



Australian Academy of Health and Medical Sciences: Response to the House of Representatives Standing Committee on Education, Employment and Training – Research funding inquiry, June 2018

Introduction

The Australian Academy of Health and Medical Sciences' (AAHMS) mission is to promote health and medical research and its translation to enable a healthier community in Australia and the World. The Academy was established to provide an impartial and authoritative voice for health, informed by the best available evidence and expert advice from the best and brightest in health and medical research. Established in 2014, the Academy now has an elected Fellowship of over 300 and continues to grow. This response has been informed by input from Fellows and from participants in the Academy's mentoring scheme, who represent some of Australia's most promising future health and medical research leaders.

The Academy welcomes the opportunity to contribute to this inquiry. The committee has particularly noted the efficiency, effectiveness and coherency of the Australian Government funding for research as a focus for its inquiry. We would highlight the following key points:

- **Research and innovation drive economic growth, create jobs and bring considerable societal benefits through the translation of research findings.**
- **Efficiency and impact of research funding will be maximised through long-term investment that provides the stability needed to ensure that research and innovation can address the most pressing national and global challenges.**
- **For health and medical research, funding impact and translation will be substantially improved by ensuring that research is embedded in healthcare delivery. Clinician scientists need to be empowered to pursue both clinical and research endeavours.**
- **Research funding now must deliver for the future, which means implementing targeted support for early- and mid-career researchers to ensure that they can become tomorrow's leaders.**

Research funding in Australia

Australia has a strong history of world-class research and innovation.¹ This research base is hugely valuable, acting as a driver of economic growth, creating jobs and providing societal benefits. **To maximise efficiency and impact, the sector needs a long-term, stable funding commitment.** Research and innovation across disciplines can help to address many contemporary global

¹ For example, the 2015 Excellence in Research Australia (ERA) exercise found that 62% of the fields assessed were above or well above world standard. For more information: era2015.arc.gov.au/



Australian
Academy of Health and
Medical Sciences

C/- Gabba Towers, 411 Vulture Street, Woolloongabba, QLD 4102
PO Box 6114, Woolloongabba, QLD, Australia 4102

tel: +61 400 428 224 · email: info@aaahms.org
www.aaahms.org

challenges, but this takes time. For example, in health and medical sciences, it is well established that the pipeline from discovery to translation can take a decade or even more. Research in the UK has estimated that the time lag between research spending and a resulting health gain is 12 years for mental health, 15 years for cancer, 16 years for musculoskeletal diseases and 17 years for cardiovascular disease.² When expertise and momentum are lost, it can take years to restore capacity.

Over the past decade, Australian gross expenditure on R&D (GERD) has fallen as a proportion of GDP. According to data from the Australian Bureau of Statistics, from 2006-2014, GERD was consistently above 2%, hitting a high of 2.25% in 2008-09, but in 2015-16 it fell to 1.88% of GDP.³ This decline is a worrying trend, which has seen Australia fall behind our competitors. Average GERD among OECD countries was 2.36% in 2015, with Australia well below that average and ranked 18th among OECD countries.⁴

We welcome recent research and innovation announcements in the 2018-19 Budget and would stress that **the impact of these will be enhanced by a commitment from the Government to long-term funding stability for the sector, including returning to a positive trajectory for GERD as a percentage of GDP.**

A funding system fit for purpose

It is critical that the funding system fit for purpose. At the highest level, a vibrant research and innovation sector requires **the right balance of funding across the ecosystem, including supporting projects, investing in people, and delivering the necessary facilities and infrastructure.** A fall in capacity in one area will have knock-on effects in others. A dual funding system can help to deliver this. Within the current system, however, there are tensions that need to be explored. For example, it is not clear where responsibility lies for supporting the costs of employing researchers, meaning that this is increasingly under-resourced. To deliver excellent research, Australia needs to nurture and attract excellent researchers; this issue must be addressed.

