PRE-BUDGET SUBMISSION TO THE AUSTRALIAN TREASURER

JANUARY 2014 | HEALTH & MEDICAL RESEARCH

RESEARCH AUSTRALIA

AN ALLIANCE FOR DISCOVERIES IN HEALTH

ABOUT RESEARCH AUSTRALIA

Research Australia is an alliance of 160 members and supporters advocating for health and medical research in Australia. Research Australia's activities are funded by its members, donors and supporters from leading research organisations, academic institutions, philanthropy, community special interest groups, peak industry bodies, biotechnology and pharmaceutical companies, small businesses and corporate Australia. It reflects the views of its diverse membership and represents the interests of the broader community.

Research Australia's mission is to make health and medical research a higher priority for the nation. We have four goals that support this mission:

A society that is well informed and values the benefits of health and medical research.

Greater investment in health and medical research from all sources.

Ensure Australia captures the benefits of health and medical research.

Promote Australia's global position in health and medical research.

Elizabeth Foley

CEO & Managing Director

02 9295 8547

elizabeth.foley@researchaustralia.org

www.researchaustralia.org

384 Victoria Street Darlinghurst NSW 2010

Table of Contents

PRE-BUDGET SUBMISSION TO THE AUSTRALIAN TREASURER

HEALTH AND MEDICAL RESEARCH

INTRODUCTION

Research Australia welcomes the commitment the Commonwealth Government has made to protect funding for health and medical research (H&MR). While it is easy to see this funding as an expense, it needs to be recognised as an investment which improves Australians' quality of life and provides important economic benefits.

There are still numerous diseases and conditions that affect our wellbeing, and our changing lifestyles continue to create new challenges for us. Health and medical research is the starting point for overcoming these problems and further extending the health and wellbeing of our community. This wellbeing depends on continuing to invest in research, and equally importantly, ensuring that we continue to use the new knowledge the research generates in ways that benefit us all.

Preserving and increasing the wellbeing of its members is a goal of every human community and is a fundamental responsibility of government. Australians values the contribution the Commonwealth makes to funding H&MR. In public opinion polling by Research Australia over the last decade the provision of health services and of funding for health and medical research have consistently rated as high priorities for government funding. In the polling conducted in June 2013, 80% of respondents rated increased funding for health and medical research by the Australian Government as 'Important' to 'Extremely Important'.[1]

Reducing the burden of disease on the Australian community has the added advantages of reducing the cost associated with treating specific diseases, and increasing national productivity.

Research also provides the opportunity to improve the efficiency of our health system and the productivity of its workforce. With health expenditure in Australia of $140 billion per year, even small improvements in efficiency and productivity can provide significant dividends for both the broader economy and the Australian Government.

A key priority for the Government should be to ensure that the health system is able to absorb research findings more rapidly through evidence based practice in health services and in public health initiatives.

---

1 Research Australia, What do Australians think about health and medical research? 2013 Opinion Poll-

SUMMARY OF RECOMMENDATIONS

- **Maintain the aggregate real value of Commonwealth Government funding for health and medical research across all funding programs.**
- **Fund the implementation and monitoring of the McKeon Review recommendations.**
- **Increase funding for research to support the effective and rapid translation of new discoveries into practice.**
- **Increase funding for health systems research to increase our capacity to analyse and identify best practice for the Australian health care system and to increase research into the most successful, effective and efficient delivery mechanisms and structures for implementing best practice.**
- **Expand the mandate of the Australian Commission on Safety and Quality in Health Care to include efficiency as well as safety and quality, and provide incentives for health care providers to nominate existing practices and initiatives to the Commission for adoption as part of the Healthcare Standards.**
- **Increase funding for population health and preventive health research to improve the effectiveness of preventive health campaigns and identify emerging trends in the health and disease profile of the Australian population.**
- **Retain programs that support Australian research and development (R&D) and innovation, including Commercialisation Australia and the R&D tax incentive.**

AUSTRALIAN GOVERNMENT SUPPORT FOR HEALTH AND MEDICAL RESEARCH

As noted in the introduction, the Commonwealth Government has a long history of support for H&MR and this support has various humanitarian and economic objectives:

- relieving human suffering;
- improving the health and well being of all Australians;
- making the Australian health system more effective, efficient and productive;
- supporting the commercialisation of Australian intellectual property;
- building Australia's advanced manufacturing capability.

