



Australian Government
National Health and Medical Research Council

NHMRC

GPO Box 1421 Canberra ACT 2601
16 Marcus Clarke Street, Canberra City ACT 2600
T. 13 000 NHMRC (13 000 64672) or +61 2 6217 9000
F. +61 2 6217 9100
E. nhmrc@nhmrc.gov.au
ABN 88 601 010 284
www.nhmrc.gov.au

Submission No.089.1

(Dementia)

Date: 05/03/2013

Dr Alison Clegg
Committee Secretary
Standing Committee on Health and Ageing
House of Representatives
PO Box 6021
Parliament House
Canberra ACT 2600

Dear Dr Clegg,

**HOUSE OF REPRESENTATIVES STANDING COMMITTEE ON HEALTH & AGEING
INQUIRY INTO DEMENTIA: EARLY DIAGNOSIS & INTERVENTION**

Thank you for the opportunity to discuss the work of the National Health and Medical Research Council in relation to research in the area of dementia on Tuesday 12 February. Please find enclosed a response to the questions on notice from that meeting.

If you require any further information, please contact Virginia Hart (02 6217 9101, virginia.hart@nhmrc.gov.au)

Yours sincerely,

Professor Warwick Anderson
Chief Executive Officer

March 2013

Response to Questions on Notice from the Tuesday 12 February Meeting

1. Mr GEORGANAS: How do those 82 [dementia-related applications] out of the 4,000 rate compared to other illnesses? (Hansard page 2)

Since 2003, NHMRC has awarded over \$6 billion across all its schemes. Of the funds awarded each year, an average of approximately 3 % has been allocated to dementia research. The table below provides a comparison between funding for dementia research and the funding allocated to research for other major diseases.

	Total funds awarded between 2003-2013	Percentage of total funds awarded between 2003-2013
Cancer	\$1,451,594,253	23.44%
Cardiovascular Disease	\$902,347,534	14.57%
Diabetes Mellitus	\$543,157,882	8.77%
Mental Health	\$463,967,983	7.49%
Obesity	\$258,027,923	4.17%
Arthritis and Musculoskeletal	\$239,083,848	3.86%
Dementia	\$190,510,431	3.08%
Asthma	\$173,625,347	2.80%
HIV/AIDS	\$119,380,570	1.93%

Please note that much of the research that NHMRC funds is multi-disciplinary in nature and may cross over two or more disease areas.

Additionally, these figures include the funding figures currently available for grants beginning funding in 2013. Funding for 2013 is a broad estimate of likely outcome based on research grant offers following the 2012 grant application rounds - some adjustment is likely later in 2013 once the acceptance process has been completed

A breakdown of the figures is available at [Attachment A](#).

For the funded rates of dementia related applications between the years 2003-2013, please refer to [Attachment F](#), noting the low application rate.

An analysis of the funded rates of research across all the above major diseases could not be completed with accuracy in the time period as part of this submission. NHMRC can provide this information to the Committee in future if those details are needed.

2. Mr IRONS: How do you approach the 4,000 applications [you receive each] year? (Hansard page 2)

Please see [Attachment B](#) for a more detailed description of the Project Grants peer review process.

Please note that, while it is specific to the Project Grants scheme, the majority of processes and principles are common to NHMRC schemes.

As part of the process of continuous improvement of peer review, NHMRC recently released draft Principles of Peer Review for consultation, as well as holding an International Peer Review Symposium to investigate and discuss strategies that may lead to improvements in peer review. The draft Principles of Peer Review document is at [Attachment C](#).

3. **Mr COULTON: Are you doing any research into lifestyle? Is there any work being done for whole of life and where that goes [in relation to dementia]? (Hansard page 4)**

Since 2003, NHMRC has awarded approximately \$7.9 million to a total of 15 dementia-related grants identifying as having a "lifestyle intervention" focus. These include dietary and exercise interventions, humour and music therapies, and a large scale project intended to collect information and build a model for positive ageing.

Details for the 15 grants are available at [Attachment D](#).

4. **Mr WYATT: What proportion of funding is accessed for each of [NHMRC's] funding types or programs by any researchers in respect to dementia? (Hansard page 6)**

Many of NHMRC's Research Support and People Support schemes have awarded funds to single researchers or teams performing research in dementia. However, as previously stated, the proportion of funding is small due to the small number of applications received in this area each year.

A breakdown of the funding awarded to dementia research by each scheme and the funding success rates is available at [Attachments E](#) and [F](#).

Attachments

- A. Breakdown of funding awarded to dementia research compared to research in other major disease areas
- B. Peer review summary for the 2012 Project Grants round
- C. DRAFT – Principles of Peer Review
- D. Details of "lifestyle intervention" dementia research grants
- E. Breakdown of funding awarded to dementia research per scheme by percentage
- F. Summary of dementia research success rates compared to overall success rates

CALENDAR YEAR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	
	\$302,065,599	\$329,274,084	\$379,496,148	\$427,956,743	\$489,181,030	\$576,744,352	\$665,183,104	\$695,745,543	\$756,279,662	\$772,979,325	\$798,951,507	
ARTHRITIS AND MUSCULOSKELETAL	\$12,248,648	\$14,591,150	\$17,189,687	\$19,023,258	\$21,923,669	\$26,690,237	\$26,656,598	\$26,447,513	\$27,401,611	\$24,681,146	\$22,230,331	\$6,193,857,096
Proportion	4%	4%	5%	4%	4%	5%	4%	4%	4%	3%	3%	\$239,083,848
ASTHMA	\$7,785,146	\$8,856,964	\$11,649,247	\$12,241,670	\$16,428,856	\$19,496,806	\$20,450,557	\$20,186,623	\$16,666,796	\$18,570,856	\$21,291,627	\$173,625,347
Proportion	3%	3%	3%	3%	3%	3%	3%	3%	2%	2%	3%	2.80%
CANCER	\$73,037,845	\$76,816,306	\$90,281,335	\$102,246,810	\$115,252,954	\$130,848,522	\$152,116,258	\$163,936,308	\$177,241,383	\$183,849,291	\$185,967,223	\$1,451,594,235
Proportion	24%	23%	24%	24%	24%	23%	23%	24%	23%	24%	23%	23.44%
CARDIOVASCULAR DISEASE	\$43,680,810	\$50,070,472	\$60,514,837	\$64,640,369	\$74,850,226	\$89,454,629	\$96,166,973	\$99,454,975	\$108,646,832	\$107,884,433	\$106,982,978	\$902,347,534
Proportion	14%	15%	16%	15%	15%	16%	14%	14%	14%	14%	13%	14.57%
DEMENTIA	\$6,777,538	\$7,227,824	\$9,072,064	\$10,784,082	\$12,886,838	\$18,313,724	\$23,977,923	\$25,160,284	\$25,723,805	\$26,008,886	\$24,577,465	\$190,510,431
Proportion	2%	2%	2%	3%	3%	3%	4%	4%	3%	3%	3%	3.08%
DIABETES MELLITUS	\$19,596,220	\$21,559,567	\$26,682,158	\$30,662,981	\$43,488,009	\$56,078,875	\$63,316,416	\$69,470,258	\$74,688,805	\$70,432,502	\$67,182,091	\$543,157,882
Proportion	6%	7%	7%	7%	9%	10%	10%	10%	10%	9%	8%	8.77%
MENTAL HEALTH	\$16,604,598	\$18,214,618	\$26,267,094	\$28,713,809	\$33,329,967	\$43,404,449	\$49,893,404	\$57,102,838	\$60,583,690	\$61,754,873	\$68,098,643	\$463,967,983
Proportion	5%	6%	7%	7%	7%	8%	8%	8%	8%	8%	9%	7.49%
OBESITY	\$5,368,157	\$8,425,625	\$11,956,597	\$12,944,573	\$18,310,365	\$24,750,964	\$28,766,198	\$30,796,626	\$36,571,063	\$38,487,200	\$41,650,555	\$258,027,923
Proportion	2%	3%	3%	3%	4%	4%	4%	4%	5%	5%	5%	4.17%
HIV/AIDS	\$3,463,056	\$5,866,830	\$7,403,162	\$9,427,145	\$9,571,967	\$11,085,061	\$14,839,211	\$14,188,574	\$14,271,970	\$14,249,280	\$14,994,314	\$119,380,570
Proportion	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1.93%

