Australian Stroke Coalition

POSITION STATEMENT
Stroke Learning Health System approach in Australia

Background

Stroke is an expensive, high burden condition that requires coordination across all facets of the healthcare system, from pre-hospital/emergency services through to hospital and community-based care. Variation in access to recommended evidence-based stroke care remains a major area of concern across Australia. (AuSCR 2022; Purvis 2021) Coordinating change and improvement across the components of the healthcare system is often slow and difficult to sustain. (Melder 2020) Advances in research and digital health integration have immense promise to improve adherence to evidence-based care. (Melder 2020) Involvement in partnerships between consumers, researchers and health care providers, supported by a strong culture of innovation and adaption is needed to optimise care delivery, and patient experiences and outcomes. The Learning Health System (LHS) approach, first proposed in the United States in 2007 by the Institute of Medicine (Etheredge 2007), can be applied as a dynamic, multifaceted framework that integrates existing evidence and real-world data to inform clinical decision making. Important aspects of a LHS are that it can deliver continuous and near real-time data insights to support improvements in clinical care, it has governance and involvement of all relevant stakeholders, and it supports a culture of continuous review and adaption. (Enticott 2021; Zurynski 2020) As such, this aligns with the National Safety and Quality Health Service (NSQHS) Standards (https://www.safetyandquality.gov.au/standards/nsqhs-standards/clinical-governance/clinical-governance-standard).

As a national voice for stroke, the Australian Stroke Coalition (ASC) is committed to supporting hospitals and health professionals across Australia to strengthen their capabilities in the delivery of evidence-based stroke care.

The Stroke Learning Health System for Australia

Internationally, application of the LHS approach in stroke has resulted in improved stroke care and outcomes, but comprehensive adoption has been rare. (Cadilhac 2023) Within Australia, stroke is one of the only examples that fulfills the majority of LHS components. (Teede 2023 under review) Advances in research and rapid integration within the living stroke clinical guidelines (English 2022) has ensured Australia leads the way in supporting systems that encourage evidence-based care delivery. In addition, acute data systems exist such as the national Acute Stroke Standards and indicators (ACSQHC 2019), the Australian Stroke Clinical Registry (AuSCR) supplemented by the National Audit Program utilising data infrastructure that provides access to summarised data reports. Similar systems for rehabilitation have been developed through the Australasian Rehabilitation Outcomes Centre (AROC), along with the National Stroke Audit program. Various quality improvement efforts also exist across several jurisdictions. Further refinement and embedding of the components of a LHS for stroke will maximise the impact of existing resources.

The Learning Health System (Enticott 2021) integrates:

i) evidence from **stakeholder engagement** and priority setting;

ii) evidence from **knowledge generation and synthesis** (research and guidelines);

iii) evidence from **data and information systems** (real world data) and benchmarking (informatics); and

iv) evidence from **implementation science** and healthcare advocacy and systems improvement.

