



Australian Academy
of Health and
Medical Sciences

AAHMS response to the Department of Education discussion paper on the Australian Universities Accord

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Australia's university sector is world class. For instance, eight Australian universities are now in the top 100 and twenty in the top 300 of the global *Aggregate Ranking of Top Universities*.¹ Nevertheless, there are areas for improvement in the sector and we must not be complacent. The Australian Academy of Health and Medical Sciences (AAHMS) therefore welcomes the Government's plans to ensure that Australia's higher education sector is fit for purpose into the future, through the Australian Universities Accord (AUA). We appreciate the opportunity to contribute to this process as the Government seeks to improve the way Australia's higher education stakeholders work together to address major challenges and strengthen the whole system. Reshaping the system by addressing current issues and forecasting future challenges will help advance Australia's position as a global leader in higher education, producing world-leading graduates and high-quality research and innovation to meet national needs.

AAHMS is Australia's Learned Academy for health and medicine – the impartial, authoritative, cross-sector voice. We advance research and innovation in Australia to improve everyone's health. We are an independent, interdisciplinary body of 476 Fellows – elected by peers for outstanding achievements and exceptional contributions to health and medical science in Australia. Collectively, AAHMS Fellows are a representative and independent voice, through which we engage with the community, industry and governments.

The Accord's breadth across distinct areas of the higher education system is valuable. Our submission addresses the points raised in the discussion paper most relevant to our remit and expertise in the health and medical sciences and has been developed based on contributions from our Fellows and Associate Members. We have identified several priorities and have indicated in each case the main questions to which those priorities apply.

Key messages

- Our universities are world class and play a crucial role in the Australian research and innovation landscape. To retain competitiveness, Australia needs a comprehensive research and innovation strategy, including a long-term stable funding commitment that puts us on a path towards a gross domestic R&D expenditure (GERD) target of 3%.
- To maximise the impacts of health and medical research translation, universities should work in partnership with health systems and governments (and vice versa) to embed research and innovation in the health system. This should include efforts to actively work with these partners to establish a more formal, sustainable career pathway for clinician researchers.

- We agree that steps need to be taken to accelerate progress in improving diversity and inclusion and address ongoing equity issues in higher education, including within the research and innovation workforce that sits in that sector.
- Stronger consumer and community involvement in research is needed since this is an important mechanism for improving the impacts of research and innovation by ensuring these endeavours meet the needs of the whole community.
- More work is needed to develop a health-academia-industry interface that facilitates the work of integrated teams to develop new therapies for patients, and to ensure Australia can better capitalise on innovation and commercialisation opportunities.
- Early- and mid-career researchers (EMCRs) play a crucial role in securing the future of our research and innovation workforce, but continue to face challenges including a lack of secure employment and decreasing grant success rates. Universities are working to address these issues within their individual constraints, but support from government for a whole of sector approach is needed.
- There is not currently enough capacity within the health sector to provide the required number and types of placements for health and medical students to gain registration on graduation – several actions are needed across the university and health sectors to address this issue.

Maximising the value of Australian research and innovation investments

This section primarily addresses the following questions:

- **Question 24** – *what reforms will enable Australian research institutions to achieve excellence, scale and impact in particular fields?*
- **Question 41** – *how should research quality be prioritised and supported most effectively over the next decade?*

Strategic investment in research and innovation

Research and innovation drive economic growth, create jobs, and bring considerable societal benefits through the translation of research findings.² For more than a decade, Australian gross expenditure on R&D (GERD) has been falling as a proportion of GDP. From 2006-2014, GERD was consistently above 2% of GDP, hitting a high of 2.25% in 2008-09.² Australian Bureau of Statistics data show that this fell to 1.79% in 2019-20.³ This is a worrying trend, which has seen Australia fall behind our competitors – average GERD among OECD countries has been rising and was 2.76% by 2019-20.⁴

The Labor Party's commitment to raise Australia's GERD to 3% of GDP would drive Australia's global competitiveness and deliver a major uplift in associated economic, productivity and societal benefits in line with competitor economies.⁵ A long-term stable funding commitment, underpinned by a comprehensive research and innovation strategy, is important for attracting external investment and retaining talented researchers – consequently maximising the productivity of the research and innovation sector. It allows researchers to spend more time conducting rigorous and novel research, and will help position Australia at the forefront of the knowledge, technologies and industries that will shape the world over the coming decade and beyond. **We would urge the Accord Panel to highlight the importance of moving quickly towards this 3% goal over the next decade** – to ensure outcomes such as excellence, scale, and impact (as specified in the consultation questions) can be achieved.

