

AuSCR Data Access approved projects

Title	Evaluating the cost-effectiveness of the Australian Stroke Clinical Registry and Australian Stroke Living Guidelines
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AuSCR role	Data provision
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Status	In progress

Summary

In 2023, there were an estimated 45,785 stroke events in Australia including 34,793 first-ever strokes, which equates to one stroke every 11 minutes. Stroke exerts a substantial burden, with high rates of mortality and disability. In fact, of all the neurological disorders stroke is the largest single cause of adult disability. Stroke also exerts a significant economic burden. In 2023, it was estimated the cost of stroke in Australia was \$9 billion. The lifetime costs associated with strokes that occurred in 2023 exceed \$15 billion (almost \$350,000 per person), including \$5.5 billion in healthcare costs, \$6.3 billion in lost productivity costs and \$3.3 billion in costs related to unpaid care. Learning health system models have been proposed to optimise the provision of healthcare services. Having clinical guidelines and infrastructure to monitor evidence-based therapies recommended in the clinical guidelines are two essential components of learning health systems. However, evidence on the costs and benefits of learning health systems are currently lacking. This research project aims to understand the impact of the Australian Stroke Clinical Registry (AuSCR), and the Stroke Living Guidelines, and the value they bring to stroke care in Australia within the context of a broader learning health system.

We will use an economic simulation model to estimate the potential health and economic benefits from the AuSCR and the Stroke Living Guidelines. Costs and benefits from improvements in the provision of evidence-based therapies will also be modelled. Costs and benefits will be applied to patients with stroke who are admitted to hospitals participating in the AuSCR. Data on improvements in the provision of care attributable to the AuSCR will be obtained from analysing patient-level data in the AuSCR over time. Since improvements in the quality of care observed can are not completely attributable to the AuSCR or the Living Guidelines, certain assumptions will be made. For the evaluation of AuSCR, point estimates related to the effect of quality improvement initiatives taken from published peer-reviewed literature (i.e. the effectiveness of hospital quality improvement initiatives) will also inform the amount of improvement observed that is attributable to the AuSCR. Several scenarios may be presented where the proportion of improvement attributable to the AuSCR is varied in each. For the evaluation of the Living Guidelines, a threshold analysis will be undertaken to determine the level of contribution needed for it to be considered cost-effective. Scenario analyses using a sliding scale for the level of contribution will also be employed. We will obtain other inputs for costs and benefits from several different sources, including the AuSCR Steering Committee, peer-reviewed literature, and other published reports. The main outcome of interest will be the incremental cost-effectiveness ratio (ICER) capturing mean differences in health outcomes and costs. Health outcomes will be measured by quality adjusted life year (QALYs), disability adjusted life years (DALYs), and years of life.