommended that all health care providers working with persons with stroke across the continuum of care be trained about other communication disorders that may result from stroke including: dysarthria, apraxia of speech and cognitive communication deficits | | | | X | | |
| 3.5.3 | All stroke survivors should be screened for communication deficits using a screening tool that is valid and reliable. | X | | | | | |
| 3.5.4 | Speech and language therapists should be involved in stroke management at all stages in the recovery process and should liaise closely with all related healthcare professionals, with outside agencies, both statutory and voluntary, with the individual who has had a stroke and with his/her carers | | X | | | | |
| 3.5.5 | Those patients with suspected communication difficulties should receive formal, comprehensive assessment by a specialist clinician using a simple, reliable and validated tool. | X | X | X | X | X | ● |
| 3.5.6 | Patients with any suspected communication deficits should be referred to a Speech-Language Pathologist (SLP) for assessment in the following areas using valid and reliable methods: comprehension, | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | speaking, reading, writing, gesturing, use of technology, pragmatics (e.g. social cues, turn-taking, body language, etc.) and conversation | | | | | | |
| 3.5.7 | Aphasia: Where a stroke patient is found to have aphasia, the clinician should: a) Document the provisional diagnosis. B) Explain and discuss the nature of the impairment with the patient, family/carers and treating team, and discuss and teach strategies or techniques which may enhance communication. C) Identify goals for therapy, and develop and initiate a tailored intervention plan, in collaboration with the patient and family/carer. D) Reassess the goals and plans at appropriate intervals over time. E) Use alternative means of communication (such as gesture, drawing, writing, use of augmentative and alternative communication devices) as appropriate. | X | | X | X | X | ● |
| 3.5.8 | 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 | X | | | | | |
| 3.5.9 | Aphasia: All written information on health, aphasia, social and community supports should be available in an aphasia-friendly format. | X | X | X | X | | |
| 3.5.10 | Aphasia: Patients with aphasia whose first language is not English should be offered assessment and communication practice in their preferred language. | | | | | X | |
| 3.5.11 | Aphasia: A) Stroke survivors with chronic and persisting aphasia should have their mood monitored. B) 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 | X | | X | X | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | linguistically diverse backgrounds may need special attention from trained healthcare interpreters. C) 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. | | | | | | |
| 3.5.12 | For stroke survivors with apraxia of speech, individually tailored interventions incorporating articulatory-kinematic and rate/rhythm approaches may be used. In addition, therapy may incorporate: A) Use of modelling and visual cueing. B) Principles of motor learning to structure practice sessions. C) Prompts for Restructuring Oral Muscular Phonetic Targets (PROMPT) therapy. D) Self-administered computer programs that use multimodal sensory stimulation. E) For functional activities, the use of augmentative and alternative communication modalities such as gesture or speech-generating devices. The use of augmentative and alternative communication modalities such as is recommended. | X | | X | | | |
| 3.5.13 | Dyspraxia and dysarthria: The use of augmentative and alternative communication modalities such as gesture or speech-generating devices is recommended for functional activities. | | | X | | X | ● |
| 3.5.14 | Dysarthria: Patients with unclear or unintelligible speech should be assessed to determine the nature and cause of the speech impairment. | | X | X | | X | |
| 3.5.15 | Dysarthria: For stroke survivors with dysarthria, individually tailored interventions provided by a speech and language pathologist or a trained communication partner may be provided. | X | | X | | X | ● |
| 3.5.16 | For stroke survivors with dysarthria, non-speech oromotor exercises have not been shown to provide additional benefit to behavioural speech practice and are not recommended. | X | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.5.17 | Stroke survivors with cognitive involvement who have difficulties in communication should have input from a suitably trained health professional including: A) a comprehensive assessment, B) development of a management plan, and C) family education, support and counselling as required. Management may include: A) Motoric-imitative, cognitive-linguistic treatments to improve use of emotional tone in speech production. B) Semantic-based treatment connecting literal and metaphorical senses to improve comprehension of conversational and metaphoric concept. | X | | X | | | |
| 3.6 | Visual / Perceptual Deficits | | | | | | |
| 3.6.1 | All stroke survivors should have an:<br>a) assessment of visual acuity while wearing the appropriate glasses, to check their ability to read newspaper text and see distant objects clearly;<br>b) examination for the presence of visual field deficit (e.g. hemianopia) and eye movement disorders (e.g. strabismus and motility deficit). | X | X | X | X | X | ● |
| 3.6.2 | Any patient with suspected or actual neglect or impairment of spatial awareness should have a full assessment using validated assessment tools. | X | | X | X | | |
| 3.6.3 | Due to the fluctuating presentation of neglect, a standardised test battery such as the Behavioural Inattention Test should be used in preference to a single subtest, and the effect on functional tasks such as dressing and mobility should be determined | | | | | X | |
| 3.6.4 | Fresnel Prism glasses (15-diopter) can be used to improve visual function in people with homonymous hemianopia. This treatment should be used if it is supervised by someone with expertise in this treatment, the effects are evaluated and if the patient is aware of the | | | X | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | limitations of the treatment (no evidence of benefit in activities of daily living). | | | | | | |
| 3.6.5 | Remedial-based techniques could include prisms, eye patching, repetitive transcranial magnetic stimulation (rTMS), and neck muscle vibration | | | | X | | |
| 3.6.6 | Mirror therapy may be considered as an intervention for unilateral inattention | | | | X | | |
| 3.6.7 | Any patient shown to have impaired attention to one side should be: A) given a clear explanation of the impairment B) taught compensatory strategies to help reduce impact on functional activities such as reading C) given cues to draw attention to the affected side during therapy and nursing procedures D) monitored to ensure that they do not eat too little through missing food on one side of the plate E) offered interventions aimed at reducing the functional impact of the neglect (eg visual scanning training, limb activation, sensory stimulation, eye patching, prism wearing, prism adaptation training, mental imagery training, phasic alerting, cueing, virtual reality, trunk rotation or structured feedback) | X | X | X | X | X | |
| 3.6.8 | For stroke survivors with symptoms of unilateral neglect, mirror therapy may be used to improve arm function and ADL performance | X | | | | | |
| 3.6.9 | Healthcare professionals should ensure that patients have and correctly wear their prescribed eyewear | | X | | | | |
| 3.6.10 | 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; | X | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | • 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. | | | | | | |
| 3.7 | Cognition | | | | | | |
| 3.7.1 | 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. | X | | X | | X | |
| 3.7.2 | Cognitive assessment may be carried out by occupational therapists with expertise in neurological care; patients with complex needs will require access to specialist neuropsychological expertise | | X | | | | ● |
| 3.7.3 | Stroke survivors identified during screening as having cognitive deficits should be referred for comprehensive clinical neuropsychological investigations. | X | | X | | X | |
| 3.7.4 | 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. | X | | X | | X | ● |
| 3.7.5 | Stroke survivors who have suspected difficulties executing tasks but who have adequate limb movement and sensation should be screened for apraxia. | X | | X | | X | |
| 3.7.6 | The presence of agnosia should be assessed by appropriately trained personnel (using a standardized assessment) and communicated to the stroke team, patient and family/carer. | | | X | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.7.7 | Stroke patients should have a full assessment of their cognitive strengths and weaknesses when undergoing rehabilitation or when returning to cognitively demanding activities such as driving or work. | | X | | | X | |
| 3.7.8 | Care should be taken when assessing patients who have a communication impairment. The advice from a speech and language therapist should be sought where there is any uncertainty about these individuals' cognitive test results | | | | | X | |
| 3.7.9 | The patient's cognitive status should be taken into account by all members of the multidisciplinary team when planning and delivering treatment | | | | | X | |
| 3.7.10 | 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. | X | | | | | |
| 3.7.11 | For stroke survivors with attention and concentration deficits, cognitive rehabilitation may be used. | X | | X | | X | |
| 3.7.12 | For stroke survivors with attention and concentration deficits, exercise training and leisure activities may be provided. | X | | | | | |
| 3.7.13 | Persons with impaired attention should have cognitive demands reduced through: A) having shorter treatment sessions, B) taking planned rests<br>C) reducing background distractions, D) avoiding work when tired. | | | | | X | |