Notes:

1. Much of the NHMRC research is multi-disciplinary in nature and may cross over two or more fields of research or disease areas. Therefore some of the funding contained in these data may be duplicated in more than one NHPA. The proportion of NHMRC research funding in 2012 to the NHPAs after removing removing the duplicates from those allocations is approximately 52% which is broadly consistent with the data shown here.
2. Funding for 2013 is a broad estimate of likely outcome based on research grant offers following the 2012 Grant Application Round - some adjustment is likely later in 2013 once the acceptance process has been completed

FINANCIAL YEAR	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
	\$315,701,904	\$344,852,919	\$404,873,798	\$449,882,393	\$527,773,330	\$620,776,723	\$699,179,353	\$737,087,941	\$750,170,651	\$752,962,110
ARTHRITIS AND MUSCULOSKELETAL	\$13,419,899	\$15,890,419	\$18,106,473	\$20,473,464	\$24,306,953	\$26,673,418	\$26,552,056	\$26,924,562	\$26,041,379	\$20,758,022
Proportion	4%	5%	4%	5%	5%	4%	4%	4%	3%	3%
ASTHMA	\$8,379,626	\$10,143,668	\$12,209,508	\$14,152,721	\$17,453,266	\$20,908,199	\$20,636,986	\$17,826,574	\$16,856,459	\$16,318,171
Proportion	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%
CANCER	\$75,212,308	\$83,890,220	\$96,356,183	\$108,546,963	\$122,666,861	\$141,201,462	\$158,188,407	\$170,836,595	\$179,835,499	\$162,387,587
Proportion	24%	24%	24%	24%	23%	23%	23%	23%	24%	23%
CARDIOVASCULAR DISEASE	\$46,875,683	\$55,292,694	\$62,577,628	\$69,745,321	\$82,152,478	\$92,810,832	\$97,811,025	\$104,050,928	\$108,265,666	\$93,581,589
Proportion	15%	16%	15%	16%	16%	15%	14%	14%	14%	12%
DEMENTIA	\$6,977,615	\$8,150,014	\$9,953,145	\$11,835,462	\$15,525,423	\$20,877,151	\$24,296,991	\$25,301,011	\$27,394,390	\$21,553,611
Proportion	2%	2%	2%	3%	3%	3%	3%	3%	4%	3%
DIABETES	\$20,577,910	\$24,120,888	\$28,672,584	\$37,075,516	\$49,783,472	\$59,697,666	\$66,393,383	\$72,079,529	\$72,635,750	\$63,067,376
Proportion	7%	7%	7%	8%	9%	10%	9%	10%	10%	8%
MENTAL HEALTH	\$17,409,620	\$22,240,867	\$27,490,463	\$31,021,907	\$38,204,716	\$46,483,341	\$53,373,853	\$58,455,320	\$61,040,211	\$55,147,007
Proportion	6%	6%	7%	7%	7%	7%	8%	8%	8%	7%
OBESITY	\$6,896,896	\$10,191,117	\$12,450,588	\$15,627,472	\$21,530,679	\$26,758,597	\$29,781,434	\$33,683,848	\$37,594,660	\$35,728,854
Proportion	2%	3%	3%	3%	4%	4%	4%	5%	5%	5%
HIV/AIDS	\$4,674,951	\$6,645,006	\$8,415,160	\$9,499,567	\$10,328,523	\$12,962,138	\$14,513,899	\$14,230,277	\$14,260,625	\$13,059,760
Proportion	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%

Report Run: 27 Feb 13

Source data - Totals - Current PMF Dataset as at 1 Feb 13, CY and FY data - NHMRC Website data - Summary of Burden of Disease Datasets (<http://www.nhmrc.gov.au/grants/research-funding-statistics-and-data/summary-funding-data>) and NHPA data (<http://www.nhmrc.gov.au/grants/research-funding-statistics-and-data/nhpas>) and 2013 Estimates for NHMRC Statistic Unit file 2013/ALL APPS 2012 APP ROUND as at 1 Feb 13



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A Summary of Peer Review for Project Grant Applications
May 2012

ATTACHMENT B - DOHA/NHMRC SUP SUB 89.1

| WORKING TO BUILD A HEALTHY AUSTRALIA |



Australian Government

National Health and Medical Research Council

A SUMMARY OF PEER REVIEW FOR PROJECT GRANT APPLICATIONS

May 2012

When the Project Grants scheme closed on 14 March 2012, NHMRC had received over 3700 applications. We will convene 36 Grant Review Panels involving about 500 panel members and many thousands of external reviewers.

Our Project Grants peer review processes also provide peer review for other funding organizations including the Cancer Council Victoria (CCV), the National Heart Foundation Australia (NHFA), Cancer Australia (CA) and the Commonwealth Department of Health and Ageing (DoHA).

The Project Grants scheme is NHMRC's largest funding scheme. In this letter I hope to describe in sufficient detail how our peer review processes work and why we do things the way we do.¹

This Newsletter describes some of the thinking behind why Project Grants peer review processes are how they are. More specific descriptions of the process can be found at on our website (see footnote, below):

Professor Warwick Anderson AM

May 2012

¹ This document should be read in conjunction with the 2012 Project Grant Funding Rules, and Project Grant Peer Review Guidelines available at <http://www.nhmrc.gov.au/grants/apply-funding/project-grants>

The importance of good and appropriate peer review

We have set a goal of “evolving peer review” in our current Strategic Plan. NHMRC’s financial support for research comes from the people of Australia through their government and we have an obligation to ensure that we are able to justify our processes to them.

Peer review needs to be at the highest international standards, using processes that are as transparent as possible and that deliver outcomes that are both fair and seen to be fair, and are appropriate to the goals of the particular funding vehicle.

We identified the following characteristics for NHMRC peer review in the Strategic Plan – NHMRC Peer Review:

- ensures all applications receive the best possible review
- is transparent, with independent observers
- is appropriate to the research approaches involved, including multidisciplinary and interdisciplinary research
- utilises new technologies to improve lodgment & processing of applications
- utilises international peer reviewers
- publicly recognises and acknowledges participation.