Some of these objectives are met through programs that are specific to H&MR; others are met through more general programs and support, such as for higher education or industry. This complexity makes it difficult to quantify the extent of the Commonwealth Government's financial support for health and medical research.

The Australian Institute of Health and Welfare (AIHW) has estimated that the Commonwealth Government expended $3.86 billion on H&MR in 2011-12.[2] The panel appointed by the Commonwealth Government's Strategic Review of Health and Medical Research (the McKeon Review), conducted in 2012, commissioned its own research which estimated that the Commonwealth Government expended $2.9 billion on H&MR in 2011-12.[3] The Department of Industry also undertakes its own analysis of the level of Commonwealth Government support for Science, Research and Innovation. It has estimated that the Commonwealth Government's support for the Socioeconomic Objective of Health for 2011-12 was $1.37 billion.[4]

The variation in these three estimates is an indication of the complexity of the H&MR sector and Commonwealth Government support, as well as definitional issues. (The definition of H&MR used by Research Australia is provided at Appendix 1.)

In addition to the 'high visibility' grants programs of the NHMRC, Australian H&MR is particularly reliant on the general funding provided to the higher education sector. A brief survey of some of the sources of Commonwealth Government funding for health and medical research is provided at Appendix 2.

[2] AIHW, Health Expenditure Australia 2011-12,Table A3, p.71

[3] Australian Government, Strategic Review of Health and Medical Research, February 2013, p.34

[4] The Australian Government's 2013-14 Science, Research and Innovation Budget Tables, Table 5. See Appendix 1 for an explanation of Socio Economic Objectives.

ECONOMIC BENEFITS OF GOVERNMENT EXPENDITURE ON HEALTH AND MEDICAL RESEARCH

Australia has world class health and medical researchers, engaged in a global, high value and information intensive industry. Australian H&MR supports a burgeoning biomedical manufacturing sector. The biomedical sector is Australia's largest high value exporter, with around $4 billion per annum in exports over the last two financial years. 5 Numerous reports and studies over the last decade have highlighted the economic benefits of the investment of governments in H&MR.

Many publications have identified these benefits, including:

- Deloitte Access Economics, commissioned by the Australian Society for Medical Research, *Returns on NHMRC funded Research and Development,* October 2011
- National Health and Medical Research Council, Health and Medical Research and the future in NHMRC's 75th Year The virtuous cycle and the economic benefits of health and medical research, 2011
- Lateral Economics, commissioned by Research Australia, The economic value of Australia's investment in Health and Medical Research: Reinforcing the Evidence for Exceptional Returns, 2010
- Access Economics, commissioned by the Australian Society for Medical Research, *Exceptional Returns II: The value of Investing in Health R&D in Australia*, 2008
- Sustaining the Virtuous Cycle for a healthy, competitive Australia: Final Report of the Investment Review of Health and Medical Research Committee, commissioned by the Australian Government, 2004
- Access Economics, commissioned by the Australian Society for Medical Research, *Exceptional Returns The value of Investing in Health R&D in Australia*, 2003
-

Improvements in health over the last century have been driven by H&MR advances such as vaccinations, anti-bacterial drugs, and improved surgical techniques, and there is more to be achieved. One of the greatest challenges facing the Australian community and economy over coming decades is the ageing of the population, and increasing the workforce participation of older workers. The greatest threat to the participation of older workers is disability, particularly resulting from chronic disease. Economic modelling by Monash University estimates that

> 'health improvements for 10% of the unhealthiest older workers can have strong macroeconomic effects; we estimate that (with such an improvement) employment can rise by 0.13% and real GDP by 0.1% over the period 2011-2030.'[6]

This is just one example of the economic benefits of improving the health of Australians. The key to achieving this is reducing the impact of chronic disease, through new discoveries and the better application of existing knowledge to individuals. This requires a strategic approach to health and medical research in fields as diverse as population health and the study of normal and abnormal cell formation.

---

[5] Australian Bureau of Statistics, Cat. 5368.0, *International Trade in Goods and Services*, quarterly

[6] Verikos G, Dixon P, Rimmer M, Harris A, *The Impact of Changes in Health Status: An Economywide Analysis for Australia,* The Centre of Policy Studies, Monash University, 2012, page 25

To a greater extent than most areas, H&MR is dependent on Government investment and support because many of the products of H&MR, particularly in public health and the translation of best practice in primary care, are public goods, not amenable to commercialisation.

