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MEDIA RELEASE

ACUTE STROKE CARE INEQUITY: REGIONAL AUSTRALIANS NEED BETTER PROCESSES

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ADDRESSING inequity between metropolitan and regional acute stroke care requires attention to each component of regional workflow, according to the authors of a Perspective published in the *Medical Journal of Australia*.

About 56 000 strokes occur in Australia annually at an estimated economic cost of $5 billion per year; in regional Australia strokes occur at a rate of 250 per 100 000 population per year, while in metropolitan areas, that rate is 210 per 100 000; of the 12 electorates with highest stroke incidence nationally, nine are in regional areas.

According to the authors, led by Dr Tayler Watson from Monash Health, “the benefit of time critical management of acute ischaemic stroke is well established”.

“Variances in workflow burden regional communities by delaying these time-sensitive interventions,” they wrote. “The median time from stroke onset to thrombolysis is 2.3 hours in metropolitan areas and 3.06 hours in regional Australia.

“Endovascular clot retrieval has augmented thrombolysis as gold standard of care in emergent large vessel obstruction; however, accessibility to the therapy is limited to comprehensive centres in major cities. The addition of ECR to the treatment algorithm has unavoidably resulted in significant workflow reorganisation.

“This is especially true in regional and rural health systems, which currently in Australia operate a ‘hub and spoke’ model — where ‘spoke’ health services refer to more comprehensive ‘hub’ services, usually located in metropolitan areas, for definitive treatment.

“Clear, feasible, evidence-based solutions that address the upstream and downstream contributors to inequality in each component of the patient journey (ie, workflow) are required to curtail the current inequity,” wrote Watson and colleagues.

Community awareness: the national FAST (face, arm, speech, time) campaign has increased stroke awareness since 2004, but rural and regional residents “continue to significantly underperform, suggesting the reach and effectiveness of these campaigns in regional areas are insufficient”.

Emergency assessment and transport: A trend towards lengthier wait times for priority cases is observed in rural and regional areas. The use of mobile stroke units have shown clinical benefits, but have not been validated in regional populations. “Clear and effective communication between pre-hospital and in-hospital carers is pivotal to ensuring optimal management.”

Imaging: “One in 14 regional Australian services does not have 24-hour computed tomography capabilities and only 67% have access to advanced imaging such as magnetic resonance imaging (compared with 96% in metropolitan areas).”

Door-to-needle time: “Early thrombolysis significantly improves outcomes at 90 days, but only three of five regional patients with stroke are transferred to a hospital capable of providing thrombolysis and just one in 10 receives the treatment.”

Door-in-door-out time: This a byproduct of ECR and represents the time from hospital arrival to departure for patients transferred from a primary stroke centre to an ECR centre. “Regional health services must be assisted in developing protocols to streamline intervention and transfer.”

Telestroke: Access to specialists in regional Australia continues to be a significant barrier to thrombolysis and ECR evaluation. Telestroke services support regional practitioners in diagnostic and treatment decisions and prevent potentially unsafe interventions and related costs to the health service and the patient. “National telehealth service

standardisation is an enduring challenge in Australia, with political, infrastructural and logistical issues being major barriers to unification of services."

Stroke care for Indigenous Australians living regionally is also of concern, Watson and colleagues wrote.

"Given that many Indigenous Australians live in regional areas, and have high rates of acute ischaemic stoke incidence and mortality, investigation into the appropriateness of the current workflow model in the Aboriginal and Torres Strait Islander population is mandatory."

Please remember to credit *The MJA*.

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