

REVIEW TO STRENGTHEN INDEPENDENT MEDICAL RESEARCH INSTITUTES

Submission in response to the Issues Paper

December 2014

**RESEARCH
AUSTRALIA**

AN ALLIANCE FOR DISCOVERIES IN HEALTH



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- A society that is well informed and values the benefits of health and medical research.
- Greater investment in health and medical research from all sources.
- Ensure Australia captures the benefits of health and medical research.
- Promote Australia's global position in health and medical research.

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BOOSTING THE COMMERCIAL RETURNS FROM RESEARCH

SUBMISSION IN RESPONSE TO THE DISCUSSION PAPER

INTRODUCTION

Research Australia is pleased to provide this submission to the Review. Medical Research Institutes are a critical component of Australia's health and medical research sector and actions that improve the performance of MRIs are to be welcomed.

The Review focuses specifically on independent medical research institutes (iMRIs). Exactly what distinguishes an iMRI from other MRIs is not clear in the Review's Issues Paper; nor is it clear why iMRIs have been singled out for this review. While there is no doubt that iMRIs can be more efficient and collaborate more effectively, the same is true of the whole sector, and it seems likely that many of the measures that will improve the efficiency and effectiveness of iMRIs will be equally beneficial for other parts of the health and medical research sector, including universities and hospitals that undertake research.

In addition to responding to the specific questions posed in the Issues Paper, Research Australia has made some general comments about the diversity of medical research institutes in their origins, operations and purposes. In particular Research Australia provides some comments about why a separate identity, while potentially increasing costs, can also bring benefits which must be considered in any evaluation of iMRIs' efficiency.

DEFINING INDEPENDENT MEDICAL RESEARCH INSTITUTES

As with any review, it is essential to be clear about its scope. In the case of this review the focus is independent Medical Research Institutes. The Review Panel has chosen to use the definition provided by the Australian Association of Medical Research Institutes (AAMRI) in its submission to the National Commission of Audit. The definition of ‘Medical Research Institutes’ used in AAMRI’s submission is reproduced below. It is perhaps a moot point whether this was intended by AAMRI to be a definition of independent medical research institutes.

Medical Research Institutes (MRIs) – Charitable institutions that undertake health and medical research; MRIs are located on hospital campuses and are closely affiliated with hospitals and/or universities, but are independent legal entities.

AAMRI’s website provides a slightly different definition:

‘The majority of AAMRI’s members are ‘independent’ medical research institutes (MRIs), meaning they are independent legal entities, separate from a hospital or university. Other members are university-based MRIs or alliances between a hospital and university.’¹

The website also provides criteria for membership of AAMRI:

‘AAMRI membership criteria

To be a member of AAMRI, an institute should:

- Be established primarily for the conduct of health and medical research
- Be independent, for example, be established via an Act of Parliament, be incorporated under the Companies Act, or have demonstrable independence from a parent organisation
- Normally have an independent Board of governance, with a majority of Board members not representing any single other institution (e.g. an affiliated hospital or university)
- Have as Director (or equivalent) a distinguished researcher who can demonstrate that they operate independently of any parent organisation
- Have a substantial record of attracting research funding from competitive mechanisms
- Have fiscal and administrative procedures and policies in place that allow good scientific practice and the ethical conduct of research.’²

These three different statements are provided to highlight the lack of clarity around what an iMRI is. The importance of this question becomes evident when examining the list of 67 iMRIs provided by the Review Panel on its website:

- All 45 of AAMRI’s members are on the list.
- Only 34 of the entities on the list are NHMRC Administering Institutions.³
- The Lowitja Institute is not included in the list of iMRIs although it appears to meet the independence criterion and is an NHMRC administering institution.
- At least some of the institutions on the list would appear to fail the ‘independence test’. For example the Kolling Institute of Medical Research is not a separate legal entity but is a trading name of the Northern Sydney Local Health District.⁴ It is affiliated with the Royal North Shore Hospital (where it is located) and the University of Sydney.

