



The Royal Australasian  
College of Physicians

## Media Release

### International nitric oxide trial shows great results for Kiwis

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An international trial assessing the effectiveness of nitric oxide in treating stroke patients shows New Zealanders had significantly better outcomes than people from other countries around the world.

Presenting a paper on the trial at the Royal Australasian College of Physicians (RACP) Congress in Adelaide on 17 May, Dr Michael Furlong said this was “a great result for New Zealand”.

Dr Furlong, an Internal Medicine Physician at Dunedin Hospital was the Principal Local Investigator in the trial sponsored by the University of Nottingham.

The trial, funded by grants from the U.K. Medical Research Council and the BUPA Foundation investigated the safety of applying nitroglycerine patches to the skin of acute stroke patients. It also looked at whether the patches would reduce blood pressure and brain injury.

Researchers enrolled 4011 patients experiencing acute ischaemic or haemorrhagic stroke. Patients were enrolled at 173 sites in 23 countries across five continents between July 2001 and October 2013. A majority of patients 3182 (79%) were enrolled in 2008 or later. Seventy-one New Zealand patients took part in the trial – 64 (90%) were enrolled at Dunedin Hospital.

During the trial, a nitroglycerine patch or placebo patch treatment was given to each patient for seven days.

The key local finding was that 16 percent of New Zealand sub-group were less likely to suffer severe disability within 90 days of their strokes than patients in the rest of the world. This was despite New Zealand patients being over four years older (74.5 vs. 70.2 years) and having higher rates of cardiovascular and other related diseases than others in the study.

The New Zealand subgroup also had better 90 day outcomes than patients recruited from other countries in secondary measures such as verbal fluency (11 vs. 9.2) and had shorter initial acute hospital stays (6 days vs. 11 days).

Dr Furlong said during the trial, the Internal Medicine Department at Dunedin Hospital developed a Stroke Unit to standardise and improve coordination of patient care. It included a system where the emergency department could send urgent tracer calls to members of the stroke team; this helped the team see patients immediately, and consider thrombolysis treatment and enrolment in the trial.

The stroke unit protocols also improved coordination and standardisation of post stroke care which may explain some of the superior New Zealand outcomes. This included excellent nursing care, physiotherapy, occupation therapy, speech therapy, cardiac monitoring, antiplatelet therapy, and cholesterol lowering treatment.

“The superior outcomes for New Zealand patients however, probably reflect earlier hospital admission and recruitment into the ENOS trial and therefore greater use of thrombolysis and exposure to nitroglycerine within six hours.” he said.

Dr Furlong said the benefit of the patches is now the subject of a second trial (\*Right-2) in the U.K. It aims to recruit 850 patients to provide enough clinical information to statistically validate the earlier findings.

*\* Rapid Intervention with Glyceryl Trinitrate in Hypertensive Stroke Trial-2*

### **Key facts on stroke in New Zealand** – \*Source: The New Zealand Stroke Foundation

- Stroke is the third largest killer in New Zealand. About 2500 people die as a result of strokes every year.
- Stroke is the major cause of serious adult disability in New Zealand.
- Stroke is largely preventable, yet about 9000 New Zealanders have a stroke every year.
- There are an estimated 60,000 stroke survivors in New Zealand. Many are disabled and need significant daily support. However, stroke recovery can continue throughout life.

**Ends**

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The College offers 60 training pathways. These lead to the award of one of seven qualifications that align with 45 specialist titles recognised by the Medical Board of Australia or allow for registration in nine vocational scopes with the Medical Council of New Zealand.