To deliver excellence, scale, and impact in health and medicine, the Government should:^{6,7}

- Develop a targeted strategy in these fields, in consultation with the sector.
- Increase the National Health and Medical Research Council's (NHMRC) budget beyond indexation over the next five years to address the drop in its budget in real terms since 2010.
- Build stronger strategic harmonisation between funders, particularly the Medical Research Future Fund (MRFF) and NHMRC, to increase the value derived from these investments, improve coordination, streamline processes and reduce duplication of effort within the sector.
- Work to better embed research and innovation in the health system.
- Support and strengthen the Research Translation Centres (RTCs) and broaden their coverage to include as much of Australia as possible. Access to meaningful, ongoing core funding would help them to develop this role.

Embedding research and innovation in health to ensure outcomes reach the community

Australia's health system is facing significant challenges, many of which are not unique to Australia, but rather, signify the emergence over time of more complex health needs globally – for instance, ageing populations, chronic and complex conditions, mental health, antimicrobial resistance, and climate change. All of these exist in the context of increasing demand on health services and considerable inequities in health outcomes and access to care. Research and innovation can help address these issues – but only if we set up systems that allow outcomes to be translated into policy and practice. Universities are a crucial partner in doing so. **If the Panel is seeking bold ideas to transform the future of the Australian higher education system and ensure it has maximum impact for the community, we would suggest they seek to ensure that universities are able to play the fullest role possible in delivering research and innovation in partnership with the health sector.**

Embedding high quality research and innovation in the health system can fast-track Australia's efforts to rise to these challenges – by ensuring that the outcomes of research and innovation reach patients and the community. Research-rich health environments are better for patients and staff, delivering higher quality of care, reduced mortality, improved patient experience, increased staff satisfaction, and more efficient uptake of innovations.⁷ Our 2021 report, *“Research and innovation as core functions in transforming the health system: A vision for the future of health in Australia”* described a three-year plan for embedding research and innovation in healthcare.⁷

Universities have a crucial role to play in working with the health system to create such environments, including by:

- **Educating the healthcare workforce** – preparing and equipping the workforce, including providing them with the grounding needed to engage with and understand research, which supports putting translation and implementation into practice. **Universities have a particular role to play in fostering curious and critical thinkers in their medical and health students through the education they provide.** This will equip the future workforce with the ability to ask the right questions and solve the unique problems they encounter in their professional careers.
- **Actively supporting and enabling individuals to pursue clinician researcher careers** – clinician-researchers are a crucial component of a research-rich health system. They work within teams to identify, lead and deliver research that targets patient needs, and

to support implementation of research findings into practice. Individuals in these roles work across research settings and health systems, meaning they essentially need to secure two positions – one clinical and one research – and both entities need to have mechanisms in place to enable joint employment. There is no formal sustainable career pathway for clinician researchers (whether they are doctors, nurses, midwives, or allied health professionals). Additionally, there are very few formal positions within health services that are jointly supported by clinical and academic sectors, and there is no consistent process where health services and academic organisations plan in a coordinated way. Consequently, the number of clinician researchers is falling.⁸ Local coordination between academic institutions and health service providers is critical for individuals to secure these kinds of arrangements. **Universities must work with health service providers to support and grow the clinician researcher workforce by establishing formal clinician researcher positions that incorporate time in both clinical service and research, and facilitate flexible arrangements for different individuals.**

- **Contributing to a vibrant health-academia-industry interface** – which we address in the section, *“Fostering cross-sector working to deliver best outcomes”*.

Consumer and community involvement

The impacts of research and innovation will also be improved if we ensure these endeavours engage and address the needs of the whole community. Our 2022 report, *“Research and innovation as core functions in transforming the health system: A vision for the future of health in Australia”*, set out a vision for a system in which the whole community has more equal opportunities to shape, participate in and benefit from research that is relevant to them, as active and valued partners.⁷

In our evidence collection for the report, we heard from researchers seeking to involve consumers that the barriers to doing so relate mostly to time, funding, access, resources, and a limited understanding of how best to involve consumers. Building relationships can be time consuming, which may impact on other kinds of outputs. Again, universities must look to better recognise and acknowledge researchers undertaking consumer and community involvement, for instance in their career development and promotions processes.

