

ACvA Stroke Clinical Theme Workshop 1



Draft Report
June, 2022



Acknowledgements

The Australian Cardiovascular Alliance (ACvA) acknowledge the Traditional Custodians of country throughout Australia where the participants of the workshop work, live, and meet to improve cardiovascular and stroke outcomes for the community. We recognise the Traditional Custodians' continuing connection to land, waters and community and pay our respects to them and their cultures, and to Elders both past and present.

Executive Summary

On the 30th May 2022, the Australian Cardiovascular Alliance held a Stroke clinical theme workshop that was facilitated by Professor Geoffrey Donnan AO. The workshop aimed to bring together participants from across the sector (consumers, researchers, clinicians and industry) to develop national, ambitious, and collaborative research solutions to address the unmet needs in stroke. The goal of the workshop was to agree on 'one big idea' that would shift the dial and deliver impact for stroke patients and their families. This 'one big idea' concept would then be further developed in follow-up workshops.

Stroke in Australia

In 2020, 27,428 Australians experienced stroke for the first time and by 2050 this number is predicted to almost double to 50,600 Australians. Furthermore, individuals living in regional areas are 17% more likely to suffer a stroke. There is a concerning and continuing gap between stroke patients treated in a metropolitan area compared to those being treated in regional areas. Data from the Acute Audit 2021, conducted by the Stroke Foundation, show that 84% of metropolitan patients received stroke unit care (the gold standard care) in comparison to only 41% of stroke patients in a regional hospital. Almost half a million Australians are living with the impact of stroke and the estimated NDIS cost alone is \$900m annually. Better prevention, earlier and more accessible treatment and recovery management plans are necessary to make significant inroads in improving stroke outcomes, and the associated health and economic gains.

Workshop discussion summary

The workshop participants discussed unmet needs in six key topic areas and several big ideas were discussed and are summarised below:

1. Prevention:
 - Improve primary prevention through a national screening program for AF and hypertension
 - Build a national one stop shop stroke navigation platform
2. Intracerebral haemorrhage (ICH)
 - Establish a registry to better understand better ICH as the most severe type of stroke with no level 1 evidence for any treatments
 - Eliminate the existing nihilism. Undertake a trial to demonstrate that proper management of ICH patients leads to better outcomes
3. Inflammation
 - Understand the role and timing of the inflammatory response in both haemorrhagic and ischemic stroke and in post-stroke fatigue
 - Establish a large prospective cohort to study the interplay between inflammation and stroke
4. Embolic Stroke of Uncertain Source (ESUS) and Atrial Fibrillation (AF)
 - Earlier detection and better characterisation of atrial myopathy and ESUS to prevent strokes and to provide a more targeted approach to treatment.
 - Explore the link between AF, stroke and cognitive decline and dementia
 - Conduct a large longitudinal cohort study with biomarkers (imaging, blood based, cardiac factors, recovery, fatigue, inflammation) with a core dataset across multiple trials.
5. Recovery
 - Undertake a 100 centre (or large) cohort study to build understanding of recovery (phenotypes), Australian care pathways (rural, regional, urban) and opportunities for standardisation

6. Improving equitable access to clinical trials and research in regional, rural, and remote (RRR) communities
 - Establish a portfolio of clinical trials that are “shovel-ready & tele-ready” to leverage infrastructure investments into regional, rural and remote clinical trial support. This will support access into RRR Australia and provide better patient representation and outcomes and contribute to building the necessary capacity in these areas.

Straw man concept

In summing up the discussion it was acknowledged that to make a transformative change in stroke prevention and patient outcomes we need to be bold, think big and take a wholistic approach through multidisciplinary collaborations with researchers, clinicians, industry and consumers at the centre.

Australia-wide stroke cohort

From discussions there were repeated calls for establishing a large Australia-wide cohort that could support a range of embedded trials within this large cohort. A minimum data set would be defined and data collected across the broad cohort and suggestions for variables included biomarkers, imaging, cognitive elements, fatigue elements, and recovery elements. It was noted that any collection of data from this cohort would need to consider how best to integrate and leverage from existing national stroke data infrastructure including the Australian Stroke Clinical Registry. These trials would be promoted in RRR Australia as well as metropolitan areas. Within this envelope, we propose to establish two large cohorts to enable the study of:

1. Atrial myopathy, AF and ESUS – to define atrial myopathy and characterise ESUS and to study the link between stroke, atrial disease and cognitive decline.
2. Stroke recovery – study underlying biology, recovery processes and services, and navigation.

