

CONSULTATION PAPER

SUMMARY

Issues and Proposed Recommendations

Draft for Public Comment

3 October 2012

This is a summary document that necessarily omits a range of supporting data, analysis and text that may be important to understand the proposed recommendations. The Review encourages the reader to refer to the detailed consultation paper, which we expect to distribute around mid-October, for further context and details of these recommendations.

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Foreword

Australia has for many years produced some of the best scientific and medical researchers in the world. The success of our health and medical research has resulted in better healthcare practices, less disease and morbidity, improved quality of life and, of course, increased longevity. As a nation, Australia has undeniably generated substantial benefits from research.

The Australian Government has been a consistent supporter of this research effort. Its investment has not only facilitated the build-up of research capacity and excellence across research institutions, but has also significantly enhanced investment in health and medical research by State and Territory Governments, business and the not-for-profit sector.

We live in exciting but challenging times, of rapidly changing societal, economic and technological circumstances—including an ageing population, a shifting burden of disease profile and the development of frontier technologies such as genomics. The Australian Government is keen to ensure that its investment is used wisely and equitably so that *all* Australians benefit through better health outcomes, and so that it delivers the greatest economic value. As we face a trajectory of unsustainably increasing healthcare costs, Australia needs a comprehensive strategic plan to ensure it optimises government investment in health and medical research. In establishing this Review, the Australian Government has taken a vital step in support of this need.

Following its first meeting in November 2011, the Panel spent some months listening and absorbing information. It invited public submissions in early February, receiving over 340 formal contributions. The Panel commenced a series of public meetings in mid-April which were held in every capital city, from Hobart on 18 April 2012 to Sydney on 5 July 2012. The Panel also held a series of private stakeholder consultations across Australia which included some 75 meetings, covering over 175 different stakeholder groups and more than 200 individuals. The submissions and the information gathered during the public and stakeholder meetings revealed a considerable breadth and depth of issues, though clearly some key themes—such as workforce constraints and lack of indirect research cost support—were reiterated across the nation.

In addition, an overarching message that emerged from the plethora of evidence was the lack of a sufficiently strong connection between health and medical research and the delivery of healthcare services. Thus, the Panel's overarching vision for the future of health and medical research is one where research is fully embedded in all aspects of healthcare to deliver 'Better Health Through Research'.

This consultation paper has been released as a draft document to canvass the Panel's current views of the various issues and seek feedback on proposed recommendations. In establishing the Review, the Australian Government requested that the Panel report 'in late 2012'. In line with this timeframe, the Panel's call for comments on this Consultation Paper allows four weeks for responses—from 3 October to 31 October 2012. Feedback can be provided via an online submission tool available at www.mckeonreview.org.au.

On behalf of the Panel of the Strategic Review of Health and Medical Research in Australia, I urge you to read this consultation paper and provide constructive feedback so that the Panel can further refine its thinking on strengthening, and indeed rejuvenating, this important sector.

Simon McKeon AO

Chair, Strategic Review of Health and Medical Research in Australia

1. Executive Summary

Vision. The Panel's vision for health and medical research (HMR) is 'Better Health Through Research'. Better health encompasses population health outcomes, such as increased life expectancy, as well as social goals such as equity, affordability and quality of life. HMR is the R&D arm of Australia's \$130bn health sector, so investment in research is vital to support innovation, performance improvement, and curtail escalating healthcare costs. The vision is for a high quality and efficient health system, where a defined proportion of the health budget is invested in research in the health system and where all research activity is well managed to deliver health impact. Initially, the focus should be on spending current investment more effectively. Within the next ten years, an additional \$2–3bn p.a. should be invested in research to deliver a better health system and an additional \$0.4–0.6bn p.a. for other initiatives. The strategy to achieve this vision has seven themes:

I. Embed Research in the Health System

- 1. Drive Research Activity in the Health System.** Protect, manage and monitor at least 3% (excluding the NHMRC Medical Research Endowment Account (MREA)) of total Australian, State and Territory Government health expenditure on defined research activity in the health system, within a defined timeframe (e.g. 8-10 years). Initially maintain, refocus and protect current State and Territory Government funding, using 5% to 7% of Activity Based Funding (ABF) to contribute to the approximately \$1.5bn p.a. currently allocated for research in the health system. Over the longer term add competitive programs, possibly on a 2:1 Australian Government to State and Territory Government contribution ratio, which could provide an additional \$2–3bn p.a. for research in the health system within 8-10 years.
- 2. Establish Integrated Health Research Centres.** Establish and fund 10–20 'Integrated Health Research Centres' over time, combining hospital networks, universities and medical research institutes (MRIs), with significant incremental investment each for five years and clear criteria around strategy, governance and focus.
- 3. Promote Research Participation by Health Professionals.** Support a significant number (e.g. building to around 1,000) of research focused health professionals over the next 10 years with practitioner fellowships and competitive grants, embed research into health professional training and accreditation, and streamline accreditation processes for leading research professionals arriving from overseas.
- 4. Re-align Sector Leadership and Governance.** Empower and resource the NHMRC to take a leadership role across all HMR in Australia including research impact in the health system, possibly with a new name. Task the NHMRC with tracking and reporting Australian HMR expenditure, workforce, research outputs and research outcomes, working with the Independent Hospital Pricing Authority (IHPA) and Local Hospital Networks (LHNs).
- 5. Streamline Clinical Trial Processes.** Establish 5–10 national ethics committees to replace local committees, implement a common IT platform for approvals, have the revamped and expanded NHMRC accelerate implementation of Clinical Trials Action Group (CTAG) recommendations, align standard pricing for clinical trials services, build a portal for recruitment and coordination, provide a national clinical trials insurance scheme, and increase funds for non-commercial trials and infrastructure.

II. Set and Support Research Priorities

- 6. Align Priority Setting Processes.** Develop and fund a set of 8–10 national health research priorities with 10% to 15% of the NHMRC MREA and establish an expert committee for each priority area that determines and leverages ‘top down’ spend within each priority.
- 7. Support a Range of Strategic Priorities.** Support and provide targeted investment in Indigenous health research, rural and remote research, developing world research and advances in genomics in addition to the national health research priorities.

III. Maintain Research Excellence

- 8. Train, Support and Retain the Research Workforce.** Provide active workforce monitoring, higher Australian Postgraduate Awards (APA) stipends, early investigator grants, more flexible track record definitions, research fellowships, career break flexibility and mentoring, with the expanded NHMRC responsible.
- 9. Rationalise Indirect Cost Funding for Competitive Grants.** Ensure that all qualified institutions, including MRIs and health care facilities, receive at least 60% indirect cost loading for national competitive grants.
- 10. Streamline NHMRC Competitive Grant Processes.** Re-engineer the NHMRC granting process to include, but not limited to, streamlining of application processes and assessment criteria, increasing the proportion of five-year grants, simplification of IT platforms, and harmonisation of recording of track records between competitive granting schemes.
- 11. Build Enabling Infrastructure and Capabilities.** Provide significant funding (possibly \$150m to \$200m per annum) for infrastructure and management of national patient databases, for co-ordination of biobank access, and for new enabling technologies and analytical services.

IV. Enhance Non-commercial Pathway to Impact

- 12. Enhance Public Health Research.** Increase funding for public health research, and facilitate increased collaboration between researchers and State and Territory public health experts.
- 13. Enhance Health System Research.** Build capacity in health services research and health economics, to understand and assist translation, and to evaluate health system innovation.
- 14. Accelerate Health System Innovation.** Accelerate research translation and health system innovation through key performance indicators (KPIs) and recognition of translation as a valuable form of research output, and develop a clinical registry program and translation plans.
- 15. Inform Policy with Evidence-based Research.** Inform policy and practice with research evidence, and enhance capability of the expanded NHMRC to procure evidence to support policy makers at the Australian and State and Territory Government level.

V. Enhance Commercial Pathway to Impact

- 16. Support Research Commercialisation.** Maintain HMR access to Australian Research Council (ARC) linkage grants, replace NHMRC Development Grants with a new Matching Development Block Grant Scheme, and establish a new early-stage development fund (possibly around \$250m scale).
- 17. Enhance Commercialisation Environment.** Improve commercialisation visibility, facilitate exchange between research and industry and improve access to scale commercialisation services.

VI. Attract Philanthropy

- 18. Leverage Donations.** Track HMR philanthropic funds raised and allocate funds (possibly \$50m per annum) to match new large philanthropic donations aligned to HMR priorities.
- 19. Encourage Scale in Philanthropy.** Task the Australian Charities and Not-for-profits Commission (ACNC) to encourage aligned smaller charities to collaborate on research funding provision to increase impact.

