

The NSW Ministry of Health welcomes the opportunity to provide a submission to the Health and Medical Research Strategic Review (McKeon Review).

In 2011, the NSW Government established the NSW Health and Medical Research Strategic Review, which was led by Mr Peter Wills AC. The NSW Review consulted widely with the research community: more than 360 submissions were received and more than 180 people participated in group or individual interviews. Several documents were released to support the NSW Review: an issues paper; a fact base and a discussion paper. These documents are provided to the McKeon Review with this submission.

The NSW Ministry of Health considers the following to be key issues for the McKeon Review:

- Funding the full cost of research and increasing the transparency of research infrastructure funding programs
- Developing sustainable national research assets, including biobanks, population cohort studies and capacity in bioinformatics
- Strengthening the research workforce, including developing career certainty, attracting and retaining the best researchers, supporting clinician researchers and building workforce capacity in biostatistics and health economics
- Increasing the use of research evidence in health policy, practice and programs, and strengthening the evidence base on interventions to achieve this

1. Why is it in Australia's interest to have a viable, internationally competitive health and medical research sector?

- 1.1 There is a strong case for the ongoing investment in and development of Australia's health and medical research sector. Research impacts on improved clinical and population health outcomes through a better understanding of diseases; the development of new treatments and interventions (clinical and preventive); and improving the organisation and delivery of better health services. Furthermore, a strong research culture within the health sector helps attract and retain the best clinicians, and facilitates the education and training of other health professionals. *The economic value of Australia's investment in health and medical research: reinforcing the evidence for exceptional returns* estimates that a \$1 investment in Australian research and development returns \$2.17 in health benefits.
- 1.2 A viable and competitive health and medical research sector also has a positive economic impact through the creation of new products and services, new company formation and growth in established companies, increased employment, increased private and not-for-profit investment and income from patents, licensing and royalties.
- 1.3 Australia has an enviable record of achievement in health and medical research and has many strengths and competitive advantages including a high quality health system and excellent researchers, clinicians, medical research institutes and universities. For example, the *2010 Excellence in Research Australia (ERA)* evaluation demonstrates that many Australian universities are rated above, or well above world standard across a range of health and medical research fields. Ongoing support for health and medical research in this country will enable Australia to build on this strong base.

2. How might health and medical research be best managed and funded in Australia?

2.1 Research is funded by a range of agencies, organisations and individuals including governments, industry, non-government organisations and through philanthropic sources. However, it is difficult to quantify the investment in health and medical research in Australia. Within the public health system, research is embedded within the delivery of the highest quality health care and teaching functions of Local Health Districts.

2.2 Commonwealth Government funding of health and medical research is significant and include programs for funding research projects, people support and research infrastructure. This range of funding support is critical to a vibrant and sustainable health and medical research sector. However, success rates for many grant programs are low, with many excellent quality research proposals made by world class researchers not successful in attracting financial support.

There is an opportunity to better coordinate research funding between the Australian and state governments, and better linkages between government and non-government sources of research funding. For example, non-government organisations provide significant funding for research in specific diseases and conditions, for example juvenile diabetes, asthma and children's cancer. There is potential for government and non-government bodies to partner in research funding programs and to ensure complementarities of funding and to better leverage funding from philanthropic and international sources.

2.3 Making decisions about the optimum funding arrangements for health and medical research is challenging. For example, there is a need to strike an appropriate balance between funding for discovery, clinical, health services, population health research.

Returns on investment in public health: an epidemiological and economic analysis provides evidence for the significant benefits afforded by prevention in terms of longevity, improved health and lower health care expenditure, which supports the currently strong policy and program support for prevention at both national and state levels. However, although NHMRC funding for public health and health services research is growing, the proportion is well below funding for discovery and clinical research. Further, there is a predominant focus on funding descriptive research. The *Report of the review of public health research funding in Australia* found that less than 7% of NHMRC-funded studies related to intervention research.

There have been some recent, and welcome, developments to support policy-relevant public health research, including the establishment of partnership grants and partnership centres. A continuing focus on these types of schemes, with stronger engagement with policy agencies and the end users of research is required. In addition, the development of a population health research strategy (with a broader remit than the priorities of the Australian National Preventative Health Agency) would be welcome. This research strategy should consider priorities, funding programs, infrastructure and workforce issues.