Delivery mechanisms

A major delivery mechanism will be sought through leveraging the recent Commonwealth infrastructure investment of \$110M into supporting clinical trials in RRR Australia and through the well-established stroke network within metropolitan centres. There is an opportunity to take clinical trials and research to the bush and to take a deep dive into the gaps and issues that face stroke patients in all postcodes and provide solutions to address inequities.

Next Steps

A second workshop will be held to identify the leads and to scope project plan, requirements and resources.

Introduction

Cardiovascular diseases (CVD) including stroke and blood vessel diseases remains the leading cause of death in Australia and is the greatest healthcare expenditure cost, at around \$11 billion annually. Concerningly, one Australian will have a stroke every 19 minutes, with often devastating outcomes. CVD and stroke is also a main contributor to the health gap between Aboriginal and Torres Strait Islander peoples and non-Indigenous Australians.

The ACvA Clinical Theme Initiative

The ACvA Clinical theme initiative aims to bring together researchers, clinicians, health and infrastructure providers, industry, governments, and community groups from across Australia to strategically address the big challenges in cardiovascular disease and stroke.

In August 2021, ACvA undertook an open Expression of Interest asking for top three research priorities/unmet needs that could be addressed through a national collaborative research program. Over 100 submissions were received, of which over one-third (35) of respondents identified Stroke as a key area where there was unmet need. (Table of research priorities from EOI attached)

EOI topics were broad and covered prevention, acute care and secondary prevention and rehabilitation, as well as, including improvement in access and equity of care for priority populations and RRR communities and importance of data and the opportunity presented by new technologies and telehealth.

Pre-workshop preparation

To assist with the preparation for a workshop some pre-planning meetings were held to distil the stroke EOIs into potential topics and to identify relevant stakeholders to invite to first workshop. Participants in these planning meetings included Geoff Donnan, Chris Levi, Julie Bernhardt, Dominique Cadilhac, Mark Parsons, Vincent Thijs and David Howells.

Three pre-workshop planning meetings were held and based on these discussions the following six topics were proposed as key focus areas for the first workshop that would benefit from a collective effort to address unmet needs, identify gaps, and explore opportunities that could all result in a step-change in delivering better outcomes for stroke patients.

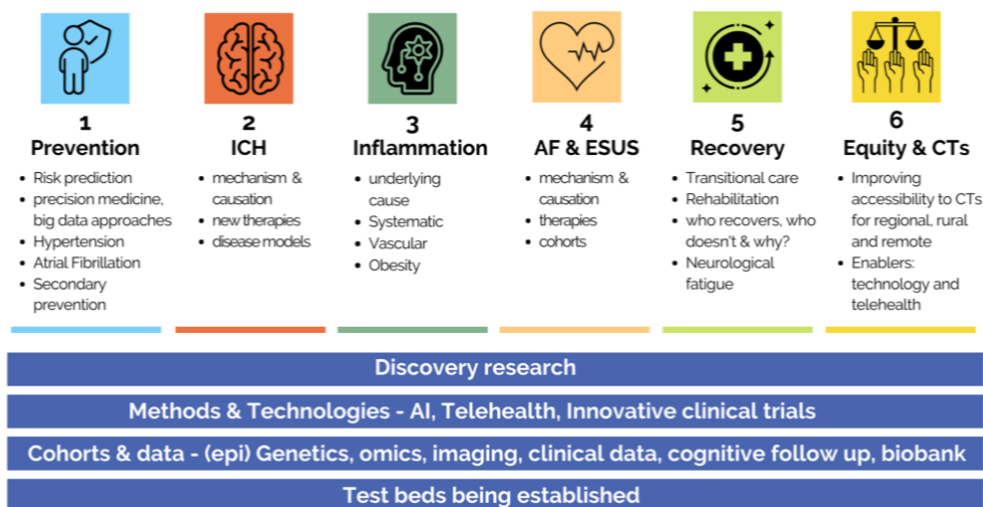


Figure 1 Identified six topics for discussion at the first stroke workshop

Stroke Foundation Consumer Council Feedback for ACvA Stroke Clinical Theme Workshop

