The Stroke Foundation welcomes an opportunity to provide a response to this consultation regarding a Five Year Australian Medical Research and Innovation Strategy. Our submission highlights how cardiovascular and, in particular, stroke research, should be a strategic focus given the lack of funding at present compared to the burden of disease. We also highlight issues regarding career pathways and lack of infrastructure to support cardiovascular disease (CVD) and stroke research and reinforce the value of bringing a broad range of partners to the table to support translation of research into better health outcomes. Where possible we have linked our comments back to the Strategy Building Blocks in Figure 1 from the ‘Call for Submissions’ (Figure 1).

**Burden of disease**

‘Burden of disease on the Australian community’ is listed as a Mandatory Consideration in Figure 1. We are familiar with the responses being put forward by the Heart Foundation and the Australian Cardiovascular Alliance regarding the burden of disease for CVD and support their assertion that current research funding levels for CVD do not currently match the burden of disease reality. With CVD accounting for 23.9% of all deaths it is clear that it should be a strong focus for medical research.

**Workforce and Infrastructure**

If the MRFF funding is to fix the current gaps in medical research then it must address the current issues around workforce and infrastructure. This is highlighted as a challenge in Figure 1 (enhance and sustain research enabling technologies, infrastructure and workforce). The Stroke Foundation would argue that current implementation at the clinical interface needs drastic improvement and to do this there needs to more attention given to two major areas.

The first is career paths for research active clinical staff and others involved in the medical/health innovation pathway. We understand there are serious issues regarding career pathway for researchers, either clinical or non-clinical, and the current fellowship structure (early post-doctorate to senior levels) is fractured. This is especially acute in the cardiovascular research space and the issue is well described in the submission from the Australian Cardiovascular Alliance.

The low success rate for NHMRC grants limits the ability, especially for early and mid-career researchers, to build a stable and successful research career. The Stroke Foundation focuses its small research funding program on very early career researchers due to the known challenges in this area. We would support the MRFF addressing this challenge within its strategy.

The second is the establishment of infrastructure to support research and to enable better integration of research into the health system. This includes infrastructure for trials, trial...
networks, registries and research networks. This is in line with the challenge in Figure 1: Research universally embedded across the health system.

Registries
Registries are a vital research translation tool that directly support clinical practice improvement through accurate monitoring of care standards. The Stroke Foundation, with partners in the Australian Stroke Coalition, have developed innovative solutions to improve stroke care quality. Our work has included development of a tool to drive consistent data collection and enable better measurement of quality of care against the Commission for Safety and Quality in Health Care’s Acute Stroke Clinical Care Standard.

The Stroke Foundation has also developed an online portal for health professionals (www.InformMe.org.au). InformMe allows clinician access to relevant localised data collected by the previously mentioned tool. In addition, clinicians are also able to access the latest clinical guidelines and to develop and implement quality improvement plans to target care gaps identified through data collection.

This research translation is already demonstrating success through better bedside stroke care in Australian hospitals, however the data collection element is not yet rolled out nationwide and therefore significant benefit is still to be realised. A focus on supporting clinical registries would be welcomed in the MRFF strategy.

An Australian Stroke Research Network (ASRN)
The Stroke Foundation has previously advocated for funding support for an Australian Stroke Research Network in order to build on existing stroke networks and provide a platform for an expanded, more efficient and higher impact national research program in stroke. Such a network would be a strategy to meet the challenge of reducing barriers to collaboration as highlighted in Figure 1.

By bringing together stroke research organisations and individuals an ASRN would extend research impact, build capacity and ultimately improve the evidence base for new clinical practices. Cooperation and collaboration has the potential to include shared infrastructure and standardised approaches to research practice, ideally leading to more impact from research investment. It would also provide for research to extend beyond clinical trials, for example, epidemiological, health services research and prevention. This research – through an ASRN – could be coordinated in a multi-disciplinary, disease focused manner.

Another benefit of an ASRN is to leverage off the value of partnerships for stroke research, or promote partnerships amongst other organisations. This would include not just the traditional research sector but also other partners such as policy makers, clinicians, consumers and other health service and program coordinators such as health NGOs and international stroke networks.

Translation of research
The Stroke Foundation supports the MRFF playing a role to fund translational research that delivers better health outcomes. Again, this is listed as a challenge in Figure 1: Facilitate the translation of research into health outcomes.
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In terms of acute treatment, in the area of stroke research there have been significant discoveries in recent times involving Australian researchers, the most notable being the introduction of endovascular clot retrieval as a new and highly effective acute therapy. Despite Australian researchers being at the forefront of this globally significant advancement in treatment, our health system has been slow to make the new therapy available to patients compared to international counterparts. This points to a lack of translation support to ensure patient outcomes are improved quickly as discoveries are made.

As the only national organisation dedicated to reducing the impact of stroke in Australia the Stroke Foundation plays an important role in supporting translational research. This includes a small program of research funding to early career researchers as well as funding program evaluation and impact assessment.

In principle we believe the MRFF should have a role to support research that assists with direct translation to better care. Included in this is the potential to facilitate partnerships between policy makers, researchers, consumers and groups working on improving clinical practice. It is our view that this multidisciplinary approach will lead to better translation of research into practice. The inclusion of clinicians and consumers will ensure that uptake of new ideas are fostered early, while ongoing evaluation of innovative programs can be used to monitor and improve programs based on current evidence.

The Stroke Foundation delivers a range of programs designed to reduce stroke impact in Australia and as an evidence-based organisation we strive to better understand the impact of these interventions. Being a charity with limited government funding the allocation of appropriate resources is often a challenge and we would see great benefit in the MRFF providing better support for research efforts in this area. As an example the Stroke Foundation is currently partnering in a research program aimed at investigating the impact of an online information and recovery support resource that we have developed for stroke survivors (www.enableme.org.au). We are currently exploring opportunities for a similar partnership to evaluate the impact of another program that supports stroke survivors to better recover following hospital discharge.