Overview

Peer review can be explained as occurring in two key stages.

The first provides the applicant with reviewers’ written assessments and an opportunity to write a “rebuttal”.

The second is the meeting of the Grant Review Panel, which makes the final decision regarding an application’s score.

We aim to support the best research ideas each year, as judged by peers and in accordance with NHMRC’s selection criteria for Project Grants which are:

- **Scientific Quality** of the applications’ research objectives
- **Significance and/or Innovation** of the proposed approach
- **Track Record** of the research team and their ability to successfully deliver the research.

There are no exclusions for applications to NHMRC’s Project Grants scheme, because we will support any and all research approaches relevant to health, from the most fundamental investigation of life through to broad ranging applied research; from research to benefit individual patients through to ‘whole of health system’ approaches.

We aim to ensure that all researchers have a fair chance on a level playing field of being funded. The level playing field involves having clear and specific selection criteria; ensuring that all applications undergo consistent peer review processes; that as much expertise is brought to applications in all the different fields of research as possible; that independent scrutiny occurs throughout; and that peer decisions remain the cornerstone of NHMRC processes.

Whatever we do, it is essential that the wider community as well as the research community can trust the process. This is why we call upon a large number of expert peers to contribute to the complex process of peer review. There are shortcuts that perhaps could be taken but which cannot stand scrutiny as to the fairness and quality of the outcomes.

Peer review is a complex process, undertaken by committed researchers. Each peer reviewer will have their own views on applications. It's a human activity and we all bring our training, experience and individual knowledge to the table. NHMRC's policies are therefore designed so that we can fund the highest quality research, following a consistent, fair and equitable assessment of each application, as outlined below.

Below I have outlined the various processes that NHMRC undertakes to ensure timely, fair and robust review of all applications in the Project Grants scheme. There is more detail at <http://www.nhmrc.gov.au/grants/apply-funding/project-grants>.

Applications to NHMRC

The number of applications continues to grow significantly.

Applications opened on 7 December 2011 and closed 14 March 2012. This year, 3727 applications were submitted. As the Table below shows, the numbers of applications continues to rise, by more than 1300 in the last 5 years

Table 1: Number of applications for each application year

Application year	Number of applications
2007	2420
2008	2587
2009	3001
2010	3238
2011	3369

After close of applications, NHMRC senior scientific staff perform an initial, interim allocation of applications to the Assigners Academy and GRPs, based on applicant identified Peer Review Area preferences.

The Assigners Academy has the critical tasks of helping finalize the allocation of applications to GRPs and obtaining two external assessments for each application.

Written peer review reports

Like most other international funding bodies, we use external peer reviewers to provide panels with the expertise needed to cover all the research applications being reviewed each year.

Securing two external assessment reports for each application is a crucial part of ensuring fair and robust scrutiny of each application. In 2012, Assigners Academy membership has expanded to approximately 160 to accommodate the ever increasing Project Grant application numbers and their diversity of discipline, approaches and methodologies.

Assigners Academy members will work with each other and senior staff in NHMRC's Canberra Office with access to a revised RGMS database that provides over 15,000 RGMS CVs and new software, *Reviewer Finder* (used by some international research funding bodies).

The information garnered from *Reviewer Finder* is able to link potential peer reviewers to each application by using publication information extracted from PubMed. I am confident this new functionality will greatly assist the Assigners Academy to identify the most appropriate external assessors and, in turn, better progress this part of the peer review process.

As you can appreciate, it is essential that NHMRC receives assessor and spokesperson reports with enough time to allow applicants to respond to those reports and then enough time for the GRP members to consider both the reports and the rebuttal prior to the GRP meetings.

Grant review panels

The task of allocating applications to GRPs, with 90-110 applications per GRP, is challenging. Establishing around 36 GRPs, these difficulties arise from dealing with applications across 225 defined fields of research, four Broad Research Areas (Basic Science, Clinical Medicine and Science, Health Services Research and Public Health), and also taking into account that the majority of applications are multidisciplinary. NHMRC's policy is to establish GRPs with approximately equal numbers of applications (around 100). This helps to ensure that similar time is devoted to each application, to share the workload and to ensure all applications receive enough time for consideration by the GRP. Unfortunately it is very rare that the numbers of applications in a field or research area exactly fit the numbers to make up a GRP!

Some research fields such as immunology and microbiology are large and complete GRPs that consider around 100 applications can be constructed for these fields. However, most have fewer than 100 applications and are multidisciplinary and so the exact numbers of applications across the research disciplines determines the final mix of multidisciplinary panels.

GRP membership is onerous on its members and NHMRC is grateful to the many hundreds of researchers who volunteer their time and commitment so willingly each year. On top of their primary and secondary spokesperson responsibilities, each GRP member must read and consider all applications assigned to the panel. This is a huge load, but scientific research cannot proceed without peers assessing peers.

As well, we try to achieve a balance in the people we ask to serve on GRPs. Our Research Committee has endorsed principles for appointment of GRP members:

- retain approximately 60 per cent of membership from the previous year
- ensure broad State and Territory representation
- ensure representation from large and small Administering Institutions
- ensure spread of a single Administering Institution's applications across GRPs
- maintain balanced representation of gender
- ensure expertise is appropriate for the applications before the panel
- avoid, where possible, instances where a panel considers an application submitted by an applicant serving on the same panel.

Independent Chairs

The independent Chairs are responsible directly to NHMRC for ensuring that peer review policies are upheld. In selecting Chairs, NHMRC seeks experienced researchers of the highest integrity that have no, or minimal, conflicts of interest with the applications under review. Research Committee has endorsed a Framework for selecting GRP Chairs, which is included in the Peer Review Guidelines (<http://www.nhmrc.gov.au/grants/apply-funding/project-grants>).

Prior to commencing their duties, Chairs receive a comprehensive briefing session from senior NHMRC staff to ensure they are confident in their role and in their ability to uphold the peer review process in a fair, equitable and transparent way.

Managing Conflicts of Interest

One of the major processes each participating peer review member must undertake each year is to declare their conflicts of interest. Other researchers and the wider community seek assurance on this aspect of peer review and wish NHMRC to take the identification and management of conflicts of interest seriously. Clearly, assessment of applications should be based solely on assessing the value of the application, as judged against the selection criteria. Therefore, it is essential that members involved in peer review – whether the Assigners Academy, external assessors or GRP members - are free from any conflicts of interest that may influence their advice.

As a relatively small country, with a collaborative research spirit, potential conflicts of interest arise frequently. Details of how NHMRC manages conflicts of interest for Project Grants are provided in the Peer Review Guidelines. In summary:

- all peer reviewers must declare their conflicts of interest prior to accessing confidential documentation.
- no peer reviewer can be assigned an application on which they have a conflict of interest.
- conflicted GRP members do not participate in discussion and excuse themselves from the meeting room.
- wherever possible applications are not assigned to a GRP on which members are the applicants. Such applications are assigned to "sister" panels.

Allocation to spokespersons and their role

Allocation of applications to spokespersons is generally a two-step process. After they have declared their conflicts of interest, panel members are able to nominate applications assigned to their panel that they are best-placed to review. Based on this information, NHMRC senior staff members allocate applications to potential primary and secondary spokespersons. Taking conflicts of interest into account, we try hard to match applications as closely as possible with the spokesperson's expertise.

