

Submission to the Strategic Review of Health and Medical Research

Name and contact details

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Submission summary:

1. Establish a national philanthropic and corporate framework to complement NHMRC funding.
2. Realistic funding of infrastructure costs tied to grant success.
3. Overhaul of the current NHMRC funding application system in the light of international best practice, with engagement of stakeholders to resolve conflict of interest problems and optimise the review process.
4. Engagement of clinicians in a coordinated approach to clinical research and translation.

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

Discoveries in this sector save lives, reduce disability and suffering and create jobs, products and companies that return substantial financial rewards. All of these things can be measured, but should also be considered as national investment. In the era of the human genome, with an ageing population and the increasing burden of chronic disease, this is what smart countries do. To not do so because it may be done somewhere else risks Australia becoming a backwater, waiting for others to discover the future. This argument also neglects the many unique local factors that operate in health and medical research, particularly in clinical translation. The sector attracts the best and brightest minds and we risk losing a vital pool of talent and altruism by not nurturing it. We also risk compromising the training ground for many of the best educators in the biological and medical sciences. I believe most Australian taxpayers would be surprised and disappointed if medical research was not a national priority. Even as a relatively small country, we have a proud history of medical research, which should continue as one of our internationally competitive strengths. As a relatively prosperous country, we also have a special obligation to do medical research that helps those less well off, including our own indigenous population and those in our surrounding region.

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

Management

Transparent competition, peer review and prioritisation for key challenges should remain the guiding principles for awarding medical research funding. However, there is no doubt that the NHMRC system could be more efficient and responsive. It has become bogged down because of a failure to resolve conflict of interest (COI) issues, to the point that peer review is now seriously compromised. Peer review remains the cornerstone of publishing in the health and medical research literature, showing it is possible for the sector to manage. The pool of qualified reviewers in Australia is limited and international review is

not a reliable alternative. A more realistic and inclusive approach to COI problems is required. I believe the sector has been disenfranchised in the COI debate and would have many useful suggestions on what has and will work best, including the lessons from international best practice.

Different versions of the grant review process have been tried in recent years, causing fatigue and demoralisation for reviewers and applicants with little improvement to the system. The current project grant system, in particular, has corroded. There are numerous reasons for this, including failure to resolve COI issues, leading to lack of sufficient expertise and rigor, a poorly organised process for selecting reviewers and panel members and an excessive number of applications per panel. The amount of time required is a major disincentive to the involvement of more senior researchers. Panels have become disproportionately populated with junior researchers, many of whom are thrown into the system without orientation or credentialling. The previous balancing role of chairman has been undermined as COI issues have taken precedence.

The application process has also become a major drain on time, with researchers spending a substantial part of each year applying for funding, rather than doing research. These inefficiencies have been amplified by the disastrous introduction of RGMS, which wasted an enormous amount of time and goodwill. The current annual application cycle is highly inefficient. 'Near miss' applications have to wait another 12 months to apply, but then commonly receive a different set of questions from another panel that lacks any corporate memory for the previous review. Surely a two-stage process is possible, with the original panel able to consider updated applications from near miss applicants that have been given the opportunity to correct perceived weaknesses. Once again, we could learn a lot here from international best practice, such as the study sections of NIH, where the panel has an active dialogue with applicants.

Lack of clinical expertise on panels is another recurring problem, undoubtedly contributing to low success rates for clinical research applications. Better ways to engage clinical researchers in a more efficient review process are urgently required.

There are major gender disparities in health and medical research. As an area of higher education with immediate appeal to many young people, it is a great shame that more kids from underprivileged backgrounds miss out. Most of the issues involved here are probably generic, but certainly depend on adequate funding to maintain the sector, to train inspiring teachers, to provide jobs and foster role models.