| 3.7.14 | Any person with impaired attention should: A) be offered an attentional intervention (eg Time Pressure Management, Attention, Process Training, environmental manipulation), ideally in the context of a clinical Trial B) receive repeated practice of activities they are learning. | | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.7.15 | Any stroke survivor found to have memory impairment causing difficulties in rehabilitation or adaptive functioning should: A) be referred to a suitably qualified healthcare professional for a more comprehensive assessment of their memory abilities; B) have their nursing and therapy sessions tailored to use techniques that capitalize on preserved memory abilities; C) be assessed to see if compensatory techniques to reduce their disabilities, such as notebooks, diaries, audiotapes, electronic organizers and audio alarms are useful; D) have therapy delivered in an environment as similar to the stroke survivor's usual environment as possible to encourage generalization; E) be taught strategies aimed at assisting their memory, e.g. using a notebook, diary, mobile phone/audio alerts, electronic calendars and/or reminders; F) be taught approaches aimed at directly improving their memory, e.g. computerized memory training games and learning mnemonic strategies | X | | X | | X | |
| 3.7.16 | For stroke survivors with cognitive impairment, meta-cognitive strategy and/or cognitive training may be provided. | X | | X | | X | |
| 3.7.17 | Information should be provided to individuals with impaired executive functioning in an appropriate way that supports their learning | X | | X | | X | |
| 3.7.18 | Any person found to have agnosia should be offered a perceptual intervention | | | | | X | |
| 3.7.19 | For stroke survivors with limb apraxia, interventions such as gesture training, strategy training and/or errorless learning may be provided. | X | | X | | X | |
| 3.7.20 | Patients with suspected limb apraxia should be treated using errorless learning, gesture training and graded strategy training | | | | X | | |
| 3.7.21 | Cognitive rehabilitation may include: strategy training across all cognitive domains, the use of periodic, random auditory alerting | | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | tones to improve sustained attention, the use of self-instructional training/ internal training (e.g. self-cueing, self-talk), the use of errorless learning for task specific learning for people with severe memory impairment, the use of metacognitive strategy training (e.g. goal/ plan/ do/ review, goal management training) is recommended for people with executive dysfunction | | | | | | |
| 3.8 | Psychosocial / Social Interaction | | | | | | |
| 3.8.1 | Services should adopt a comprehensive approach to the delivery of psychological care after stroke, which should be delivered by using a 'stepped care' model from the acute stage to long-term management | | | | | X | |
| 3.8.2 | Any patient whose social interaction after stroke is causing stress or distress to others should be assessed by a clinical psychologist or other specialist and, if necessary, by others to determine the underlying causes (eg pain, infection, depression). | | | | | X | |
| 3.8.3 | Assessment measures should be adapted for use with patients with expressive or minor receptive aphasia. In patients with more severe aphasia, an assessment tool designed specifically for this purpose, such as the SAD-Q or DISCS, should be used. In patients with aphasia or other impairments that complicate assessment, careful observations over time (including response to a trial of antidepressant medication if considered necessary) should be used. | | | | | X | |
| 3.8.4 | Patients identified as having symptoms of mood disorder should be offered a more detailed assessment, seeking information on past history, potential causes and impact, and treatment preferences | | | | | X | |
| 3.8.5 | Following the assessment: A) the nature of the problems and their causes should be explained to family, to other people in social contact and to the rehabilitation team B) the patient should be helped to learn the best way to interact successfully without causing distress | | | | | X | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | C) all those involved in social interactions should be taught how best to respond to inappropriate or distressing behaviour D) psychosocial management approaches should be considered E) antipsychotic medicines may be indicated if other causes have been excluded and the patient is causing distress and is at possible risk of harm to self or others. Given the high rates of adverse effects, including risk of stroke, the use of antipsychotics should be carefully considered. Treatment should be started on a low dose and increased slowly according to symptoms. Ideally treatment should be short-term (eg 1 week) and withdrawn slowly. | | | | | | |
| 3.8.6 | Interventions for individual disorders of mood or cognition should be applied within the framework of a stepped care and comprehensive model | | | | | X | |
| 3.8.7 | Patients with continuing disorders should be considered for comprehensive interventions tailored towards developing compensatory behaviours and the learning of adaptive skills. | | | | | X | |
| 3.8.8 | In patients with mild or moderate symptoms of mood disorder, patients and carers should be provided with information, support and advice about the mood disorder as the first line of intervention. This may be from within the MDT by nominated staff who are suitably trained and supervised, and may also involve the voluntary sector | | | | | X | |
| 3.8.9 | Patients with severe or persistent symptoms of mood disorder should be considered for referral to a specialist in the management of mood disorder in stroke | | | | | X | |
| 3.8.10 | Psychological or pharmaceutical treatment (or a combination) for mood disorder should be provided if: recommended by a clinician with expertise in managing mood disorder after stroke; or, as the second line of intervention, if the patient has not responded to | | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | information, support and advice. Any treatment should be monitored for effectiveness and kept under review. | | | | | | |
| 3.8.11 | Patients identified as having cognitive impairment or mood disorder should be reassessed before discharge decisions are taken | | | | | X | |
| 3.9 | Activities of Daily Living (ADL) | | | | | | |
| 3.9.1 | Every patient who has had a stroke should be assessed formally for their safety and independence in all personal activities of daily living by a clinician with the appropriate expertise, and results should be recorded using a standardised assessment tool. | | | X | | X | |
| 3.9.2 | All patients who have problems with activities of daily living following stroke should have access to an occupational therapist with specific knowledge and expertise in neurological care. Occupational therapy treatment should be based on an assessment of each patient's unique problems | | X | | | | ● |
| 3.9.3 | Every person should be asked about the work and/or leisure activities they undertook before their stroke | | | | | X | |
| 3.9.4 | Any patient who has limitations on any aspect of personal activities after stroke should: A) be referred to an occupational therapist with experience in neurological disability, *And* B) be seen for further assessment within 4 working days of referral, *and* C) have treatment of identified problems from the occupational therapist who should also guide and involve other members of the specialist multidisciplinary team. | | | | | X | |
| 3.9.5 | 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 | | X | X | | X | |
| 3.9.6 | For stroke survivors, virtual reality technology may be used to improve ADL outcomes in addition to usual therapy. | X | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.9.7 | The team should promote the practice and transfer of skills gained in therapy into the patient's daily routine, and in the community | | | | X | | |
| 3.9.8 | It is recommended that patients be given opportunities to repeat rehabilitation techniques learned in therapy and implement them while supervised by stroke rehabilitation nurses | | | | X | | |
| 3.9.9 | All daily living tasks should be practiced in the most realistic and appropriate environment, with the opportunity to practice skills outside therapy sessions. | | | | | X | ● |
| 3.9.10 | Any patient whose activities have been limited should be: A) assessed by an occupational therapist with expertise in neurological disability B) taught how to achieve activities safely and given as many opportunities to practice as reasonable under supervision, provided that the activities are potentially achievable C) assessed for, provided with and taught how to use any adaptations or equipment needed to perform activities safely. | | | | | X | ● |
| 3.9.11 | Where a patient cannot undertake a necessary activity safely themselves, then alternative means of achieving the goal must be put in place to ensure safety and wellbeing | | | | | X | |
| 3.9.12 | Patients who wish to return to work (paid or unpaid employment) should: A) have their work requirements established with their employer (provided the patient agrees) B) be assessed cognitively, linguistically and practically to establish their potential C) be advised on the most suitable time and way to return to work, if this is practical D) be referred to a specialist in employment for people with disability if extra assistance or advice is needed E) be referred to a specialist vocational rehabilitation team if the disability employment advisor is unable to provide the necessary rehabilitation | X | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.9.13 | Patients who wish to return to or take up a leisure activity should have their cognitive and practical skills assessed, and should be given advice and help in pursuing their activity if appropriate. | | X | | | X | |
| 3.10 | Weakness | | | | | | |
| 3.10.1 | For stroke survivors with reduced strength in their arms or legs, strength training should be provided. | X | X | | | | |
| 3.10.2 | For stroke survivors with reduced strength in their arms or legs (particularly for those with less than antigravity strength), electrical stimulation may be used. | X | | X | | | |
| 3.11 | Motor Function/Control | | | | | | |
| 3.11.1 | Patients should engage in training that is meaningful, engaging, progressively adaptive, intensive, task-specific and goal-oriented in an effort to improve transfer skills and mobility | | | | X | | |
| 3.11.2 | All patients should be assessed for motor impairment using a standardised approach to quantify the impairment. | | | | | X | |
| 3.11.3 | Assess the need for special equipment on an individual basis. Once provided, equipment should be re-evaluated on a regular basis. Equipment and aids should be appropriate to the patient's physical and social context and provided as soon as possible. | | X | | X | X | ● |
| 3.11.4 | Recommend that wheelchair prescriptions be based on careful assessment of the patient and the environment in which the wheelchair will be used | | | | X | | |