Primary spokesperson (1SP)

Prior to the GRP meetings the 1SP is required to write an assessor's report and provide a preliminary score against the three selection criteria. This report along with external assessors' reports is provided to the applicant. At the GRP meeting 1SP leads the discussion of the application including the budget (where necessary), taking into account the applicants' responses ("rebuttal") to all assessors' comments. This role is particularly demanding, involving many hours of preparation for each application.

Secondary spokesperson (2SP)

At the GRP meeting, the secondary spokesperson presents the external assessors' views and applicant's response formally to the GRP during consideration of each application. Prior to the GRP, 2SP is also required to read the application and provide preliminary scores against the selection criteria.

Grant review panel meetings

The 2012 Grant Review Panels (GRPs) will meet over six weeks from 30 July to 7 September 2012 in NHMRC Canberra offices and each panel will meet for up to 5 days.

Not for further consideration process (NFFC)

This process was introduced to help limit the numbers of applications being reviewed in depth by each GRP to a manageable number. It removes around one third of the applications as being the least likely to be funded. This allows the GRPs to concentrate on those likely to end up in the fundable range (category 4 and above). Since NHMRC is only ever able to fund the top 20-25% of applications, it is very unlikely that the bottom third of applications will be scored in the top 25% after GRP discussion, as previous experience has shown.

In 2012, the NFFC process will be based on the category scores of 1 and 2 SP, after they have considered the external assessments and the applicant's response. More detail is provided in the Peer Review Guidelines.

The complete step-by-step process for GRP consideration of applications is provided in the Peer Review Guidelines. The whole process is aimed at achieving consistent and fair consideration of all applications.

You can view an introductory video of the process for GRP members (<http://www.nhmrc.gov.au/grants/apply-funding/project-grants>).

To ensure that GRPs score consistently across panels, we track each panel's scoring profile on a daily basis. If any particular profile appears inconsistent with the long term norm for the panel, the GRP Chair is asked if the scoring seems *prima facie* to be out of line with previous years. The aim is to ensure that GRPs adhere rigorously to the selection criteria and their descriptors, so we can be confident, as far as possible, that scores are equivalent across all GRPs.

Assessing career disruptions and "relative to opportunity"

Research Committee has approved a revised description of how career disruptions should be considered in order to provide clear advice for panel members when assessing an applicant's Track Record. The primary intention of this advice is to assist applicants who may have borne children or have been affected by serious illness during the usual 5 year period for assessing publications.

Career disruption is different to "relative to opportunity". For the latter, GRPs are asked to take into account the differences in publication opportunity between full time researchers versus those with other duties. These policies are detailed in the Project Grant Funding Rules (see above).

Observers

Independent Observers are a valuable and crucial part of the peer review process. Their involvement contributes to the fair and equitable assessment of applications by observing and reporting on NHMRC peer review process, facilitating community views through their involvement and reporting, and in general, contributing to the NHMRC's continued commitment to maintain community, professional and government confidence in our peer review processes and funding outcomes.

Observers are usually from medical research charities and consumer health organizations. They are not active researchers but do hold respected positions in society. Their responsibility at the GRP meetings is to provide an independent view to NHMRC that processes are adhered to and are fair within and between panels.

After GRPs – the Formal Processes

NHMRC's Research Committee

Research Committee will meet in September 2012 to consider the outcomes from the GRPs and to make funding recommendations to Council.

After the last week of GRP meetings, Office of NHMRC will collate and quality check the scores of all applications. No changes to GRPs' scores are made at this or any other time.

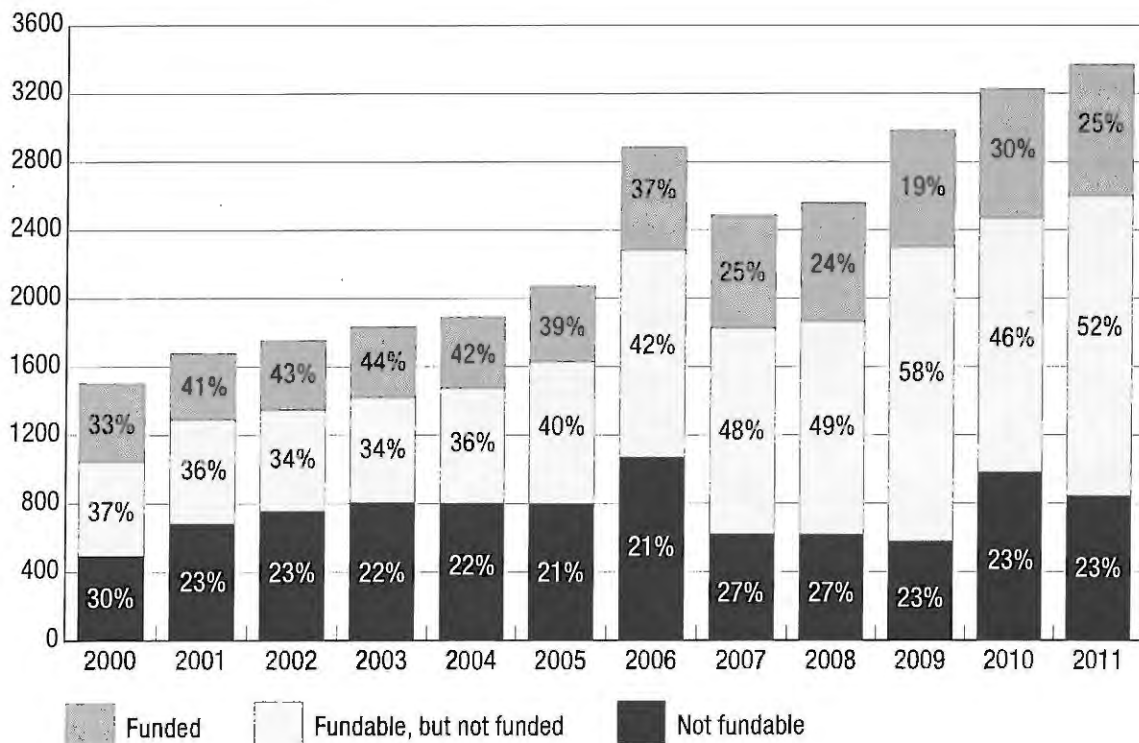
Research Committee will determine the total number of applications that it considers appropriate to recommend for funding, taking into consideration the budget it set in February 2012, as part of its recommendations for funding across all NHMRC funding schemes. In recommending funding, Research Committee members do not have access to any information about specific grants and operate according to strict conflict of interest guidelines at all times.

The number of applications funded each year relates to the funds available to support research and is not a division between funded and "rejected" applications. In fact, each year there are many more applications that are worthy of funding but which remain unfunded.

To explain further, each year, there are enough funds to support all applications rated as category 7 (just 3 in 2011) and category 6 (286 in 2011), and only a proportion of those assessed as category 5. In 2011, 39% of applications were assessed to be category 5 applications and, of these, 29% were funded. After funding all applications in categories 7 and 6, NHMRC funds the same *proportion* of applications in category 5 across all panels.