VII. Invest and Implement

- 20. Invest for the Future.** Enhance and align HMR investment programs, with extended oversight by the expanded NHMRC. Index competitive research grant budgets (particularly the NHMRC MREA) to increases in health expenditure. Focus initially on realigning and better managing existing investment, then develop new programs over three to five years.
- 21. Action Report Recommendations.** Establish a robust implementation process with a medium term follow up review by the NHMRC and with oversight by an independent panel.

2. Vision and Goals

2.1 Introduction

Health and medical research (HMR) is critical to delivering better health outcomes for Australians. HMR is part of the broader health sector, which includes health professionals, consumers, the business and not-for-profit sectors, and governments. The Australian, State and Territory Governments have recently introduced a number of reforms to the health system to enhance the funding and delivery of healthcare services. This includes consolidation of hospital funding into a National Health Funding Pool (NHFP) and moving from block funding via State and Territory Governments to Activity Based Funding (ABF) delivered through Local Hospital Networks (LHNs).

In the context of rising healthcare costs and health reform, HMR has a critical role to play in improving the health system, particularly in the next five to ten years. While historically Australia's HMR performance has been strong by international standards, notably in the areas of biomedical and clinical research, realising the potential value from HMR requires it to be deeply embedded into the health system. New thinking, strategies and processes are needed to drive improvements in healthcare delivery through a rejuvenated and fully integrated HMR sector.

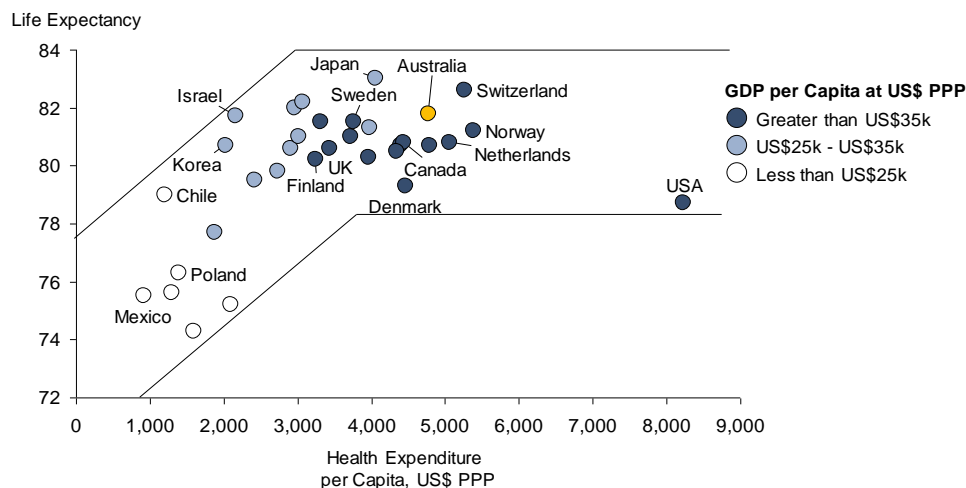
2.2 Health System Performance

While Australia's health system compares well to other countries in terms of life expectancy, healthcare costs are escalating at an unsustainable rate. Australia's national expenditure on health is estimated at over \$130bn in 2011-12. Of this, total government expenditure is currently over \$90bn and 7% of GDP, but projected to grow to over \$450bn and 13% of GDP by 2049-50. Simply increasing healthcare expenditure does not necessarily lead to improved health outcomes (Exhibit 1), so a more strategic investment approach is required to improve outcomes and control costs.

Exhibit 1

For wealthy countries, increasing health expenditure does not necessarily lead to improved health outcomes

Life Expectancy vs. Health Expenditure
2010



Source: OECD, Pacific Strategy Partners Analysis

2.3 Role of Health and Medical Research

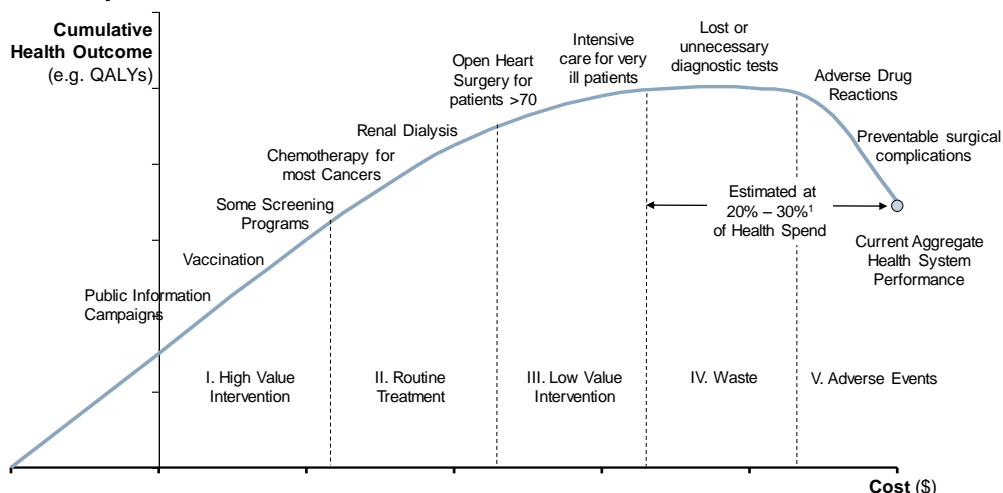
HMR is the R&D function of Australia’s \$130bn health system. Investment in HMR has underpinned the improved quality of healthcare for Australians over the last 50 years. Escalating healthcare costs are fiscally unsustainable and unlikely to significantly improve health outcomes on their own. Investment in HMR has a fundamental role in improving the future effectiveness and efficiency of the sector. An additional dollar spent on research has a multiplier effect by driving efficiency and new practices compared to an additional dollar on general healthcare.

One area of opportunity for improvement is the cost of waste and adverse events in the health system. In the USA, this is estimated at between 20% and 30% of health expenditure, and while the equivalent Australian number is not known, it is likely to be similarly significant. Health services research on the Australian health system must be a priority to identify and target wasteful spending that does not improve health outcomes.

Exhibit 2

Health outcomes are driven by productivity and cost-effectiveness of health services

Health System Performance



Notes: 1. Based on US estimates – Institute of Medicine (2012), 'Best Care at Lower Cost: The Path to Continuously Learning Health Care in America'; Berwick and Hackbarth (2012), Journal of the American Medical Association, 'Eliminating Waste in US Health Care'; PwC Health Research Institute (2008) 'The Price of Excess: Identifying Waste in Healthcare Spending'

Source: Pacific Strategy Partners Analysis, Tengs, T. et al (1995) 'Five-hundred life saving interventions and their cost effectiveness', Risk Analysis, 15,3, 369 – 390;

Research across the spectrum from biomedical to health services research has significant potential to improve health outcomes and the cost effectiveness of the health system via three main levers:

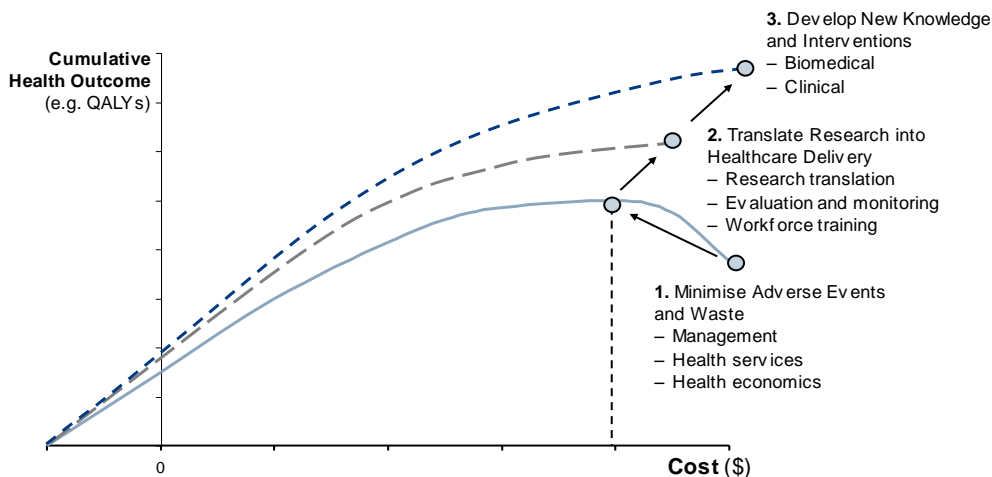
1. Health services research to identify ways to minimise adverse events and waste;
2. More effective research translation to improve healthcare delivery; and
3. New knowledge to create new clinical interventions.

Optimising each lever requires a holistic approach to embed research into a health system where clinical practice is based on evidence and research evidence is routinely translated into clinical practice.