2.4 The NSW Health and Medical Research Strategic Review identified that even research active Local Health Districts can lack a clear picture of the research undertaken, its purpose and outcome. The National Health and Hospital Reform provides an opportunity to clarify funding for research for LHDs to support improvements in the strategic direction and management of this research. This could be achieved through an expectation that LHDs develop a strong research culture (e.g. through research strategic leadership, governance, support for clinician-researchers and by ensuring LHD

infrastructure support research activities) and ensuring that this work is appropriately funded.

- 2.5 Research infrastructure funding is a critical issue, in particular, the need to fund the true cost of research. *The 2008 Review of the Innovation System* notes that the gap between funding and the full cost of research is a significant risk to the quality and sustainability of universities. According to the report *Costing Medical Research to Reform Health Outcomes: The case for increased indirect cost funding for Australian accredited MRIs*, for every research grant dollar received, an additional 60c is needed to meet these indirect costs.

The research infrastructure funding landscape is complex. There are a myriad of programs administered by the Australian Government (e.g. IRISS, SRE, RIBG). State governments also fund a range of programs (e.g. in NSW, the Medical Research Support Program for MRIs and the Capacity Building and Infrastructure Grants Program for population and health services research groups). The NSW Health and Medical Research Strategic Research consultations identified that deficiencies in research infrastructure funding undermines the long-term interest of the research community by taking time from the main business of research and through impeding cross-sectoral collaboration. Further, differences in levels of infrastructure support (for universities, MRIs and health services) are considered by some to be divisive.

Australian Government infrastructure funding programs should be clarified and made more consistent to ensure that parity across all parts of the health and medical research sector be achieved. Provisions for research infrastructure funding for research undertaken in Local Health Districts should be built within the National Health and Hospital Reform funding processes. There is an opportunity for research to be undertaken to determine the impact of activity based funding on research in Local Health Districts.

Reporting of grant performance should reflect the institution that undertakes the research as well as the Administering Institution will increase transparency of research infrastructure funding programs.

- 2.6 Research ethics and governance approval processes were identified by the Clinical Trials Action Group as a key issue for national action. This is also reflected at the state level, with researchers and sponsors specifying delays in ethics and governance as approval as a key frustration. This is despite the introduction of single ethical review in NSW in 2007 and ongoing development of the NSW system to improve timeliness. Two recent examples in NSW are the introduction of modified processes for low and negligible risk research in early 2011, and the establishment in 2012 of mutual acceptance of an ethics review for clinical trials undertaken by a public health organisation in NSW, Queensland and Victoria. Implementing the national Harmonisation of Multicentre Ethics Review (HoMER) processes and tools, and public reporting of approval timeframes (using standard metrics) will go some way to improve this situation.

However, there is still potential for governance approval to delay the timely initiation of research. Although the NHMRC, through HoMER, has established guidance on this subject, and some jurisdictions, including NSW, have established research governance frameworks for public health organisations, some institutions continue to struggle to adequately support and monitor the responsible conduct of quality research.

3. What are the health and medical research strategic directions and priorities and how might we meet them?

Strategic directions

3.1 A strategic approach to support a viable, internationally competitive and effective health and medical research sector must include a focus on: supporting the generation of excellent research; increasing the use of research evidence in policy and practice; developing the research workforce; and funding research infrastructure and assets.

3.2 Advancing knowledge should continue to be one pillar of the health and medical research endeavour in Australia. However, improvements in health for individuals and communities will require a combination of investigator-led and strategic research. The generation of high quality research should continue to be supported through funding programs. A more explicit approach to funding strategic research should be developed with input from all funding stakeholders to ensure a more coordinated and integrated approach.

3.3 Increasing the use of health and medical research evidence in policy, practice and programs is addressed at Question 4.

3.4 The research workforce is a fundamental prerequisite to a strong health and medical research sector. However, there is limited information about this workforce and mechanisms to redress this deficiency should be established.

