

# RECOMBINANT TISSUE PLASMINOGEN ACTIVATOR (rt-PA) UTILISATION BY RURAL CLINICIANS IN ISCHAEMIC STROKE: A SURVEY OF BARRIERS AND ENABLERS

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**Aim:** This research aimed to identify barriers which prevent rural health care providers from utilising rt-PA in acute ischaemic stroke and possible support mechanisms which could eliminate these barriers.

**Methods:** Data was obtained from surveys of rural health care providers involved in acute stroke patient care in three rural hospitals that had existing rt-PA pathways. Surveys were anonymous and gathered self assessed ratings of experience, practise environment, attitudes, existing support, barriers and possible enablers regarding rt-PA use in ischaemic stroke. Saturation sampling was used to recruit for the study. Two surveys were used; one to target physicians and a second for nursing staff. The surveys included both yes/no and short answer responses.

**Results:** A total of 10/38 (26%) responses were obtained from physicians and 13/69 (19%) from nurses. Physicians reported the strongest barriers to the use of rt-PA as pre hospital delays (91%), the risk of intracerebral haemorrhage (ICH) (73%) and clinical diagnostic uncertainty (60%). Physicians reported high levels of confidence in the support they received from their stroke units (90%), while reported levels of confidence in support from hospital administration (50%) and the ambulance service (60%) were notably lower.

Rural nurses involved in acute stroke care are poorly educated on stroke and rt-PA treatment for acute ischaemic stroke. A third of the respondents could correctly list six different stroke signs and a quarter could note the correct rt-PA administration time window. This lack of education was a primary barrier to rt-PA utilisation. The risk of ICH was also a barrier to rt-PA administration for rural nurses involved in acute stroke patient care.

**Conclusions:** Primary barriers for rural physicians in the utilisation of rt-PA treatment for acute stroke are pre hospital delays and clinical diagnostic uncertainty primarily due to their fear of ICH. Rural physicians involved in acute stroke care require education, specifically regarding the calculated risk of ICH following rt-PA utilisation if inclusion and exclusion criteria are adhered to. Exposure and practical experience is also required to improve their ability to clinically diagnose stroke patients who are eligible for rt-PA. This study made clear that nurses involved in the care of acute stroke patients also need education on both recognising stroke signs, the use of rt-PA, its efficacy and ICH risk and the use of thrombolysis pathways and protocols for acute stroke.

**Future Directions:** Further research is suggested into the effects of education and practical experience for rural health care providers involved in acute stroke patient care on rt-PA treatment rates.

*For the full report on this project visit our website, follow the link to the Rural Research Capacity Building Program and click on 'view completed projects'*

Jocelyn Williams is an Accredited Practising Dietitian. She is employed by the Acute Stroke Unit in Wagga Wagga as the Specialist Stroke Dietitian. She also runs a private dietetic practise, Shaping Solutions Food Management. Jocelyn is particularly interested in stroke, including acute treatments and secondary prevention with lifestyle modification.



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