Exhibit 3

Health outcomes can be improved by better management, increased translation effectiveness and new knowledge

Levers to Improve Health System Performance



Source: Pacific Strategy Partners Analysis

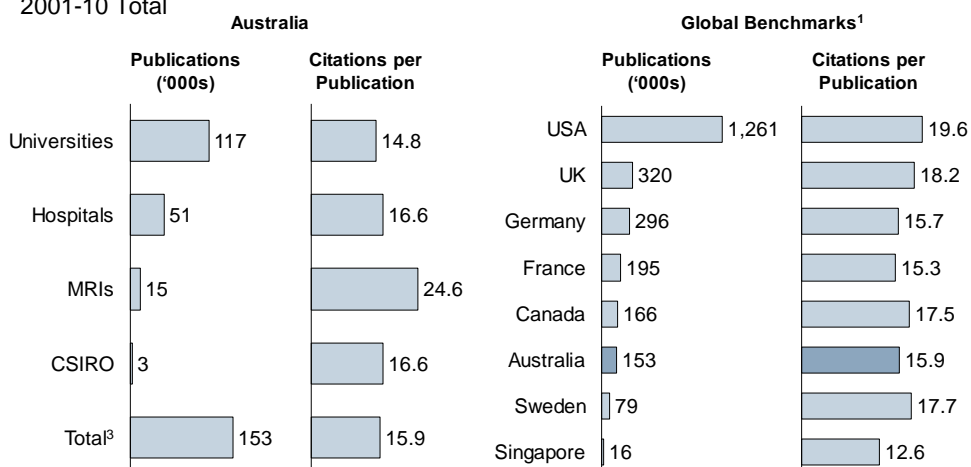
2.4 Health and Medical Research Performance

Australia ranks highly against a range of international benchmarks for HMR, ‘punching above its weight’ in publication output with relatively high citation rates. This performance is the fruit of long term investment in HMR and ongoing reform to improve its effectiveness, particularly over the last decade.

Exhibit 4

Australia's health and medical research output is relatively highly cited and about two-thirds is produced by universities

Health and Medical Research Bibliometrics Overview
2001-10 Total



Notes: 1. Covers journals in HMR related fields (Biology & Biochemistry, Clinical Medicine, Immunology, Molecular Biology & Genetics, Neuroscience & Behaviour, Pharmacology & Toxicology); 2. Australian figures in Thomson Reuters international dataset aligned to Australian domestic data (slight difference in CPP average 15.9 vs. 15.4 and number of publications (153k vs. 107k)
3. Sum of segments do not add to total due to double counting

Source: Thomson Reuters

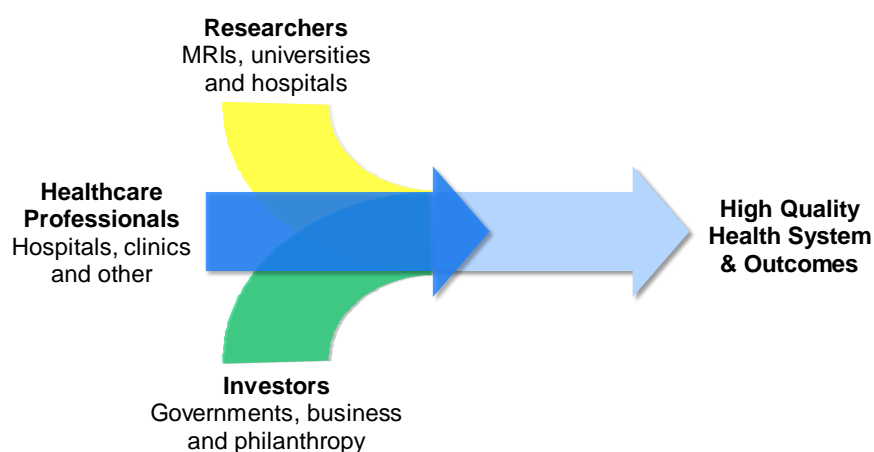
2.5 Vision

The Panel's vision is for 'Better Health Through Research'. Better health can be defined by population health outcomes, such as increased life expectancy, together with social goals such as equity, affordability and quality of life. A high quality, effective and affordable healthcare system is required to deliver these outcomes. Research investment has a vital role to play in reform of the health system, by supporting both innovation and performance improvement. To do this, 3% of the health budget should be invested in research in the health system. Initially, the focus should be on spending current investment more effectively. Within the next ten years, an additional \$2-3bn p.a. should be invested in research to deliver a better health system and an additional \$0.4-0.6bn p.a. for other initiatives.

Exhibit 5

The Panel's vision is for 'Better Health Through Research'

HMR Vision



'Better Health Through Research'

2.6 Goals and Strategy

Investment in HMR has three complementary goals:

- Better health outcomes – increased life expectancy and quality adjusted life years;
- Knowledge creation – foundation for new discovery and practice; and
- Economic impact – reduced healthcare costs, wealth creation and new jobs.

Better health outcomes, as highlighted in the vision, are a fundamental objective. These encompass both longevity and deeper social goals that accompany a greater level of health and wellbeing in individuals, such as positive lifestyle impacts on carers, family and friends. Knowledge creation is both a supporting enabler to deliver better health outcomes and a goal in its own right, essential to innovation and advancement of the sector. The economic impact of HMR includes benefit from curtailing escalating healthcare costs, productivity gains that accrue from having healthier people in the workforce and community, and wealth creation from research commercialisation and associated employment. The potential of HMR to deliver economic impact provides a compelling case for investment in and of itself. Collectively, these three goals underpin the fundamental role of HMR as part of the health system and broader Australian society.

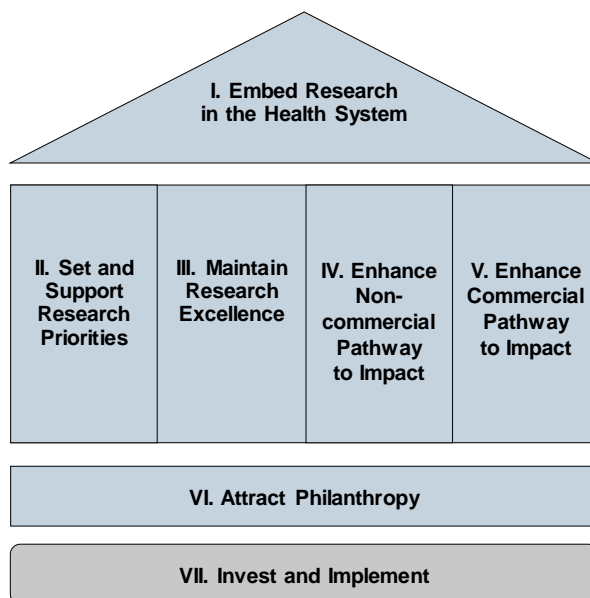
A new strategy is required to successfully achieve these goals and leverage HMR’s latent potential to improve the health system, and has seven themes:

- I. Embed research in the health system;
- II. Set and support research priorities;
- III. Maintain research excellence;
- IV. Enhance non-commercial pathway to impact;
- V. Enhance commercial pathway to impact;
- VI. Attract philanthropy; and
- VII. Invest and implement.

Exhibit 6

The new strategy has seven themes

Strategic Pillars Framework



3. Embed Research in the Health System

3.1 Introduction

HMR is essential to improve the health system. While we perform ground-breaking HMR within our research institutes, universities and companies, increasing pressure to deliver health services has restricted research activity in the health system. This has also created barriers for research translation into evidence-based clinical and health interventions.

3.2 Drive Research Activity in the Health System

For the new health reforms to achieve their target health impact, research must become integral to, and embedded in, the health system. The Panel has determined that at least 3% of all Government health funding should be invested in defined and well-managed research activity within the health system. Given the current level and rate of increase in Government health spending, this would be around \$4.7bn out of \$160bn by FY2023 and would be in addition to existing research investments made via the National Health and Medical Research Council (NHMRC). The proposed Activity Based Funding (ABF) model for hospitals is a good mechanism to drive a more focused research and development approach by quarantining research funding within the health system.

The initial imperative is to improve management of research in the health system. The Australian Government should continue to provide matched support for State and Territory Government investment in defined research activities. Currently around \$1.5bn p.a. is estimated to be spent by all levels of Government on research in the health system. This is a rough estimate only, and better understanding the size of the actual number and how it is spent should be a key priority. The Australian Government's contribution could comprise 5% to 7% of its committed ABF expenditure of about \$13.7bn for FY13 and should be protected, managed, monitored and evaluated. Explicit KPI's about research, both at State level and in hospital CEO contracts, are an important way to ensure that these funds are spent on appropriate, focused research.

Over a number of years, the Australian Government should boost its contribution to around 2:1 relative to State and Territory Governments, to lead an additional \$2–3bn p.a. investment for research in the health system within the next ten years. Competitive programs (detailed in other recommendations) should ensure this investment is focused on the most important research questions and the best research teams. This will ultimately give the Australian Government a leading role in influencing research to ensure that the other 97% of funding improves health outcomes for all Australians through a more effective and efficient health system.