Funding the full costs of research

Research grants do not currently cover the full costs of research. They usually cover only the direct costs of that particular project (although not always in full), but not the indirect costs such as:

- The provision and maintenance of larger facilities and equipment,
- Underpinning institutional services such as business development, support services, technology and information resources.
- Institutional running costs.

These costs are essential to delivering research. Although there is some government funding to support such costs (the Research Support Program (RSP), for instance), the value of this funding has dropped in real terms. There are several drivers of this trend – for example, the costs of research have increased faster than the funds provided through the RSP.

Universities therefore have to cover any shortfall associated with direct or indirect costs and this has become increasingly challenging. We would encourage the Panel to consider solutions to address this ongoing and worsening issue.

Fostering cross-sector working to deliver the best outcomes

This section primarily addresses the following questions:

- **Question 3** – *what should the long-term target/s be for Australia’s higher education attainment by 2030 and 2040, and how should these be set and adjusted over time?*
- **Question 23** – *how should an Accord help Australia increase collaboration between industry, government, and universities to solve big challenges?*
- **Question 27** – *how can we improve research training in Australia including improving pathways for researchers to gain experience and develop high-impact careers in government and industry?*

Addressing health challenges, meeting patient needs and improving healthcare through cutting-edge research is best achieved by integrated research teams that incorporate multidisciplinary insights and expertise. **More work is needed to develop a health-academia-industry interface that facilitates the work of integrated, interdisciplinary teams.** In addition, Australia is not currently maximising health innovation and commercialisation opportunities.

Universities must play their part in educating a future workforce equipped to tackle big problems with innovative solutions and to translate and implement those solutions into policy and practice. Government needs to work with universities to ensure that the brightest minds are given the opportunity to work on these challenges. The Accord should be used to develop the institutional frameworks needed to ensure the future workforce can research, innovate, and translate to address the challenges we face. Training in softer skills – such as business and entrepreneurship, leadership, communication, teamworking and patient and public involvement – will be crucial. We also need to support and develop leaders who can drive cultural and system change across sectors.

Australia should invest in individuals and organisations that bring people and ideas together to help build a research and innovation culture – we need to train the next generation of professionals to move and interact seamlessly between the sectors. For example:

- Government should work with and incentivise universities to improve systems that support more undergraduate and postgraduate students to undertake industry placements. It should increase the number of industry-based PhD students and postdoctoral opportunities. This would help students to develop translational research skills and support partnerships between universities and industry collaborators.
- Universities, industry, health providers and government should create opportunities for researchers to be appointed conjointly between sectors or create placements within a sector. This would help grow cross-sector collaboration and maximise opportunities for individuals to work within wider networks to solve future research and health challenges.

The National Industry PhD Program introduced by the Department of Education is a step in the right direction, as it aims to support PhD students in industry-focused research projects. The program is aiming to provide for up to 150 students per year, which is about 1.5% of the students completing a PhD annually in Australia (which totals approximately 10,000).^{9,10} It will be important to monitor and evaluate this program, especially to gauge interest, and to remain open to increasing the number of places if there is sufficient demand. Post-submission or postdoctoral opportunities are also important since the time limitations and deadlines around a PhD can make it difficult for some students to allocate time to spend in industry.

Another scheme, the Researcher Exchange and Development within Industry (REDI) program has been providing industry experience and skills development for students, researchers, clinicians, MTP (medical technology, biotechnology and pharmaceutical) sector professionals, entrepreneurs, and innovators. The aim is to build an industry-ready workforce with the skills and capacity to keep pace with the demands of the technology, biotechnology, pharmaceutical and digital health sector.¹¹ The program was originally funded (mainly through the MRFF) for four years from 2019 and is due to finish this year. MTP Connect, which runs the scheme, has reported that demand has exceeded expectations. For instance, the REDI Fellowship program, which supports medtech and pharma companies to bring Australian talent in-house to work on priority research projects, received additional funding to help meet demand – with a wide range of industry partners involved.^{12,13} Schemes such as this, where there is demonstrated value and demand, should be extended.

Many talented PhD students and early-career researchers move from academia into industry or government, attracted by the higher salaries attainable in those sectors. The implementation of joint roles that allow a researcher to work both in industry and at universities could facilitate improved research outcomes and translation.