The funding outcome and applications worthy of funding over recent years is summarized in Figure 1.

Figure 1: Funding outcomes 2000 - 2011



Note: In 2006, a "notice of Intent to Submit was introduced for one year). This elicited a considerable increase in submitted applications.

Special Areas and Strategic Plan Initiatives

NHMRC funds the best proposals as determined by the GRPs. In some instances NHMRC seeks to fund additional applications in specific areas, to stimulate research interest in areas identified in our Strategic Plan, or to utilise funding provided by other organizations. Ensuring adequate investment in these areas sometimes requires funding applications that are deemed fundable but may fall below the standard Project Grant funding cut-off. These include:

Indigenous health: This is NHMRC's only enduring research priority and we are committed to spending at least 5% of our total funding on Indigenous health research. Research Committee recommends funding additional *fundable* grants below the standard Project Grant cut off. In 2010, 21 of 53 applications were funded (40% funded rate) and in 2011, 30 of the 61 applications were funded (49% funded rate).

Strategic Plan initiatives: NHMRC encourages applications in areas identified in our Strategic Plan as "Major Health Issues" for the triennium² and where an additional research effort is needed. Each year, Research Committee is asked to consider a small number of category 5 applications that fall below the standard Project Grant cut off. These applications are carefully assessed to ensure they closely meet the particular strategic plan initiative area description. In 2011, an additional 19 strategic plan initiative applications were funded. These are advertised in our funding call for applications.

Other government departments: Each year, NHMRC runs peer review for other agencies that wish to fund research projects in a particular area. For example, in 2011 the Department of Health and Ageing funded grants in Maternity Services research and since 2009 the Department of Climate Change and Energy Efficiency has funded applications addressing the health challenges of climate change. In these Special Initiative areas, NHMRC funds any applications above the cut off line and provides the details of all other fundable, but unfunded applications to the respective agencies for their final decisions.

Charitable non-government organisations: NHMRC works with a number of charitable funding bodies, such as the Cancer Council Victoria and the National Heart Foundation of Australia. We provide peer review of their applications to reduce their peer review load and thus the load on the whole research community. For these organizations, NHMRC funds any application that is above our funding cut off, if the applicant has indicated they seek either NHMRC or the charity's funding. We refer the other fundable applications, and any applications seeking charity funds only, to the charities for their decision making. We also undertake peer review for our sister Commonwealth governmental agency, Cancer Australia.

NHMRC's Council

Research Committee's recommendations are presented to NHMRC Council. Like Research Committee, Council does not have access to information on individual grants. Through long convention, Council is asked to confirm or reject Research Committee's recommendations, but not amend them. If Council rejects Research Committee's recommendations they would be referred back to Research Committee for consideration. To date this has not happened.

Ministerial approval and announcement

The NHMRC CEO accepts Council's recommendations and then formal documentation is prepared seeking the Minister's approval to expend public money. Once formal approval is granted by the Minister, s/he announces the successful applications and NHMRC formally notifies applicants of the outcomes through their Institutional Research Administration Offices and RGMS.

² NHMRC Strategic Plan 2010 - 2012
http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/nh132_strat_plan_2010_2012.pdf.

The Grant Review Panel Assessment Summary (GAS)

Last year we introduced the Grant Review Panel Assessment Summary (GAS) to replace the previous GRP Final Reports. Primarily, this was in response to NHMRC's Commissioner of Complaints' strong recommendation that NHMRC should reconsider the narrative feedback previously provided to applicants. Research Committee accepted this and agreed that a simpler, quantitative report was of more value, providing applicants with precise information on how their application scored against other applications, in each of the three criteria.

Some final comments

NHMRC's peer review has evolved over the last two decades, but the essential components remain – specific, internationally-benchmarked selection criteria, a panel decision and an overall ethos of funding the best ideas and the best research.

The biggest change NHMRC has implemented over the last 15 years has been the transition from a State by State interview process to a nationwide process involving expert review and discussion in a panel forum.

We have always valued the use of external assessors and throughout that period have had a Commissioner of Complaints to receive and adjudicate any concerns raised by researchers regarding NHMRC's administration of peer review.

Technology has changed over this period from paper to *Informed Filler* to RGMS. We are very hopeful that the full implementation of RGMS and its attendant software will give us, and you as applicants, stability over the coming years.

We can always improve and each year we gather comments and ask Research Committee's advice on how to improve. We take into account the many individual comments from GRP members, community members, applicants and reviewers. This feedback is invaluable and it is the task of Research Committee and the Office of NHMRC to take this feedback and continue to improve our process. Not everything is possible within the constraints of Office of NHMRC funding resources and broad ranging Commonwealth legislation and policy which prescribes the use of government funds.

Finally, times change. NHMRC's new IT infrastructure and ability to manage large volumes of complex information open the possibility of new ways to further improve fairness, quality, and timeliness. For example, journal publication peer review is now almost entirely electronic and occurs continuously.

I feel that more can be done with peer review and grant funding in this regard. The full implementation of RGMS will also afford NHMRC the opportunity to be more flexible in the annual round. This year we will introduce a number of "rounds" for Partnerships for Better Health Projects and we also plan to discuss with the research community the possibility of introducing a continuous application process for large scale clinical trials. We believe that this will especially suit clinical trials, where it can be tricky to arrange co-funding synchronized with NHMRC timings, but will also act as a trial for all projects grants in the future. While this is still in the very early stages I hope that this flexibility can eventually be available for Project Grants too.

Acknowledgments:

I am grateful for the help of Dr Clive Morris, Dr Tony Willis and their teams at Office of NHMRC, and members of NHMRC Research Committee, in preparing this document.

NHMRC PROJECT GRANTS – PEER REVIEW

Frequently Asked Questions

Why does NHMRC use external assessors for Project Grants?

Our aim is to provide all applicants with high quality peer review and for this to be as fair and consistent as possible across all applications. In the related document, *NHMRC Project Grant Applications 2012 - Peer Review Processes*, we set out our principles for peer review.

With different sized fields of research in Australia, from large (such as neurosciences, cancer biology & oncology) to small (diagnostics, sport science, medical imaging) or newly emerging disciplines (nanobiology), having two good external peer review assessments helps overcome the difficulties of GRPs with varying mixes of disciplinary expertise.

Most international organisations that conduct one annual funding round use external written reviews. For NHMRC, this allows applicants to make a written response to the reviewers (rebuttal) – when there are multiple rounds (such as NIH, applicants can instead revise and resubmit within months).

In Australia, we have researchers across a similar breadth and diversity of research fields and disciplines as the USA and other larger countries. However, the numbers of researchers in different fields and disciplines varies widely in Australia, especially in new and emerging research areas. This means that only a proportion of our health and medical research sector is large enough to accommodate a panel that consist wholly of researchers of one discipline (as discussed above). For most fields of research in Australia, the numbers of applications each year is small and varies between years and therefore we need to form multidisciplinary GRPs. These need to cover applications therefore over a much wider range of disciplines, approaches and fields than do, for example, each NIH study sections. (It is interesting to note that NIH too has been increasing their numbers of external assessments in recent years.) The expertise in some of the application areas in any year may be limited to just one or a small number of GRP members on a panel and so it is essential that the panel members have available to them true peer opinion from external assessors, so that all panel members are able to make an informed and fair judgment.