Commonwealth expenditure on health and medical research is an essential investment in Australia's future prosperity.

Research Australia urges the Government to maintain the real value of its funding for health and medical research.

ENHANCING THE EFFICIENCY AND PRODUCTIVITY OF THE HEALTHCARE SECTOR

The AIHW estimates that in 2011-12, Australian health expenditure was $140.2 billion, and that it has grown from 8.4% of GDP in 2001-02 to 9.5% of GDP in 2011-12.[7] The largest single contributor to this expenditure is the Australian Government; the AIHW estimates that it was responsible for 42% of all health expenditure in 2011-12.[8] Treasury has forecast that the Australian Government's own health expenditure will increase from 4% to 7.1% between 2009-10 and 2049-50.[9]

> 'In light of these escalating health pressures, it will be important to ensure that the health system provides value for money. This requires a health system that responds well to innovation, funding cost-effective improvements to health care while being able to adjust spending levels in areas where better value for money could be obtained.
>
> Reforms aimed at improving efficiency also could aid fiscal sustainability in the face of increasing demands on the health system. It will be important to encourage improvements in efficiency and quality, while being flexible enough to enable care to be provided by the most appropriate professionals in the most appropriate places.'[10]

We have the opportunity to better utilise Australia's research capacity across a range of disciplines to promote innovation and improve the safety, effectiveness and efficiency of the Australian health system. Research can improve the allocation of resources within the system, help to identify areas of inefficiency, and support the identification and adoption of more efficient and effective practice.

Achieving this requires a greater partnership between researchers and those working directly and indirectly in the provision of health care:

- Health care providers identify the areas that require reform.
- Researchers and health care providers work to identify potential solutions and improvements.
- Researchers work within the healthcare system to evaluate different options and solutions.
- Researchers provide the evidence to inform the practice.
- Researchers work with practitioners to identify the best strategies to implement change.
- Health systems' information systems allow access to data to monitor implementation of new practice and measure performance.

[7] AIHW, Health Expenditure Australia 2011-12, Summary, p.viii
[8] Ibid

[9] Australian Government, *Intergenerational Report 2050*, p.47
[10] Ibid, p.54

McKeon Review

The Australian Government has made a significant investment in the Strategic Review of Health and Medical Research in Australia (McKeon Review). The Review Panel's report has identified a new strategic direction for health and medical research for the next decade, including better aligning Australia's research with the needs of Australia's population and its health system. The report has identified the scope for research to be used to make the health system safer, more effective and efficient, and recommended a greater strategic investment in health and medical research as a means of curbing the escalating cost of providing health care.[11]

If Australia is to realise the benefits outlined in the Report, resources need to be committed for this purpose. A relatively small ongoing increase in well targeted expenditure on H&MR has the capacity to deliver significant ongoing savings.

Research Australia urges the Government to make an appropriate allocation for the establishment and funding of a body to drive the implementation of the McKeon Review's recommendations and to monitor their effectiveness.

Translating research into practice

As the McKeon Review's report highlighted, making the most of our research discoveries depends on our ability to effectively translate new therapies, procedures and approaches into practice.

The CareTrack study published on 16 July 2012 reported relatively low levels of appropriate care (in accordance with current guidelines) provided by health care providers across a range of common medical conditions.[12] This study indicates that we have a long way to go in ensuring the provision of health care in accordance with current guidelines; and the task for translating new discoveries into mainstream healthcare practice is just as great if not greater.

To achieve better translation we need to improve the interaction between the research and health delivery sectors.

Research Australia recommends additional funding for the following initiatives to improve translation:

- The creation of more roles in health services across medical, nursing and allied health professions that have a dedicated time and resource allocation to research (i.e. clinician researcher roles).
- Providing research 'buy-outs' to Medicare Locals to enable General Practitioners and other health professionals to engage in research, including clinical trials.
- Building capacity and investing in implementation research, including comparative effectiveness research, to assist with shifting practitioners to adopt better practice.

[11] Australian Government, Strategic Review of Health and Medical Research, February 2013
[12] W. B. Runciman et al, CareTrack: assessing the appropriateness of health care delivery in Australia, Medical Journal of Australia 197 (2), 16 July 2012

- Investment by the health system in 'change management' expertise and practice to incentivise and support professionals to adopt new practices and create behavioural change.
- Creating evidence based decision support tools for practitioners, to support the adoption of best practice.