Creating an enriching education and training environment

This section primarily addresses the following questions:

- **Question 8** – *what reforms are needed to promote a quality learning environment and to ensure graduates are entering the labour market with the skills and knowledge they need?*
- **Question 27** – *how can we improve research training in Australia including improving pathways for researchers to gain experience and develop high-impact careers in government and industry?*
- **Question 28** – *what is needed to increase the number of people from under-represented groups applying to and prepared for higher education, both from school and from other pathways?*

Maintaining and improving the health of the Australian community depends on our capacity to educate and train the healthcare workforce and to develop the research and innovation workforce. Nurturing talented individuals from diverse background to enter higher education and pursue careers in health and medical sciences will help keep Australia competitive in the global research arena. Universities play a crucial role in these endeavours. The education of health professionals within universities should equip them to deal with current and future health challenges, providing a grounding in up-to-date knowledge and practice, and supporting the education of those from diverse backgrounds.

Challenges faced by early- and mid-career researchers

Early- and mid-career researchers (EMCRs) play a crucial role in securing the future of our research and innovation workforce – across the disciplines, including in health and medicine. However they face a particular set of challenges, including a lack of secure employment (since many are employed on a string of short-term contracts) and increasingly limited options to access to grant funding, due to historically low grant success rates from funders such as NHMRC. For instance, the MRFF launched an EMCR Grant Opportunity in 2021 to try and address some of these challenges. Grant outcomes for the program were recently published and reported a funded rate of only 2.9% for the stream targeted at early-career researchers, and 6.0% for the stream targeted at mid-career researchers.¹⁴ The sector is at risk of losing

talented researchers at these career stages. Funding and programs are both required to support EMCRs in navigating these growing challenges so that we retain talent and nurture future leaders. We must utilise the full breadth of talent of Australia's research sector.

Providing adequate student placements

There is a critical issue with the capacity of the health sector to provide the required number and types of placements for health and medical students, placements which are crucial for them to gain registration on graduation. Ensuring that students can complete the placement requirements for their course prior to graduation presents challenges for universities and the health system alike. These challenges include:

- Competition for placements as more universities and other tertiary education providers have introduced more health degrees and accepted larger cohorts through many years of the demand-driven system for domestic students and increased international student cohorts.
- A trend towards universities paying for student placements in some disciplines with priority given to student cohorts under these "pay for placement" arrangements.
- The impact of workforce shortages and movements across public, private and not-for-profit sectors, including in the disability and aged care sectors, and the ongoing impact of COVID-19 on staff capacity and capability to educate and supervise students on placements.

Reformation of the health student placement system is needed, which could include: rationalisation of placement sites between universities; introduction of extended student placements; attainment of competency rather than hours served on placements; no charges or payments for student placements; broader introduction of Assistants programs across the health professions – whereby students are salaried by the health system for a proportion of their final year of training (for example, Assistants in Medicine were introduced in NSW during the COVID-19 pandemic and the program was continued due to its success).¹⁵

Improving diversity and inclusion

A research and innovation workforce that reflects the full diversity of the population in which it works is best equipped to understand and address the health challenges faced by all the individuals and communities within it. Unfortunately, when it comes to health and medical research careers, some groups are still disadvantaged, including women, LGBTQI+, Aboriginal and Torres Strait Islander, and culturally and linguistically diverse (CALD) researchers. Universities, as employers, have the opportunity to improve this situation and many have programs in place – these programs must be monitored and evaluated for impact, and further funded or adjusted to ensure they are working.

To highlight one specific example in health and medicine, Aboriginal and Torres Strait Islander peoples make up a very small proportion of the health and medical research workforce. Consequently, efforts to develop a thorough understanding of the unique experiences of this important group have been insufficient. The NHMRC reported in 2021 that Aboriginal and Torres Strait Islander clinician researchers face the same barriers as the wider workforce, but also face significant additional challenges, which prevent them from thriving, including:¹⁶

- Workplace racism, or not feeling that they have a culturally safe workplace.
- Very limited career opportunities, and the perception that a successful clinician research career is less achievable.

- Perceptions that research is not as relevant compared to other critical roles that address Aboriginal and Torres Strait Islander health and wellbeing.
- Limited support and low numbers of Aboriginal and Torres Strait Islander senior colleagues for mentorship.
- Not feeling well understood by non-Indigenous clinicians or researchers, for example because they did not feel they had a shared understanding.

Universities are ideally positioned to help address some of these challenges.

Identifying current gaps in the skills and knowledge of graduates entering the workforce could also be used to inform the changes required to develop high quality learning environments.