¹ <http://aamri.org.au/members/about-aamri-members/>

² <http://aamri.org.au/members/become-a-member/>

³ Analysis undertaken using the NHMRC’s List of Administering Institutions as at 1 August 2014, available at <https://www.nhmrc.gov.au/grants/administering-grants/administering-institutions>

⁴ Search undertaken at <http://abr.business.gov.au> on 1 December 2014

Relationship with the NHMRC

The fact that only half the institutions on the Review's list of iMRIs are administering institutions is of particular relevance in light of the following paragraph in the Issues Paper:

'Most iMRIs are established as independent entities under Companies or State legislation. They nevertheless administer a significant proportion of Commonwealth provided NHMRC grants. Overall, around \$178 million in competitive grants (plus \$34 million in Independent Research Institute Infrastructure Support Scheme) was administered by iMRIs in 2013, out of a total of \$851.4 million for NHMRC Medical Research Endowment Account expenditure.'⁵

This paragraph appears to equate iMRI with NHMRC Administering Institution and yet, as noted above, only 34 of the 67 MRIs on the list are administering institutions. (As an estimate of the proportion of competitive grants that flows to or through MRIs \$178 million is almost certainly too low.)

The Hanson Institute is one example of an MRI that is not an administering institution. Established in 1991 by grants from South Australia's Anti-Cancer Foundation and funding from the Australian Cancer Research Foundation, the Hanson Institute is '...the research division of the Royal Adelaide Hospital and SA Pathology. The Institute also works in close collaboration with the University of Adelaide.'⁶

SA Pathology, Royal Adelaide Hospital and the University of Adelaide are NHMRC Administering Institutions and between them received more than \$14 million in NHMRC grants in 2013. The Hanson Institute is not an administering institution and yet it claims to be one of the five largest medical research institutes in Australia.⁷ This is because it 'provides an environment and facilities for basic and clinical researchers employed by SA Pathology, the Royal Adelaide Hospital, the University of South Australia and the University of Adelaide located on the campus of SA Pathology and the Royal Adelaide Hospital.'⁸ It is providing facilities that bring researchers from several institutions together, and is also able to raise philanthropic funding to support the research. These are clearly useful functions, and the Hanson Institute is not unique but is it an 'iMRI' as conceived by the Review, and is the Review interested in how the it (and institutions like it) collaborate, and improving their efficiency?

If the true focus of the Review is MRIs that are NHMRC Administering Institutions, then that potentially changes the complexion of the Review and what it is seeking to achieve. The lack of a clear definition what constitutes an iMRI and/or identification of this population makes it difficult to respond to the Review's questions.

⁵ Review of Independent Medical Research Institutes, page 1

⁶ <http://www.hansoninstitute.sa.gov.au/about-the-hanson-institute/history-of-the-hanson-institute/>

⁷ Ibid

⁸ <http://www.hansoninstitute.sa.gov.au/our-cancer-research/>

Independence and identity

Independence and identity are closely related. The majority of research institutes have their origins in a university or major hospital. Universities have responsibility for research in a wide range of fields and disciplines, as well as teaching. Hospitals have responsibilities for the delivery of healthcare to a (usually local) community. Health and medical research is only a part of what these institutions do, and the 'brands' of the organisations can be diffuse or linked to a narrow geographical area. In such a circumstance creating an institute with a focus on health and medical research and its own identity can have a number of advantages.

For example, the Black Dog Institute is based at the Prince of Wales Hospital Randwick and is very closely affiliated with the University of New South Wales. While not an NHMRC Administering institution, its 2012 annual report boasts of the NHMRC grants it has secured (including a *Centre for Research Excellence in Suicide Prevention* with researchers from around Australia).⁹ The Black Dog Institute 'brand' enables the institute to have a national presence which would be more difficult to achieve if it relied on the identities of the UNSW and the Prince of Wales Hospital, both of which are closely associated with NSW and Sydney, and with a range of different activities. A separate identity also assists with attracting staff and donors with a particular interest in the mental health issues it is seeking to address.

The creation of a new identity is often also driven by a collaboration or partnership between two or more existing institutions. One of the most recent examples is the Peter Doherty Institute for Infection and Immunity. A joint venture between the University of Melbourne and Melbourne Health, the creation of a new identity can help to define and delineate the activities undertaken in the joint venture from those undertaken by the respective partners in their own right. It can also serve as a vehicle for embedding research into health practice while simultaneously using the patient experience to direct the research.

Identity can also be important in developing a specific organisational culture which is conducive to research. Mission based, and with a focus on research in a specific area (or areas), it can be easier to generate collaborative, focused teams than is the case in a larger organisation with a more diverse and broader purpose.