Falling grant success rates have contributed to inefficiencies. This trend is seen in health research as well as other disciplines, and is driven by several factors, such as the decline in available funding accompanied by an expanding cohort of researchers competing for these funds. The result is that researchers are spending a considerable amount of time preparing and submitting applications that are ultimately unsuccessful. In addition, when doing so, they are often faced with inconsistent processes. For instance, the required formats for career track record often vary between funding

² <https://wellcome.ac.uk/sites/default/files/whats-it-worth-musculoskeletal-disease-research-januar-2018.pdf>

³ www.abs.gov.au/ausstats/abs@.nsf/Latestproducts/8104.0Main%20Features22015-16?opendocument&tabname=Summary&prodno=8104.0&issue=2015-16&num=&view

⁴ 2015 is the last year for which there is a comprehensive data set across OECD nations. For more information: data.oecd.org/rd/gross-domestic-spending-on-r-d.htm



schemes, which causes unnecessary duplication of effort and is an inefficient use of researchers' time.

Related to this, the level of bureaucracy associated with research, whether in terms of funding applications or the regulation and governance of research, is another cause of inefficiencies. Researchers and administrators spend an increasing amount of time doing paperwork. This can often be reasonable and necessary – adequate regulation of research is of the utmost importance – especially in health. However, to ensure that research can commence in a timely manner and ultimately underpin efficient translation into benefits, administrative processes must be proportionate. Opportunities to streamline should be identified and acted upon. For example, recent attempts to improve and simplify research ethics and governance have not brought the intended reduction in administrative burden and have in some cases increased administrative work – anecdotally, we have heard of instances where research projects have been delayed by up to 12 months.

Maximising the impact of health and medical sciences

Australia has a rich history of delivering health and medical research outputs that have global impact, such as the cochlear implant for deafness, the HPV vaccine to prevent cervical cancer and 'spray-on' skin that improves healing for burn victims. As well as a stable funding landscape **the impacts of health and medical research would be greatly improved by better embedding research in healthcare delivery.** There is substantial duplication and inefficiency in clinical research because of unnecessary separation of research and healthcare delivery.

The healthcare delivery system should be fully engaged in supporting and conducting research because clinical research leads to better patient outcomes and, in aggregate, lower service delivery costs.⁵ There are several ways in which this could be delivered that relate to the research funding system. Of particular note, clinical researchers rely on having the time to undertake both clinical and research activities – at present, those pursuing such a career face many barriers in finding this balance, especially at the start of their careers. Healthcare delivery, training and **research funding mechanisms must enable clinical researchers to balance clinical and research work.**

Within the health and medical research sector, Medical Research Institutes (MRIs) deliver a considerable proportion of research and innovation. For instance, they produce around 20% of Australia's medical research publications and are highly successful in leveraging additional funding for their research.⁶ However, there are currently differences in the funding of indirect costs within MRIs, universities and other research institutions. A standardised federal mechanism for funding

⁵ Australian Commission on Safety and Quality in Health Care (2017). *Economic evaluation of investigator-initiated clinical trials conducted by networks*. Australian Commission on Safety and Quality in Health Care, Sydney

⁶ Department of Health (2015). *Review to strengthen Independent Medical Research Institutes*.

www.health.gov.au/internet/main/publishing.nsf/Content/Review+to+strengthen+Independent+Medical+Research+Institutes



the indirect costs of research across the entire health and medical research sector should be developed, which adequately reimburses hospitals, MRIs and universities for the indirect costs of research.

Supporting early- and mid-career researchers

For the future of the sector, it is critical that we invest now in excellent early- and mid-career researchers. Aspects of the current system, such as falling grant success rates, can cause even the most promising researchers to pursue alternative careers.

Within the dual funding system, the Research Training Program portion of Block Grants is an important mechanism for supporting research training. Beyond this, funding should be designed to incorporate targeted mechanisms that outline clear, differentiated eligibility criteria to ensure that researchers at all career stages can make competitive applications. There is also an issue to address in terms of team-based research, which can sometimes disproportionately impact on those earlier in their career – team-based research is increasingly important to addressing global challenges and individuals contributing to these endeavours must receive adequate recognition.

An efficient knowledge economy is underpinned by efforts to nurture talent, develop skills and improve diversity. This last point applies across the workforce; the research funding system will have the biggest impact if research is delivered by the best researchers – we must therefore continue to actively pursue equal opportunities within the sector. We welcome recent announcements in this regard and stress the need for ambition in these endeavours.

We are grateful to the Fellows and mentees who contributed to this response.