



Australian Academy of Science

**RESPONSE TO THE CURRENT AND EMERGING
ISSUES FOR- NHMRC FELLOWSHIP SCHEMES
CONSULTATION PAPER
FROM THE AUSTRALIAN ACADEMY OF SCIENCE / JUNE 2015**

Australian Academy of Science - Response to Current and Emerging Issues for NHMRC Fellowship Schemes consultation paper

Summary of the main points in the Academy's response

1. The potential impact of the Medical Research Future Fund should form part of the consideration for future medical research and workforce planning.
2. The balance between total annual expenditure on Project Grants and total annual expenditure on fellowships should not be changed.
3. The funding rate for NHMRC grants could be improved by reducing the limit on the number of grants that can be held at the Chief Investigator level.
4. Expecting fellows to make adequate career progression so they are ready to apply to the next level up in the fellowship scheme, rather than re-apply at the same level, should be a principle of the scheme. This principle is best implemented flexibly by assessment panels.
5. It would be appropriate to have a maximum age cut-off point for eligibility to the fellowship scheme.
6. There are an appropriate number of fellowship levels, but the balance of fellowships available at each level needs to be addressed.
7. Consideration should be given to redirecting the funding for some of the Early Career Fellowships to the pinch points in fellowship pipeline, such as the Career Development Fellowships level and the Senior Research Fellowships level A.
8. The NHMRC should not identify particular areas for capacity building for the Fellowship scheme. Instead, priority health and medical research areas should be identified and a proportion of the Medical Research Endowment Account as a whole directed towards those areas.
9. To improve participation for women in the medical research workforce, greater flexibility should be employed as to how part-time fellowships are held.
10. The NHMRC should continue efforts to support Aboriginal and Torres Strait Islander researchers.

Comments on initial background information

Medical Research Future Fund

"... the timing of its establishment is not yet certain. It is anticipated that disbursements will not reach significant levels for several years after establishment and there is currently little known about how disbursements will be allocated. Thus, the MRFF cannot be seen as a mechanism for alleviating the current funding pressures in the next half decade or so."

Consultation paper

The consultation paper disregards the positive role that the MRFF could play in alleviating current funding pressures in the next half decade. Developments since the release of the consultation paper mean that three primary reasons for not considering the MRFF no longer hold true.

1. Timing of the establishment of the MRFF is not yet certain

The timing of the establishment of the MRFF has become clearer and the Government has introduced legislation into Parliament to establish the fund. Subject to the passage of the legislation the fund will become operational on 1 August 2015.

2. Disbursements will not reach significant levels for several years after establishment

The 2015-16 Budget papers make clear that disbursements are expected to reach significant levels within just three years with anticipated annual disbursements of \$224 million by 2018¹. At this point the MRFF could start to make a tangible difference to alleviating funding pressures, and it is difficult to see what other policy options, including those outlined in the consultation paper, have the potential to have anywhere near this level of impact.

3. Little is known about how disbursements will be allocated

The Government is planning to establish the fund and start disbursements in 2015-16 and has indicated that “net earnings will provide a permanent revenue stream, primarily to the National Health and Medical Research Council”². The NHMRC is also well-positioned to provide advice on how the fund could be best utilised to fund both outstanding health and medical research, and alleviate current funding pressures.

Issue 1: The balance is changing between the number of research grants available and the number of Fellowships

Question 1: how should NHMRC’s funding balance between research grants and fellowships be adjusted as the total number of Project Grants available falls progressively over the next few years?

The balance between total annual expenditure on Project Grants and total annual expenditure on fellowships should not be changed.

The move towards five-year grants will mean that fewer *new* grants will be awarded each year, but it should be acknowledged that after a transition period the total number of *active* grants supported by the NHMRC in any one year will remain the same.

The number of new grants made each year as outlined in Table 4A and 4B in the consultation paper are not as useful as looking at the number of *active* grants being funded by the NHMRC in any one year (new and recurring). The projected funded rate is assuming a 7% per annum growth in grant applications based upon past growth. It is not clear if this has taken into account that as researchers transition to five year grants they will be submitting fewer grant applications.

The funding rate could be improved by reducing the limit on the number of grants that can be held at the Chief Investigator level.

¹ Department of Finance (2015) *Portfolio Budget Statements 2015-16*. Available at: <http://www.finance.gov.au/publications/portfolio-budget-statements/15-16/>

² Department of Education and Training (2015) *Draft National Strategy for International Education*. Available at: <https://internationaleducation.gov.au/International-network/Australia/InternationalStrategy/Documents/Draft%20National%20Strategy%20for%20International%20Education%2020150504a.pdf>

Other funding pressures, such as the increasing complexity and cost of medical research, and medical research inflation outstripping annual increases in the NHMRC research funding, will impact on the number of grants that can be supported.

Issue 2: Is the structure of NHMRC fellowship schemes appropriate for 2015 and beyond?

Question 2: To increase the turnover of NHMRC Research Fellows, should these schemes be seen as 'up and out schemes', whereby Fellows wishing to reapply can only do so at a higher level?