Recommendation 1: Drive Research Activity in the Health System. *Protect, manage and monitor at least 3% (excluding the NHMRC Medical Research Endowment Account (MREA)) of total Australian, State and Territory Government health expenditure on defined research activity in the health system within a defined timeframe (e.g. 8-10 years). Initially maintain, refocus and protect current State and Territory Government funding, using 5% to 7% of Activity Based Funding (ABF) to contribute to the approximately \$1.5bn p.a. currently allocated for research in the health system. Over the longer term add competitive programs, possibly on a 2:1 Australian Government to State and Territory Government contribution ratio, which could provide an additional \$2–3bn p.a. for research in the health system within 8-10 years.*

3.3 Establish Integrated Health Research Centres

3.3.1 Introduction

Clusters dominate global creative output in many industries (for example, Hollywood and Silicon Valley). Health research clusters are typically characterised by co-location and collaboration of researchers in universities, MRIs, hospitals and other healthcare service providers.

3.3.2 NHMRC Model of Advanced Health Research Centres

The NHMRC released a discussion paper in December 2010, promoting ‘Advanced Health Research Centres’, and is proposing to invite consortia of universities, hospitals and MRIs to apply for recognition of excellence. No funding was provided and it is not clear whether just recognition as such a centre will be sufficient incentive for genuine clusters to form and deliver impact.

3.3.3 The Panel’s Proposal for Integrated Health Research Centres

Research clusters are one of the key drivers for the vision of embedding research in the health system. The Panel’s proposal is for funded ‘Integrated Health Research Centres’ (IHRCs) to integrate research excellence with healthcare services delivery and facilitate best-practice translation of research directly into healthcare delivery. As such, IHRCs would bring together researchers within universities, MRIs and health services (e.g. LHNs, Medicare Locals, other health services and aged-care facilities), and ensure cooperative access to skilled professionals, infrastructure, patient / data access and a capacity to implement change. In certain circumstances (e.g. rural and regional research) these may operate as a virtual IHRC. A rigorous selection and accreditation process will be required to ensure candidate centres demonstrate excellence, effective collaboration and a strategy to deliver health system impact. Significant incremental funding should be provided to encourage and facilitate their development. The Panel’s early view is that this could be up to \$10m p.a. each.

Recommendation 2: Establish Integrated Health Research Centres. *Establish and fund 10–20 ‘Integrated Health Research Centres’ over time, combining hospital networks, universities and medical research institutes (MRIs), with significant incremental investment each for five years and clear criteria around strategy, governance and focus.*

3.4 Promote Research Participation by Health Professionals

3.4.1 Introduction

Research capacity within the clinician and allied health workforce is critical for identifying research questions, conducting research, promoting research translation and improving the health system.

3.4.2 Increase Clinician Researcher Capacity

The current system does not adequately facilitate, incentivise or support research by the clinical workforce. Research is rarely financially rewarding for health professionals, who face increasing pressure to deliver clinical services which reduces time available for research. Protected research time is required to ensure the best clinician researchers remain active in research.

3.4.3 Train Health Professionals in Research

There is also a lack of research capability within the broader health workforce, for which education, training and improved incentives for dual accreditation as a PhD and specialist is required.

3.4.4 Facilitate Faster Entry of Overseas Professionals

Participation in research by overseas health research professionals is constrained by restrictions on obtaining visas and issues with accreditation of international medical graduates.

Recommendation 3: Promote Research Participation by Health Professionals. Support a significant number (e.g. building to around 1,000) of research focused health professionals over the next 10 years with practitioner fellowships and competitive grants, embed research into health professional training and accreditation, and streamline accreditation processes for leading research professionals arriving from overseas.

3.5 Re-align Sector Leadership and Governance

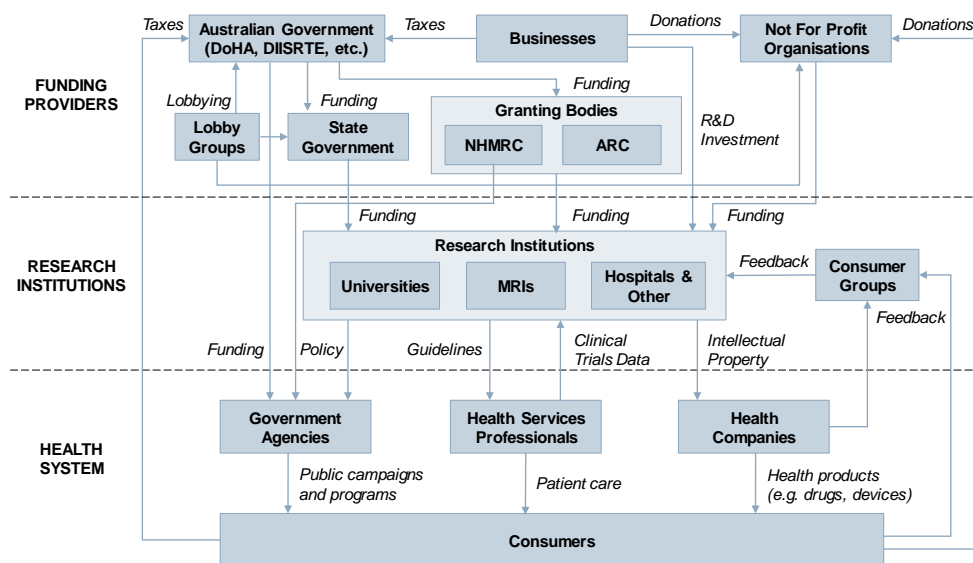
3.5.1 Introduction

While the HMR sector is complex and comprises various stakeholders and types of activities, there is no true leader for the sector. A single entity needs to assume the role of champion for HMR, drive key reforms across the sector and unite major stakeholders. The lack of accurate statistics on HMR, particularly research conducted in the health system, is one of the consequences of the current absence of leadership.

Exhibit 7

The health and medical research sector is complex and comprises various stakeholders and types of activities

HMR Funding and Activity Flows



3.5.2 Provide Leadership in HMR

While the logical body to assume leadership of the HMR sector is the NHMRC, it does not have the mandate, governance structure, authority or resources to be able to perform the role of a true leader as it is currently configured. While the Panel has given consideration to the possibility of an additional or alternative body, re-tasking a revamped and expanded NHMRC with a leadership mandate is the preferred approach.

3.5.3 Track and Monitor Current Investment

While understanding the growth and composition of HMR investment is critical to driving any improvement efforts across the sector, this area remains poorly understood:

- Australian Government – HMR spend is well tracked for competitive grants, as are data on Department of Health and Ageing (DoHA) expenditure;
- State and Territory Government – Direct support is well understood, but indirect support via the health system is generally not measured, and so is not managed effectively;
- Business investment – Reasonably well managed as it is deployed largely in the commercial sector and tracked by the ABS; and
- Philanthropy – Currently only partially tracked via a survey conducted by Research Australia every few years, and could probably be spent more effectively.

Recommendation 4: Re-align Sector Leadership and Governance. Empower and resource the NHMRC to take a leadership role across all HMR in Australia including research impact in the health system, possibly with a new name. Task the NHMRC with tracking and reporting Australian HMR expenditure, workforce, research outputs and research outcomes, working with the Independent Hospital Pricing Authority (IHPA) and Local Hospital Networks (LHNs).

3.6 Streamline Clinical Trial Processes

3.6.1 Introduction

Clinical trials are a key research activity performed within clinical settings. While Australia continues to attract clinical trials, it has become one of the most expensive and slowest to trial commencement locations in the world. Hence, its current position is being eroded. If this occurs, it will have a negative impact on access to trial outcomes in the form of improved treatments. Streamlined ethics and governance processes, efficient pricing and better patient recruitment are imperative for Australia to remain globally competitive.

3.6.2 Accelerate Implementation of CTAG Report Recommendations

Implementation of recommendations from the 2011 Clinical Trials Action Group (CTAG) report, *'Clinically Competitive: Boosting the Business of Clinical Trials in Australia'*, has been sub-optimal, as the implementation committee does not have the level of authority and responsibility required.

3.6.3 Drive a National Approach to Streamlining Ethics and Governance

Ethical reviews and governance approvals are highly complex and present a significant bottleneck for clinical trials. Furthermore, statutory and legislative requirements vary considerably between State jurisdictions and the nature of multi-centre ethical reviews results in significant duplication of activity. Research institutions are also concerned about insurance and indemnity in the case of misadventure following ethical review elsewhere, which has led to resistance and slow progress towards adopting the Harmonisation of Multi-centre Ethical Review (HoMER) national system of ethics review.