| 3.11.5 | Hypoxia inducing positions *(lying on the left side regardless of affected side or slumped in a chair)* should be avoided | | X | | | | |
| 3.11.6 | When planning a program to improve motor control, the following should be considered to improve motor control and general fitness: a) strength training focusing on functional tasks b) task-specific training | | | | | X | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | c) exercise training to promote cardiorespiratory fitness d) gait re-education to improve mobility e) expertise should be available in specialized seating | | | | | | |
| 3.11.7 | For stroke survivors who have difficulty sitting, practicing reaching beyond arm's length while sitting with supervision/assistance should be undertaken. | X | | X | | | |
| 3.11.8 | For stroke survivors who have difficulty in standing up from a chair, practice of standing up should be undertaken. | X | | | | | |
| 3.11.9 | For stroke survivors who have difficulty standing, task-specific practice of standing balance should be provided. Strategies could include: a) practicing functional tasks while standing; b) walking training that includes challenge to standing balance (e.g. overground walking, obstacle courses). | X | | | | | |
| 3.11.10 | Any patient with significant impairment in maintaining their balance should receive progressive balance training. Therapists should consider both voluntary and reactive balance control within their assessment and treatment | | | | X | X | |
| 3.11.11 | Effective interventions for balance retraining include trunk training/seated balance training (early and late), task oriented intervention with or without multisensory intervention (late), force platform biofeedback (early and late); Tai Chi (late), aquatic therapy (late), structured, progressive, physiologically based therapist-supervised home exercise program (early), cycling training (early), and partial body weight support treadmill training (early) | | | | X | | |
| 3.11.12 | For stroke survivors who have difficulty with standing balance, virtual reality including treadmill training with virtual reality or use of Wii Balance Boards may be used. | X | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.11.13 | Rehabilitation should include repetitive task training, where it is assessed to be safe and acceptable to the patient, when the aim of treatment is to improve gait speed, walking distance, functional ambulation or sit-to-stand-to-sit. | X | X | X | X | X | |
| 3.11.14 | 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. The following modalities may be used: a) Circuit class therapy (with a focus on overground walking practice); b) Treadmill training with or without body weight support. | X | X | X | X | | ● |
| 3.11.15 | Treadmill-based gait training (with or without body weight support) can be used to enhance walking speed, and distance walked when overground training is not available or appropriate. Treadmill training is suggested for 30 min, five days per week for two to three weeks | | X | | X | X | ● |
| 3.11.16 | Electromechanical (robotic) assisted gait training devices could be considered for patients who would not otherwise practice walking. They should not be used in place of conventional gait therapy. | | | | X | | |
| 3.11.17 | There is no conclusive evidence that body weight supported treadmill training (BWSTT) is superior to over ground training to enhance walking abilities. BWSTT could be considered when other strategies for walking practice are unsuccessful in those patients with low ambulatory function | | X | | X | | |
| 3.11.18 | Biofeedback could be used as an adjunct to improve gait and balance | | | | X | | |
| 3.11.19 | Mental Practice could be considered as an adjunct to lower extremity motor retraining | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.11.20 | Rhythmic auditory stimulation (RAS) could be considered for improving gait parameters in stroke patients, including gait velocity, cadence, stride length and gait symmetry | | | | X | | |
| 3.11.21 | 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. • Electromechanically assisted gait training. • Biofeedback. • Cueing of cadence. • Electrical stimulation. | X | | X | | | |
| 3.11.22 | Virtual reality, including both immersive technologies such as head mounted or robotic interfaces and non-immersive technologies such as gaming devices can be used as adjunct tools to other rehabilitation therapies as a means to provide additional opportunities for engagement, feedback, repetition, intensity and task-oriented training | | | | X | | |
| 3.11.23 | 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. Follow up to verify its effectiveness should occur. | X | X | X | X | X | ● |
| 3.11.24 | For stroke survivors, rehabilitation should include individually-tailored exercise interventions to improve cardiorespiratory fitness. | X | | X | X | X | |
| 3.11.25 | 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. | X | | X | X | | |
| 3.11.26 | Lower extremity orthotic devices may be helpful if ankle or knee stabilization is needed to help the patient walk. Prefabricated bracing can be used initially, and more expensive customized bracing reserved for patients who demonstrate a long-term need | | | | X | | |
| 3.11.27 | FES should be used to improve strength and function (gait) in selected patients, but the effects may not be sustained | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| 3.11.28 | Functional electrical simulation may be considered as a treatment for drop-foot, where the aim of treatment is the immediate improvement of walking speed and/or efficiency | | X | | | | |
| 3.11.29 | There is insufficient evidence to recommend for or against neurodevelopmental therapy (NDT) in comparison to other treatment approaches for motor retraining following an acute stroke | | | | X | | |
| 3.11.30 | Therapy should include repetitive and intense use of novel tasks that challenge the patient to acquire the necessary motor skills to use the involved limb during functional tasks and activities. | | | | X | | |
| 3.11.31 | Electromechanical/robotic devices may be considered to improve arm motor function and motor strength in selected patients where the necessary equipment is already available and healthcare professionals are competent in the use of the equipment. | | X | | | X | |
| 3.11.32 | Spasticity should not limit the use of strength training in the leg | | | | X | | |
| 3.11.33 | The need for gait aids, wheelchairs, and other assistive devices should be evaluated on an individual basis | | | | X | | ● |
| 3.11.34 | Prescription and/or acquisition of an assistive device should be based on anticipation of a long-term need | | | | X | | |
| 3.11.35 | Once provided, patients should be reassessed, as appropriate, to determine if changes are required or equipment can be discontinued | | | | X | | |
| 3.12 | Upper Limb Management | | | | | | |
| 3.12.1 | Patients should engage in training that is meaningful, engaging, repetitive, progressively adapted, task specific and goal-oriented in an effort to enhance motor control and restore sensorimotor function | | | | X | | |
| 3.12.2 | Training should encourage the use of patients' affected limb during functional tasks and be designed to simulate partial or whole skills | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | required in activities of daily living (e.g. folding, buttoning, pouring, and lifting) | | | | | | |
| 3.12.3 | Initial standardized arm and hand function assessment performed by clinicians experienced in the field of stroke. | | | | X | | |
| 3.12.4 | Access to appropriate equipment (such as functional electrical stimulation, pillows and arm troughs for positioning) | | | | X | | |
| 3.12.5 | Robotics are an emerging and developing area and stroke rehabilitation programs should begin to build capacity to integrate robotic technology into stroke rehabilitation therapy to appropriate patients as the research evidence suggests, and in the future incorporate this therapy as part of comprehensive therapy where available. | X | | | X | | |
| 3.12.6 | 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. | X | | | | | |
| 3.12.7 | 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. | X | | X | X | X | |
| 3.12.8 | 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. | X | X | X | X | X | |
| 3.12.9 | For stroke survivors with mild to moderate weakness, complex regional pain syndrome and/or neglect, mirror therapy may be used as an adjunct to routine therapy to improve arm function after stroke. | X | | X | X | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| 3.12.10 | 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. | X | | X | X | X | |
| 3.12.11 | Bilateral arm training does not appear to be superior to unilateral arm training in improving upper extremity motor function. | | | | X | | |
| 3.12.12 | Repetitive task training for the upper limb, such as reaching, grasping and other functionally meaningful tasks, should be used to assist in rehabilitation of the arm post stroke. The program should include strength training to improve impairment and functional after stroke for UL; spasticity is not a contra-indication to strength training | | | | X | X | |
| 3.12.13 | Therapists should consider supplementary training programs aimed at increasing the active movement and functional use of the affected arm between therapy sessions, e.g. Graded Repetitive Arm Supplementary Program (GRASP) suitable for use during hospitalization and at home | | | | X | | |
| 3.12.14 | Intensive CIMT should not be used for individuals in the first month post stroke | | | | X | | |
| 3.12.15 | 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. Trunk restraint may also be incorporated into the active therapy sessions at any stage post-stroke. | X | X | | X | X | |
| 3.12.16 | Adaptive devices designed to improve safety and function may be considered if other methods of performing specific functional tasks are not available or tasks cannot be learned | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| 3.12.17 | It is uncertain whether sensory stimulation (e.g., transcutaneous electrical nerve stimulation (TENS), acupuncture, muscle stimulation, biofeedback improves upper extremity motor function | | | | X | | |
| 3.12.18 | 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. | X | X | X | X | X | |
| 3.12.19 | The need for special equipment (such as wheelchair trays) should be evaluated on an individual basis. Once provided, patients should be reassessed as appropriate to determine if changes are required or equipment can be discontinued with the aim of achieving independent function | | | | X | | |