A key stakeholder for these workshop are those with lived experience of stroke. To ensure consumers were part of this initiative from the start, members of the Stroke Foundation consumer panel and the SPHERE Cardiovascular research panel were invited to the workshop. In preparation, the Stroke Foundation held a consumer workshop focus group and a summary of the priorities and outcomes from this focus meeting are provided below.

Stroke Prevention:

- Better diagnosis and management of AF
- Effective awareness campaign about the risk of stroke related to hypertension
- Improve and increase risk assessment for hypertension in primary health care practice.
- Need to understand why strokes are happening to young people - are there links to the contraceptive pill, hormones or pregnancy or other risk factors.
- Has risk research explored gender differences in the prevalence of stroke in young people?
- Research into unexplained strokes ie. No risk factors or explanation for the stroke. Is there any association with headaches or migraine?
- How often are TIAs dismissed as stress headaches and not investigated in young people?
- Poorly diagnosed stroke in young people with no identifiable risk factors – misdiagnosed as drug addicts.

Recovery:

- Why is there inconsistency in treatment after stroke, particularly aphasia? No national approach or standards.
- GP knowledge of stroke management and recovery is generally poor.
- Transition to home a problem with increased and better acute care a higher proportion of people who have a stroke are discharged home after a relatively short stay in hospital. No time to fully assess cognitive or psychological impacts of stroke (PTS like shock).
- New pathways to recovery care are needed to provide multidisciplinary, supportive care and psychological support. Access to neuropsychologist very limited especially in regional and rural areas – need for new models of care including telehealth.
- Communication and information provision needs to focus on the positive not negative outcomes of stroke – good communication approaches need to be defined?
- Current rehabilitation and recovery pathways are too complex, inconsistent, depend on where you live and if you can pay, are not fit for purpose considering the changes to acute care and the improved outcomes that are being achieved. A new model is needed- start again with the patient at the centre not the service provider.

The Stroke Clinical Theme Workshop

The stroke workshop was held online on the 30th May 2022 and attended by 51 participants from across Australia and facilitated by Professor Geoff Donnan AO (Clinical stroke neurologist and Professor of Neurology at the University of Melbourne and co-chair, of the Australian Stroke Alliance). Represented at the meeting were clinicians, researchers, allied health, stroke consumer representatives, peak bodies, industry partners, National Collaborative Research Infrastructure Strategy capabilities. The agenda can be found [here](#) and detailed list of accepted attendees can be found in Appendix 1.

Topics Discussions

For each topic there was an expert Chair, who was tasked with setting the scene and leading the discussion. All were asked to consider "what do we know, what don't we know and where we could go?". A summary of the discussions from each six topics is provided below.

1. Stroke prevention (Chair, Seana Gall)

- While the rates of stroke incidence is decreasing, due to the increasing and ageing population in Australia, the absolute number of stroke occurrences is increasing and forecasted to increase by more than 50% in the next 50 years. This presents serious problems to the health system and Australian community.
- There is poor identification and management of risk factors of stroke e.g. uncontrolled blood pressure and undiagnosed AF and awareness
- >20% of people leave hospital without adequate secondary prevention plans