A system on relying only on the reviews of GRP members themselves was trialed by NHMRC in 2006 but it meant that applications in small fields received less extensive peer review at the multidisciplinary panels compared to applications from larger disciplines that were reviewed by single discipline panels.

QUESTION	RESPONSE
<i>How are external assessments used by GRPs?</i>	<p>These reviews are available to the whole panel for consideration. However the 2SP has the responsibility of formally presenting the views of the external assessors to the GRP. In this way, NHMRC ensures that external assessors' views (and expertise) are provided fully for consideration during panel discussions.</p>
<i>How many external assessments will I get?</i>	<p>We plan for each application to received three written reports; one from the 1SP and two external assessors. Achieving this relies on peers (1SP and external assessors) delivering a review on time.</p> <p>In this, we depend on researchers who agree to write reviews and doing so in time for them to be returned to the applicants for rebuttal.</p> <p>In 2011, the majority of applicants received 2 external assessments (a total of 2446 applications or 70% of applications, up from 41% in 2010). Seventy applications had no external assessment and 979 received one external assessment. A small number received more than two, due to late submissions of reviews after the deadline.</p> <p>I am confident that we will again improve this in 2012, through further improvements to the RGMS database and Reviewer Finder and earlier and expanded involvement of the Assigners Academy member.</p> <p>Finally, I would like to remind all recipients of NHMRC funding that participating in peer review is a requirement of receiving that funding.</p>
<i>Does NHMRC use overseas external assessors?</i>	<p>Yes, there are no restrictions placed on the NHMRC Academy member in nominating overseas assessors.</p> <p>As well, we are also called increasingly on the New Zealand Health Research Committee and the National Medical Research Council of Singapore for panel member nominations</p>
<i>Why is NHMRC using the Not For Further Consideration (NFFC) process?</i>	<p>This is to minimize the workload on GRP members by removing some applications from the GRP review. The NFFC list is determined once the spokespersons and external assessor reports have been sent to the applicants and they have submitted a "rebuttal".</p> <p>This NFFC list is determined just prior to the GRP meeting itself. Based on this list ONHMRC excludes applications from full panel discussion. However if even one panel member feels that the scores are not reflective of the application's quality, the grant application can be 'rescued' and hence discussed under the normal GRP protocol.</p> <p>Full details of the NFFC process is outlined in the NHMRC Peer Review Guidelines for funding commencing in 2013 here: http://www.nhmrc.gov.au/grants/apply-funding/project-grants</p>

QUESTION	RESPONSE
<p><i>Why does NHMRC not consider journal impact factors, H-index or ERA journal rankings in the assessment of people's track record?</i></p>	<p>Journal rankings rank the journal, not individual papers. In an analogous way, the Excellence in Research for Australia (ERA) initiative was not designed to rank individuals, but groups. All serious commentators in bibliometrics warn against equating journal rankings with an individual paper's quality and impact.</p> <p>To explain some of our thinking, we published a paper in April 2010 on the NHMRC website discussing the use of Journal Impact Factor (JIF) in the peer review of individual grant applications. http://www.nhmrc.gov.au/_files_nhmrc/file/grants/peer/impact%20factors%20in%20peer%20review.pdf</p> <p>The key issues identified in this paper were the following:</p> <p>The JIF of the journal in which a publication appears does not describe the impact or importance of the individual papers – it describes the overall citation of all papers in that journal in a given time period</p> <p>The impact of an individual paper is better assessed by citations acquired by that paper.</p> <p>The quality and importance of a paper is a peer review judgment that needs to take into account many factor</p> <p>Simplistic use of the JIF to assess the quality of individual papers is inconsistent with what is known about bibliometrics, notably with respect to the differences in citation practices between different fields of research.</p> <p>While this paper was focused on the use of JIF, there are many other publication and citation metrics available to the research community that can potentially be misleading when applied to the peer review of publication outputs of a small research team or individuals.</p> <p>For example, there have been questions raised by the research community whether the ERA Ranked Journal List will be used in the peer review of NHMRC grant applications. The ERA Ranked Journal List was compiled for the purpose of performing large-scale, retrospective ranking of published outputs in a single field of research at the institution level over a fixed time period (2003 – 2008). For this reason it is NOT appropriate to use these journal rankings in the peer review of grant applications, as the number of publications in question may be very small and may span multiple fields of research. Recently, it was announced that the journal rankings will no longer be used in the ERA 2012 process.</p>

continued.....

(continued)

Why does NHMRC not consider journal impact factors, H-index or ERA journal rankings in the assessment of people's track record?

There are similar issues with the use of other publication and citation metrics in peer review. For example, another popular citation/publication metric is the H-index, which is bound by the total number of publications from an individual and can therefore be seen to have an age-related (or years of active research/publishing) bias. In addition, H-index does not take into account different citation practices between fields of research and can therefore be misleading when used to make comparisons between individuals or teams of researchers.

NHMRC expects peer reviewers to take into account their expert knowledge of their field of research, as well as citation and publication practices of that field when assessing the publication component of track record. Track record assessment should take into account the overall impact and contribution to the field of all the published journal articles from a team of grant applicants, not just the standing of the journal in which those articles are published. The NHMRC encourages the publication of articles in high quality journals but does not support using the overall impact of all publications in a journal as a proxy measure for the impact of individual published outputs.

NHMRC PROJECT GRANT APPLICATIONS 2012

Peer Review Processes

Principles

Peer review needs to be at the highest international standard, using quality processes that are as transparent as possible and outcomes that are both fair and seen to be fair. NHMRC peer review:

- aims to provide all applications with the best possible review;
- is transparent, with independent observers;
- is appropriate to the research approaches involved;
- utilises internet-based technologies to improve lodgement of applications;
- utilises both domestic and international peer reviewers
- is recognised and acknowledged publicly by NHMRC.

High Quality

The highest quality peer review depends on ensuring that each application is assessed by reviewers with appropriate skill and expertise. This is a complex task, as applications to NHMRC cover every discipline, are often multi-disciplinary and employ a wide array of sophisticated techniques and methodologies. For this reason, two external assessors are sought for each application to help ensure the high quality of peer review is maintained across all applications.

Consistency

It is the responsibility of the Assigners Academy, NHMRC Staff, the Grant Review Panel (GRP) Chairs, Assistant Chairs and every Grant Review Panel (GRP) member to ensure that NHMRC's processes are followed and applied consistently for every application. The 2012 Project Grants Funding Rules and *NHMRC Peer Review Guidelines for funding commencing in 2013* (Peer Review Guidelines) (<http://www.nhmrc.gov.au/grants/apply-funding/project-grants>) detail the review process to be followed at each stage of peer review.

Fairness and equity

Each application must be assessed on its individual strengths and weaknesses by external assessors and GRP members with appropriate knowledge and expertise, and assessed in a consistent manner against each of the three Project Grant Selection Criteria. The emphasis on a consistent and systematic approach to assessing each application ensures fairness across all applications.

The process: from application to Ministerial approval

Roles and responsibilities of all parties involved in peer review are outlined in the 2012 Project Grant Funding Rules and Peer Review Guidelines (see above).