| 3.12.20 | Functional dynamic orthoses are an emerging therapy tool that may be offered to patients to facilitate repetitive task-specific training | | | | X | | |
| 3.12.21 | Repetitive Transcranial magnetic stimulation (rTMS) and transcranial direct current stimulation (tDCS) may be considered as an adjunct to upper extremity therapy | | | | X | | |
| 3.12.22 | 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. | X | | | | | |
| 3.12.23 | All patients should be offered training in self-management skills, to include active problem-solving and individual goal setting | | | | | X | |
| 3.13 | Palliative Care | | | | | | |
| 3.13.1 | Teams providing care for patients after stroke should be taught how to recognise patients who might benefit from palliative care | | | | | X | |
| 3.13.2 | An accurate assessment of prognosis or imminent death should be made for patients with severe stroke or those who are deteriorating | | | X | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.13.3 | A pathway for stroke palliative care can be used to support Stroke survivors and their families/carers and improve care for people dying after stroke. | | | | | | |
| 3.13.4 | Stroke survivors 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 | | | X | | X | |
| 3.13.5 | After stroke, all end-of-life decisions to withhold or withdraw life-prolonging treatments (including artificial nutrition and hydration) should be in the best interests of the patient and take prior directives into consideration | | | | | X | |
| 3.13.6 | All patients who are dying should be given the opportunity of timely/fast-track discharge home or to a hospice or care home according to wishes of the patient and/or carers. | | | | | X | |
| 3.14 | Carer / Family Training | | | | | | |
| 3.14.1 | 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. | X | | X | | | ● |
| 3.14.2 | 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. | X | | X | | | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| 3.14.3 | Caregiver education and training to assist the patient with activities of daily living and increasing the patient's level of independence | | | | X | | |
| 3.15 | Home Program / Self Practice | | | | | | |
| 3.15.1 | Patients should be encouraged by staff members, with the help of family/friends, to continue to practice skills they learn in therapy sessions into the patient's daily routine in a consistent manner. | X | | | X | X | ● |
| 3.16 | Patient / Family Education | | | | | | |
| 3.16.1 | During the rehabilitation phase, carers should be encouraged to participate in an educational programme that: A) explains the nature of stroke and its consequences; B) teaches them how to provide care and support; C) gives them opportunities to practise care with the patient; D) emphasises and reiterates all advice on secondary prevention, especially lifestyle changes. | | X | X | | X | ● |
| 3.16.2 | Educational content should be specific to the phase of care or recovery and appropriate to the readiness and needs of the stroke survivor, family, and caregiver | | X | | X | | |
| 3.16.3 | Stroke rehabilitation support initiatives for caregivers to increase patient/caregiver understanding of rehabilitation plans and improve adherence | | | | X | | |
| 3.16.4 | The scope of the educational content should cover all aspects of stroke care and recovery | | | | X | | |
| 3.16.5 | Education should be interactive, up to date, ongoing, and provided in a variety of languages and formats (e.g., written, oral, group counselling approach), and ensure communicative accessibility for stroke survivors | | X | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.16.6 | Specific team members should be designated to provide and document education | | | | X | | |
| 3.16.7 | Patient education should promote self-efficacy through mastering self-management skills, including action planning, modelling behaviours and problem-solving strategies, reinterpreting symptoms, and social persuasion through group support and guidance for individual efforts | | | | X | | |
| 3.16.8 | Family and caregiver education should include training in personal care techniques, communication strategies, physical handling techniques and other daily living activity goals and preferences, how to access community services and resources, problem-solving techniques, health system navigation, and self-management | | | | X | | |
| 3.17 | Goal Setting | | | | | | |
| 3.17.1 | 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. | X | | X | | X | ● |
| 3.17.2 | 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 | X | | X | | X | |
| 3.17.3 | Stroke survivors and their families/carers should be given help to understand the nature and process of goal setting, and be given help (eg using established tools) to define and articulate their personal goals | | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 3.17.4 | Every patient involved in the rehabilitation process should have goals that: A) are meaningful and relevant to the patient; B) are challenging but achievable; C) include both short-term (days/weeks) and long-term (weeks/months) targets; D) include both single clinicians and also the whole team; E) are documented, with specified, time-bound measurable outcomes; F) have achievement evaluated using goal attainment; G) include carers where appropriate; H) are used to guide and inform therapy and treatment. | | | | | X | |
| 3.17.5 | Stroke survivors should be offered training in self-management skills that include active problem-solving and individual goal setting. | X | | X | | | |
| 3.17.6 | Every patient should have their progress measured against goals set at regular intervals determined by their rate of change, for example using goal attainment scaling | | | | | X | |
| 3.17.7 | When a patient's goal is not achieved, the reason(s) should be established and: A) the goal should be adjusted, *or* B) the intervention should be adjusted, *or* C) no further intervention should be given towards that goal and a further goal set as appropriate. | | | | | X | |
| 4.0 | MANAGING COMPLICATIONS THEME | | | | | | |
| 4.1 | Spasticity | | | | | | |
| 4.1.1 | Any patient with motor weakness should be assessed for the presence of spasticity as a cause of pain, as a factor limiting activities or care, and as a risk factor for the development of contractures. | | | | | X | |
| 4.1.2 | Any patient who has increased tone sufficient to reduce passive or active movement around a joint should have their range of passive joint movement assessed and monitored | | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 4.1.3 | Specific goals should be set and monitored using appropriate clinical measures | | | | | X | |
| 4.1.4 | Spasticity and contractures may be prevented or treated by antispastic pattern positioning | | | | X | | |
| 4.1.5 | Routine use of splints is not recommended in the literature | X | X | X | X | X | |
| 4.1.6 | 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. This should be in the context of a specialist multidisciplinary team service accompanied by rehabilitation therapy or physical maintenance strategies (eg splinting or casting) over the next 2–12 weeks following botulinum toxin injection. | X | | X | X | X | ● |
| 4.1.7 | 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. | X | | | | | ● |
| 4.1.8 | 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. | X | | | | | |
| 4.1.9 | For stroke survivors with spasticity, adjunct therapies to Botulinum Toxin A, such as electrical stimulation, casting and taping, may be used. | X | | | | | |
| 4.1.10 | For stroke survivors, the routine use of stretch to reduce spasticity is not recommended. | X | | | | | |
| 4.1.11 | Spasticity and contracture should be treated or prevented by anti-spastic pattern positioning, active movement and monitoring range of movement for deterioration of function, passive movement and pain control | X | | | X | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| 4.1.12 | Ankle splints used at night and during assisted standing may be considered for prevention of ankle contracture in the hemiparetic lower extremity | | | | X | | |
| 4.2 | Contracture | | | | | | |
| 4.2.1 | 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. | X | X | X | X | X | |
| 4.2.2 | For stroke survivors, serial casting may be trialled to reduce severe, persistent contracture when conventional therapy has failed. | X | | | | | |
| | 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. | | | | | | |
| 4.2.3 | Overhead pulley exercise should not be used routinely to maintain range of motion of the shoulder | | X | X | X | | |
| 4.3 | Oedema | | | | | | |
| 4.3.1 | For stroke survivors with severe weakness who are at risk of developing swelling of the extremities, management may include the following: A) dynamic pressure garments; B) electrical stimulation; C) elevation of the limb when resting | X | | X | X | | |
| 4.3.2 | For stroke survivors who have swelling of the hands or feet management may include the following: A) dynamic pressure garments; B) electrical stimulation; C) continuous passive motion with elevation; D) elevation of the limb when resting | X | | X | | | |
| 4.3.3 | Hand Oedema: For patients with hand edema, the following interventions may be considered: | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| | a. Active, active-assisted, or passive range of motion exercises in conjunction with arm elevation<br>b. Retrograde massage<br>c. Gentle grade 1–2 mobilizations for accessory movements of the hand and fingers | | | | | | |
| 4.4 | CRPS or Shoulder-Hand Syndrome | | | | | | |
| 4.4.1 | Prevention: Active, active-assisted, or passive range of motion exercises should be used to prevent CRPS<br>Diagnosis: should be based on clinical findings including pain and tenderness of metacarpophalangeal and proximal interphalangeal joints, and can be associated with edema over the dorsum of the fingers, trophic skin changes, hyperaesthesia, and limited range of motion | | | | X | | |
| 4.4.2 | A triple phase bone scan (which demonstrates increased periarticular uptake in distal upper extremity joints) can be used to assist in diagnosis | | | | X | | |
| 4.5 | Subluxation | | | | | | |
| 4.5.1 | 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. | X | X | X | X | X | |
| 4.5.2 | For stroke survivors at risk of shoulder subluxation, shoulder strapping is not recommended to prevent or reduce subluxation. | X | | | | | |
| 4.5.3 | 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 | X | | | | | |