Opportunity	Solution
<ul style="list-style-type: none"> • Leverage existing prevention programs e.g. STOPstroke (synergy grant) 	<ul style="list-style-type: none"> • Connecting existing initiatives (e.g. STOPstroke and iRebound) to develop a national one-stop shop for stroke prevention information and tools that can be accessed by clinicians and consumers • Personalised medicine approach
<ul style="list-style-type: none"> • Increasing awareness and uptake of Heart Health Check by primary care and the community 	<ul style="list-style-type: none"> • The Stroke Foundation is in the process of updating the Management of Absolute cardiovascular risk guidelines, which provides a good opportunity to advocate to the MBS taskforce to increase the Heart Health Check MBS item rebate for GPs
<ul style="list-style-type: none"> • Improve secondary prevention 	<ul style="list-style-type: none"> • Can utilise pharmacists and cardiac rehabilitation services as part of routine post-stroke care and management • Leveraging existing community-based services (e.g. My Health For Life (QLD), Get Healthy coaching service)
<ul style="list-style-type: none"> • Secondary prevention is hindered by the fragmented and complex health system. We need a system-wide approach to ensure no one falls through the chasm. 	<ul style="list-style-type: none"> • A navigator program that guides patients through the health care system from start to end, and also re-entry after discharge (e.g. by providing checkpoints) • Consideration of a central navigator system (platform) with different modalities e.g. digital, telephone, in-person • Also a need to include psychology and mental health support for stroke patients, especially young stroke survivors.

	<ul style="list-style-type: none"> It is important that secondary prevention programs are personalised
<ul style="list-style-type: none"> Medication adherence is poor 	<ul style="list-style-type: none"> More research into understanding the drivers for adherence to medication
<ul style="list-style-type: none"> Better identify people with high blood pressure and AF (also highlighted in Stroke Foundation Strategy 2022) 	<ul style="list-style-type: none"> AFScreen and May Measurement Month joined forces with a combined screening program to raise public awareness Reinvigorate stroke risk awareness campaigns with targeted content that is relevant to different cultures and is age-appropriate, with use of multimedia platforms
<ul style="list-style-type: none"> Young Stroke 	<ul style="list-style-type: none"> More research required to understand why young people are having stroke – we can capitalise on existing and available datasets and deep dive

Big picture projects

1. Establish a national AF screening and management program

2. Build a national one stop shop stroke navigation platform. Leverage existing programs and systems to create a platform for consumers and clinicians to access with ease.

2. Intracerebral haemorrhage (Chair, Ken Butcher)

- Intracerebral haemorrhage (bleeding into the brain tissue) is the second most common cause of stroke (15-30% of strokes) and the most deadly.
- Haematoma expansion is detrimental for ICH patients, and current drugs are not working. Lowering blood pressure has been one treatment method however trials have not been successful in providing the supporting evidence. More research is required.
- There is no concrete evidence of treatment using anti-coagulant reversal in acute ICH
- There is no benefit shown for surgical intervention for ICH
- There is currently no evidence-based treatments available for patients with ICH

Challenge	Opportunity
<ul style="list-style-type: none"> No current evidence-based treatments for ICH 	<ul style="list-style-type: none"> Need more research to understand mechanism and to develop novel treatments for ICH Need better animal models for ICH to support basic research
<ul style="list-style-type: none"> ICH patient need to be identified and treated earlier in the acute care setting ICH patients treatments are not tracked (cf ischemic stroke) 	<ul style="list-style-type: none"> Prioritise ICH patients and quickly differentiate from ischemic stroke patients. Change the way ICH patients are tracked in the acute hospital setting, and Track prospectively the treatment approach and outcomes for ICH patients, including broader integration within national clinical quality registry infrastructure for Stroke.

<ul style="list-style-type: none"> • Difficult to capture ICH patients as often treated at different services (ED, surgical etc) 	<ul style="list-style-type: none"> • Review the National Acute Stroke Clinical Care standards to ensure adequate representation of the indicators that will permit ICH monitoring. • This will support the capture of data in registries and enable feedback to hospital CEs on quality of care.
<ul style="list-style-type: none"> • Cultural issues to overcome with clinical nihilism existing for ICH. • Lack of intensive care for ICH patients 	<ul style="list-style-type: none"> • Need for intensive stroke units to actively manage ICH patients

Big picture projects

1. Better management of ICH patients in the acute hospital setting.

- Establish a registry with national prospective ICH patient disease type and treatment data that can be linked to existing registries to obtain longer-term outcomes data to better understand ICH, which is currently a poorly understood problem with the worst outcomes.

2. Overcoming ICH nihilism.

- ICH is the stroke subtype that causes the most disability and better intensive support for ICH patients is required (e.g. through intensive stroke units).