3.6.4 Standardise Clinical Trial Pricing

Current clinical trial pricing and service charges vary significantly across healthcare providers, and should be standardised to simplify multicentre trials.

3.6.5 Improve Clinical Trial Recruitment and Co-ordination

Improving patient recruitment for clinical trials was one of the four key areas addressed by CTAG, noting that about 90% of industry-sponsored trials in Australia experienced recruitment delays, especially for Phase III studies.

3.6.6 Support Non-commercial Clinical Trials

Non-commercial clinical trials are an important part of efforts to improve health outcomes and reduce healthcare costs. Given their nature, non-commercial trials require government funding, as well as access to resources in hospitals and health services providers—both of which are lacking. The Panel's early view is that an additional \$50 - \$100m p.a. is required to support non-commercial clinical trials and infrastructure.

Recommendation 5: Streamline Clinical Trials Processes. *Establish 5–10 national ethics committees to replace local committees, implement a common IT platform for approvals, have the revamped and expanded NHMRC accelerate implementation of Clinical Trials Action Group (CTAG) recommendations, align standard pricing for clinical trials services, build a portal for recruitment and coordination, provide a national clinical trials insurance scheme, and increase funds for non-commercial trials and infrastructure.*

4. Set and Support Research Priorities

4.1 Introduction

Research in Australia is largely investigator initiated. While the Panel supports this approach and research across the spectrum of research areas, a portion of investment should be strategically focused to ensure key priorities are addressed.

4.2 Align Priority Setting Processes

Since the purpose of HMR is to improve health outcomes, strategic decisions should influence research directions. This should augment the investigator-initiated approach to focus resources on the most promising research directions, with a broad engagement process.

Recommendation 6: Align Priority Setting Processes. *Develop and fund a set of 8–10 national health research priorities with 10% to 15% of the NHMRC MREA and establish an expert committee for each priority area that determines and leverages ‘top down’ spend within each priority.*

4.3 Support a Range of Strategic Priorities

4.3.1 Introduction

There are a number of strategic priorities that should be supported.

4.3.2 Support Indigenous Health Research

Indigenous HMR is difficult to fund due to the longer-term timeframes involved, the need for researchers to visit and develop close relationships with the community, and the need to understand the delivery of health services.

4.3.3 Support Rural and Remote Research

Health outcomes are worse for rural and remote populations, than urban ones. Research capacity should be better organised to focus on understanding and addressing this gap.

4.3.4 Support Developing World Research

Australia’s excellent research capacity can play an important international role by partnering to solve HMR questions relevant to the developing world. AusAid has proposed a partnership with the NHMRC to support implementation research that will deliver an impact in our region.

4.3.5 Support Advances in Genomics

The analysis of patient genomes for the purposes of diagnosis, prognosis and personalised treatment planning represents an area of research that is most likely to directly influence the future delivery of health and has significant potential to improve health outcomes. While the technology for genomic sequence acquisition is advancing quickly, the rate at which we are linking this information to healthcare delivery and tapping into its potential lags considerably. Australia is one

of the few developed nations without a dedicated genomics research centre. A shift in focus from data gathering to conducting high quality research is needed.

Recommendation 7: Support a Range of Strategic Priorities. Support and provide targeted investment in Indigenous health research, rural and remote research, developing world research and advances in genomics in addition to the national health research priorities:

- Build Indigenous research capacity through the NHMRC people support schemes and support an IHRC with a focus in this area;
- Establish a focused virtual rural and remote IHRC, with linkage of rural and remote doctors into other IHRCs and access to national data platforms around research, trials and patients;
- Support developing world research by promoting engagement between the NHMRC researchers and AusAid, and encourage partnering of Australian and international researchers for NHMRC grants; and
- Develop capacity and capability in genomics / bioinformatics and personalised medicine through a national bioinformatics research network, capacity-building grants, ongoing training within the health community and investment in patient data infrastructure.

5. Maintain Research Excellence

5.1 Introduction

While Australia’s performance in HMR has been excellent on a comparative basis internationally, continued support across the spectrum of research areas (e.g. biomedical, clinical, public health and health system) is required to maintain our international standing.

5.2 Train, Support and Retain the Research Workforce

5.2.1 Introduction

There are a number of constraints on the current HMR workforce that make research a relatively unattractive career option.

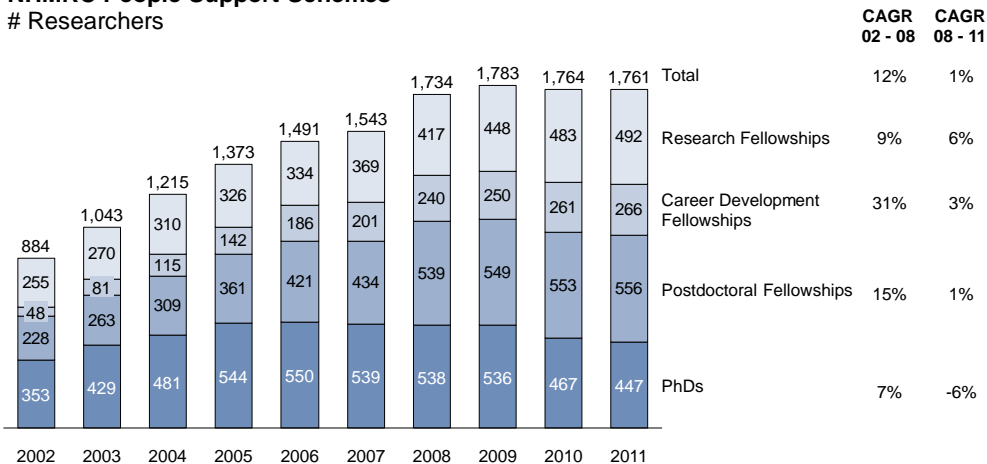
5.2.2 Monitor and Manage the Research Workforce

The overall HMR workforce is not actively monitored or managed and there is very poor visibility of the size and dynamics of the HMR workforce. The number of researchers supported by NHMRC people support schemes has been flat to declining since 2008.

Exhibit 8

NHMRC people support schemes experienced strong growth up until 2008 and has since stabilised

NHMRC People Support Schemes



Source: NHMRC

5.2.3 Support Early Investigators

Early investigator support is not well targeted, Australian Postgraduate Award (APA) stipends are low, and any expansion of the PhD cohort requires career path options including training for non-research roles to be attractive.

5.2.4 Increase Track Record Flexibility

Non-clinical research areas and non-publication work are not sufficiently valued for research track records, while mid-career researchers have trouble demonstrating their track record.

5.2.5 Fund our ‘Best and Brightest’

The NHMRC supports 492 research fellowships, which are renewable every five years. The growth in mid-career fellowships has created an increased pool of candidates, while discontinued schemes such as the Australia Fellowship has reduced the availability of research fellowships. Clearly, any career scheme is sustainable only if there is exit as well as entry. The NHMRC and Panel support demonstrated excellence against all criteria as the core requirement for nationally-competitive career research fellowships. While acknowledging that the NHMRC will continue to fund only the best and brightest of career level biomedical research staff, and that the majority are and will continue to be funded by hospitals, universities, and research institutes, there is a need to build further capacity in newly emerging disciplines in which Australia lacks strength, including genomics, bioinformatics, biostatistics, health services research and health economics.

5.2.6 Retain Researchers within the System

There are a number of career progression barriers, such as career interruptions, that impact a researcher’s track record and make it difficult to re-enter the workforce. There also appears to be a lack of capacity to mentor young researchers.

Recommendation 8: Train, Support and Retain the Research Workforce. *Provide active workforce monitoring, higher Australian Postgraduate Awards (APA) stipends, early investigator grants, more flexible track record definitions, research fellowships, career break flexibility and mentoring, with the expanded NHMRC responsible:*

- *Actively monitor workforce shape, dynamics and people support schemes;*
- *Support career entry with higher APA stipends and ‘early investigator’ grants focused on few total research years rather than ‘new to NHMRC’;*
- *Increase the number of training and career fellowships focusing on genomics / bioinformatics, health economics, biostatistics and health services research;*
- *Provide increased flexibility of track record definitions in grant applications to encompass a broader range of research activities and contributions; and*
- *Retain more researchers in the system through longer grants, flexibility for career breaks or part-time work, removal of barriers to retention and funded capacity for mentoring.*

5.3 Rationalise Indirect Cost Funding for Competitive Grants

Research indirect cost funding is inadequate and depends on the type of institution and jurisdiction. MRIs are ineligible to access Research Infrastructure Block Grant (RIBG) funding and hospitals cannot access RIBG or Independent Research Institutes Infrastructure Support Scheme (IRIISS) funding.