1. Submission

All applications are prepared and submitted using NHMRC Research Grants Management System (RGMS). Institutional Research Administration Officers submit the final endorsed applications on behalf of their administering institutions.

2. Allocation to Assigners Academy and Grant Review Panels (GRPs)

NHMRC senior scientific staff perform the initial allocation of applications to the Assigners Academy and GRPs, based on applicant-identified Peer Review Area preferences.

The Assigners Academy's task is to advise on the final allocation of applications to GRPs and to obtain two external assessments for the applications they are assigned.

Applications to NHMRC cover the four broad research areas (Basic Science, Clinical Medicine and Science, Health Services Research and Public Health) and 225 defined fields of research. The objective is to establish 36 GRPs, each with approximately 14 members and 100 applications to review. In establishing GRPs, NHMRC staff apply the Research Committee endorsed Guiding Principles for Nomination and Appointments, which are included in the Peer Review Guidelines. Assigners Academy members work collaboratively with each other and with Senior NHMRC staff. They utilise the RGMS database and new software (*Reviewer Finder*TM) to identify and invite potential external assessors.

3. External Assessment

NHMRC staff and Assigners Academy members aim to ensure NHMRC receives assessor reports with sufficient time for applicants to respond to those reports and for the GRP members to consider both the reports and the rebuttal prior to the GRP meetings.

4. Spokespersons

Once applications have been assigned to a GRP and GRP members have declared their conflicts of interest, applications are allocated to spokespersons. Initially, panel members are able to nominate applications that they are best-placed to review, with NHMRC senior staff doing the final allocation of 8 applications as primary spokesperson (1SP) and 8 applications as secondary spokesperson (2SP).

Prior to the GRP meetings, the 1SP is required to write an assessor's report and provide a preliminary score against the three selection criteria. This report along with external assessors' reports is provided to the applicant. At the GRP meeting 1SP leads the discussion of the application including the budget (where necessary), taking into account the applicants' response ("rebuttal") to all assessors' comments. This role is particularly demanding, involving many hours of preparation for each application.

The 2SP is required to provide preliminary scores against the selection criteria prior to the meeting. At the GRP meeting, the secondary spokespersons primary role is to present the external assessors' views and applicant's response formally to the GRP during consideration of each application.

All members are required to read all applications and the written assessments, so that they are ready to participate in the discussion of the applications during the GRP meeting.

5. Grant Review Panel Meetings

Independent Chairs

Independent Chairs are responsible for ensuring that peer review processes are upheld. In selecting Chairs, NHMRC seeks experienced researchers of the highest integrity that have no, or minimal, conflicts of interest with the applications under review. The Research Committee endorsed Framework for selecting GRP Chairs, is available in the Peer Review Guidelines.

Managing conflicts of interest

It is essential that members involved in peer review – whether the Assigners Academy, external assessors or GRP members – are free from any conflicts of interest that may influence their advice. Details of how NHMRC manages conflicts of interest for Project Grants are provided in the Peer Review Guidelines.

Not for further consideration process (NFFC)

This process removes the bottom third of the applications and allows the GRPs to concentrate on those applications likely to end up in the fundable range. This process is fully described in the Peer Review Guidelines.

GRP process for each application

This process is fully described in the Peer Review guidelines and also illustrated in the introductory *YouTube* video of the process at:
<http://www.nhmrc.gov.au/grants/peer-review/nhmrc-grant-review-panels-induction>.

Observers

The role of Observers is to provide an independent view to NHMRC that GRP processes are adhered to and that assessment is fair and equitable within and between panels.

6. Approval Processes

NHMRC Research Committee

The role of Research Committee is to consider the outcomes from the GRPs and to make funding recommendations to Council.

Research Committee determines the total number of applications that it considers appropriate to recommend for funding, based on the available budget. In recommending funding, Research Committee members do not have access to any information about specific grants and operates according to strict conflict of interest guidelines at all times. No changes to GRPs' scores are made at this or any other time.

In framing its final recommendations to Council, Research Committee considers additional applications in specific research priority (Indigenous Health) and Strategic Plan Initiative areas. Additional applications may be recommended that are deemed fundable but fall below the standard Project Grant funding cut-off.

NHMRC Council

Research Committee's recommendations are provided to NHMRC Council for endorsement. Like Research Committee, Council does not have access to information on individual grants to avoid any potential conflict of interest.

Ministerial approval and announcement

The NHMRC CEO accepts Council's recommendations and then formal documentation is prepared seeking the Minister's approval to expend public monies.

ATTACHMENT C - DOHA/NHMRC SUP SUB 89.1



Australian Government

**National Health and
Medical Research Council**

NATIONAL HEALTH AND MEDICAL RESEARCH COUNCIL PRINCIPLES OF PEER REVIEW

The National Health and Medical Research Council is responsible for managing the Australian Government's main investment in health and medical research. We have a responsibility for ensuring that the tax-payer's funds are invested wisely and fairly. NHMRC also undertakes peer review on behalf of a number of other health and medical research funding organisations.

The *Australian Code for the Responsible Conduct of Research* describes peer review as the impartial and independent assessment of research by others working in the same or a related field. Peer review is used in a number of ways in research and research management, in the assessment of grant applications, in selecting material for publication, the review of performance of researchers and research teams and in the selection of staff.

Peer review is the best approach to assessing the quality of health and medical research and is the basis of NHMRC's decision making when recommending applications for funding. Peer review needs to be at the highest international standards, using processes that are as transparent as possible and that deliver outcomes that are both fair and seen to be fair, and are appropriate to the goals of the particular funding vehicle.

The Principles of Peer Review outlined on the next page are applicable to all funding schemes. Minor variations for some long-standing schemes are identified where relevant.

Principles of Peer Review

NHMRC's principles of peer review¹

1. **Fairness.** Peer review processes are fair and seen to be fair by all involved.
2. **Transparency.** All stages of peer review are transparent to applicants, with funding rules, selection criteria, and peer review guidelines publicly available and the names of peer review participants published on the internet.
3. **Independence.** Peer review panels provide independent advice to NHMRC's Research Committee and Council.
4. **Appropriateness and balance.** The size, experience, expertise and operation of peer review panels is appropriate to the goals and scale of the funding vehicle.
5. **Research community participation.** Peer review relies on the willing participation of the research community, including the training of junior researchers².
6. **Confidentiality.** Participants respect that assessor confidentiality is important to the fairness and robustness of peer review.
7. **Impartiality.** Peer review is objective and impartial, with appropriate processes in place to manage real and perceived conflicts of interest.
8. **Continuous improvement.** Peer review utilises new technologies and best practice in order to maximise the benefits of peer review and minimise individual workloads. Peer review is responsive to criticism to minimise weaknesses. Participants are given training and feedback to help improve their performance

1 All participants should be familiar with the Australian Code for the Responsible Conduct of Research, in particular Chapter 6.

2 Section 6.4 of the Australian Code for the Responsible Conduct of Research, states that all researchers in receipt of public funding have a responsibility to participate in peer review.