3. Inflammation (Chair, Connie Wong)

- Following a stroke there is an acute inflammatory response in the brain, as well as systemic inflammatory responses that affects the immune, gut and endocrine systems, both acutely and chronically.
- Chronic systemic inflammation may be playing a role in increasing the risk of stroke.
- There is little known on how acute, systemic and chronic inflammation affects stroke incidence and recovery.

Challenge	Opportunity
<p>To understand the acute inflammatory response in the brain</p> <ul style="list-style-type: none"> • Need to better understand the mechanism • Need better animal models of stroke to support basic research 	<ul style="list-style-type: none"> • Generate better animal models (young and old) for stroke to allow the detailed analysis of the acute inflammatory response in brain post-stroke. • Better understanding of the acute post-stroke inflammatory response in the brain could identify novel anti-inflammatory drug targets to improve brain repair.
<p>To understand the role of chronic and systemic inflammation on stroke incidence and recovery</p> <p>Systemic inflammation post-stroke affects many organs and tissues including the immune, gut and endocrine systems. These pathologies present clinically in hours and can be transient or chronic, often continue to develop after the patient is discharged and often for years later.</p>	<ul style="list-style-type: none"> • Start to track and monitor long-term outcomes for stroke patients to better understand the effect of inflammation on stroke incidence and recovery. • Investigate the relationship between systemic inflammation and neurological fatigue after stroke

<ul style="list-style-type: none"> • Need to better understand the effect of chronic systemic inflammation on stroke patients. • Need to understand the interplay between existing systemic inflammation and stroke incidence • Need to understand the temporal mechanisms and cellular response to systemic inflammation before we can identify potential drug targets to improve recovery and patient outcomes. • Does systemic inflammation contribute to neurological fatigue after stroke? Neurological fatigue is a big problem for stroke survivors and is poorly understand. The potential interplay between inflammation and fatigue needs further research. 	
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Big picture projects

1. **Establish a large prospective cohort to study inflammation** and its effects on stroke patients in the short-term and longer term as well as the potential interplay with post-stroke fatigue.
2. **Need better animal stroke models** for the identificataion of targets for novel anti-inflammatory therapy interventions.

4. Cardiac myopathy, AF and Embolic Stroke of Uncertain Source (ESUS) (Chair, Mark Parsons)

- Embolic Stroke of Uncertain Source is a sub-group of cryptogenic strokes, often occurring in younger patients.
- The ability to accurately define the topography and mechanism of stroke is crucial to ensure the most effective care and therapy. Previously, it was thought the cause of ESUS was from undiagnosed AF, however underlying atrial myopathy is now thought to be the major cause of ESUS with AF often occurring post-stroke.
- Treatment with NOACs (New Oral AntiCoagulants) have recently been shown to have no significant effect. However, this may be due to the lack of a targeted treatment approach and the inability to stratify ESUS patients.
- Atrial myopathy occurs in response to many of the common stroke and cardiovascular risk factors (hypertension, obesity, alcohol, kidney disease, smoking, aging, and systemic inflammation).
- Earlier detection and better characterisation of atrial myopathy and ESUS provides the opportunity to prevent strokes and to provide a more targeted approach to treatment for people at high risk of a stroke or a vascular event.
- There is a growing recognition of the link between AF, stroke and, cognitive decline and dementia and thus better screening and secondary prevention would have long-term health benefits.

Challenge	Opportunity
While we have many tools to assess atrial myopathy (blood biomarkers, ECG markers ECHO markers, acute cardiac CT) we need to	<ul style="list-style-type: none"> • Opportunity for multidisciplinary collaboration with cardiologists to better define atrial myopathy and characterise ESUS to better treat and prevent strokes.

be able to better characterise atrial myopathy and ESUS.	
Anyone with AF and/or a stroke survivor is at higher risk of cognitive decline and dementia.	<ul style="list-style-type: none"> To better understand stroke, atrial disease and cognitive decline we need to undertake cognitive assessments with long-term follow up.