Recommendation 9: Rationalise Indirect Cost Funding for Competitive Grants. *Ensure that all qualified institutions, including MRIs and health care facilities, receive at least 60% indirect cost loading for national competitive grants.*

5.4 Streamline NHMRC Competitive Grant Processes

5.4.1 Introduction

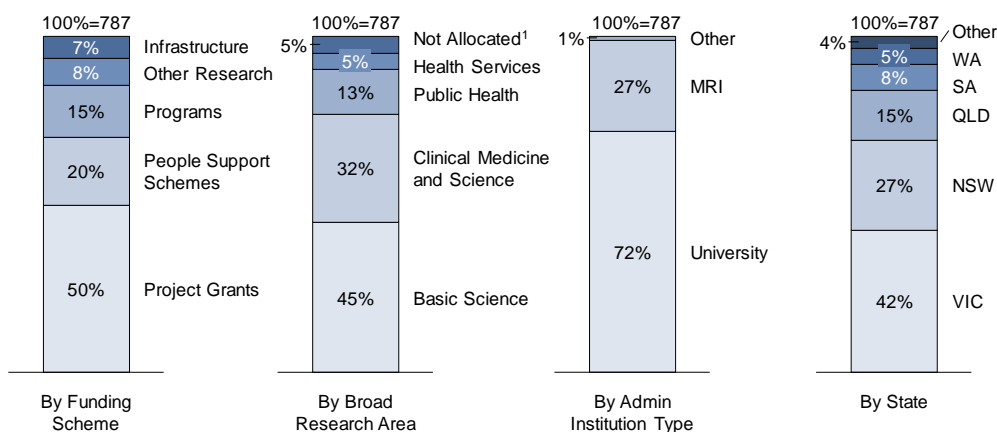
While the NHMRC funds a number of competitive grant schemes across various research areas, there are issues with administrative processes and systems.

Exhibit 9

NHMRC funding is deployed across various schemes and research areas, and is largely administered through universities and MRI's

NHMRC Expenditure

\$m and % Mix of Total Expenditure
2011



Note: 1. Mostly equipment and infrastructure grants not allocated to a field of research
Source: NHMRC

5.4.2 Improve NHMRC Grant Application and Assessment Processes

Grant applications are complex and time consuming for applicants and assessors. The current system incentives are driving up the number of applications while reducing successful grants. The evaluation criteria, while including significance and track record, are likely to be encouraging overly conservative proposals. A process of early triage for those applications unlikely to be successful will be critical to reducing the load on the reviewing process.

5.4.3 Move to Longer Grants

Research is becoming increasingly complex to perform. The current typical three-year project grant cycle results in career insecurity, reduced quality and impact of the research being generated and an administrative burden. Grant request standardisation into predominantly five-year terms with fixed budget quanta will simplify budget preparation and assessment whilst improving job security and improving the quality of the outcomes.

5.4.4 Improve RGMS and Harmonise Track Records between Competitive Grant Schemes

The grant submission process varies considerably from one competitive granting agency to another with respect to content, format and IT platform. Within the last three years, the NHMRC launched an online Research Grant Management System (RGMS) for grant submission, review and ongoing administration. This proved problematic during implementation and while it has improved, is still regarded as cumbersome at submission and review. Considerable improvements are required in RGMS and there is merit in considering unification of submission process elements between all granting agencies such as the Australian Research Council (ARC), including the adoption of a standardised CV template.

Recommendation 10: Streamline NHMRC Competitive Grant Processes. *Re-engineer the NHMRC granting process to include, but not limited to, streamlining of application processes and assessment criteria, increasing the proportion of five-year grants, simplification of IT platforms, and harmonisation of recording of track records between competitive granting schemes:*

- *Improve NHMRC grant application processes and refocus assessment criteria on the significance of the outcomes, support a limited but significant quantity of high-risk / potential high-return research, and explore charging institutions a fee for processing project grant applications to encourage institution level triage;*
- *Move to standardise project grant duration at five years, with the funding request in quanta of \$50,000 per annum and a minimum per annum request of two quanta; and*
- *Simplify grant application and review processes for NHMRC RGMS, by concentrating on grants that on first assessment are in the top half of applications, and harmonise CV / track records between competitive granting schemes.*

5.5 Build Enabling Infrastructure and Capabilities

5.5.1 Introduction

Developing major infrastructure and building skilled support capacity are key enablers to ensure the long-term effectiveness of HMR.

5.5.2 Accelerate Efforts to Build a National Patient Research Database

The ease with which data can be collected, analysed and disseminated is a critical factor in the advancement of medical research and its translation to better healthcare. There is a gap in long-term data storage and discovery infrastructure.

5.5.3 Secure Long-term Funding for Major Infrastructure and Enabling Technologies

Modern HMR is a complex activity that increasingly requires support from a broad range of enabling technologies, such as access to biobanked material, medical imaging, simulation technologies, micro and nanobiotechnologies, proteomics, metabolomics and genomics.

Short-term research project timeframes have led to a limited supply of longer-term funding for major equipment and other enabling technologies. The 2008 Cutler Review recommended that the government ensure a sustainable research infrastructure strategy into the future and extend funding for a successor program to the National Collaborative Research Infrastructure Scheme (NCRIS) for 10 years including capital and operational support of \$150m to \$200m per annum.

5.5.4 Develop a National Biobanking Platform

The current ad hoc approach to the development of biobanks in Australia is costly and difficult for researchers to access efficiently. Central coordination of these activities to ensure access for research nationally is critical.

5.5.5 Increase Support Services Capacity

There is an increasing need to build capacity in key enabling technologies and providing supporting services (e.g. bioinformatics).

Recommendation 11: Build Enabling Infrastructure and Capabilities. *Provide significant funding (possibly \$150m to \$200m per annum) for infrastructure and management of national patient databases, for co-ordination of biobank access, and for new enabling technologies and analytical services:*

- *Accelerate efforts to build a national database of de-identified, linked patient and healthy population data for research purposes, ensure staff access to the internet across the health system and encourage consumers to contribute de-identified health data at admission, following the lead of IHRCs;*
- *Create an infrastructure-funding process (possibly \$150 to \$200m p.a.), ideally within the expanded NHMRC, to fund major infrastructure and key enabling technologies, focused within IHRCs and other high quality institutions;*
- *Develop a national biobanking hub as the coordination and distribution base for all existing and newly created specimen-based biobanks in the country with a major focus on accessibility, recordkeeping and quality control; and*
- *Identify key enabling technologies and analytical services, support them through long-term funding mechanisms and develop NHMRC people support schemes to build capacity.*

6. Enhance Non-commercial Pathway to Impact

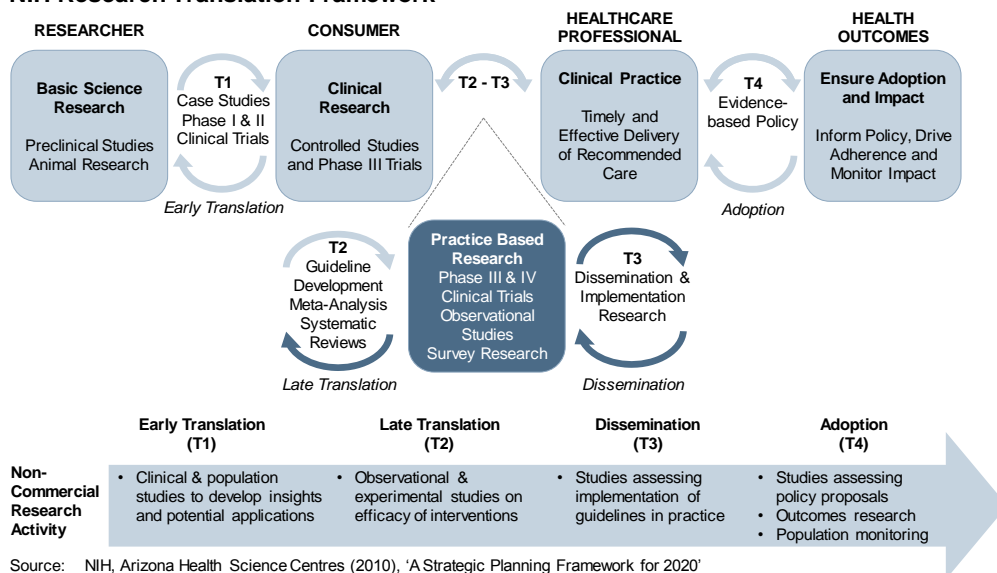
6.1 Introduction

Research translation is the key to delivering impact on health outcomes. There are different translation pathways for different types of research that can be summarised in a T1 – T4 framework used by the National Institutes of Health (NIH) in the United States. While commercial translation is challenging, it usually has a corporate sponsor driving progress through clinical trials and results in a marketable drug or device. Non-commercial translation is even more challenging, and public good innovations may have no natural champion to drive research and subsequent uptake.

