

The Medical Journal of Australia • MJA

MEDIA RELEASE

TELEMEDICINE IMPROVES ACUTE STROKE OUTCOMES IN REGIONAL SETTINGS

EMBARGOED UNTIL 12:01am Monday 13 April 2020

TELEMEDICINE support has improved access to acute stroke therapies in regional hospitals in Victoria, 12 months on from the launch of a pilot program in 16 hospitals, according to the authors of research published online today by the *Medical Journal of Australia*.

The Victorian Stroke Telemedicine (VST) program allows emergency department (ED) clinical staff to contact a stroke specialist on a dedicated toll-free telephone number.

“Audio-visual consultation between the VST stroke specialist, ED clinical staff, and patients (family, carers) was facilitated by a telemedicine cart (mobile computer and camera) at the bedside of the patient,” wrote the researchers, led by Professor Chris Bladin, from the Florey Institute of Neuroscience and Mental Health, and Ambulance Victoria.

“The stroke specialist connects to the telemedicine cart via embedded software that also provides rapid access to a picture archiving and communication system for reviewing brain images. A diagnosis is provided by the specialist and best practice treatments recommended for patients diagnosed with stroke, including thrombolysis or transfer for endovascular clot retrieval when appropriate. On completion, the consultation is documented in a standardised form and sent to each hospital for filing with the patient’s paper or electronic medical record.”

Bladin and colleagues compared outcomes during a 12-month control period with those for the initial 12 months of full implementation of the VST program at each hospital.

They found that a slightly larger proportion of patients with ischaemic stroke who arrived within 4.5 hours of symptom onset received thrombolysis during the intervention than during the control period (37% v 30%), but with telemedicine support some regional hospitals were able to commence stroke thrombolysis for the first time. Among those patients who arrived within 4.5 hours with a final diagnosis of stroke the door-to-CT scan time (median, 25 min v 34 min) and door-to-needle time for stroke thrombolysis (73 min v 102 min) were shorter during the intervention period than the control period. Moreover, the proportions of patients who received thrombolysis and had a symptomatic intracerebral haemorrhage (4% v 16%) were smaller during the intervention period.

“People living in regional Australia are 19% more likely than those in metropolitan areas to have a stroke, but only 53% of regional hospitals offer thrombolysis for patients with stroke (compared with 83% of metropolitan hospitals),” wrote Bladin and colleagues.

“With the support of stroke telemedicine, all key regional hospitals in Victoria can now provide stroke thrombolysis.

“The VST program has delivered acute stroke care to regional hospitals, with outcomes equivalent to, if not better than those achieved in metropolitan hospitals in Australia. Further data monitoring

and analysis will focus on longer term outcomes, and a comprehensive health economic evaluation will be undertaken," they concluded.

Please remember to credit *The MJA*.

The *Medical Journal of Australia* is a publication of the Australian Medical Association.

The statements or opinions that are expressed in the MJA reflect the views of the authors and do not represent the official policy of the AMA or the MJA unless that is so stated.

CONTACTS: Prof Chris Bladin
 Ambulance Victoria
 Monash University
 Florey Institute of Neuroscience and Mental Health
 Email: chris.bladin@unimelb.edu.au

 Prof Dominique Cadilhac
 Monash University
 Florey Institute of Neuroscience and Mental Health
 Email: dominique.cadilhac@florey.edu.au