Health system research to drive improvements

The Australian health system is large, complex and diverse. While the health needs of Australians are broadly the same across the nation, and National Health Reforms have established a broad national framework and a set of targets, the practices adopted by individual Australian hospitals and other healthcare providers vary significantly. Several reports of the National Health Performance Authority have highlighted the significant variation in performance by individual hospitals and health providers across Australia.[13]

While the NHPA reports have highlighted the differences, and are a valuable resource, they do not identify what needs to be done to improve performance. Further research is required to understand the reasons for the variations between different providers and to establish best practice. Undertaking this research provides the real opportunity to improve the delivery of health care, the productivity of the healthcare workforce and the efficiency of our health system.

If we are to achieve the more efficient, productive and effective national health system that is the aim of the National Health Reforms, we need to increase the nation's capacity for health services research. Health services research can improve the delivery of health care through the development of best practice models and structures for Australian health services; guiding the reform process; and supporting the evaluation of outcomes.

Research Australia proposes additional funding for health systems research to increase the capacity to analyse and identify best practice for the Australian health care system and to increase research into the most effective delivery mechanisms for implementing best practice.

[13] National Health Performance Authority, *Hospital Performance: Time patients spent in emergency departments in 2011–12*; *Healthy Communities: Avoidable deaths and life expectancies in Australian Communities, 2009-2011*; *Hospital Performance: Length of stay in public hospitals in 2001-12* http://www.myhospitals.gov.au

'Bottom up' research- harnessing the health sector to improve productivity and efficiency

Many individuals in our health system are striving to deliver better health care, and to do so more efficiently. These efforts account for part of the variation in performance by individual hospitals and health providers noted above. At the same time there are many practices and technologies which have been in place in particular parts of the health system for many years without having been properly reviewed or evaluated for their relative effectiveness or cost effectiveness against (often more recent) alternatives.

We are not suffering from a lack of ideas on how to make our health system more effective and efficient but we don't have the infrastructure in place to efficiently evaluate and document these ideas and apply them more broadly.

Some parts of the puzzle are already in place. For example, the Victorian Government has established the Redesigning Hospital Care Program,

'a four-year statewide initiative that is delivering significant health system improvements through the application of process redesign methodologies in Victorian public hospitals.

The program objectives are to:

- Increase redesign capability and capacity by training staff across the system to lead projects, implement change and train their peers; and
- Measurably improve health delivery processes and outcomes across the system.[14]

The Australian Resource Centre for Healthcare Innovations (ARCHI) provides an online forum for health professionals to share innovations in healthcare.[15] It is hosted by the NSW Agency for Clinical Innovation (ACI), 'the lead agency in NSW for promoting innovation, engaging clinicians and designing and implementing new models of care.'[16]

The role of the states in identifying and implementing reforms to our health systems is critical; in many areas they are the level of government closest to the delivery of healthcare. We need to capitalise on initiatives at the local and state levels for the broader national benefit, and we need to better integrate the research community in this endeavour.

The Australian Commission on Safety and Quality in Health Care already plays a role in setting national standards for healthcare, and is undertaking important work to address variations in practice. Research Australia proposes enhancing and extending the Commission's role.

[14] http://www.health.vic.gov.au/redesigningcare
[15] http://www.archi.net.au/home
[16] http://www.aci.health.nsw.gov.au

Australia needs a national body with the capacity to formally evaluate individual practices for their safety, quality, efficacy, efficiency and transferability; and able to drive the introduction of evidence based best practice in the health system nationally. Research Australia proposes adapting the Australian Commission on Safety and Quality in Health Care for this purpose. The following actions would be required:

1) Change the Commission's mandate to include efficiency as well as safety and quality
2) Charge the Commission with responsibility for identifying practices and initiatives in existing health care providers that can be evaluated for their suitability for adoption as part of the Healthcare Standards, and for the assessment of existing practices that are potentially harmful and/or inefficient.
3) Provide incentives for health providers to nominate practices/initiatives for evaluation.
4) Provide the Commission with the capacity to fund the research necessary to evaluate the practices/initiatives. The Commission could utilise the services of the National Health and Medical Research Council to evaluate and administer applications in response to a 'Targeted Call for Research'.
5) Use the existing standard setting and accreditation system to promote the adoption (or discontinuance) of the practices/initiatives.
6) Utilise the Commission's proposed clinical quality registers in the evaluation of appropriate practice/initiatives.