Exhibit 10

The NIH Research Translation Framework can be applied to non-commercial translation

NIH Research Translation Framework



Source: NIH, Arizona Health Science Centres (2010), 'A Strategic Planning Framework for 2020' Khoury et. al (2010) 'The Emergence of Translational Epidemiology'.

6.2 Enhance Public Health Research

Public health programs, such as vaccination, smoking reduction and safe sex, are driven by research evidence and have delivered significant cost-effective improvements in health outcomes. Ongoing public health research, for example, on the impact of different Medicare Locals and LHN strategies, or Australian National Health Prevention Agency (ANPHA) preventative health programs on population health, are likely to make a significant contribution to Australia's HMR priorities. Public health research therefore requires more focused capacity building and a dedicated competitive grant program.

Recommendation 12: Enhance Public Health Research. *Increase funding for public health research, and facilitate increased collaboration between researchers and State and Territory public health experts.*

6.3 Enhance Health System Research

Compared to other areas of research, there are relatively fewer researchers in health system research, which comprises health services research and health economics, despite such research being vital to efficient health care. Given the substantial health reforms underway, increased capacity is vital to ensure research is performed to evaluate the impact of these reforms and identify opportunities for improvement.

Recommendation 13: Enhance Health System Research. *Build capacity in health services research and health economics, to understand and assist translation, and to evaluate health system innovation.*

6.4 Accelerate Health System Innovation

Ongoing health system innovation requires better incentives to generate clinically-relevant research evidence, adopt proven guidelines and seek better practice in all settings.

Recommendation 14: Accelerate Health System Innovation. *Accelerate research translation and health system innovation through key performance indicators (KPIs) and recognition of translation as a valuable form of research output, and develop a clinical registry program and translation plans.*

6.5 Inform Policy with Evidence-based Research

The information needs of policy makers are generally not aligned with the current form of research output. More regular engagement and fast-turnaround advice is also required to align with the needs of policy makers.

Recommendation 15: Inform Policy with Evidence-based Research. *Inform policy and practice with research evidence, and enhance capability of the expanded NHMRC to procure evidence to support policy makers at the Australian and State and Territory Government level.*

7. Enhance Commercial Pathway to Impact

7.1 Introduction

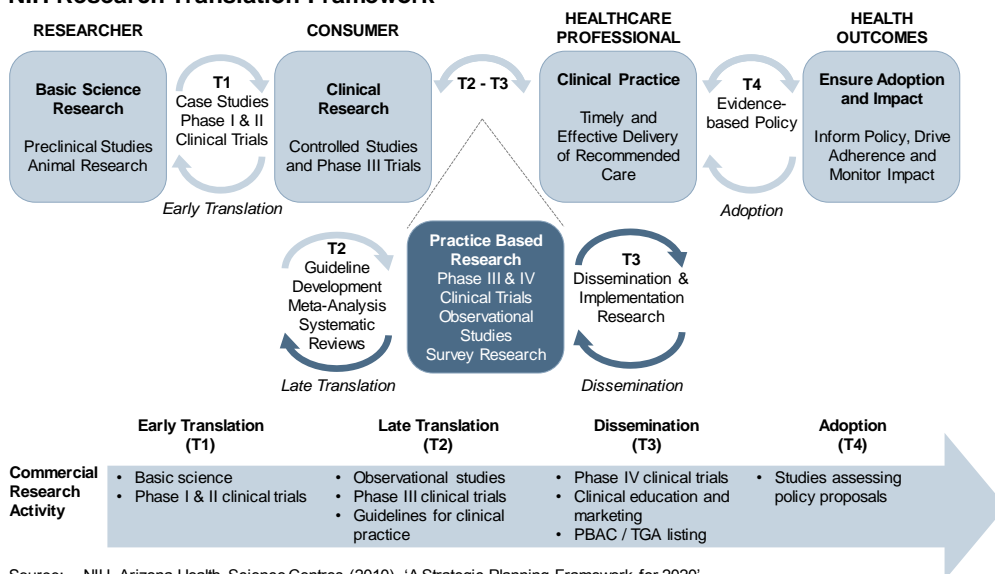
Australia is home to some impressive health and medical commercialisation success stories (e.g. CSL, Resmed and Cochlear). Adopting a wider definition of the ‘medicines industry’, which encompasses devices and vaccines, this sector is one of the largest technology exporters at \$3.8bn in 2010–11. It employs over 40,000 people and is soon expected to exceed the size of the Australian automotive manufacturing sector.

Commercialisation is a necessary step to deliver research benefits to the community, and also has the potential to create economic benefits including high-value jobs. It is also risky and Australia is failing to realise the full benefits from its research output due to lack of funding for early clinical projects and a relatively immature commercialisation environment and culture.

Exhibit 11

The NIH Research Translation Framework can be applied to commercial translation

NIH Research Translation Framework



Source: NIH, Arizona Health Science Centres (2010), 'A Strategic Planning Framework for 2020'

7.2 Support Research Commercialisation

7.2.1 Introduction

In the HMR sector, the portion of ‘D’ (development) in the R&D mix is too small and hampers innovation. There are three main funding stages: pre-clinical, early clinical and late clinical. The first two are known as the ‘valleys of death’ due to a shortfall in funding. While Australia has built up modest capacity in and access to venture capital and private equity, and can fund a small number of projects that emerge from these valleys of death, support is required to generate an increased flow of investable ideas.

Exhibit 12

Commercialisation requires funding across three stages

Commercialisation Funding Stages

	‘Valley of Death #1’ Pre-clinical	‘Valley of Death #2’ Early Clinical	Late Clinical
Example	<ul style="list-style-type: none"> Research has identified potential new diagnostic / assay / drug via lab research, initial animal models, etc. 	<ul style="list-style-type: none"> Research has discovered a molecule as drug candidate, evidenced by animal studies 	<ul style="list-style-type: none"> ‘In man’ clinical trials already through phase 1 and 2a, and addressable market scoped as commercially significant
Funding Required	<ul style="list-style-type: none"> No funding for further lab or animal trials available from grants, but too early for biotech, venture capital or industry investment Requires ~\$200k-1m / project over 2 to 3 years 	<ul style="list-style-type: none"> Funding for phase 1a, 1b and 2a clinical trials to collect data, which can support proposals to venture capital, biotechs and industry Requires up to ~\$10m / project over 5 years 	<ul style="list-style-type: none"> Funding through phase 2b & 3 global clinical trials Requires ~\$15-50m over 5 years+
Current Funding Sources	<ul style="list-style-type: none"> NHMRC development grants (~\$5-7m p.a.) MRCF equity (~\$1-2m p.a.) Discretionary MRI and university reserves (~\$2-10m p.a.) Bio-pharma / other (~\$2-3m p.a.) ARC linkage grants 	<ul style="list-style-type: none"> Small cap public biotech (~\$0-20m p.a.) MRCF (~\$10m p.a.) IIF and venture capital funds (~\$5-10m p.a.) NHMRC development grants (Nil) 	<ul style="list-style-type: none"> Small cap public biotech IIF and venture capital funds MRCF CSL and other large pharma All active, but Australian venture capital and MRCF under funded and under resourced
Recommended Funding	<ul style="list-style-type: none"> \$25m p.a. 	<ul style="list-style-type: none"> At least \$50m p.a. 	<ul style="list-style-type: none"> No clear case for government funding given \$50m + price tag / project and market interest
Notes:	Includes drugs and devices		
Source:	Panel interviews		

7.2.2 Bridge ‘Valley of Death #1’ – Pre-clinical Stage

Developing ideas from pre-clinical stage research (discovery to proof of concept) lacks funding, since they are too early stage to attract biotech, venture capital or industry investment. NHMRC Development Grants have also not been successful. Funding of at least \$25m per annum is recommended.

7.2.3 Bridge ‘Valley of Death #2’ – Early Clinical Stage

The second valley of death requires funding for phase 1a, 1b and 2a clinical trials and testing of devices to collect data to support proposals to venture capital, biotech companies and industry. Funding of at least \$50m per annum is recommended.

Recommendation 16: Support Research Commercialisation. *Maintain HMR access to Australian Research Council (ARC) linkage grants, replace NHMRC Development Grants with a new Matching Development Block Grant Scheme, and establish a new early-stage development fund (possibly around \$250m scale):*

- Valley of Death #1 – Ensure HMR has access to ARC linkage grants, and replace the NHMRC Development Grant scheme with NHMRC Matching Development block grants of around \$500,000 made to each of the 20 consistently most successful NHMRC peer-review recipient research organisations, contingent on matching commitments and access to business development capability; and*
- Valley of Death #2 – Establish ‘Translational Development Fund’ (TDF) for early-stage development of around \$250m scale, to be funded by the Australian Government and the private sector on a matching basis, and structured to incentivise superannuation fund investors.*

7.3 Enhance Commercialisation Environment

7.3.1 Introduction

Australia suffers from a lack of critical mass and an innovation culture, compared to other countries. While this is a broader issue, there are some actions the HMR sector can take to help improve the flow of investable ideas. Successful models are typically focused around ‘product’ (partnering with industry and licensing) or ‘platform technology’ (setting up a spin-out company to develop).