| 4.5.4 | To prevent complications related to shoulder subluxation, education and training about correct manual handling and positioning should be | X | X | X | X | X | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| | provided to the stroke survivor, their family/carer and health professionals, and particularly nursing and allied health staff. | | | | | | |
| 4.5.5 | The shoulder should not be passively moved beyond 90 degrees of flexion and abduction unless the scapula is upwardly rotated and the humerus is laterally rotated | | | | X | | |
| 4.5.6 | For patients with a flaccid arm (i.e., Chedoke- McMaster Stroke Assessment <3) electrical stimulation should be considered | | | | X | | |
| 4.6 | Pain | | | | | | |
| 4.6.1 | Every patient with stroke should be asked whether they have any pain, and its severity assessed using a validated score at onset and regular intervals thereafter | | X | | | X | ● |
| 4.6.2 | All patients complaining of, or experiencing pain, should have the cause of the pain diagnosed | | | | | X | |
| 4.6.3 | Any patient with musculoskeletal pain should be carefully assessed to ensure that movement, posture and moving and handling techniques are optimised to reduce the pain. | | | | | X | |
| 4.6.4 | Pain management protocols should be in place, which include a) regular review and adjustment b) handling, support and pain relief appropriate to the individual needs and c) Staff and caregivers should be educated about appropriate handling of paretic upper limbs during transfers, hypersensitivity and neurogenic pain | | | | | X | |
| 4.6.5 | For stroke survivors with severe weakness who are at risk of developing shoulder pain, management may include: A) shoulder strapping; B) education of staff, carers and stroke survivors about preventing trauma; C) active motor training to improve function. | X | | X | X | X | |
| 4.6.6 | Joint protection strategies to prevent or manage hemiplegic shoulder pain and subluxation should be used during the early or flaccid stage of recovery to prevent or minimize shoulder pain. These include: | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| | a. Positioning and supporting the arm during rest<br>b. Protecting and supporting the arm during functional mobility<br>c. Protecting and supporting the arm during wheelchair use by using a hemi-tray or arm trough<br>d. The use of slings remains controversial beyond the flaccid stage, as disadvantages outweigh advantages (such as encouraging flexor synergies, discourages arm use, inhibiting arm swing, contributing to contracture formation, and decreasing body image) | | | | | | |
| 4.6.7 | For stroke survivors with shoulder pain, shoulder strapping may be used to reduce pain. | X | | | | | |
| 4.6.8 | Consider using FES to increase pain free range of motion of lateral rotation of the shoulder | | | | X | | |
| 4.6.9 | Treatment of hemiplegic shoulder pain related to limitations in range of motion includes gentle stretching and mobilization techniques, and typically involves increasing external rotation and abduction | | | | X | | |
| 4.6.10 | Active range of motion for shoulder pain should be increased gradually in conjunction with restoring alignment and strengthening weak muscles in the shoulder girdle | | | | X | | |
| 4.6.11 | For stroke survivors with shoulder pain, electrical stimulation is not recommended to manage pain. | X | | | | | |
| 4.6.12 | Any patient whose central pain-post stroke is not controlled within a few weeks should be referred to a specialist pain management team. | | X | X | | X | |
| 4.6.13 | An individualized patient-centered approach for management of central pain syndromes should be implemented by an interdisciplinary team that includes healthcare professionals with expertise in mental health and central pain management | | | | X | | |
| 4.7 | Fatigue | | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| 4.7.1 | Fatigue in medically stable patients should be assessed particularly where engagement with rehabilitation, or quality of life is affected | | | | | X | |
| 4.7.2 | Patients with fatigue and their families should be given information and reassurance that the symptom is likely to improve with time. | | | | | X | |
| 4.7.3 | CPAP or oral devices should be used for stroke survivors with sleep apnea. | | | X | | | |
| 4.7.4 | A) Therapy for stroke survivors with fatigue should be organised for periods of the day when they are most alert. B) Stroke survivors and their families/carers should be provided with information and education about fatigue. C) Potential modifying factors for fatigue should be considered including avoiding sedating drugs and alcohol, screening for sleep-related breathing disorders and depression. D) While there is insufficient evidence to guide practice, possible interventions could include exercise and improving sleep hygiene. | X | | X | | | |
| 4.8 | Mood | | | | | | |
| 4.8.1 | Patients with suspected altered mood (eg, depression, anxiety, emotional lability) should be assessed by trained personnel using a standardised and validated scale. Screening for depression should be introduced in a way that is culturally appropriate | | X | X | | | ● |
| 4.8.2 | Any patient considered to have depression or anxiety should be assessed for other mood disorders. | | | | | X | |
| 4.8.3 | Any patient whose motivation and engagement in rehabilitation seems reduced should be assessed for changes in self-identity, self-esteem and self-efficacy (as well as changes in mood) | | | | | X | |
| 4.8.4 | Any patient who persistently cries or laughs in unexpected situations or who is upset by their fluctuating emotional state should be assessed by a specialist or member of the stroke team trained in the assessment of emotionalism | | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 4.8.5 | For stroke survivors, psychological strategies (e.g. problem solving, motivational interviewing) may be used to prevent depression. | X | X | X | | | |
| 4.8.6 | Offering routine psychological therapies in one-to-one format following a stroke is not recommended to prevent post-stroke depression | | X | | | | |
| 4.8.7 | Patients with mild or moderate symptoms of depression should be given information, support and advice and considered for one or more of the following interventions: A) increased social interaction, B) increased exercise, C) goal setting, D)other psychosocial interventions | | | | | X | |
| 4.8.8 | Any patient with significant changes in self-esteem, self-efficacy or identity should be offered additional (to A) psychological interventions | | | | | X | |
| 4.8.9 | Those determined to be depressed should receive appropriate treatment, which can consist of a) non-pharmacological treatments, which may include a) psychological (cognitive and behavioural) intervention and/or exercise b) pharmacological treatments (SSRIs are the first line of drug treatment) | | X | X | | | |
| 4.8.10 | Brief, structured psychological therapy should be considered for patients with depression. Therapy will need to be adapted for use in those with neurological conditions. | | | | | X | |
| 4.8.11 | Any patient diagnosed with emotionalism should, when they show increased emotional behaviour, be appropriately distracted from the provoking stimuli | | | | | X | |
| 4.8.12 | Patients with severe, persistent or troublesome emotionalism should be given antidepressant drug treatment, monitoring the frequency of crying to check effectiveness. Patients should be monitored for known adverse effects. If the emotionalism has not improved 2–4 | | X | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | weeks after initiating treatment, check that the patient is taking the medicine as prescribed. If they are, then consider increasing the dose or changing to another antidepressant | | | | | | |
| 4.8.13 | For stroke survivors with depression or depressive symptoms, structured exercise programs, particularly those of high intensity, may be used. | X | | | | | |
| 4.8.14 | For stroke survivors with depression or depressive symptoms, acupuncture may be used. | X | | | | | |
| 4.9 | Pressure care | | | | | | |
| 4.9.1 | Hospitals should have up-to-date policies on risk assessment, pressure injury prevention and treatment | | X | | | | |
| 4.9.2 | All stroke survivors at risk should have a pressure care risk assessment and regular evaluation completed by trained personnel. | | | X | | | |
| 4.9.3 | All stroke survivors assessed as high risk should be provided with appropriate pressure-relieving aids and strategies, including a pressure-relieving mattress as an alternative to a standard hospital mattress. | | | X | | | |
| 4.10 | Falls | | | | | | |
| 4.10.1 | Screening for risk of falls should include identification of medical, functional, cognitive, and environmental factors associated with potential falls and fall injuries | | | | X | | |
| 4.10.2 | 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 | X | | X | X | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | modifications (as determined by a health professional) for example installation of grab rails and ramps may further reduce falls risk | | | | | | |
| 4.10.3 | Those found to be at risk for falls should undergo a comprehensive interprofessional falls assessment that includes medical and functional history, and examination of mobility, vision, perception, cognition, and cardiovascular status | | | | X | | |
| 4.10.4 | Based on the risk assessment findings, an individualized falls prevention plan should be implemented for each patient (patient education, family education) | | | | X | | |
| 4.10.5 | Topics addressed in patient, family, and caregiver education should include: education about falls risks, safe transfer skills, footwear, gait aids and/or wheelchair use. | | | | X | | |
| 4.10.6 | All patients who fall post-stroke should have an assessment of the circumstances surrounding the fall to identify precipitating factors, and the falls prevention plan should be modified to reduce the risk of further falls | | | | X | | |
| 4.10.7 | 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. | X | | X | X | | |
| 4.11 | Nutrition | | | | | | |
| 4.11.1 | Assessment of nutritional risk should be carried out within the first 48 hours (using a valid screening tool) with regular re-assessment thereafter during the patient's recovery and be recorded prior to discharge | X | X | X | X | X | |
| 4.11.2 | Assessment of a patient's nutritional risk should include an assessment of their ability to eat independently and a periodic record of their food consumption | | X | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 4.11.3 | All stroke patients should have their hydration status assessed, monitored, and managed throughout their hospital admission. This should include regular weighing. Where fluid support is required, crystalloid solution should be used in preference to colloid solutions as the first option to treat or prevent dehydration. | X | X | X | | | |