In many cases identity has been driven by a single benefactor. The Garvan Institute's name reflects the desire of an early (and significant) benefactor, Mrs. Helen Mills, to honour her father; the Walter and Eliza Hall Institute is similarly named, and the QIMR Berghofer is a more recent example. This type of recognition is not possible without a separate institutional identity. Such large donations often come with a requirement for a degree of institutional independence, as a means of ensuring the gift is used in the manner intended, by way, for example, of the creation of a trust with specific objects. In other instances institutes are named to honour famous researchers (Sir Frank MacFarlane Burnet, Lord Howard Florey, Peter Doherty).

Having a separate identity can have significant advantages in attracting public support and funding, engaging staff and ensuring a clear focus on outcomes. While creating an identity comes at a cost, and an identity can be established with differing degrees of independence, the costs of this independence need to be evaluated against the benefits. Any evaluation of the efficiency of independent MRIs needs to consider not only the costs associated with independence but its potential benefits, including the ability to raise external funds, attract high quality researchers and to drive research excellence through a specific focus. While such an evaluation is possible and would enable a comparison against other types of research institutions, to

⁹ Black Dog Institute, 2012 Annual Report, p.6-7

Research Australia's knowledge the research required to enable such an a comparison has not been undertaken.

RESPONSE TO QUESTIONS

1. **Having regard for sources of medical research funding in Australia, current funding arrangements and other players in the sector**
 - a. **Identify and describe key elements of a best practice model for iMRIs.**
Suggestions may address organisational structure, and capital and asset models
 - b. **Is there an optimally sized and structured model for an MRI in Australia? For example, is there an optimal size for number of scientists, number of support staff etc? The Panel notes that most Australian MRIs are smaller than their international counterparts. Do Australian MRIs see themselves at a disadvantage to their typically larger offshore counterparts?**

Research Australia is unable to identify a best practice model for iMRIs. Medical research institutes arise in response to a range of different circumstances and to serve different specific needs at a specific point in time. These circumstances largely determine the structure and nature of the organisation. Like any organisation, MRI's should regularly review their organisational structure and operational and administrative arrangements to ensure it continues to serve the organisation's mission and objectives and that it is as efficient as possible.

It is not immediately apparent that there is an optimal size for MRIs. In many respects the size of an MRI will be driven by its research focus and available funding. An MRI with a research focus in an area that attracts relatively little funding or where there is only limited research capacity in Australia may necessarily be small. Whether the research focus is so narrow that it should consider amalgamating, collaborating or merging with another medical research institute or other research organisation is a question that should be considered by the Board as a matter of good governance. This includes considering any adverse effect a merger or amalgamation may have on the iMRI's focus and culture.

If an MRI is small/ 'boutique' and able to primarily utilise the infrastructure of a hospital or university it is associated with, it can be efficient. The issue frequently arises when a research institute becomes 'middle sized', and more independent with its own corporate and research infrastructure, but is not large enough to utilize this capability to its maximum potential, or not able to get the quality required to be both efficient and effective.

HR and payroll systems are a good example. For a medium sized organisation these can lead to comparatively large costs, including needing to employ more staff in HR/operations, higher staff turnover in HR personnel as they are attracted to organisations with better systems and more fulfilling jobs, and generally inefficiency/lower productivity.

This need for separate infrastructure is often driven by the issue of identity. Finding ways to share corporate and research infrastructure could be part of the solution.

An example from the private sector is CUSCAL. The Credit Union sector centralized back office and systems back in the 1980s and 1990s to form CUSCAL, enabling them to compete with the payments systems and services provided by banks. Brands of credit unions are still maintained which is vital to them attracting customers.¹⁰

¹⁰ <https://www.cuscal.com.au/about-us>

2. Identify and describe opportunities for how iMRIs might increase efficiency and avoid duplication in the health and medical research sector. Suggestions may address capital and asset models, corporate and research infrastructure, and organisational structure.

The question of duplication arises in more than one sphere.

In relation to research conducted, the issue of research duplication is one that applies to all fields of research. As the volumes of research grow globally, it becomes more difficult to be aware of what research is being conducted elsewhere and to remain abreast of current developments. As this issue is one which applies more broadly than to iMRIs it is assumed that this is not the type of duplication which is the subject of the inquiry.

In relation to duplication of organisational and administrative effort, it is not immediately apparent whether iMRIs are more or less efficient than other publicly (or privately) funded research organisations. The degree of variation among iMRIs in terms of efficiency, and whether it is related to size or other drivers is also largely an unknown.