This proposal is not that efficiency should be prioritised over safety and quality, but that it should be included with safety and quality in the Commission's mandate.

Measures that improve quality and safety typically improve patient management, reduce adverse events and readmissions and lead to quicker recoveries, and these are the major drivers of efficiency gains. Giving the Commission the capacity to fund the research necessary to evaluate the practice ensures that good ideas can be assessed and translated in a systematic way that is consistent with the needs of the health system. Utilising the NHMRC to administer and monitor the research grants programs eliminates potential duplication in this area and provides an opportunity to better engage the research community, including through the NHMRC's Research Translation Faculty.

Preventive health research

'Prevention is better than the cure' is a saying that is as true as it is well known. Some of the greatest health and economic benefits have flowed from preventive health measures such as vaccination programs and anti-smoking campaigns.

Chronic disease represents a significant and increasing component of the overall burden of disease as our population ages and we become more successful in treating infectious disease and other acute conditions.

The AIHW reports that:

- analysis of the 2004-05 National Health Survey showed that just over 7 million people have at least one chronic condition, and the proportions having a condition increase with age, as do the proportions of people reporting more than one chronic condition.
- More than half of all potentially preventable hospitalisations are from selected chronic conditions.
- In 2004-05, people with chronic disease were more likely to not participate in the labour force, were less likely to be employed full-time, and more likely to be unemployed, than those without chronic disease.[17]

The major chronic diseases such as heart disease, stroke and type 2 diabetes are linked to lifestyle, and are amenable to preventive health measures.

Preventive measures have to be at the forefront of addressing many of the major health issues facing Australia, including obesity and diabetes, if we are to do so in a cost effective manner. The success of such measures and the identification of emerging population health issues are dependent upon the capacity of Australia's public health, preventive health and population health researchers. This requires expertise not only in the health social sciences but in a diverse range of disciplines including economics and environmental science to effectively identify and prioritise issues, develop targeted interventions and evaluate their success.

Research Australia urges greater funding for population health and preventive health research to improve the effectiveness of preventive health measures and identify emerging trends in the health and disease profile of the Australian population.

[17] www.aihw.gov.au/chronic-diseases

Commercialising Australia's H&MR discoveries

While Australia has a world class reputation for health and medical research, we have historically been less successful at commercialising our research discoveries.

A commonly used indicator of innovation and commercialisation is the number of Triadic Patents issued. Triadic Patents are a series of corresponding patents filed at the European Patent Office, the United States Patent and Trademark Office and the Japan Patent Office. Australia produces 0.6% of the world's Triadic Patents but 2% of scientific articles, indicating that we are less successful than the world average in translating research into the patents that are required for successful commercialisation.[18]

Focusing specifically on Australian health and medical research does not reveal a significant improvement. Australia accounts for only 1.7% of the OECD's patents for health and medical research despite contributing 3% of the OECD's medical research publications.[19] Using a broader measure of biotechnology patents, the OECD reports that for 2005, Australia had 2.2% of the world's share of biotechnology patents.[20]

In the last decade a number of measures have been implemented by the Commonwealth Government to support the commercialisation of Australia's research, and these are bearing fruit. Australia has a small but dynamic biomedical sector, and is well placed to benefit from the scientific advances being made in a range of areas in the life sciences. Continued Commonwealth Government support is critical to the further development of Australia's knowledge intensive high value biotechnology, pharmaceutical and medical devices industries.

Research Australia supports the continuation of programs to support Australian R&D and innovation, including Commercialisation Australia and the R&D tax incentive.

[18] OECD, 2010, Science Technology and Innovation Outlook 2010, p.154
[19] Grant, J. 2004, *Sustaining the Virtuous Cycle*, Australian Government, p.24, 2004; OECD 2000- 2009 data on patents by inventor, for category IPCA 61- medical or veterinary science; hygiene
[20] OECD, 2008 Compendium of Patent Statistics, p.19

CONCLUSION

Research Australia is conscious of the Government's determination to return the Budget to surplus, and we appreciate the Government's continued support for, and commitment to, H&MR. This commitment is well placed. Uniquely, Australia's investment in H&MR has the capacity to:

- improve the health of all Australians,
- boost productivity and economic growth;
- curb the growth in health expenditures; and
- support Australia's transition to a modern, knowledge intensive economy.