| 4.11.4 | Stroke patients with suspected nutritional concerns, hydration deficits, dysphagia, or other comorbidities that may affect nutrition should be referred to a dietitian for recommendations:<br>a) To meet nutrient and fluid needs orally while supporting alterations in food texture and fluid consistency recommended by a speech-language pathologist or other trained professional<br>b) For enteral nutrition support in patients who cannot safely swallow or meet their nutrient and fluid needs orally.<br>c) The decision to proceed with tube feeding should be made as early as possible after admission, usually within the first three days of admission in collaboration with the patient, family (or substitute decision maker), and interprofessional team | X | | | X | | |
| 4.11.5 | Patients who are at risk of malnutrition, including those with dysphagia, should be referred to a dietitian for assessment and ongoing management. | X | X | X | X | | |
| 4.11.6 | For stroke patients whose nutrition status is poor or deteriorating, nutrition supplementation should be offered. | X | X | X | | X | |
| 4.11.7 | For stroke patients who do not recover a functional swallow, nasogastric tube feeding is the preferred method of feeding in the short term.<br>For stroke patients, there is no preference with regard to continuous pump (meaning using a pump for greater than or equal to 16hrs out of 24hrs for less than or equal to 80ml/hr) feeding versus intermittent | X | | X | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | bolus feeding (meaning 250-400mls/hr for 4-5times/day) therefore practical issues, cost and patient preferences should guide practice. | | | | | | |
| 4.11.8 | For stroke patients who are adequately nourished, routine oral nutrition supplements are not recommended. | X | | | | | |
| 4.11.9 | Fluid balance and nutritional intake should be monitored in all stroke patients who are at high risk of malnutrition, are malnourished and/or have swallowing problems | | | X | | X | |
| 4.12 | Incontinence | | | | | | |
| 4.12.1 | All wards and stroke units should have established assessment and management protocols for both urinary and faecal incontinence, and for constipation in stroke patients | | X | | | X | |
| 4.12.2 | The presence or absence of incontinence of urine should be documented for all patients after a stroke | | X | | | | |
| 4.12.3 | All stroke survivors with suspected urinary continence difficulties should be assessed by trained personnel using a structured functional assessment. | X | X | X | | X | |
| | For stroke survivors, a portable bladder ultrasound scan should be used to assist in diagnosis and management of urinary incontinence. | | | | | | |
| 4.12.4 | All stroke survivors with suspected faecal continence difficulties should be assessed by trained personnel using a structured functional assessment. | X | | X | | | ● |
| 4.12.5 | Stroke survivors with confirmed continence difficulties should have a continence management plan formulated, documented, implemented and monitored. | X | | X | | X | ● |
| 4.12.6 | Patients with stroke who have continued loss of bladder control 2 weeks after diagnosis should be reassessed to identify the cause of incontinence, and have an ongoing treatment plan involving both patients and carers. The patient should: A) have any identified causes | | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | of incontinence treated; B) have an active plan of management documented; C) be offered simple treatments such as bladder retraining, pelvic floor exercises and external equipment first | | | | | | |
| 4.12.7 | All stroke patients with a persistent loss of control over their bowels should: A) be assessed for other causes of incontinence, which should be treated if identified; B) have a documented, active plan of management | | | | | X | ● |
| 4.12.8 | Stroke patients with troublesome constipation should:<br>A) have a prescribed drug review to minimise use of constipating drugs<br>B) be given advice on diet, fluid intake and exercise<br>C) be offered oral laxatives<br>D) be offered rectal laxatives only if severe problems remain. | | | | | X | |
| 4.12.9 | The use of indwelling catheters should be avoided as an initial management strategy except in acute urinary retention | X | | X | | | |
| 4.12.10 | 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 | X | | X | | X | |
| 4.12.11 | If incontinence persists the stroke survivor should be re-assessed and referred for specialist review | X | | X | | X | |
| 4.12.12 | For people with urge incontinence: a) anticholinergic drugs can be trialled b) a prompted or scheduled voiding regime program/bladder retraining should be trialled c) if continence is unachievable, containment aids can assist with social continence. | X | | X | | | ● |
| 4.12.13 | For people with urinary retention: a) the routine use of indwelling catheters in NOT recommended. However, if urinary retention is severe, intermittent catheterization should be used to assist bladder | X | | X | | | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | emptying during hospitalization. If retention continues, intermittent catheterization is preferable to indwelling catheterization b) if using intermittent catheterization, a closed sterile catheterization technique should be used in hospital c) where management of chronic retention requires catheterization, consideration should be given to the choice of appropriate route, urethral or suprapubic d) if a stroke survivor is discharged with either intermittent or in-dwelling catheterization, they and their family/carer will require education about management, where to access supplies and who to contact in case of problems. | | | | | | |
| 4.12.14 | For people with functional incontinence, a whole-team approach is recommended. | X | | X | | | |
| 4.12.15 | For stroke survivors, the use of indwelling catheters should be avoided as an initial management strategy except in acute urinary retention. | X | | | | | |
| 4.12.16 | All stroke survivors with suspected faecal continence difficulties should be assessed by trained personnel using a structured functional assessment. 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. | X | X | X | | | |
| 4.12.17 | For stroke survivors with bowel dysfunction, bowel habit retraining using type and timing of diet and exploiting the gastro-colic reflex should be used. | X | | X | | | ● |
| 4.12.18 | For stroke survivors with bowel dysfunction: A) Education and careful discharge planning should be provided. B) Use of short-term laxatives may be trialled. C) Increase frequency of mobilisation (walking and out of bed activity) to reduce constipation. D) Use of | X | | X | | | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | the bathroom rather than use of bed pans should be encouraged. E) Use of containment aids to assist with social continence where continence is unachievable. | | | | | | |
| 4.13 | Deep Vein Thrombosis (DVT) | | | | | | |
| 4.13.1 | For acute stroke patients who are immobile, the use of intermittent pneumatic compression may be used, either as an alternative to low molecular weight heparin or in those with a contraindication to pharmacological DVT prophylaxis (including patients with intracerebral haemorrhage or within 24 hours of thrombolysis) | X | | | | | |
| 4.13.2 | Antithrombotic stockings are not recommended for the prevention of DVT or PE post stroke. | X | X | X | | | |
| 4.14 | Swallowing (Dysphagia) | | | | | | |
| 4.14.1 | Patients should be screened for swallowing deficits as soon as they are alert and ready for trialing oral intake (e.g. medications, food, liquid) using a valid screening tool by an expert in dysphagia, ideally a speech-language pathologist (SLP); if an SLP is not available this should be done by another appropriately trained professional | X | | X | X | X | |
| 4.14.2 | Swallowing should be screened for as soon as possible but at lease within 24 hours of admission | X | | X | | X | |
| 4.14.3 | The gag reflex is not a valid screen for dysphagia and should NOT be used as a screening tool | X | | X | | | |
| 4.14.4 | Abnormal results from the initial or ongoing swallowing screens should prompt a referral to a speech-language pathologist, occupational therapist, dietitian or other trained dysphagia clinician for more detailed bedside swallowing assessment and management of swallowing, feeding, nutritional and hydration status | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 4.14.5 | Videofluoroscopic swallow study (VSS, VFSS, MBS) or fiberoptic endoscopic examination of swallowing (FEES), should be performed on all patients considered at risk for pharyngeal dysphagia or poor airway protection, based on results from the bedside swallowing assessment | X | | X | X | X | |
| 4.14.6 | Restorative swallowing therapy and/or compensatory techniques to optimize the efficiency and safety of the swallow, with reassessment as required, should be considered for dysphagia therapy | | X | | X | | |
| 4.14.7 | Restorative therapy may include lingual resistance, breath holds and effortful swallows. Compensatory techniques may address posture, sensory input with bolus, volitional control, texture modification and a rigorous program of oral hygiene based on specific impairments identified during comprehensive swallow assessment. | X | | X | X | X | |
| 4.14.8 | Patients, family and caregivers should receive appropriate training / education on feeding and swallowing recommendations. | X | | X | X | | |
| 4.14.9 | To reduce the risk of pneumonia, patients should be permitted and encouraged to feed themselves whenever possible | | | | X | | |
| 4.14.10 | All stroke patients, particularly those with swallowing difficulties, should have assistance and/or education to maintain good oral and dental (including dentures) hygiene. | X | | | X | | |
| 4.14.11 | Staff and carers of stroke patients (in hospital, in residential care and home settings) should be trained in assessment and management of oral hygiene. | X | | | | | |
| 4.14.12 | For stroke patients, chlorhexidine in combination with oral hygiene instruction, and/or assisted brushing may be used to decrease dental plaque and gingiva bleeding. Caution should be taken, however, for patients with dysphagia. | X | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 4.14.13 | All stroke patients with swallowing problems should have written guidance for all staff/carers to use when feeding or providing liquid | | | | | X | |