For questions about this submission, or to arrange a consultation with Fellows and Associate Members of the Academy, please contact Lanika Mylvaganam, Policy Manager (policy@aaahms.org) at Australian Academy of Health and Medical Sciences. The Academy is grateful for the input received from our Fellows and Associate Members in developing this submission.

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References

1. University of New South Wales. *Aggregate Ranking of Top Universities*. Published 2022. Accessed April 5, 2023. <https://research.unsw.edu.au/artu/artu-results>
2. The Australian Academy of Health and Medical Sciences. *Driving Prosperity and Improving Lives through Health and Medical Science*; 2019. Accessed March 24, 2023. <https://aaahms.org/wp-content/uploads/2022/02/AAHMS-pre-election-full-statement-February-2019.pdf>
3. Australian Bureau of Statistics. *Research and Experimental Development, Businesses, Australia*. Published 2021. Accessed March 31, 2023. <https://www.abs.gov.au/statistics/industry/technology-and-innovation/research-and-experimental-development-businesses-australia/latest-release>
4. OECD. *Gross domestic spending on R&D*. Published 2021. Accessed March 23, 2023. <https://data.oecd.org/rd/gross-domestic-spending-on-r-d.htm>
5. Australian Labor Party. *ALP National Platform: As Adopted at the 2021 Special Platform Conference*; 2021. Accessed January 18, 2023. <https://alp.org.au/media/2594/2021-alp-national-platform-final-endorsed-platform.pdf>
6. The Australian Academy of Health and Medical Sciences. *Statement from the Australian Academy of Health and Medical Sciences ahead of the 2022 Federal Election*. Published online 2022. <https://aaahms.org/policy/statement-ahead-of-the-2022-federal-election/>
7. Australian Academy of Health and Medical Sciences. *Research and Innovation as Core Functions in Transforming the Health System: A Vision for the Future of Health in Australia*; 2022. Accessed March 28, 2023. <https://aaahms.org/wp-content/uploads/2022/10/AAHMS-Vision-Report.pdf>

8. Group of Eight Australia. *Strengthening Australian Clinical Research-Group of Eight Submission to the Medical Workforce Reform Advisory Committee*; 2020. Accessed May 2, 2022. <https://go8.edu.au/wp-content/uploads/2020/12/Go8-AICRTP-FINAL.pdf>
9. Department of Education. *2021 Student summary tables*. Published 2023. Accessed April 4, 2023. <https://www.education.gov.au/higher-education-statistics/resources/2021-student-summary-tables>
10. Department of Education. *National Industry PhD Program*. Published 2023. Accessed March 28, 2023. <https://www.education.gov.au/university-research-commercialisation-package/national-industry-phd-program#toc-applications>
11. MTPConnect. *Researcher Exchange and Development within Industry (REDI) initiative*. Published 2022. Accessed April 11, 2023. <https://www.mtpconnect.org.au/programs/REDI>
12. MTPConnect. *MTPConnect Announces 16 REDI Fellowships in Sought After Industry Roles*. Published 2022. Accessed April 11, 2023. https://www.mtpconnect.org.au/Story?Action=View&Story_id=551
13. MTPConnect. *The REDI Fellowship Program Re-opens - Call for Industry Sponsors to Apply*. Published 2022. Accessed April 11, 2023. https://www.mtpconnect.org.au/Story?Action=View&Story_id=481
14. Australian Department of Health and Aged Care. *Data about the MRFF - 2021 Early to Mid-Career Researchers Grant Opportunity Outcomes*; 2023. Accessed April 5, 2023. <https://www.health.gov.au/sites/default/files/2023-04/data-about-the-medical-research-future-fund---2021-early-to-mid-career-researchers-grant-opportunity-outcomes.pdf>
15. NSW Government. *Doctors of tomorrow boost health workforce*. Published 2022. Accessed April 11, 2023. <https://www.nsw.gov.au/media-releases/doctors-of-tomorrow-boost-health-workforce>
16. National Health and Medical Research Council. *Investigating Clinician Researcher Career Pathways Project: Report on Qualitative Research about Career Pathways for Aboriginal and Torres Strait Islander Clinician Researchers*; 2021. Accessed November 21, 2022. <https://www.nhmrc.gov.au/about-us/publications/report-qualitative-research-about-career-pathways-aboriginal-and-torres-strait-islander-clinician-researchers>