Big picture projects:

- Large longitudinal cohort study** comprised of stroke patients as well as people at high risk of having a stroke (people with hypertension, obesity, diabetes, AF without a vascular event, and others with markers of Inflammation). The wider cohort could also be used for variable sub-studies and randomised control trials (for e.g. to better understand ESUS, atrial myopathy, and AF). The cohort will be investigated for biomarkers, imaging, cognitive elements, fatigue elements, and recovery elements and would be followed up for many years.
- Randomised Control Trial** – targeted study of high risk ESUS patients to investigate anticoagulation versus antiplatelet treatment for ESUS related to atrial myopathy.

5. Recovery (Chair, Julie Bernhardt)

- We do not understand the underlying biology of stroke recovery - why do some patients have a good recovery and not others?
- Prediction models for stroke recovery are limited.
- Inequities exist between urban and rural communities
- Mental health is a big issue in recovery and how you adapt to life post-stroke
- Community based care is complex and difficult to navigate

Challenge	Opportunity
<p>How can we improve stroke rehabilitation and recovery and make a transformative change?</p> <ul style="list-style-type: none"> Currently no consistent guidelines for stroke rehabilitation and recovery What should acute-care rehab look like? Don't understand the biology of recovery so don't have markers apart from patient reported outcomes. No minimum standards for recovery 	<p>Create a new national system of care for stroke rehabilitation and recovery (maximising new technologies, telerehab, telehealth etc) and provide a simple navigation system</p> <ul style="list-style-type: none"> Define a set of national minimum standards for stroke rehabilitation and recovery (associated with better recovery) that if we deliver will provide better outcomes, needs to include mental health. Develop ideal platform for delivery, will need to be flexible to enable maximum national reach and uptake e.g. suggested experimental design - identify a minimum group of processes that can be delivered in a variety of ways and compare to routine care. Develop guidelines for rehabilitation and recovery for patients (and also set patient milestones for recovery)

	<ul style="list-style-type: none"> • Need better data to support improvements in rehab services and data are essential if we are to lobby government for improvements and provide solutions. Explore the use of data capture through the national stroke rehabilitation audit by the Stroke Foundation. Suggested big idea – undertake a 100 site study of rehab services that includes: delivery method, dose of rehab, biomarkers, outcomes, and health economic evaluations. • Drive a more personalised approach to rehabilitation and recovery using big data and data linkage approaches and prediction modelling. Generate a large recovery dataset that could be used to tailor personalised rehabilitation and recovery. • Consumers must be involved in all aspects of research and co-design • Leverage insights from the Young stroke project
<p>Need better information and navigation.</p> <ul style="list-style-type: none"> • Need consistency across the pathways and across jurisdictions • More outreach and information for the community providers, particularly for NDIS • GP knowledge of stroke recovery and available services is limited 	<ul style="list-style-type: none"> • Leverage learnings from the MRFF young stroke project to develop a one-stop shop platform for delivering processes (services), co-design with consumers. • Reduce the divide between the city and the bush.
<p>Need for stroke specific mental health services</p> <ul style="list-style-type: none"> • There is a need for a mental health care pathway for stroke patients (trauma and grief models are needed for stroke). • Current psychological interventions need to be modified for stroke patients 	<ul style="list-style-type: none"> • A mental health care pathway for stroke patients is essential.

Big picture project

1. Large cohort study to understand – A. recovery and B. processes.

Evidence from this research will permit a national standard of care to be set (including a mental health component) and will underpin the development and co-design of a platform for delivering processes and services, and recruitment of patients into targeted clinical recovery trials that will be simple to navigate and will reach all postcodes.

6. Equitable access to clinical trials and research for regional, rural and remote communities (Chair, Chris Levi)

- Trials can potentially improve the regional health disadvantage. Currently access to clinical trials is poor and not equitable.
- Hub and spoke models work in Australia
- End user (consumer, industry and academic) focussed, open partnerships are best.
- Need capacity building in the regional, rural and remote regions as delivery workforce to recruit is largely non-existent.

