

Why the new 'living' Australian Stroke Guidelines matter to New Zealand

Karim Mahawish, P Alan Barber, Anna McRae, Julia Slark, Annemarei Ranta

The 2017 Australian Clinical Guidelines for Stroke Management provide the latest evidence-based guidance and have been adopted for New Zealand in an effort to improve outcomes for all New Zealanders. The New Zealand Stroke Network participated in leading the development of the 2017 Australian Clinical Guidelines for Stroke Management under the umbrella organisation 'Stroke Foundation- Australia'. Therefore, this new guideline now replaces the 2010 document and can be found at <https://informme.org.au/Guidelines/Clinical-Guidelines-for-Stroke-Management-2017>.

The guideline covers the most critical topics of stroke care from pre-hospital to post-discharge care, as well as the management of transient ischaemic attack (TIA). It is intended to aid the development of locally appropriate clinical pathways, and help to guide clinical judgement.

One novel feature of this guideline, a world-first, is the ability for realtime updates. Given the rate at which new evidence has been emerging in recent years, this is a major advantage. The new guideline, now exclusively existing as an online document, facilitates the real-time incorporation of new recommendations.

A few changes from past recommendations are worth noting for New Zealand practice. One such feature is the recommendation for general practitioners to use the New Zealand-developed Best Practice Advocacy Centre (BPAC) TIA/Stroke electronic decision-support tool, as it was found to significantly reduce 90-day vascular event rates (73% reduction) in practices that accessed this tool during a recent randomised controlled trial from New Zealand.¹

The most revolutionary research to emerge in stroke treatment, and which

is given a strong recommendation in the guideline, is endovascular thrombectomy (stroke clot retrieval) for patients with ischaemic stroke caused by a large vessel occlusion in the internal carotid artery middle cerebral artery (M1 segment) or basilar artery.² The recent DAWN³ and DEFUSE 3⁴ studies used computed tomography cerebral perfusion imaging to identify patients with a significant ischaemic penumbra and thus be most likely to benefit from endovascular thrombectomy. These studies showed that the therapeutic window could be expanded up to 24 hours in such patients with significant improvements in outcome. The challenge for New Zealand will be to set up round-the-clock access for all New Zealanders to advanced imaging and interventional neuroradiology services using a coordinated air and road transport. The Ministry of Health has recently approved a National Stroke Clot Retrieval Service Improvement Programme to help address current gaps.

Other changes include a more aggressive blood pressure lowering target in intracerebral haemorrhage. The INTERACT 2⁵ trial has resulted in a weak recommendation for acute lowering of blood pressure to a target systolic of around 140mmHg in patients with intracerebral haemorrhage. In INTERACT 2, this target had to be achieved within an hour of randomisation and maintained for seven days. This will be a challenge to achieve in many New Zealand hospitals outside a high-dependency setting.

The guideline issues a weak recommendation for dual antiplatelet therapy (DAPT) with aspirin and clopidogrel for three weeks in patients with TIA or minor stroke based on the CHANCE trial,⁶ which included patients with ABCD₂ ≥ 4 or NIHSS ≤ 3 scores. The POINT trial,⁷ yet to be included in the guideline, used DAPT for 90 days

and demonstrated a significant reduction in stroke recurrence at the expense of also an increase in the risk of haemorrhage. The benefit mainly accrued in the first few weeks of therapy, while the bleeding risk was more sustained. This suggests that a shorter duration of DAPT, for around 30 days, is probably safe and still effective; although this time frame was not part of the primary outcome of the trial so a degree of caution has to be applied.

The guideline offers a strong recommendation to use direct oral anticoagulants (DOACs) in preference to warfarin for patients with non-valvular atrial fibrillation. A recent systematic review showed reduced mortality and lower rates of intracranial haemorrhage in patients taking DOACs compared with warfarin.⁸ Idarucizumab, the reversal agent for the direct thrombin inhibitor Dabigatran, provides additional reassurance for its use. The once daily anti-Xa inhibitor Rivaroxaban has now been funded by PHARMAC for use as stroke prevention in patients with non-valvular atrial fibrillation, but a reversal agent is not yet available.

The Australian Guideline does not include information to provide New Zealand culturally specific guidance, and clinicians are advised to continue to refer to the 2010 New Zealand Stroke Guidelines on these matters.⁹ However, more needs to be done in this area. Population-based data taken from the Auckland Regional Community Stroke Studies (ARCOS) have demonstrated a gradual decline in overall stroke incidence since 1981; yet between 2002 and 2011, there

has been a two-fold increase in first stroke in those aged 16–49 among Māori and Pacific peoples.¹⁰ Further, ethnic inequalities in stroke survival have also increased significantly in the last 10 years.¹¹ This may be due to differences in severity at presentation or in access and utilisation of increasingly effective acute stroke interventions. Māori and Pacific groups continue to experience stroke at a significantly younger age (mean age of first stroke is 60 and 62 years, respectively) compared with New Zealand Europeans (mean age 75 years).¹² Māori and Pacific non-valvular atrial fibrillation patients are diagnosed 10 years earlier than non-Māori/Pacific patients.¹³ The currently ongoing HRC funded REGIONS Care project aims to add additional substantial evidence on how to improve clinical stroke management for these patient groups.

The guideline provides the latest evidence-based guidance for the management of stroke patients in New Zealand and must be adopted in New Zealand to improve stroke outcomes for all. Interested readers are encouraged to look through the guidelines in the new look and easy to use online format. Key priorities for the optimisation of outcomes following stroke include improved access to acute organised stroke care, including reperfusion and endovascular thrombectomy, and organised stroke rehabilitation services. The work of the National and Regional Stroke Networks as well as individual DHBs and health providers and engaged consumers with support from the Ministry of Health and the Stroke Foundation have achieved much over the past 10 years, but ongoing efforts are needed.

Competing interests:

Nil.

Author information:

Karim Mahawish, Lakes District Health Board, Rotorua;
P Alan Barber, Auckland District Health Board, Auckland;
Anna McRae, University of Otago, Wellington; Julia Slark, University of Auckland, Auckland;
Annemarei (Anna) Ranta, University of Otago, Wellington.

Corresponding author:

A/Prof Anna Ranta, Department of Medicine, University of Otago, PO Box 7343, Wellington.
anna.ranta@otago.ac.nz

URL:

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