Executive Summary

National Stroke Audit

Acute Services Report 2017

strokefoundation.org.au
At a glance

› 127 Hospitals
› 31,952 Acute stroke admissions

Time critical stroke therapy

But thrombolysis given in hospital within 60 MINUTES lags internationally

36%

of patients reached hospital in 4.5 hour time window for thrombolysis

7% 2015
13% 2017

Use of thrombolysis increased

59% 62% 30%

30%59%

62%

of patients did not receive a DISCHARGE CARE PLAN

41%

of patients did not receive a REHABILITATION ASSESSMENT

30%

of patients did not receive RISK FACTOR EDUCATION

Stroke unit care

87 STROKE UNITS 2015

95 STROKE UNITS 2017

77% Metro

47% Regional

Patients who received stroke unit care

66% 28%

Routine use of Clinical Guidelines

in hospital WITH stroke unit

in hospital WITHOUT stroke unit

More patient care needed

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35%

of patients did not receive a DISCHARGE CARE PLAN
Executive Summary

The 2017 National Stroke Audit provides a robust and representative snapshot of acute stroke care in Australia. The National Report highlights areas where the system for acute stroke treatment and care is working well and reports on where improvement or changes may be needed. It is the only report of its kind in Australia, tracking the performance of Australia’s stroke care against evidence-based clinical guidelines, the Acute Stroke Services Framework 2015 and the Australian Commission on Safety and Quality in Health Care Acute Stroke Clinical Care Standard 2015. The report also highlights changes in stroke treatment and care from previous cycles of the National Stroke Audit which commenced in 2007.

Clinicians, healthcare administrators and governments alike utilise the data in this report to review services and clinical care in order to improve the quality of stroke management throughout Australia. The report delivers a solid foundation and baseline for the implementation of the newly released Clinical Guidelines for Stroke Management (September 2017).

The Audit collected data in two parts: the first involved a survey of resources, processes and infrastructure completed by 127 hospitals; and the second was a retrospective audit of 4,192 patient case notes (from 117 hospitals). Public and private hospitals that participated, reported admitting more than 30,000 stroke patients in the previous 12 months. Of the 127 participating sites, 82 sites were in metropolitan locations, 45 sites were regional, including one rural. The majority of the participating services admitted between 75 and 499 patients with stroke in the past year.

It is important to note this report maps stroke treatment and care against the Clinical Guidelines for Stroke Management 2010 which have now been superseded by the 2017 version. Thus, providing an informed baseline for future audits against the updated evidence-based best practice guidelines.

The Audit data revealed inequalities in acute stroke care and services. Advancements in stroke treatment and care mean stroke is no longer a death sentence for many, however too many patients are missing out on best practice care simply because of where they live. There were pockets of the country where targeted investment and coordination of services has resulted in improved outcomes for stroke patients. However, other areas have been left behind; gaps are widening and patients are suffering poorer outcomes as a result.

A metropolitan and regional divide is clearly demonstrated in the Audit results. This is particularly concerning when we know regional Australians are 19% more likely to suffer a stroke than their metropolitan counterparts.

Encouragingly six sites in the Audit were found to meet all the elements of a comprehensive stroke service (increased from one site in 2015), including but not limited to, the provision of hyperacute treatments (endovascular thrombectomy services and intravenous thrombolysis [clot busting] services) and stroke unit care 24 hours a day, 7 days a week. All of these sites were located in metropolitan areas.

‘Time is brain’ therapies

Stroke is a serious medical emergency requiring urgent attention, but with the right treatment at the right time, many people are able to recover from stroke. Some of the more recent advancements in ischaemic stroke (caused by a clot) treatment are particularly time critical and can only be provided within the first few hours of a stroke (4.5 hours from stroke symptom onset for thrombolysis, and generally within six hours for endovascular thrombectomy). The earlier treatment is delivered, the better the outcome for patients.

Availability of thrombolysis has increased; 72% of participating sites reported offering the treatment, however there was significant variation across the states and even within states. In the Australian Capital Territory thrombolysis availability was 100%, in Victoria it was 90% but in New South Wales and Tasmania it was just over 60% and in Western Australia it was only 31%. In saying availability to thrombolysis has increased, delivery of the treatment to appropriate patients remains a challenge. Nationally it has increased from 7% in 2015 to 13% in 2017, encouragingly the rate in South Australia was 20%, the Australian Capital Territory 23% and Victoria 19%. In short, thrombolysis is available, but there is inconsistent access across the country.
The Audit also shows that just 36% of patients with stroke reached hospital within the critical 4.5 hour time window for thrombolysis treatment. Recognition of stroke as a medical emergency remains a high priority.

Endovascular thrombectomy services were being delivered at 21 locations nationally, 12 of these 24 hours a day, 7 days a week. No endovascular services were available in the Northern Territory and a 24 hour service was not accessible in the Australian Capital Territory or Tasmania at the time of the Audit. In Queensland three of its services (12%) were delivering the treatment and all were concentrated in the south-east of the state – Brisbane and the Gold Coast. While the appropriate distribution and composition of services is still a matter of discussion, it is vital all Australians have a clear pathway to access this treatment.

Coordinated processes between ambulances, emergency departments and stroke units require integrated triage. Again, there is limited implementation of these care processes. Efficiency of hospital processes is critical to hyperacute care. The Audit shows Australia continues to be well behind indicators of efficiency for patients accessing time critical treatments. Only 30% of appropriate patients accessed thrombolysis within 60 minutes of hospital arrival, compared to the United States of America 59.3% and the United Kingdom 62.3%.1,2

**Stroke unit care**

Building on time critical treatment, access to a stroke unit is proven to save lives and reduce disability caused by stroke. Stroke unit care is characterised by provision of care in one location by an interdisciplinary team including medical, nursing and allied health professionals (occupational therapists, physiotherapists, speech pathologists, social workers and dietitians) with expertise in stroke.