| 4.14.14 | Stroke patients with difficulties self-feeding should be assessed and provided with the appropriate equipment and assistance (including physical help and verbal encouragement) to promote independent and safe feeding as far as possible. | | | | | X | |
| 4.14.15 | Dysphagic patients on modified diets should have their intake and tolerance to diet monitored. The need for continued modified diet should be regularly reviewed. | X | | X | | X | |
| 4.14.16 | Patients with persistent weight loss and recurrent chest infections should be urgently reviewed | X | | X | | | |
| 4.14.17 | Nutrition support should be initiated for people with stroke who are at risk of malnutrition which should incorporate specialist dietary advice and may include oral nutritional supplements, and/or tube feeding | | X | | | X | |
| 4.14.18 | One or more of the flowing methods can be provided to facilitate resolution of dysphagia: therapy targeting specific muscle groups, thermos-tactile stimulation, and/or electrical stimulation. | X | | X | | | |
| 4.14.19 | Gastrostomy feeding should be considered for stroke patients who: need but are unable to tolerate nasogastric tube feeding; are unable to swallow adequate amounts of food and fluid orally by 4 weeks; are at long-term high risk of malnutrition. | | | | | X | |
| 4.14.20 | Any stroke patient discharged from specialist care services with continuing problems with swallowing food or liquid safely should: A) be trained, or have carers trained, in the identification and management of swallowing difficulties; B) should have regular reassessment of their dysphagia beyond the initial acute assessment | | | | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | to enable accurate diagnosis and management; C) should have their nutritional status and dietary intake monitored regularly by a suitably trained professional. | | | | | | |
| 4.14.21 | All patients, particularly those with swallowing difficulties, should have assistance and/or education to maintain good oral and dental hygiene (brushing of teeth and removal of excess secretions). | X | | X | | X | |
| 4.14.22 | Staff or carers responsible for the care of patients disabled by stroke can be trained in assessment and management of oral hygiene | X | | X | | X | |
| 4.15 | Nursing Neurological Assessments | | | | | | |
| 4.15.1 | Stroke inpatients should be treated 24 hours a day by nurses specialising in stroke and based in a stroke unit | | X | | | | |
| 4.15.2 | The key elements of good stroke unit nursing care are: removing the competition for nursing time, recognition of stroke nursing as a specialisation, eg swallow screening, empowering nurses to become facilitators of rehabilitation, therapeutic interventions and enabling independence, knowledge, clinical skill, confidence and interest, multidisciplinary team working and collaboration; enabling nurses to coordinate patient care; nursing assessment of the care needs of the patient, including a formal scoring of pressure sore risk and swallow screening; nursing management of the patient's care needs, maintaining the patient in a correct posture and position and regular observation of key characteristics, such as airway, swallowing, nutritional status, continence and skin integrity; active patient and family contact and interaction | | X | | | | |
| 5.0 | COMMUNITY MANAGEMENT THEME | | | | | | |
| 5.1 | Organisation of community management | | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 5.1.1 | Median length of time between referral for outpatient rehabilitation to commencement of therapy (Target is within 30 days) | | | | X | | |
| 5.1.2 | Mechanisms to periodically re-evaluate those patients with severe stroke who are admitted to nursing homes, continuing care, or other settings to ensure that they have access to rehabilitation as appropriate, if the patient progresses sufficiently and has goals amenable to rehabilitation. | | | | X | | |
| 5.1.3 | Coordination and development of strong partnerships in the community, and adequate resources to ensure access to comprehensive stroke rehabilitation. This is especially important in more rural and remote geographic locations where telehealth technologies should be optimized. | | | | X | | |
| 5.1.4 | Processes for patients and caregivers to re-access the rehabilitation system as required. Financial barriers should not limit access to rehabilitation services. | | | | X | | |
| 5.1.5 | Timely access to stroke rehabilitation services in the community following discharge. Outpatient and/or community based rehabilitation services should be available and provided by a specialized interprofessional team, when needed by patients, within 72 h of discharge from inpatient rehabilitation | | | | X | | |
| 5.1.6 | Availability of skilled clinicians who have experience practicing in outpatient and community rehabilitation | | | | X | | |
| 5.1.7 | Long-term rehabilitation services widely available, and without financial barriers, in nursing and continuing care facilities, and in outpatient and community programs, including in-home visits | | | | X | | |
| 5.1.8 | Therapy should be provided for a minimum of 45 minutes per day (Evidence Level B) per discipline, 2 to 5 days per week, based on individual patient needs and goals for at least 8 weeks. | | | | X | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 5.1.9 | Patients and families should be involved in their management, goal setting, and transition planning | | | | X | | |
| 5.2 | Self-Management | | | | | | |
| 5.2.1 | Patients and families should be introduced to resources which will enable self-management and the ability to navigate through the health care system | | | | X | | |
| 5.2.2 | 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.<br>Stroke-specific self-management programs may be provided for those who require more specialised programs.<br>A collaboratively developed self-management care plan may be used to harness and optimise self-management skills. | X | | X | | | |
| 5.2.3 | Community-based rehabilitation programmes can use self-management approaches to optimise recovery and social reintegration | | | X | | | |
| 5.3 | Driving | | | | | | |
| 5.3.1 | All patients admitted to hospital should be asked if they intend to drive again | X | | X | | X | |
| 5.3.2 | 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 national and state guidelines. | X | | X | | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 5.3.3 | 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 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. | X | | | | | |
| 5.3.4 | The person or team responsible for any stroke patient who wishes to drive should: A) ask about and identify any absolute bars to driving, B) consider the patient's capacity to drive safely, C) discuss driving and give advice to the patient, D) document the findings and conclusions, inform the GP and give a written record to the patient. | | | | | X | |
| 5.3.5 | 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. | X | X | X | X | X | |
| 5.3.6 | Patients can be referred to training programs, such as simulator based training, to help prepare for a road test or the resumption of driving. Health professionals using driving simulation need to receive training and education to deliver intervention effectively and appropriately, and mitigate driving simulator sickness. | X | | | X | | |
| 5.3.7 | On-road driving rehabilitation may be provided by health professionals specifically trained in driving rehabilitation. | X | | | | | |
| 5.4 | Return to vocation / volunteer | | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 5.4.1 | Patients, especially those <65 years of age, should be asked about vocational interests (i.e., work, school, volunteering) and be assessed for their potential to return to their vocations. This initial screening should take place early in the rehabilitation phase, and become included in the individualized patient goal setting and planning for rehabilitation needs | X | X | X | X | | ● |
| 5.4.2 | 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. | X | | | | | ● |
| 5.4.3 | A detailed cognitive assessment including a neuropsychological evaluation, where appropriate, is recommended to assist in vocational planning | | | | X | | |
| 5.4.4 | Psychological wellbeing should be a focus for intervention in working-age stroke patients as it is a predictor of return to work. | | | X | | | |
| 5.4.5 | Resumption of vocational interests should be encouraged where possible. A gradual resumption should occur when appropriate | | | | X | | |
| 5.4.6 | People wishing to return to work should have access to advice on benefits, employment and legal rights and referral to social work if appropriate | | X | | X | | |
| 5.4.7 | Employers should be encouraged to provide work modification and flexibility to people returning to work after a stroke | | X | | X | | |
| 5.5 | Leisure | | | | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 5.5.1 | Patients should be given the opportunity to discuss pre-stroke leisure pursuits and be assessed for rehabilitative needs to resume these activities. Participation in leisure activities should be encouraged | | | | X | X | |
| 5.5.2 | For stroke survivors, targeted occupational therapy programs including leisure therapy may be used to increase participation in leisure activities. | X | | X | X | | |
| 5.5.3 | Patients with difficulty undertaking leisure activities of their choice should be offered a goal directed community-based program aimed at increasing participation in leisure and social activities, in liaison with local volunteer organizations. | | | | X | X | ● |
| 5.6 | Sexuality | | | | | | |
| 5.6.1 | Stroke survivors and their partners should be offered: A) the opportunity to discuss issues relating to sexual intimacy with an appropriate health professional; and B) written information addressing issues relating to sexual intimacy and sexual dysfunction post stroke. Any interventions should address psychosocial as well as physical function | X | X | X | X | X | ● |
| 5.6.2 | Any patient who has a limitation on sexual functioning and who wants further help should:<br>A) be assessed for treatable causes; B) be reassured that sexual activity is not contraindicated after stroke and is extremely unlikely to precipitate a further stroke ; C) if suffering from erectile dysfunction, be assessed for the use of sildenafil or an equivalent drug; D) avoid the use of sildenafil or equivalent drug for 3 months after stroke and until blood pressure is controlled; E) be referred to a | | | | X | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | person with expertise in psychosexual problems if the problems remain unresolved. | | | | | | |