7.3.2 Leverage Scale and Expertise

Many HMR commercialisation offices are subscale and do not have the required level of expertise to assess opportunity in specific domain areas.

7.3.3 Foster a Culture of Commercialisation

Commercialisation skills and expertise are in short supply.

7.3.4 Protect Valuable Intellectual Property

While researchers file a significant number of patents, many of them are not actually ideas with commercial potential.

Recommendation 17: Enhance Commercialisation Environment. *Improve commercialisation visibility, facilitate exchange between research and industry and improve access to scale commercialisation services:*

- *Foster a culture of commercialisation through greater visibility and freer interchange between researchers and industry;*
- *Encourage MRIs and research institutions with sub-scale or no business development offices to engage larger institutions / precincts (e.g. Uniquest) for commercialisation requirements; and*
- *Encourage researchers to test against commercial expertise whether intellectual property has potential commercial value before filing patents.*

8. Attract Philanthropy

8.1 Introduction

HMR attracts significant philanthropic investment from the mass market, corporate donations, trusts and foundations, and high-net-worth individuals. While large philanthropic donations are frequently reserved for buildings, this may not always be the most effective use of funds in delivering research impact. This is increasingly being recognised by fundraisers and philanthropists, and a trend towards also providing financial support for researchers and indirect research costs has started to emerge.

8.2 Leverage Donations

While Australian volunteerism in terms of time spent is one of the highest in the world, high-end philanthropy is relatively underdeveloped in Australia, despite an increasing global trend, particularly in the United States.

Recommendation 18: Leverage Donations. *Track HMR philanthropic funds raised and allocate funds (possibly \$50m per annum) to match new large philanthropic donations aligned to HMR priorities.*

8.3 Encourage Scale in Philanthropy

There are many small charities and foundations that lack scale to drive significant research impact and create inefficiencies in administrative overheads.

Recommendation 19: Encourage Scale in Philanthropy. *Task the Australian Charities and Not-for-profits Commission (ACNC) to encourage aligned smaller charities to collaborate on research funding provision to increase impact.*

9. Invest and Implement

9.1 Introduction

HMR investment has been shown to generate a high aggregate return. The challenge for the sector is to ensure incremental investment delivers the highest returns available, with a greater focus on translation and augmenting the health reform process. A robust implementation process is also required to ensure the actions agreed by the Australian Government are implemented as intended.

9.2 Invest for the Future

HMR is the R&D function of a \$130bn health system, and its investment is critical to curtail escalating healthcare costs and unlock opportunities for waste reduction and performance improvement in the health system.

The initial focus should be on realigning existing investment in two areas. First, how the NHMRC focuses and allocates its current budget should be adjusted. Second, the current approximate \$1.5bn p.a. research investment in the health system should be optimised to provide greater control, transparency and accountability. This should also include early investment on waste and adverse events as this will provide health system cost savings. For example, a well-designed program to address post-operative infections could provide significant cost savings that could more than fund the proposed increased HMR investment.

Once the appropriate controls and mechanisms are in place, new investment programs over three to ten years will deliver further health system improvement, support high quality research and stimulate new investment. This should bring an additional \$2–3bn p.a. to research in the health system to attain the target of 3% of health budget spent on research. Other initiatives largely outside the LHNs and health system will require up to \$0.4–0.6bn p.a. in later years and should allow competitive research grant budgets (particularly the NHMRC MREA) to increase in line with health expenditure.

Investment is required for 12 of the 21 recommendations, which come under four themes:

I. Optimise Existing HMR Investment

- **Drive Research Activity in the Health System (1A).** Encourage State and Territory Governments to improve oversight of the current \$1.5bn health system research investment as a pre-requisite for continued matched investment by the Australian Government of 5% to 7% of ABF funds.
- **Re-align Sector Leadership and Governance (4).** Empower and resource the NHMRC to assume a leadership role, including tracking and monitoring overall HMR investment, supporting the research workforce and accelerating the streamlining of clinical trial processes.
- **Align Priority Setting Processes (6).** Refocus and enhance the current MREA administered by the NHMRC around HMR strategic priorities, public health research and health system research, index MREA to increases in health expenditure and re-engineer NHMRC grant processes using current NHMRC budget.

- **Train, Support and Retain the Research Workforce (8A).** Support career entry through ‘early investigator’ grants, using current new investigator funding but with adjusted criteria

II. Deliver a High Quality and Efficient Healthcare System

- **Drive Research Activity in the Health System (1B).** Allocate funding for research by State and Territory hospitals and health service providers to ensure that at least 3% of health budget (e.g. \$4.7bn out of \$160bn in FY23) is invested in research. Over the next ten years, add competitive programs, possibly on a 2:1 Australian Government to State and Territory Government contribution ratio and provide an additional \$2–3bn for research in the health system.
- **Establish Integrated Health Research Centres (2).** Provide significant investment (e.g. up to \$10m per annum) each for five years and clear criteria around strategy, governance and focus.
- **Promote Research Participation by Health Professionals (3).** Provide funding for clinician led research in State hospitals and health service providers through competitive schemes.
- **Streamline Clinical Trial Processes (5).** Provide significant funding (possibly \$50–100m) to support non-commercial trials and access to resources in hospitals and health services providers.
- **Inform Policy with Evidence-based Research (15).** Provide funding (e.g. \$10–15m per annum) to support policy and practice with research evidence and enhance capability of the expanded NHMRC to procure evidence to support policy makers at the Australian and State and Territory Government level.

III. Support High Quality Research

- **Train, Support and Retain the Research Workforce (8AB).** Support career entry through higher APA stipends with around \$10m in funding per annum, and increase the number of training and career fellowships focusing on genomics / bioinformatics, health economics, biostatistics and health services research with funding of around \$15–20m per annum.
- **Rationalise Indirect Cost Funding for Competitive Grants (9).** Provide top-up funding of 60% of competitive grants costs, particularly for MRIs and hospitals, roughly estimated at \$200–300m per annum by FY23.
- **Build Enabling Infrastructure and Capabilities (11).** Fund infrastructure, possibly at \$150–\$200m per annum, and provide funding for the national de-identified patient database and national bio-bank of around \$10m per annum.

IV. Attract New Investment

- **Support Research Commercialisation (16).** Create a better environment for business investment in clinical trials and commercialisation, with matched development grants and a ‘Translation Development Fund’ over five years of around \$250m scale, possibly with \$125m in funding to be provided by the Government and first drawdown not until at least FY16.
- **Leverage Donations (18).** Encourage through matching donations and greater focus of philanthropic investment in priority areas, possibly with funding of up to \$50m per annum.

Recommendation 20: Invest for the Future. Enhance and align HMR investment programs, with extended oversight by the expanded NHMRC. Index competitive research grant budgets (particularly the NHMRC MREA) to increases in health expenditure. Focus initially on realigning and better managing existing investment, then develop new programs over three to five years.

9.3 Action Report Recommendations

About 75% of the Wills Review recommendations were successfully implemented, delivering a substantial positive impact on the sector. The remaining 25% that were partially or not implemented were largely those that cut across multiple parts of government. The implementation process proposed in this Review draws on quality management techniques, to review and adjust recommendations so that they deliver impact as intended.

9.3.1 Plan

Propose and seek agreement to a set of measureable, trackable actions with clear responsibility for implementation. Where many parties need to cooperate, a single entity should be made accountable (generally DoHA) and report on progress to the Australian Government Health Minister and / or the Australian Health Ministers' Advisory Council (AHMAC).

9.3.2 Deliver

Set rewards and mechanisms to incentivise State and Territory Governments, departments and institutes responsible for delivery of specific actions within agreed timeframes.

9.3.3 Check

Establish a follow-up review of implementation by the NHMRC, with oversight by an independent panel, in around 5 years.

9.3.4 Refine

If required, refine the planned actions to improve impact.

Recommendation 21: Action Report Recommendations. Establish a robust implementation process with a medium-term follow-up review by the NHMRC, with oversight by an independent panel.

9.4 Implementation Feedback

The final report will add more details on investment, timing and the specific responsibility for each recommendation and potential actions. The Panel would value feedback on ideas to ensure action is taken to deliver the report recommendations, given the complex governance arrangements within the sector.

The Panel's call for comments on this Consultation Paper allows four weeks for responses, from 3 October to 31 October 2012. Feedback can be provided via an on-line submission tool available at www.mckeeonreview.org.au.