The NHMRC Research Fellows scheme should reward excellence and provide stability for our very best researchers so they can develop their careers and undertake high quality research.

Some medical researchers have expressed that it is difficult for new applicants to higher level fellowships to be competitive against those reapplying at the same level, even though the NHMRC has made substantial improvement to assess fellowship applications relative to opportunity.

A general expectation that fellows are ready to apply to the next level up in the fellowship scheme, rather than re-apply at the same level, is appropriate. This expectation is best implemented flexibly by assessment panels at the assessment stage of applications rather than as a formal rule. This would allow for appropriate exemptions for those with legitimate career interruptions, or for those who have previously skipped a fellowship level because of rapid progress. As the NHMRC Research Fellowship scheme should be about supporting excellence *and* ensuring the next generation of researchers have the opportunity to develop their careers, it would be appropriate to have a maximum age cut-off point for eligibility to the scheme³.

Question 3: Are there too many Fellowship levels? Does this structure impede the career progression of rapidly rising stars in health and medical research?

There are an appropriate number of fellowship levels, but the balance of fellowships available at each level needs to be addressed.

³ Further consideration as to what a maximum age might and what impact this might would need to be considered. A maximum age for eligibility could be defined as the age at which a person becomes eligible for the Age Pension.

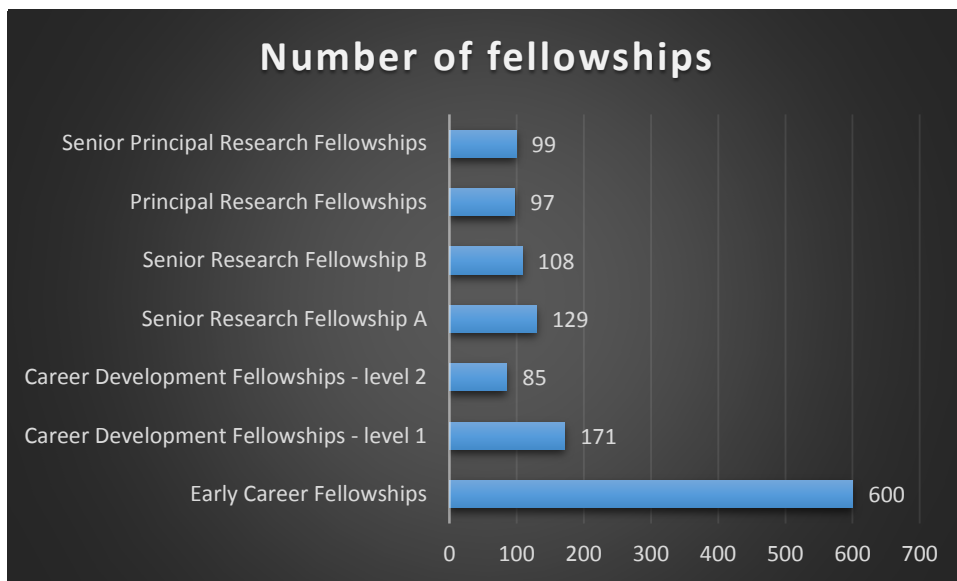


Figure 1 Number of NHMRC fellowships at each level

The discussion paper states that the NHMRC maintains a pyramid shape to its Fellowships scheme and presents Table 3 to support this. However in this table the two Career Development Fellowship levels have been combined. When these are separated, as in Figure 1 above, it becomes apparent that a pyramid shape is not being maintained. Specifically, it is apparent that there are too many Early Career Fellowships relative to long-term career opportunities.

To help build more sustainable career pathways for the next generation of medical researchers, the NHMRC should consider redirecting the funding for some of the Early Career Fellowships to the pinch points in the fellowship pipeline and awarding a greater number of fellowships at the Career Development Fellowships level and the Senior Research Fellowships level A.

Question 4: Taking into account that awarding longer grants means fewer grants overall in steady state funding, should NHMRC extend the duration of Early Career Fellowships to more than four years? Should the Career Development Fellowship be extended beyond 5 years to, say, seven or ten years?

As outlined in the Academy's response to question 1, awarding longer grants will result in fewer *new* grants awarded each year, but it does not mean fewer *active* grants overall in a steady state funding environment following a 3-5 year transition period.

Given the current skewed fellowship pipeline and bottlenecks, there is merit in exploring whether it would be feasible to decrease the number of Early Career Fellowships available each year, and redirect this funding to increase their length, and to increase the number of Fellowships offered at Career Development Fellowship level and Senior Research fellowships level A. This would help to ensure a more balanced pipeline of medical research fellowships, providing realistic career opportunities for the next generation of medical researchers.

Issue 3: Should there be a stronger strategic approach to granting Fellowships?

Question 5: Should NHMRC identify particular areas that require capacity building for the future and maintain support for those areas for long enough time to make a difference? What else should be done to support women and increase participation and success by Aboriginal and Torres Strait Islander researchers?