Challenge	Opportunity
How can we improve equitable access to trials for regional, rural and remote communities?	<p>There is a mult-stakeholder RRR (R3) policy approach in development that will support R3 trials infrastructure and systems</p> <ul style="list-style-type: none"> • Funding has been provided by the 2019 Commonwealth funding initiative \$110M to address inadequate access to and benefits of clinical trials in rural/regional areas. • NSW has secured \$30M for a Health Service led rural, regional and remote clinical trials support units (\$30M) • Qld Health has secured \$75M (Telehealth trials) • Deliverables <ul style="list-style-type: none"> ○ Increase number of clinical trials ○ Increase diversity (multiple disease/condition areas) ○ Increase patient recruitment/retention in trials. • Increase trial delivery modes • Start with “shovel ready – tele-ready” trials that can leverage these developing national infrastructures to help run trials (and cohorts). • The established stroke telehealth network platform (NSW) could also be leveraged for research purposes outside of metro areas in Australia.

Big picture project

1. **Leverage the \$110M investment into RRR CT infrastructure with ‘shovel-ready and Tele-ready’ clinical trials** that will support the development and bring the benefits of clinical trials to rural and remote Australia. It will provide better CT representation and outcomes and will contribute to building workforce capacity outside of the metro areas. Could also include trials that have been discussed in the other topics.

Straw man proposal

Having considered all topics the key straw man proposal put forward to be further developed in the next workshop was to develop a portfolio of trials which are promoted in rural, regional and remote Australia as well as in metropolitan areas. Within this envelope, we propose to establish two large cohorts to enable the study of:

1. Atrial myopathy, atrial fibrillation and Embolic stroke of uncertain source cohort, and
2. Stroke recovery – underlying biology, recovery processes and services, and navigation.

Both inflammation and secondary prevention components will also be embedded and a minimum data set across all cohorts will be defined and standardised to ensure a powerful dataset is being generated for downstream analysis, linkage and predictive modelling.

Collaboration with and leverage of the national regional, rural and remote clinical trial (RRR CT) policy and infrastructure investment will provide a key delivery vehicle into RRR Australia. In addition, the well established stroke telehealth network platform has the potential to be expanded and exploited for research purposes.

All research proposals and planning will include strong consumer engagement at every stage. The vision to bring research and trials to the bush will require people living in regional centres to be involved in the co-design with the lived experience to ensure the systems designed are fit for purpose.

Next Steps

The workshop summary will be circulated to all participants for feedback and input. A smaller group will be invited to join a pre-planning meeting for the next workshops where we aim to scope the strawman proposal further, identify additional stakeholders and develop a broad project plan for consideration and further development.

For any further information please contact Catherine Shang, ACvA (Catherine.shang@ozheart.org)

Appendix 1. List of online workshop acceptees

Name	Organisation
Ainslie Cahill AM	Leader, Consumer and Community Involvement, Maridulu Budyari Gumat/Sydney Partnership for Health, Education, Research and Enterprise (SPHERE)
Andrew Gilbert	CEO, Bioplatforms Australia
Anna Balabanski	Neurologist and Stroke Physician, Alfred Health Senior Research Fellow, Australian Stroke Alliance
Annmarie Pendleton	Medical Science Liaison, Bristol Myers Squibb
Arman Sabet	Neurologist, Gold Coast University Hospital
Ben Freedman	Director External Affairs, Heart Research Institute/Charles Perkins Centre Group Leader, Heart Rhythm and Stroke Group, Heart Research Institute Honorary Professor of Cardiology, Sydney Medical School, University of Sydney Honorary VMO, Concord Repatriation General Hospital
Bernard Yan	Professor of Neurology, University of Melbourne President, Stroke Society of Australasia
Brad Sutherland	Associate Professor, University of Tasmania NHMRC Boosting Dementia Fellow
Brenda Booth	Stroke Foundation consumer representative
Caleb Ferguson	Associate Professor, School of Medicine and Nursing, University of Wollongong NHMRC Emerging Leadership Fellow
Carlos Garcia Esperon	Conjoint Lecturer, School of Medicine and Public Health, University of Newcastle
Cheryl Carcel	Senior Research Fellow, The George Institute NHMRC Emerging Leader Fellow
Chris Levi	Neurologist and Director, John Hunter Hospital Health and Innovation Precinct
Chris Sobey	Professor in Physiology, Department of Microbiology, Anatomy, Physiology & Pharmacology, La Trobe University Co-Director, Centre for Cardiovascular Biology and Disease Research Co-Head, Vascular Biology & Immunopharmacology Group Director, Australian Cardiovascular Alliance
Claire Muller	Neurologist, Royal Brisbane and Women's Hospital
Connie Wong	Associate Professor, Monash University
Coralie English	Professor, University of Newcastle
David Howells	Professor, University of Melbourne
Dominique Cadlihac	Professor, Monash University
Eleanor Horton	Stroke Foundation consumer representative
Elizabeth Lynch	Senior Research Fellow, Matthew Flinders Fellow, Flinders University
Geoff Donnan AO	Professor of Neurology, University of Melbourne Co-Chair, Australian Stroke Alliance
Jacqueline Schmitt	Research Program Manager, National Heart Foundation of Australia
Jacqui Hislop-Jambrich	Principal Clinical Research Scientist, Canon Medical
Jamie Vandenberg	Professor, Victor Chang Cardiac Research Institute
Jennifer Muller	Stroke Foundation consumer representative
John Parisot	Business Development Manager, Therapeutics Innovation Australia
John Pierce	Postdoctoral Research Fellow, Centre of Research Excellence in Aphasia Recovery and Rehabilitation
Julie Bernhardt	Professor, University of Melbourne Deputy Director, Florey Institute Director, Centre for Research Excellence Stroke Rehabilitation and Brain Recovery