H&MR is dependent on Government investment and support. While there is private sector investment, many of the outcomes of H&MR are public goods, not amenable to commercialisation. HM&R is integral to the health reforms needed to continue to deliver the healthcare Australians need.

For these reasons Research Australia is of the view that continued Commonwealth funding for H&MR is essential, and that further specific funding should be made available to support efforts to improve the translation of research and promote greater efficiency in the health system, as detailed elsewhere in this submission.

In areas as complex as the Australian health system, the higher education sector and government support for industry, there are inevitably inefficiencies and duplication of effort. There is, therefore, an opportunity to improve both efficiency and effectiveness. In considering such opportunities, Research Australia urges the Government to be mindful of the impact that changes in these areas can have on Australian H&MR, which is a delicate web of programs and support that have been developed over time and are interweaved through these sectors.

Research Australia appreciates the opportunity to make this submission and would be pleased to provide further information or answer any questions that this submission may have raised.

APPENDIX 1

DEFINTION OF HEALTH AND MEDICAL RESEARCH

One of the immediate issues faced in undertaking any review of health and medical research is defining it. Research Australia uses the following definition:

Health and medical research is research that **aims to improve the health and well being of people**. It draws on our knowledge of the human body and the world around us to find ways to cure and prevent disease, reduce injury and disability, improve the delivery of health services and help us to lead longer healthier lives.

H&MR embraces **a range of different disciplines** including biology, physiology, pharmacology, chemistry, engineering, biotechnology, epidemiology, medicine, psychology, nursing, allied health, population studies, IT, mathematics, economics and health services research.

It is concerned with basic discoveries about how our bodies (and minds) function and respond to disease; the development of new drugs, procedures and therapies, influencing behaviour to improve health, and making our health services more effective and efficient.

As with any definition, there are areas at the boundaries that test it. For example, basic research into cell function is not regarded as health and medical research, even though the discoveries from such research underpin our understanding of human physiology and responses to disease. Similarly, research in nanotechnology may lead to the development of new materials that have application in medical devices, but the basic research is not considered to be health and medical research. (The research required to apply these new material to medical devices would fit the definition.)

At the other end of the scale, health and medical research includes research in disciplines such as health economics and public health. These disciplines, while often far removed from the laboratory and the traditional image of science, nonetheless play a critical part in ensuring the translation of research, the delivery of safer, more effective and efficient health services, and a healthier population.

APPENDIX 2

AUSTRALIAN GOVERNMENT FUNDING OF H&MR

Competitive grant programs

The most visible component of Commonwealth Government funding of health and medical research is the National Health and Medical Research Council's (HMRC) grants programs, and to a lesser extent the Australian Research Council grants programs.

NHMRC

The NHMRC will provide approximately $850 million in grants for health and medical research in the current financial year. Based on 2012 figures, approximately 80% of this amount ($680 million) will be allocated to the higher education sector, with the balance going to not for profit medical research institutes.

Australian Research Council

The Australian Research Council will provide approximately $930 million in grants in the current financial year. While it does not fund 'Medical and Dental Research', a significant proportion of ARC funding is provided to research that fits within a broader definition of health and medical research. The Hon Christopher Pyne, Minister for Education, recently highlighted the role of the ARC in funding H&MR:

'The ARC's value here is in its flexibility—for the ARC works in all disciplines. Take for example the Future Fellow Professor Martina Stenzel. Although her background is in chemistry, she has taken her breakthrough work in nanoparticles into the hospital, to help cancer patients. Her unique platinum project, to develop nano-sized drug delivery containers for the targeted delivery of platinum containing anti-cancer agents, bridges a gap between chemistry and medicine in a way that perhaps only an ARC fellowship can effectively support.'[21]

An analysis of completed ARC National Competitive Grant Projects since its inception in 2001 to 2012 suggests that on a conservative estimate, at least 10% of ARC project grants are related to health and medical research. This includes a range of projects from medical device engineering to health economics. The Government has more recently redirected $103 million of ARC funding over four years to health and medical research in diabetes, dementia and tropical diseases.