It is noted that the Review is seeking to collect information about the business frameworks for iMRIs. This could be a useful starting point for a study to benchmark the efficiency of different publicly funded research organisations. Clearly such an exercise would need to be undertaken with the co-operation of iMRIs and careful consideration would need to be given to the information to be collected and how 'efficiency' is to be measured. In the private sector, efficiency is typically measured in terms of the capital outlay required to generate a given profit. In the research sector the output is research; while assessing the value or impact of research is less straightforward than measuring profit it is nonetheless critical to any assessment of the efficiency of iMRIs. If done well, this information could be of great value to the management and boards of individual iMRIs while also assisting the sector as a whole to identify areas of relative underperformance and opportunities for improved efficiency.

There is no reason to believe that there is one single 'most efficient' model for iMRI's. Experience in other areas including the private sector indicate that there is a range of successful business and operating models. The management and boards of iMRIs are responsible for the effective and efficient operation of their institutions and are best placed to make decisions in this regard. A useful focus for the review is how the MRI sector can build its management and governance capacities. Initiatives that could assist this capacity building include making training available to senior management and directors, and providing the opportunity for iMRIs in Australia to examine the governance and management structures of other research organisations in Australia and overseas.

- 3. Identify and describe opportunities for iMRIs to share resources and equipment with other health and medical research institutions (universities, other iMRIs, hospitals, healthcare providers). Suggestions may address sharing administrative services (e.g. HR, security, OHSE, research administration) or scientific facilities (e.g. equipment, staff, laboratories).**

Many iMRIs are co located with either a university or a hospital and have often evolved from within the larger institution. As a first step it is important to consider why the iMRI does not share administrative systems with the large institution. These can include contractual and licensing issues, concerns about the confidentiality of information, and the ability to restrict access to information within a system.

In many cases existing organisations have substantial legacy systems. While there may be advantages in sharing another organisation's system, or in moving to a new shared administrative system, the costs associated with the transition can be prohibitive, particularly for an iMRI with limited financial and administrative resources.

One solution would be to provide one off 'organisational innovation' grants to assist groups of MRIs (or MRIs and other institutions) to move to more efficient, shared administration systems and practices.

In relation to scientific and research facilities, the NSW Health and Medical Research Hubs strategy provides a useful model for encouraging cooperation and sharing of resources and facilities between research organisations.¹¹ Some MRIs, including the Hanson Institute and the Hunter Medical Research Institute, also play this role.

- 4. Identify and describe possible opportunities for accessing more diverse funding sources.**

Funding sources for iMRIs are already diverse, and include funding from Commonwealth, State and Territory governments, philanthropy, overseas grants, private sector contracts and partnerships and revenue generated from the commercialisation of iMRIs' own intellectual property.

The mix of these different funding sources varies from one iMRI to another and reflect a range of factors such as its age and history, the research fields in which it works (some are more amenable to commercialisation) and the research collaborations it has developed.

In relation to the ability of iMRIs to generate their own income thorough revenue from commercialisation, many are hampered by a lack of funds available to undertake the research required to cover the 'valley of death' between publication of results and establishing a body of evidence sufficient to warrant the attention of a commercial partner. A pooled fund available to MRIs for the research and experiments necessary to undertake these pre- commercialisation activities would support MRIs in generating commercialisation revenues.

The different sources of funding available to iMRIs and how this is linked to the Review's focus on the efficiency of iMRIs raises a significant question. Is the Review concerned with the overall efficiency of iMRIs or with the efficient use of Commonwealth Government funding received by iMRIs? The backing of one or more large organisations such as a university or a public hospital does not determine whether a research institute is more or less efficient than an 'independent' institution without such support; it may simply mean that the cost of research overheads are being met elsewhere (through the state health budget, university

¹¹ <http://www.health.nsw.gov.au/ohmr/Pages/hub-strategy.aspx>

research infrastructure grants or teaching revenue) and is not as 'visible'. Similarly, an independent medical research institute may be able to meet its overheads through significant public donations or revenue from commercialisation of its research. Is an iMRI that raises significant income through sources other than Commonwealth Government funding by definition more efficient than an iMRI that relies principally on Commonwealth Government funding? Research Australia submits that the focus should be on overall efficiency, taking into account all sources of income and the costs associated with generating that income on the one hand, and research outputs on the other.