| 5.7 | Peer Support | | | | | | |
| 5.7.1 | 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. | X | | X | | | |
| 5.8 | Carer Support | | | | | | |
| 5.8.1 | Comprehensive assessment of the individual and their family needs should be undertaken to facilitate access to appropriate secondary prevention and rehabilitation resources after stroke, including identification of any enablers and barriers | | | X | | | |
| 5.8.2 | Patients, families and caregivers should be assessed to determine their needs and readiness for information and education, training, psychosocial support, and health and social services | | | | X | | |
| 5.8.3 | 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. | X | | X | X | X | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 5.8.4 | Carers should be provided with information about the availably and potential benefits of local stroke support groups and services, at or before the persons return to the community. | X | | X | | X | |
| 5.8.5 | 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.<br>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.<br>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.<br>Assistance should be provided for families/carers to manage stroke survivors who have behavioural problems. | X | X | X | | X | |
| 5.8.6 | Patients, families and caregivers should be prepared with appropriate and realistic expectations regarding role changes, and the availability of services and resources within changing care environments | | | | X | | |
| 5.8.7 | Carer support should include:<br>A) Written discharge instructions from care providers that identify action plans, follow-up care, and goals, provided to the patient, family, and primary care giver. | | | | X | | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| | B) Access to a contact person in the hospital or community (designated case manager or system navigator) for post-discharge queries<br>C) Access to and advice from health and social service organizations (e.g., through single points of access to all organizations<br>D) referrals to community agencies such as stroke survivor groups, peer survivor visiting programs, and other services and agencies | | | | | | |
| 5.8.8 | Stroke survivors and their caregivers should have their individual psychosocial and support needs reviewed on a regular basis | | X | | X | | |
| 5.8.9 | Advice about the financial support available should be provided for family/carers of people with stroke prior to discharge and as needs emerge and circumstances change | | | X | | | |
| 5.8.10 | Efforts to reduce the effects of socioeconomic disadvantage on stroke should be aimed at the pre-hospital stage in primary and secondary prevention, and in rehabilitation services post discharge | | | X | | | |
| 5.9 | Care after hospital discharge: | | | | | | |
| 5.9.1 | Any patient whose situation changes (eg new problems or changed environment) should be offered further assessment by the specialist stroke rehabilitation service. | | | | | X | |
| 5.9.2 | Contact and education by trained staff should be offered to all stroke survivors and their families/carers after stroke. | X | | X | | | |
| 5.9.3 | Interdisciplinary community rehabilitation services and support services should be made available whenever possible to enable early supported discharge to be offered to all people with stroke who have mild to moderate disability | X | X | X | | | |
| 5.9.4 | Health services with a stroke unit should provide comprehensive, experienced MDT community rehab and adequately resourced support services for stroke survivors and their family/carers. | X | X | X | | | |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
|---|---|---|---|---|---|---|---|
| 5.9.5 | Rehabilitation in the home setting should be offered to all stroke survivors as needed. Where home rehab is unavailable, patients requiring rehab should receive centre-based care. | X | X | X | X | | |
| 5.9.6 | People who have difficulty in activities of daily living, including self-care, productivity and leisure, should receive occupational therapy or inter-professional interventions targeting activities of daily living | | | | X | | |
| 5.9.7 | Stroke survivors can be managed using a case management model after discharge. If used, case managers should be able to recognize and manage depression and help to coordinate appropriate interventions via a medical practitioner | X | | X | | | |
| 5.9.8 | Stroke survivors should have regular and ongoing review by a member of a stroke team, including at least on specialist medical review. The first review should occur within 3 months, then again at 6 and 12 months' post discharge (at least for the first 3 years). | X | | | X | X | |
| 5.9.9 | Stroke survivors and their carers/families should be provided with contact information for the specialist stroke service and a contact person for any post-discharge queries for at least the first year following discharge. | X | | X | | X | |
| 5.9.10 | All people following stroke should take sufficient physical exercise to achieve national levels of physical activity | | | | | X | |
| 5.9.11 | The prescription of equipment should take account of any cognitive and behavioural deficits and their constraints on the person's ability, or their family/ caregiver's ability, to use the equipment safely and appropriately. Where this in doubt, arrangements should be in place for regular review | | | | | X | ● |
| 5.9.12 | Patients and their family/caregivers should be given clear written information on who to contact for repairs, replacement or future help and advice regarding the equipment. The ongoing effectiveness of | | | | | X | ● |

| | Domain and Guideline Recommendation Theme | Stroke Foundation [9] | SIGN [10] | SFNZ &NZGG [27] | CSS[28-29] | ISWP [11] | NZGG[33] |
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| | equipment should be reviewed on a regular basis and in accordance with the manufacturers' guidelines. | | | | | | |
| 5.10 | Long Term Rehabilitation | | | | | | |
| 5.10.1 | Stroke survivors who have residual impairment at the end of the formal rehab phase of care should be reviewed annually, usually by the GP or rehab provider to consider whether access to further interventions is needed. A referral for further assessment should be offered for relevant allied health professionals or general rehabilitation services if there are new problems not present when undertaking initial rehabilitation, or if the person's physical or social environment has changed. | X | | X | X | | |
| 5.10.2 | 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. | X | | | X | | |
| 5.10.3 | 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. | X | | | | | |
| 5.10.4 | For older stroke survivors living in a nursing home, routine occupational therapy is not recommended to improve ADL function. | X | | | | | |

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| 5.10.5 | Stroke survivors with residual impairment identified as having further rehabilitation needs should receive therapy services to set new goals and improve task-orientated activity | X | | X | | | |
| 5.10.6 | Any stroke survivor with declining physical activity, activities of daily living or mobility at six months or later after stroke should be assessed for appropriate targeted rehabilitation | | | | X | | |
| 5.10.7 | The duration of the formal rehabilitation phase of care should be tailored to the individual patient based on their response to interventions, not on an arbitrary time limit. | | | X | | | |
| 5.10.8 | Stroke survivors with confirmed difficulties in performance of personal tasks, IADLs, vocational activities or leisure activities should have a documented management plan updated and initiated to address these issues. | X | | X | | | |
| 5.10.9 | People with difficulties in mobility should be offered an exercise program specific to those difficulties and monitored throughout the program | | | | X | | |
| 5.10.10 | Patients with aphasia should be taught supportive conversation techniques | | | | X | | |
| 5.10.11 | Patients with dysphagia should be offered swallowing therapy and opportunity for reassessment as required | | | | X | | |
| 5.10.12 | Stroke survivors should be provided with a cardiovascular fitness program to maximize functional outcomes after stroke (and as part of overall vascular risk reduction). Patients should be prescribed modified activities to allow age appropriate target heart rates to be achieved for 20 to 30 minutes three times per week | | | | X | | |
| 5.10.13 | Stroke survivors should be encouraged to participate long term in appropriate community exercise programs. | X | | X | X | | |

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| 5.10.14 | At any point in their recovery, stroke survivors who have experienced a change in functional status and who would benefit from additional rehabilitation services should be offered a further trial of outpatient rehabilitation if they meet the requirements | | | | X | | |
| 5.11 | Mood disturbance | | | | | | |
| 5.11.1 | 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. | X | | | X | X | |
| 5.11.2 | Patients and their caregivers should have their psychosocial and support needs reviewed on a regular basis as part of long-term stroke management | | | | X | | |
| 5.11.3 | All patients with stroke should be considered to be at high risk for depression. During the first assessment, the clinical team should determine whether the patient has a history of depression or risk factors for depression | | | | X | | |
| 5.11.4 | Psychological strategies can be used to prevent depression after stroke | X | | | | | |
| 5.11.5 | Routine use of antidepressants to prevent post-stroke depression is NOT recommended | X | X | X | X | X | |
| 5.11.6 | Antidepressants can be used for stroke patients who are depressed and for those with emotional lability | X | X | | | | |
| 5.11.7 | Patients should be given information and advice about the impact of stroke, and the opportunity to talk about the impact on their lives | | | | X | | |
| 5.11.8 | Patients with marked anxiety should be offered psychological therapy | | | | X | | |

SIGN= Scottish Intercollegiate Guidelines Network, SFNZ&NZGG= Stroke Foundation of New Zealand and New Zealand Guideline Group, CSS= Canadian Stroke Strategy, ISWP= Intercollegiate Stroke Working Party, NZGG=New Zealand Guideline Group, X= presence of guideline recommendation, • = presence of guideline recommendation for both vascular and trauma condition.

Note: Recommendations that are out dated have been excluded. Recommendations that are inconsistent with other clinical practice guidelines have been excluded.