NHMRC Fellowships and capacity building

A strategic approach to NHMRC Fellowships should form part of a broader strategic approach to increasing the links between health and medical research priorities, and aspirational national health priorities. The NHMRC should not identify particular areas for capacity building for the Fellowship scheme. Instead, priority health and medical research areas should be identified and a proportion of the Medical Research Endowment Account as a whole (and potentially the Medical Research Future Fund) directed towards those areas. This approach would be in line with the recommendations of the Strategic Review of Health and Medical Research⁴.

The Strategic Review of Health and Medical Research found that compared to other nations the focus for health and medical research in Australia is largely investigator-driven. The review found that with such an approach there are considerable risks that issues of critical importance might go un-researched, and that research efforts may be expanded on areas with low potential for impact.

The review made specific recommendations about developing health and medical research priorities that align with Australia's aspirational national health priorities, and then ensuring a small portion of funding be directed to priority areas. Specifically it recommends:

“Establish, fund and create a structure around a set of national health and medical research priorities.

- a. Set national health and medical research priority areas through the leadership body and the Council of Australian Governments Standing Council on Health on a triennial basis.
- b. Allocate a defined portion of the NHMRC Medical Research Endowment Account budget (10%-15%) to priority areas for ‘top-down strategic research’.
- c. Create a panel of experts for each priority area to set the research agenda, leverage funding and evaluate outcomes.”

McKeon et al (2013), p. 103⁵

The Academy supports the McKeon review's recommendations and sees this as the most appropriate approach to ensuring Australia builds the scientific capacity areas in priority areas, while ensuring the curiosity-driven and investigator-led research continues to deliver substantial benefits and remains at the heart of health and medical research.

Supporting women in health and medical research

To improve participation for women in the medical research workforce, greater flexibility should be employed as to how part-time fellowships are held. Where a fellowship is held on a part-time basis

⁴ McKeon, S. et al (2013) *Strategic review of Health and Medical Research: Final Report*. Available at: <http://www.mckeonreview.org.au/>

⁵ McKeon, S. et al (2013) *Strategic review of Health and Medical Research: Final Report*. Available at: <http://www.mckeonreview.org.au/>

the number of years in which it is held should be increased. For example, it should be possible to hold a four-year fellowship on a part-time basis for eight years.

The NHMRC should continue the work it is undertaking to encourage employers to put in place adequate gender equity policies.

The Academy is trialling the UK Athena SWAN Charter with a diverse range of research institutions this later this year, and looks forward to working with the NHMRC and others on this initiative.

Supporting Aboriginal and Torres Strait Islander researchers

The NHMRC should continue efforts to support Aboriginal and Torres Strait Islander researchers. Increasing participation in the future will require efforts that go beyond the NHMRC. The primary, secondary and tertiary education system as a whole needs to better support Aboriginal and Torres Strait Islander students so greater numbers can become health and medical researchers.

Question 6: Is there a better solution to encouraging diversity in careers than those based on years post-PhD?

Specifying years post-PhD within funding rules for different fellowship schemes is the most appropriate baseline to use. This criterion should continue to be employed with some flexibility so that panels and assessors can take into account career disruption. Such flexibility will probably have to be employed with a degree of subjective judgement as individuals' personal circumstances will vary. As Klocker and Drozdowski⁶ show there is great scepticism amongst some researchers in trying to put an objective value on the impact on research output of family caring responsibilities, and this would likely extend to other interruptions such as non-linear careers paths.

Issue 4: Responsibilities of employing institutions and the health and medical research sector

Question 7: Should employing institutions be expected to provide more certainty to their employees than now?

The funding profile for NHMRC fellowships is such that there are fewer fellowships available at each subsequent level, and there are increasing numbers of applicants, particularly at the mid-career level. This model will inevitably mean that many good scientists will not progress to the next fellowship level.

For this reason, while it would be desirable for employing institutions to provide certainty of position to their employees it is not feasible for most organisations in the current funding environment.

Specifically, there are some institutions where such a policy is already in place, but these tend to be the larger research-intensive universities. However, it is not feasible for most research organisations to do this. Where such an option is considered it should be reserved for those who narrowly miss out on the current fellowship round, rather than it being a blanket extra year of funding.

⁶ Klocker, N. & Drozdowski (2012) 'Career progress relative to opportunity: how many papers is a baby 'worth'?'. *Environment and Planning A*, 44:1271-1277

Question 8: Would this be achieved if NHMRC required institutions to commit to one or more years of ongoing support for researchers exiting from NHMRC Fellowships?

Mandating such a requirement within the NHMRC funding rules would probably force institutions to put this policy in place, but it would also put unsustainable financial pressure on smaller research organisations. There is a risk that such a policy might make some research organisations more selective in their initial recruitment and therefore make it difficult for all but the very best medical researchers to find appropriate employment.

Question 9: Should this be restricted to Early Career and Career Development Fellows?

If employed this option should apply to those who narrowly miss out Career Development Fellowships.