The lack of career pathways, poor remuneration in relation to other health and medical careers, lack of support for early to mid-career researchers and job insecurity were identified in the NSW Health and Medical Research Strategic Review as pressing issues. Increasing the attractiveness of research careers was also identified as a key challenge in *Research Skills for an Innovative Future*.

In NSW, workforce gaps in bioinformatics, biostatistics and health economics have been reported. Enhancing existing (e.g. the NSW Biostatistical Officer Training Program) or establishing new training programs in areas of need should be considered. Providing incentives to attract leading researchers in key areas is also a potential strategy, e.g. the Government of Alberta, Canada, established a successful program to attract exceptional researchers through offering a five year contract with one option for renewal and a significant research budget.

3.5 Issues relating to funding the full cost of research and research infrastructure funding programs are addressed at 4.3.

The *Australian Roadmap for Australian Research Infrastructure* reinforces the benefit of shared research assets to maximise cost-effective research activity. A long-term, strategic approach to ensuring sustainability of existing assets and the development of new assets remains important. The NSW Health and Medical Research Strategic Review consultations identified gaps in shared assets in bioinformatics, biobanks and population health cohort studies. The significant work at national and state level to develop capability in record linkage is strongly endorsed.

Research priorities

3.6 Although there are national research priorities and national health priorities, how these priorities inform government research funding could be made more explicit.

The Australian Government is currently undertaking a process to refresh the national research priorities and priority goals. Promoting and maintaining health is one of the five priorities outlined in the consultation paper. The Ministry of Health supports these priorities and the related priority goals.

The national research priorities and goals are necessarily broad. However, more specific priorities for health and medical research need to be determined. These should be identified by the application of transparent priority setting process that involves all stakeholders and uses robust criteria. As well as considering specific diseases, this should also include a consideration of population groups (e.g. Aboriginal health), types of research (e.g. fundamental research, intervention research, health systems research) and ensure there is flexibility to conduct research on emerging and urgent health issues.

4. How can we optimise translation of health and medical research into both commercial and social outcomes?

Social outcomes

4.1 There is limited evidence on effective strategies to support the uptake of evidence from research in health policy, practice and programs. Research on mechanisms to increase use of evidence in policy, practice and programs should be a high priority. The NHMRC recently funded the Centre for Informing Policy in Health with Evidence from Research (CIPHER) under its Centres of Research Excellence Program to help fill this knowledge gap.

4.2 *Promoting the generation and effective use of population health research in NSW: a strategy for NSW Health 2011 – 2015* outlines a program of work aiming to increase the generation and use of policy-relevant research and includes:

- Strategies to increase the generation of policy-relevant research (i.e. intervention, implementation and evaluation research), e.g. establishing and communicating Ministry of Health priorities, funding and undertaking policy-relevant research and promoting research-practitioner partnerships; and
- Strategies to increase uptake of existing research e.g. including support for publishing research findings, increasing access to research syntheses, integrating research translation plans in relevant research projects funded by the Ministry of Health and building the capacity of policy and program officers to use research.

There is potential for agencies to establish a formal requirement for the use of evidence in the development of policy and programs and to ensure that major policies and programs are rigorously evaluated. This could be achieved through inclusion in relevant performance agreements, policy development guidelines and through regular review and assessment.

4.3 Although many academics have a strong desire for their research to 'make a difference', policy-relevant research is not always considered by academics to be well rewarded. Traditional metrics that inform career development (i.e. peer review income and publications) are less amenable to policy research. This is because policy research is often commissioned by agencies and primary research outputs are reports for government. With the increasing emphasis on the use of research evidence in policy and practice, there is a need to develop robust and meaningful impact measures to better reward policy-relevant research.

Commercial outcomes

4.4 The NSW Health and Medical Research Strategic Review consultation identified a shortage of investment-ready ideas, a cultural divide between researchers and business skills and the need to resolve issues surrounding intellectual property ownership and management as key issues that impacted on commercialisation in this state. Strategies to address these issues could include improving opportunities for researchers to acquire

business and commerce skills, promoting scale in commercialisation offices for use by multiple organisations, and developing an intellectual property framework for publicly funded research.