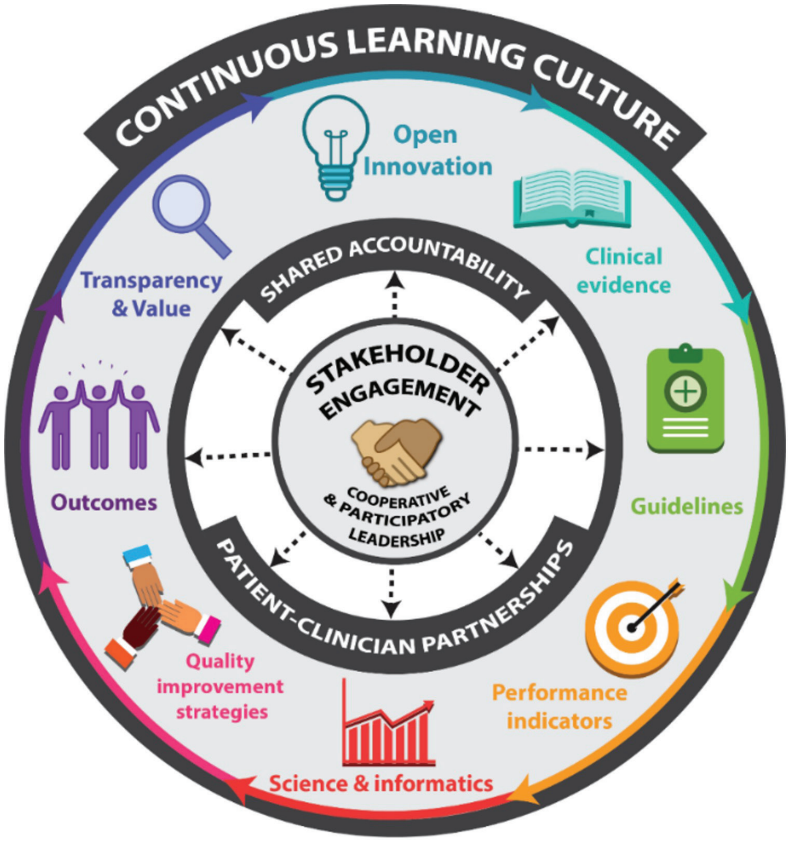

Figure 1: Elements of the Learning Health System (Cadilhac 2023)

Stakeholder engagement and priority setting

The ASC brings all stakeholders together to work on agreed priorities to improve outcomes for people with stroke. **The ASC strongly recommends an active partnership model between those with lived experience, clinicians, healthcare administrators, and researchers in all initiatives.**

Research development and synthesis

Research discovery in stroke care has led to substantial improvements in outcomes. However, rapid integration of new trial evidence into existing literature to provide actionable recommendations for clinicians to use is needed. (Elliott 2021) **The ASC supports the living Clinical Guidelines for Stroke Management as an important tool for synthesis of research evidence and translation into routine practice.**

Data systems and benchmarking

Knowledge of performance is critical to identify gaps in care and to help prioritise quality improvement activities. The ASC has previously provided oversight of the establishment of the Australian Stroke Data Tool and the National Stroke Data Dictionary as important mechanisms in collecting routine standardised data for quality-of-care assessments and benchmarking.

The ASC recommends that:

a) **all acute and rehabilitation stroke services routinely monitor care by collecting national acute stroke quality of care indicators (ACSQHC 2019, AuSCR, Stroke Foundation) and/or agreed rehabilitation indicators (AROC, Stroke Foundation)**

b) **stroke services quality committees regularly review stroke data dashboards that monitor near real time performance**

c) **stroke services compare their performance with national benchmarks and actively drive improvement.**

Implementation and Healthcare Improvement

Review of local performance data by clinical teams is one important strategy to drive improvement in evidence-based care delivery (Ivers 2012) and there are good examples of this in stroke (Fonarow 2010; Asplund 2011). However, the collection and monitoring of stroke data is only useful if acted on to improve care. Implementation involves understanding local issues that both hinder (barriers) and enhance (enablers) care, and tailoring strategies to address these issues. Evidence-based implementation strategies include education, facilitated interdisciplinary workshops to develop tailored implementation plans, reminders, improvement collaboratives, consumer mediated strategies, or peer influence (key opinion leaders). (Grimshaw 2012; Forsetlund 2021; Kilkenny 2021; Lowther 2021) **The ASC encourages the use of evidence-based implementation strategies aimed at improving stroke care.**

System strategies should also be used where relevant, such as financial incentives (Cadilhac 2019), policy documents (such as agreed frameworks/position statements), or system redesign. **The Stroke Unit Certification program should be used by all stroke unit services as a system strategy to improve access to evidence-based care.**

About the ASC

Established in 2008, the Australian Stroke Coalition (ASC) is co-convened by the Stroke Foundation and the Stroke Society of Australasia (SSA), and brings together representatives from groups and organisations in the field of stroke treatment and care, including clinical networks and professional associations and colleges. The ASC tackles agreed priorities to improve stroke treatment and care and raise the profile of stroke at a state and national level.

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