South Australian Stroke Services Plan*
2009-2016

Summary Document for
Allied and Scientific Health Workforce

* Please note this is a Summary Document only. For a complete version of the plan go to www.health.sa.gov.au/clinicalnetworks
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Recommendations

**Primary prevention**
- Develop culturally appropriate stroke specific prevention messages based on the SA Primary Prevention Plan
- Develop stroke primary prevention support material for general practice in collaboration with the Divisions of General practice and the Royal Australian College of General Practice

**Transient Ischaemic Attack (TIA) services**
- Establish specialist TIA clinics in the major hospitals and country general hospitals

**Early identification and intervention**
- Implement a statewide public education program promoting Face Arm Speech Time (FAST)
- Develop a positive community message to promote thrombolysis
- Develop a patient pathway to identify consistent entry criteria and treatment options
- Develop education programs and a validated assessment tool to identify stroke symptoms early
- Develop stroke protocols for the National health Call Centre

**Acute stroke services**
- Provide acute stroke care according to the National Stroke Foundation (NSF) clinical Guidelines for Acute Stroke Management 2007
- Establish comprehensive stroke units at the major metropolitan and country general hospitals, to be managed by stroke heads and follow the NSF recommended staffing requirements
- Establish a statewide stroke coordinator program with a metropolitan hospital lead coordinator and hospital based coordinators (metro and country) and providing 24 hour rapid activation processes.
- Provide funding and management for stroke services independently of neurology service funding and all acute stroke beds are to be collocated
- Establish a Stroke Physician Network
- Country patients within a 21/2 hour catchment will be transported to a major metropoloitan hospital
- Ensure delivery of protocols to facilitate the rapid transit of stroke patients to the Stroke Unit where reprofusion therapy can be implemented
- Develop formal links with private hospitals and general hospitals to implement protocols, provide education and telemedicine.
**Inpatient rehabilitation**

- Develop clinical guidelines and patient pathways incorporating specialised rehabilitation
- Structure rehabilitation stroke care teams to ensure continuity of care occurs from admission through to discharge
- Provide early supported discharge services
- Ensure team based care is based on NSF guidelines
- Staffing and infrastructure to be implemented consistent with the Australian Faculty of Rehabilitation Medicine Standards
- Appoint community based stroke coordinators to ensure the transition from rehabilitation services and that patients’ rehabilitation needs are available in the local community
- Develop appropriate rehabilitation services for younger stroke survivors
- Develop appropriate services for individuals experiencing a significant stroke
- Develop further links with specialised rehabilitation services such as SEETEC and Royal Society of the blind
- Develop new models such as tele-rehabilitation and group therapy
- Establish formal partnerships between metro and country units with specialist medial and therapy outreach visits

**Community based stroke rehabilitation**

- Increase ambulatory community based stroke rehabilitation options, including early supported discharge, home and centre based therapy
- Develop e-rehabilitation modules will allow rehabilitation at home to be supervised by distant therapy teams
- Establish partnerships with general practice, day therapy centres, Dom Care SA, Disability SA, Metro Home Link and other private providers
- Ensure the needs of young stroke survivors are considered in the development of community based stroke rehabilitation services
- Develop transparent admission/referral criteria to ensure multiple entry points, particularly if a patients’ condition changes
- Establish regional MD clinics that focus on driver assessment and retraining, management of swallowing difficulties and management of spasticity
- Establish effective transport options to centre based and outpatient clinic services
- Explore innovative models of service provisions where allied health staff may be limited
- Establish services in areas that are accessible
Secondary prevention
- Develop information packs for GPs, stroke survivors and their families re prevention
- Educate GPs re the need for monitoring and management of risk factors in collaboration with the Division of GPs and the Royal Australian College of GPs
- Develop programs to improve adherence to evidence based recommendations in secondary prevention

Long term care
- Establish a mechanism to ensure all survivors receive information about stroke, stroke recovery and relevant community services
- Provision of return to work services
- Implement clinical pathways in partnership with community services to ensure continuity of care
- Ensure the provision of adequate carer respite programs and places
- Improve access to peer support through support groups, buddy programs etc
- Improve access to self management programs
- Establish a centralised phone follow up services that determines patient needs after discharge and links the patient with a Stroke Liaison officer
- Establish community based Stroke Liaison Officers

End of life care
- Provide palliative care services in line with the palliative Care Service Plan 2009-2016

Primary Prevention and early intervention for Aboriginal people
- Through education target primary prevention and early identification strategies regarding health issues for young Aboriginal people
- Provide additional training to Aboriginal health workers

Acute stroke services for Aboriginal people
- Incorporate into the design of stroke services culturally specific messages and healing requests
- Create links between metro and rural services and national programs for transient patients
- Include stroke information in the Central Australian Rural practitioners Association Standard Treatment Manual.