- 5. Identify opportunities for iMRIs to expand existing and develop new national and international strategic collaborations with other institutions (universities, MRIs, health sector and/or industry), including collaboration with those fields, disciplines and scientific resources needed for research growth and expansion over the next decade (e.g. mathematics and big data expertise, behavioural sciences, engineering)**

The nature of appropriate collaborations is as varied as the iMRIs themselves. Smaller iMRIs may have less capacity to reach out across disciplinary and geographic boundaries and the encouragement of networks and co-operative activities (such as pooled purchasing, as is used by some by small businesses) may be a model for enhancing collaboration.

- 6. Identify and describe opportunities for iMRIs to implement policy, governance or other arrangements to more readily translate research into health policy, and with this, positive health outcomes.**

In many ways the problems associated with the translation of research into health policy are akin to those associated with commercialisation. They also apply to the translation of research into health policy by universities and other research organisations. Fundamentally, there is a gap between the publication of research findings and its implementation in practice. This gap requires further clinical trials or pilot programs to establish the clinical outcomes, broader health benefits and the relative cost/benefit of delivering the intervention in the community to existing programs. There is currently insufficient funding for these activities and a lack of capacity in both the research sector and the healthcare sector to conduct and evaluate these further studies and plan their implementation. (Translation requires not only clinician researchers but more health economists and experts in data manipulation and health policy.)

There is also a lack of incentives and mechanisms in the system to drive the widespread uniform adoption of new interventions. How we as a nation:

- identify and evaluate new health interventions,
 - make decisions about which interventions to adopt, and
 - then implement new health interventions into our health system
- is a question that goes beyond the scope of this review. While iMRIs are undoubtedly a valuable source of new interventions, the solution to this problem largely lies beyond their doors.

- 7. Identify ways iMRIs can actively build the capacity of the health and medical research sector in Australia to respond to future challenges. Suggestions may address innovations in the areas of research methodology, workforce and training.**

Academic Health Science Centres provide an opportunity for iMRIs to collaborate with other research organisations and health care providers, and Research Australia supports the recommendations of the McKeon Review in relation to the establishment of Academic Health Science Centres in Australia.

The Commonwealth Government has also recently flagged a review of research raining. This review provides an opportunity to formally consider the role of iMRIs in the training of researchers and the provision of facilities for research students at undergraduate and postgraduate levels.

As described at item 4 above, a pooled fund available to MRIs for commercialisation activities could help MRIs to capitalise more on their IP to generate commercial revenue.

Building commercialisation capability within MRIs is also critical. As a starting point, ensuring that MRIs are eligible as 'businesses' to participate in The Entrepreneurs Infrastructure Programme would give iMRIs access to a range of services and support designed to facilitate the commercialisation of research.

Increasing the commercialisation capacity of MRIs also improves the knowledge transfer to the sector. MRIs already play a critical role in training researchers and providing posts for early career researchers; improving the commercialisation capacity of MRIs will enhance the transfer of commercialisation skills and knowledge throughout the broader research workforce.

8. Apart from publications and citations, what other impact criteria are used by your institution as indicators of individual or institutional success?

This question is not applicable to Research Australia.

CONCLUSION

There is no doubt that iMRIs (and MRIs generally) can be more efficient. Whether iMRIs are currently more or less efficient than non independent MRIs or any other type of publicly funded research organisation is not, however, clear. Research Australia is of the view that, like any other well governed organisation, iMRIs should be as efficient as possible, and the responsibility for this rests principally with the governing bodies of the institutions and with the senior management they appoint.

Research Australia recognises that there are a number of actions that can be taken to support iMRIs in pursuit of greater efficiency, including providing them with information about relative performance, and providing resources to support them in governance capacity building. Other measures include support to enable MRIs to commercialise their IP (thus generating their own income). Equally there are actions that can be taken to support MRIs in increasing their effectiveness, and we have sought to outline these measures in this submission.

Any examination of the efficiency and effectiveness of iMRIs, and particularly of measures to enhance their ability to collaborate, must consider the other organisations with which they work- the universities, hospitals and other research and healthcare organisations in the public and private sector. This sector wide review of the efficiency and effectiveness was a subject of the Strategic Review of Health and Medical Research undertaken by the Review Panel led by Mr Simon McKeon AO in 2012, and the findings of that review remain current.

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