Kate Hayward	Senior Research Fellow, Florey Institute NHMRC ECR Fellow
Ken Butcher	Professor, UNSW Director, Clinical Neurosciences, Prince Wales Clinical School, UNSW
Kim Beesley	Stroke Foundation consumer representative
Kim Malkin	Stroke Care Program Manager, Boehringer Ingelheim
Leeanne Carey	Professor, Florey Institute Discipline Lead, Occupational Therapy, School of Allied Health, La Trobe University
Maree Hackett	Program Head, Mental Health, The George Institute Professor, Faculty of Medicine, UNSW Sydney Professor of Epidemiology, The University of Central Lancashire
Maria Bubnic	Executive Director, Victorian Department of Health
Mark Parsons	Professor, UNSW Professor, Neurology, Faculty of Medicine, University of Melbourne Director, Maridulu Budyari Gumal/Sydney Partnership for Health, Education, Research and Enterprise (SPHERE)
Michael Dobbie	CEO, Phenomics Australia
Michael Nilsson	Professor, Global Innovation Chair of Rehabilitation Medicine, College of Health, Medicine and Wellbeing, University of Newcastle
Michael O'Sullivan	Professor, Centre for Clinical Research, Faculty of Medicine, University of Queensland
Milica Markovic	Senior Project Officer, Department of Health, Victoria
Natasha Lannin	Professor of Neuroscience, Monash University
Neil Spratt	Professor, School of Biomedical Sciences and Pharmacy, University of Newcastle Neurologist, John Hunter Hospital
Nichola Browning	Stroke Foundation consumer representative
Rene Stolwyk	Associate Professor, Monash University
Richard Lindley	Professor of Geriatric Medicine, Westmead Clinical School Professorial Fellow, The George Institute for Global Health Professor of Geriatric Medicine, Blacktown Hospital Principal Investigator, Westmead Applied Research Centre
Ryan Clarke	Manager, Clinical Operations, Bristol Myers Squibb
Saran Chamberlain	Young Stroke Project Coordinator, Stroke Foundation
Seana Gall	Senior Research Fellow, Menzies Institute for Medical Research, University of Tasmania
Shaoming Chen	Lead, Stroke Care, Regional Operating Unit ASEAN, South Korea, Australia & New Zealand, Boehringer Ingelheim
Sharon McGowan	CEO, Stroke Foundation
Steven Faux	Professor and Director, Rehabilitation Unit, St Vincent's Public Hospital
Toni Arfaras	Stroke Foundation consumer representative
Tony Finneran	Stroke Foundation consumer representative
Tony Rolfe	Stroke Foundation consumer representative
Wojtek Goscinski	CEO, National Imaging Facility