

SUBMISSION TO STRATEGIC REVIEW OF HEALTH AND MEDICAL RESEARCH

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SUMMARY (<300 words)

The Mater Medical Research Institute is a hospital based independent medical research Institute conducting biomedical and clinical research tightly integrated to patient care. We are a relatively small Institute in financial terms with an annual budget of ~\$14m. However, we provide integration of research activities across a major teaching hospital campus and produced >200 research publications in 2011. Our tight integration with clinical activities brings knowledge of the challenges associated with conducting high quality clinical research in the Australian environment.

In this submission we briefly address the four key questions posed by the review, and our major recommendations can be summarised as follows:

1. Current government funding for health and medical research is inadequate to deal effectively with the current problems in health care delivery. Without substantial future increases research will be unable to help contain the forecast dire increases in chronic disease and the associated major increases in the health care budget.
2. Different models of research funding need to be developed to ensure that there are multidisciplinary approaches to complex health problem and to ensure research outcomes that will improve the health of Australians and result in reductions in the health care budget.
3. The NHMRC needs to be more actively involved and better informed in setting research priorities that will give high returns in terms of decreasing morbidity and reducing the health care budget.
4. New strategies need to be developed to fund outcomes-based clinical research capable of changing clinical practice. Consideration needs to be given to improving incentives for clinicians participating in research, in conjunction with hospital funders and the clinical colleges/professional organisations.
5. Australia's capacity for high-quality disease prevention research needs to be increased dramatically if we are to reduce forecast increases in the incidence of chronic disease, much of which is known to be preventable.

Is it in Australia's interest to have a viable, internationally competitive health and medical research sector?

On purely economic grounds there is a necessity for Australia to increase its HMR capacity and the impact of its HMR activities on the health of Australians. Increases in the Australian health budget are clearly not sustainable. Whilst the Australian public expect first-class health care in an international context, governments are increasingly not going to be able to meet these expectations unless they can reduce the burden of disease or increase the efficacy of disease management. Both of these objectives are dependent on high quality research outcomes. Whilst Australia is a relatively small component of the international research effort it is not viable for Australia to ignore its responsibilities in terms of research.

Research active clinical units not only produce findings which can be translated into better health care but they ensure rapid implementation of new knowledge generated internationally. Australian HMR is important to mitigate our nation's future projected and unexpected health and economic challenges. The current NHMRC investment in research represents only 0.8% of Australia's health expenditure which is insufficient to make a substantial impact on the projected increases in health expenditure. Australian governments need to be convinced of the rather simple economic arguments supporting substantially increased investments in research, but are more likely to increase funding if there are plans that clearly maximise the returns from research activity.

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

Consideration should be given to a major revamp of the NHMRC including how it sets priorities and how it distributes funding. Government increases in HMR funding should be made contingent on the development of new strategies to direct research priorities and distribute funding. The NHMRC needs to take a more active role in setting implementable priorities for research funding by establishing specialist panels identifying the major health care problems and the types of solutions needed to address them, and then ensuring that the funding application processes align with the desired outcomes. Some funding will need to be directed to major facilities such as Academic Health Centres and Centres for Disease Prevention.

A Major review of the current funding programs needs to be undertaken. Problems with current project grant funding include:

- insufficient expertise on grant review panels
- an ever-changing but seemingly never improving system continually tinkered with but without major overhaul
- somewhat ad hoc rolling priority areas
- inadequate funding to cover costs
- a badly timed system in terms of announcements close to the end of the calendar year that provide a strong disincentive for research as a career, provide much disruption to research projects and make budgeting for research organisations extremely rushed and difficult
- the major problem with the current program funding is that while it purports to fund programmes of research in healthcare areas of need, because of the way it is structured and evaluated, is in fact a system for funding elite researchers with strong track records that typically band together to combine their CVs rather than to address health care issues.
- our leading researchers are those that are most likely to have impact on healthcare if appropriately directed and should be supported by various funding strategies including Fellowships
- A significant lack of clinical relevance of NHMRC funding – little emphasis on translational outcomes, clinician, or clinician-scientist involvement in research
- No overt or transparent method of assessing TR “subject to opportunity” – why is there no “multiplication factor” for publications and/or citations (or H-index, for example) to quantitatively factor in actual time available for research?

Australian governments should give consideration to funding clinical trials with the potential to reduce health care costs from the healthcare budget. The pharmaceutical industry is not going to sponsor these sorts of trials and many of them will be considered scientifically dull by the project grant funding system. For example the PBS could fund trials investigating the reduced use of PBS funded drugs, or the use of alternative cheaper drugs.

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

Australia's economic burden associated with the ageing population and the increasing incidence of chronic disease is projected to increase to unsustainable levels of almost half of the total Federal Government expenditure by 2050. There are clearly identifiable major targets for increased research activity. Dementia alone is posing a huge cost in terms of health and nursing care; research that delayed dementia or diminished symptoms even in a relatively small proportion of cases would have a huge impact on the healthcare budget. Diabetes is Australia's largest growing chronic disease and its incidence is projected to increase 4-fold in the first 3 decades of the 21st century. Research leading to prevention strategies that decrease this incidence by only a few percent would have an enormous significance in terms of morbidity and healthcare expenditure. These are only two examples of many diseases that can be addressed via research. For example, the NHMRC's directive to GRPs a few years ago to support "transformational" research is way off the point – most transformational research is not identified as such in the planning stage plus, importantly, incremental improvements in care of common illnesses have enormous societal and personal benefits, yet could rarely be described as transformational.

The NHMRC needs to expand its capacity to make informed decisions about research priorities and, with increased funding capacity, find innovative ways to best address those priorities so that the desired clinical outcomes are met.

Addressing these issues requires an expansion of our research capacity which necessitates increased research training and improved incentives for clinical and non-clinical researchers to maintain a research career.

Prevention research is a small component of the current NHMRC budget which reflects a problem with the quality of our current prevention research. Australia's capacity for high quality disease prevention research, including research that investigates implementation of prevention programs, needs to be increased substantially.

How can we optimise translation of health and medical research into better health and wellbeing?

Establishment and funding of Academic Health Centres combining research, education, clinical services and disease prevention are central flagships to ensure implementation of the findings of research into better health outcomes. Without appropriate resourcing, governance and buy-in from the government health funders these Centres will not achieve their goals.

Alliances between institutions, integrating university/academic research, clinical research, clinical activity and the private biotechnology and pharmaceutical sectors need to be

encouraged and funded. Funding schemes should encourage collaboration and multidisciplinary approaches wherever relevant.

Career paths for researchers, including clinicians, need to be improved to build a higher capacity research workforce. We can't expect high quality outcomes without a high quality research workforce and we cannot expand our research activities without expanding our research training.

Separate funding for clinical trial activities should be provided by the healthcare providers as a necessary component of delivering an efficient and effective service delivery.

One mechanism to promote translation is to enforce a significant R&D spend in each State and the Commonwealth Health Departments. Research needs to be integrated into health care delivery – the current system absolves Health from research responsibilities because it's the NHMRC remit. Further, Commonwealth subsidy of State Health systems could be contingent on State Health R&D spend.