Secondary prevention for Aboriginal people
- Develop education programs for Aboriginal stroke survivors that focus on improving life post stroke
- Link with Step Down units
• Provide stroke education and information to Pt Augusta- Centre for Excellence for Aboriginal and Torres Strait Islander people

**Safety and Quality**

• Establish a Stroke Quality and Safety Committee as a subgroup of the Stroke Clinical Network
• Implement evidence based guidelines for Acute Stroke Care and Stroke Rehabilitation and Recovery
• Include private rehabilitation hospitals in quality initiatives
• Participate in the National stroke Audit and associated activities

**Training and education**

• Develop a consistent training program for all professional and workers who provide stroke care
• Establish stroke specific fellowships in medical, nursing and allied health
• Rotate staff across the stroke care continuum
• Facilitate universities to take a lead role in encouraging rehabilitation as a specialist area, particularly in nursing

**Research**

• Ensure stroke research forms a critical component on the development of stroke services, in line with the Shine young report
• Expand research with a focus on improving stroke survivor health outcomes

**Statewide Stroke Clinical Network**

Establish a network with the proposed role of:

• Developing clinical pathways form primary prevention to post stroke community based support services, including an activation process for acute stroke
• Identifying and monitoring the establishment of appropriate services with agreed staffing levels and skills
• Monitoring of clinical indicators and other key performance indicators
• Monitoring the implementation of the SA Stroke Service Plan
• Development of evidenced based protocols for triage, diagnoses and delivery of reprofusion therapy
• Appointment of a State Chair of Stroke
• Establishment of a subcommittee to oversee implementation education, training and research
• Establish a Safety and Quality subcommittee
• Appoint a lead coordinator to provide data management and education support
Statistical Information

Australia has an ageing population, and South Australia had the highest proportion of older people in the nation with one in six people over the age of 65. An estimated 40,000 to 48,000 stroke events occur in Australia every year, equating to one every 11-13 minutes. The majority of these are first ever strokes. Of these 4 out of 5 people were aged 60+ years.

The National Stroke Unit Audit conducted by the NSF in 2007 found that South Australia hospitals provided significantly fewer stroke specific beds than other states and fewer patients were receiving Tissue Plasminogen Activator (tPA). Only 42% of South Australians experiencing stroke received care in a stroke unit.

i. Early intervention

Early recognition of stroke symptoms is the key to timely treatment and the implementation of measures to save life and reduce the impact of disability. The administration of tPA within three hours of the onset of symptoms has been shown to significantly improve stroke outcomes.

ii. Costs of strokes

Stroke has been estimated to be responsible for 2% of the direct health care costs in Australia. The NSF reported in 2007 that the estimated lifetime cost of stroke was around $2.14 billion per year.

Moodie et al\(^1\) reviewed the difference in cost structure between models of care: a dedicated stroke unit, a mobile stroke service where a stroke team was engaged but patients were admitted across wards and conventional care with no dedicated stroke team. It was found that dedicated stroke units were the most cost effective.

Best Practice in Stroke Care

The literature demonstrates that key components should include:

- Primary health care services who work within the evidence based guidelines for primary prevention of stroke
- Emergency services and primary health care staff trained to recognise stroke symptoms including use of tPA
- Acute stroke care facilities include specialist medical, nursing and allied health care staff and diagnostic services
- Rehabilitation and post acute services are integrated with the acute service

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• Community based GPs work within the evidence based guidelines to manage the key risks for reoccurrence
• Long-term social support for survivors and carers.

Models of rehabilitation Service Delivery
High level stroke patients can be discharged early from an acute facility if they are provided with interventions from an interdisciplinary stroke rehabilitation team. Model components include:
  • Comprehensive Stroke Unit establishment incorporating emergency care, acute, sub acute and rehabilitation services in the one unit with the patient managed by the same specialist, interdisciplinary team.
  • Community based rehabilitation, either centre or home based
  • Outpatients clinics and example focus areas are swallowing, spasticity and return to driving
  • Ongoing community based support
  • Workforce composition as per the Australasian Faculty of Rehabilitation Medicine (AFRM) with 3% of effective full time hours allocated to staff training and development
  • Primary prevention and early intervention for Aboriginal and Torres Strait Islander people targeted through education for young people along with additional training for Aboriginal Health Workers to better convey health messages re stroke.
  • Safety and Quality minimum data sets and national benchmarking processes to be implemented across all rehabilitation sites
  • Ensuring stroke research forms a critical component in line with the Shine Young report, including participation in international trials
  • Establishment of a statewide Stroke Clinical Network inclusive of specialists from acute, rehabilitation and primary health care sectors.
## Staffing Guidelines

The Australian Faculty of Rehabilitation Medicine Staffing Guidelines per 10 patients\(^2\) is tabled as follows.

<table>
<thead>
<tr>
<th>Professional group</th>
<th>Minimum FTE per 10 Inpatients</th>
<th>Minimum FTE for Ambulatory Services per 10 patients</th>
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</tbody>
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\(^2\) Australasian Faculty of Rehabilitation Medicine Royal Australasian College of Physicians Standards 2005 *Adult Rehabilitation Medicine services in Public and Private Hospitals*