It is encouraging to see access to stroke unit care has again increased to 69%, from 58% in 2013. However, the Audit found that of those who accessed a stroke unit, only half spent enough time on it to maximise their benefit. Again, regional Australians were less likely to have access to these vital services. This suggests bed management systems should be reviewed so hospitals can better prioritise patient movement to an appropriate stroke unit bed.

It is understood that it is not practical to expect all hospitals to have dedicated specialist stroke services. Some may only have a small number of stroke admissions, but all patients need and deserve access to best practice stroke care. The Framework recommends all patients with suspected stroke should be transported to a hospital with a stroke unit. Smaller services should have appropriate systems in place to rapidly screen and transfer patients with stroke to the nearest dedicated stroke unit or where access to time critical stroke treatments are available.

Only 57% of services reported routine use of the Clinical Guidelines for Stroke Management, care plans and protocols to support access to care for all patients with stroke. Patients are being left with avoidable disability because pathways are not in place to ensure their access to best practice stroke treatment.

In addition, we must ensure hospitals that have regional responsibility for stroke are equipped with the knowledge and resources to deliver best practice stroke care in line with the Clinical Guidelines for Stroke Management. A total of 65 acute services reported they had regional responsibility for stroke care, 14 of these services said they had no medical lead with specialist stroke knowledge responsible for ensuring best quality care. Similarly, it was concerning 16 services reported they did not have a stroke coordinator. It was, therefore, unclear what level of outreach and support could be provided in these centres.

**Helping patients to live well after stroke**

Coordination of care by interdisciplinary teams is critical to patient outcomes. Most hospitals recognised the importance of the coordination of care with rehabilitation services – 94% reported systemised coordination with rehabilitation service providers, 82% reported standardised tools to determine rehabilitation need and 98% 1 Xian Y et al. Use of Strategies to Improve Door-to-Needle Times With Tissue-Type Plasminogen Activator in Acute Ischemic Stroke in Clinical Practice Findings from Target Stroke. Circ Cardiovasc Qual Outcomes. 2017;10:e003227. DOI: 10.1161/CIRCOUTCOMES.116.003227
reported routine involvement from carers in early rehabilitation processes. However in 2017, just 59% of services provided assessment for ongoing rehabilitation, a decrease from 77% in 2015. Whilst this assessment identified 75% of patients with stroke have ongoing rehabilitation needs, only 46% were referred to rehabilitation services.

Patients who were not treated in a stroke unit were also disadvantaged. They experienced delays in starting their rehabilitation early (within 48 hours from assessment), received less treatment based on their rehabilitation goals, and had fewer assessments for rehabilitation, compared to those who were treated on a stroke unit. Early rehabilitation and appropriate assessment of ongoing needs is a critical component of best practice care and helps patients with stroke to live well after stroke.

The Audit also found patients were not being properly supported to transition out of hospital. Despite this being an area of emphasis of previous Audits, the Framework and the Standard, 35% of patients did not have a discharge care (personal recovery) plan developed. Around the same number of patients (30%) were not provided with risk factor modification advice. There was much variation around the country in terms of patient education regarding risk factors and behaviour change for modifiable risk factors: a low of 56% in the Northern Territory and Tasmania, compared with a high of 84% in South Australia. Patients were also not prescribed recommended secondary prevention medications. Given one-in-10 stroke survivors are likely to suffer a recurrent stroke within 10 years, these gaps have significant and at times devastating implications for patients, families and the healthcare system. Those not treated on a stroke unit were less likely to receive this crucial advice and medication. We know that around 80% of strokes are preventable and the number of strokes would be practically cut in half (48%) if high blood pressure (hypertension) alone was eliminated.3

The opportunity

There are opportunities for improvements in acute stroke treatment and care across the country. We know what best practice stroke care looks like, with the release of the new Clinical Guidelines for Stroke Management, we must now ensure all Australian patients with stroke have access to it. This Audit provides a benchmark for clinicians, healthcare administrators and government to improve on. The Australian healthcare system must adapt to support healthcare professionals in the delivery of best practice stroke care and improve how resources are utilised to deliver the best outcomes for all Australians.

Recommendations

1. Review stroke service coordination and links, between metropolitan and regional areas, as well as with ambulance services.
2. Increase access to and delivery of time-critical therapy (thrombolysis and endovascular thrombectomy), and ensure that all patients in all parts of Australia have a clear access path to be transferred to receive appropriate stroke therapy.
3. Review bed management and patient flow practices to increase admission rates to a stroke unit and increase length of time patients are treated in a stroke unit.
4. Ensure all patients with stroke are assessed early for rehabilitation and referred as appropriate.
5. Review discharge planning processes to ensure appropriate risk factor education and medication is delivered.
The full National Stroke Audit Acute Services Report 2017 can be downloaded at informme.org.au/stroke-data

How to get more involved

- **Give time** – become a volunteer.
- **Raise funds** – donate or hold a fundraising event.
- **Speak up** – join our advocacy team.
- **Leave a lasting legacy** – include a gift in your Will.
- **Know your numbers** – check your health regularly.
- **Stay informed** – keep up-to-date and share our message.

Contact us

📞 1300 194 196
🆔 strokefoundation.org.au
(fb) /strokefoundation
/twitter @strokefdn
/in (insta) @strokefdn