[21] The Honorable Christopher Pyne, Minister for Education, Second Reading Speech, Australian Research Council Amendment Bill 2013, 14 November 2013

Higher Education Sector

The Higher Education sector is critical to the conduct of health and medical research, expending $2.66 billion on H&MR in 2010. Equally, health and medical research is critical to our higher education institutions, with health and medical research accounting for approximately one third (32.4%) of all research expenditure by the Higher Education sector.[22]

The majority of this funding is derived from the Commonwealth Government. In addition to NHMRC and ARC grants, which have already been described, there are a number of other Commonwealth Government funding programs that are critical to health and medical research in the higher education sector.

Research Block Grants

There are six Commonwealth Government grants programs that support research activities in the higher education sector. These programs are allocated based on criteria related to the conduct of research, such as the value of an institution's competitive research grants and the number of research students. In 2013, expenditure on these programs was approximately $1.67 billion.[23] On the basis that H&MR accounts for one third of all R&D expenditure in higher education institutions, approximately $550 million of the research block grants relates to H&MR.

Other targeted Commonwealth Government funding

Other programs include Co-operative Research Centre (CRC) funding and specific grants and contracts to undertake research in specific areas.

General University Funds

Universities typically have discretion as to how these funds are allocated between teaching, research and other activities. In addition to private income such as fees bequests and donations, this includes some funding from the Commonwealth Government. For 2012-13, The Commonwealth Government contribution to General University funds is estimated to be $1.7 billion.[24]

Other Commonwealth Government expenditure

Department of Health

The Department of Health funds a number of programs directly from its own budget; examples are the Adult Stem Cell Research Centre, Cancer Clinical Trials, and the National Public Health Communicable Disease Control Research Centres. In 2012-13, the estimated actual expenditure on these programs was $77.9 million.[25]

---

[22] ABS 8111.0, Research and Experimental Development, Higher Education Organisations, Australia 2010, Table 9 SEO Health ($2,657,700,000) divided by total expenditure ($8,202,999,000); Table 4, by source of funds

[23] Dept. of Industry website, 20 Nov. 2013 www.innovation.gov.au/Research/ResearchBlockGrants/Pages/default.aspx

[24] The Australian Government's 2013-14 Science, Research and Innovation Budget Tables, Table 5.

[25] The Australian Government's 2013-14 Science, Research and Innovation Budget Tables, Table 3, Department of Health and Ageing (excluding NHMRC)

CSIRO

The CSIRO undertakes research across a wide range of areas, including health. No official estimate of the expenditure on health and medical research is available although an analysis suggests it was 15- 20% of 2011-12 research expenditure.

Commercialisation Australia

Commercialisation Australia is an initiative of the Commonwealth Government. It is a competitive, merit-based assistance program offering funding and resources to accelerate the business building process for Australian companies, entrepreneurs, researchers and inventors looking to commercialise innovative intellectual property. As at 10 October 2013, Commercialisation Australia had accepted a total of 469 participants with grant support of $198.5 million. [26] 101 of the grant recipients' products (21%) are in the 'health and medical' market.

In addition to Commercialisation Australia there are other industry assistance programs which may also benefit organisations undertaking and/or commercialising health and medical research.

R&D Tax Incentive

The R&D Tax Incentive is a Commonwealth Government program that helps businesses offset some of the costs of doing R&D. Introduced in its current form for the 2011/12 financial year, its two core components are:

- a 45 per cent refundable tax offset (equivalent to a 150 per cent deduction) to eligible entities with an aggregated turnover of less than $20 million per annum; and
- a non-refundable 40 per cent tax offset (equivalent to 133 per cent deduction) to all other eligible entities.

While the program is still in its infancy, there is some evidence that it has been very successful, with the Commonwealth Government's August 2013 financial statement upgrading the estimate of expenditure on the measure by $304 million for 2013-14, and to $1.2 billion over the four years to 2016-17.[27] Anecdotally, the R&D tax incentive has encouraged additional investment by the private sector in H&MR, although no estimates of the expenditure are currently available.

Infrastructure Funds

Facilities for health and medical research have benefited from funding allocations made from both the Education Investment Fund and the Health and Hospitals Fund through their association with higher education and health institutions respectively.

[26] Commercialisation Australia website, 20 Nov, 2013, http://www.commercialisationaustralia.gov.au/OurParticipants/Pages/default.aspx

[27] Australian Treasurer, Minister for Finance and Deregulation, August 2013 Economic Statement, p.36

RESEARCH AUSTRALIA LIMITED

384 Victoria Street Darlinghurst NSW 2010

T +61 2 9295 8546 **ABN** 28 095 324 379

www.researchaustralia.org