Funding

Funding for this national priority should come from all levels of government and include industry. A recurring problem is to fund the infrastructure required to actually run medical research departments and institutes. A formula that linked grant success with realistic infrastructure funding would be a major step forward. State Governments in particular, could do much more. Many companies also subscribe to a 'good corporate citizen' ethos, especially when it supports the workforce. Philanthropy is also vital, but is currently fragmented and sometimes at cross-purposes. The non-government sector might contribute more effectively if there was an over-arching framework that clearly enunciated national health problems and where there was an opportunity to supplement government funding. This might be a very useful guide for individual donors, trusts, companies and patient support groups. It could be used to identify the 'near miss' applications from NHMRC each year that fell within a particular area of interest, or contribute to infrastructure costs.

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

We have major strengths in basic medical research and perform relatively well in public health and epidemiology, but we underperform in clinical research and in research translation. Major translational research priorities include definition and uptake of best practice and evidence based medicine (regardless of geography), disease prevention in the context of the life journey, early stage chronic disease management, biomarkers, and personalised medicine, reliable recording of vital medical information, disease registries and long term outcome studies. It extends to more effective patient education and a health systems approach that links general practice with specialist and hospital care. A health system/patient journey approach is still sorely missing in most areas of clinical care – i.e. a collaborative effort between clinicians, patients and their advocates, researchers and policy makers to implement best practice, encourage innovation and improve the system via clinical research. Health economics is part of this equation. I suspect this is the area that Government finds frustrating about funding medical research – the fact that evidence exists, but is not fully implemented, or is not analysed in terms of cost effectiveness. System wide approaches, extending from MRIs and Universities to teaching hospitals, lead clinician groups, local hospitals and GP networks, patient advocacy groups and the community, are required. NHMRC could bring these groups together to tackle each of the current national health priority areas and include health economic perspectives.

Translational medicine constitutes a research discipline in its own right and there is much national and international experience to draw on. A great local example is the work done by the PBAC for prescription medicines. A similar framework should be gradually extended to reimbursement for all clinical (traditional and non-traditional), investigative and surgical interventions. Once again, NHMRC could play a key role in promoting translational medicine and research.

As mentioned above, indigenous health should be a priority for Australia.

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

Clinicians are charged with implementation of best practice and optimisation of care. They are also well placed to identify gaps in patient care and opportunities for innovation and research. Increasingly, health care consumers have strong views about the direction of research in their area. The NHMRC and ARC systems are intensely competitive, as they should be. However, these funding streams are increasingly monopolised by basic science. Unfortunately, there is a widespread feeling in the academic clinical community that the NHMRC is antipathetic towards clinical and patient-centred research and that clinicians are not competitive. The Clinical Practitioner Fellowships and the Centres for research Excellence have been positive developments, but are still quite limited. The latter two initiatives should be expanded, but NHMRC could play a greater role in fostering translational research if it was more effectively engaged with health care providers. Professional bodies such as the Royal Australasian College of Physicians, the College of Surgeons, the College of General Practitioners etc are vital stakeholders that should all be part of a roundtable that addresses system-wide issues.

It's pertinent to note here the decline in academic clinical appointments in Australia, compared to overseas and also compared to the full time nature of most basic science appointments. The notion of 'protected time' for clinicians is almost obsolete and needs to be revisited.

Internationally, clinical translation is recognised as a science in itself. Learning from the experience of the NIH, the NHS and elsewhere can help guide how this is best done locally. Translational research within the Australian health care system requires definition, infrastructure and recognition. It suffers because it is intrinsically linked with health service delivery, but is not a priority within it. It's also important to acknowledge the fragmentation of the Australian health care system. Blurring of funding responsibilities means that even obvious improvements such as the 'opt-in' electronic medical record and telemedicine are still not widely available. Embedding research as a key part of delivering health care would be a step forward. Meaningful research KPIs for teaching hospitals in particular, should be linked to hospital funding.

Building on experience from the UK and elsewhere, NHMRC should work with the Department of Health and Ageing and State Government Health Departments to establish model partnerships between teaching hospitals, universities and local GP networks. Meanwhile, it could also establish a roundtable - as mentioned above - as a forum for lead clinician groups, hospitals, GPs, patients and community networks to tackle systems-wide approaches. Its goal should be to promote best practice care, innovation and continuous improvement in an economically sustainable way.