1. Fairness

- Peer review processes are designed to ensure that peer review is fair and seen to be fair by all involved.
- Peer review participants have an obligation to ensure that each application is judged consistently and objectively on its own merits, against published selection criteria. Peer reviewers must be fair and impartial and not introduce irrelevant issues into consideration.
- Applications will be subject to scrutiny and evaluation by individuals who have appropriate knowledge of the fields covered in the application.
- Peer reviewers should ensure that their assessments are accurate and honest, and that all claims are capable of being verified.
- All complaints to NHMRC relating to the process are dealt with independently and impartially
 - Applicants can request more information on the assessment of their application.
 - Complaints processes are outlined on the NHMRC website. If an applicant is not satisfied with the outcome of an internal review, a complaint may be lodged with the NHMRC Commissioner of Complaints, as detailed in Part 8 of the NHMRC Act.

2. Transparency

- NHMRC will publish key dates³ and all relevant material including scheme requirements, selection criteria and scoring processes, peer review guidelines, guides to applicants and grant announcements, on its website and through direct electronic communications.
- NHMRC publicly recognises the contribution of participants in the peer review process, through publishing their names on the NHMRC website⁴.

3. Independence.

- The order of merit determined by peer review panels is not altered by NHMRC staff, Research Committee, Council or the CEO⁵. Where the results of multiple peer review panels are brought together to form a single merit list, NHMRC will use its best endeavours to reduce scoring variance between panels.
- Assessment reports provided by reviewers are not amended by NHMRC staff or members of peer review panels.
- Peer review panel Chairs are independent and are not involved in the peer review of any application before that panel⁶. Chairs act to ensure that NHMRC's processes are followed for each scheme, including adherence to the principles of this document.

4. Appropriateness and balance

- Peer review panels are established to meet the objectives and breadth of disciplines covered by applications received.
- NHMRC uses best endeavours to ensure that panels are constituted to provide the required balance of experience, and expertise, including the breadth required to assess multidisciplinary applications whilst also ensuring conflicts of interest are dealt with appropriately⁷.

³ NHMRC Act, Section 8.

⁴ Such information will be in a form that prevents applicants determining which particular experts were involved in the review of their application.

⁵ NHMRC Research Committee may recommend funding additional applications 'below the line' in priority areas, such as research to improve the health of Aboriginal and Torres Strait Islander peoples.

⁶ Currently (2012) for the Program Grants Scheme and some junior people support schemes the Chair is a voting member of the panel.

⁷ When the panel considers that the advice of key experts who have had to leave the room due to conflicts is essential, the Chair may request those experts to return to the room to answer technical questions, but absent themselves before scoring takes place.

- NHMRC uses best endeavours to ensure that panels are constituted to ensure an appropriate representation of gender, geography and large and small institutions.

5. Research Community Participation

- Persons holding NHMRC grants willingly make themselves available to participate in NHMRC peer review process whenever possible⁸. If they are unavailable, they provide a written reason to NHMRC to explain their unavailability.
- Consistent with the *Australian Code for the Responsible Conduct of Research*, Section 6.2, all persons involved in NHMRC peer review must do so responsibly:

It is important that participants in peer review:

- *are fair and timely in their review*
 - *act in confidence and do not disclose the content or outcome of any process in which they are involved*
 - *declare all conflicts of interest, do not permit personal prejudice to influence the peer review process, and do not introduce considerations that are not relevant to the review criteria*
 - *do not take undue or calculated advantage of knowledge obtained during the peer review process*
 - *ensure that they are informed about, and comply with, the criteria to be applied*
 - *do not agree to participate in peer review outside their area of expertise*
 - *give proper consideration to research that challenges or changes accepted ways of thinking.*
- Prior to their involvement, participants in peer review should make themselves aware of relevant NHMRC policies and procedures.

6. Confidentiality

- All participants in peer review act in confidence and do not disclose any matter regarding applications under review to people who are not part of the process.
- NHMRC will endeavour to protect the identity of peer review panel members and assessors assigned to any particular application, unless required to release such information by relevant legislation. When this occurs, it will be done so following discussion with the assessors.

7. Impartiality

- Peer review participants declare all interests and matters that may, or may be perceived to, affect his/her judgement on particular applications.
- Peer review panel members disclose relationships with other members of the panel, or with grants being reviewed by other panel members, including:
 - research collaborators
 - student, teacher or mentoring relationships
 - common employment arrangements
 - any other relationship that may, or be seen to, impair fair and impartial judgement
- Peer review panel Chairs manage conflicts of interest and ensure that no one with a significant conflict is involved in decision making of relevant applications.

8. Continuous improvement

- NHMRC will continue to introduce improvements into its peer review processes.

⁸ [Australian Code for the Responsible Conduct of Research, 6.4](#)

- Significant change will be developed in consultation with the research community and may involve piloting new processes in smaller or one-off schemes.
- NHMRC will strive to introduce new technologies that are demonstrated to maximise the benefits of peer review, or improve the efficiency and effectiveness of the process while minimising individual workloads.
- NHMRC will undertake post-program assessment of all its schemes, based on feedback from applicants, panel members, Chairs, Research Committee and the NHMRC Commissioner of Complaints.
- NHMRC will provide feedback and advice on training needs for peer reviewers coming into the system.
- Where the Peer Review Panels find external peer reviews to be substandard, feedback may be provided directly to the reviewer or their institution.

Standards and Best Practice

All NHMRC peer review and decision making process must be in accordance with the requirements of relevant Australian Government legislation and guidelines including:

- the *National Health and Medical Research Council Act 1992 (the NHMRC Act)*
- the *Commonwealth Grant Guidelines: Policies and Principles for Grants Administration 2009*
- the *Financial Management and Accountability Act 1997*

NHMRC Obligations

All NHMRC funding opportunities will be competitive and open to all eligible applicants.

For individual funding schemes, full documentation will be provided so that applicants have sufficient information to allow them to understand the scoring and decision-making process. This will include the objectives, assessment criteria, scoring systems, and sufficient detail of the peer review and decision making process.

NHMRC will ensure an appropriate period of time between advertising of funding opportunities and closing dates, in order to allow applicants sufficient time to prepare and submit their applications.

Decisions relating to the allocation of health and medical research funding from the Medical Research Endowment Account are made by the Minister for Health in accordance with the requirements of the NHMRC Act. The Minister makes funding decisions on recommendations from the CEO of the NHMRC based on the following process:

- The Research Committee (RC) of the NHMRC, as established under Section 35(2) of the NHMRC Act, considers the outcomes from all peer review processes.
- RC's role is to check that peer review processes were undertaken in accordance with all relevant requirements and guidelines.
- Neither RC nor Council are given information that would allow them to identify individual applications. RC and Council receive such information after the Minister has made his or her decision.
- RC makes funding recommendations to Council based on the outcome of the peer review process.

- RC determines the total number of applications that it considers appropriate to recommend for funding, taking into consideration the available budget.
- Council considers RC's recommendations and advises the CEO.
- The CEO does not alter or change funding recommendations provided by Council, and if he or she accepts Council's advice, this is provided directly to the Minister in accordance with the NHMRC Act and Commonwealth Grant Guidelines.

Institutional and Applicant Obligations⁹

Applicants applying for grants from NHMRC have the following obligations-

- Applicants must ensure that their applications are completely accurate and honest, and all claims are capable of being verified.
- Applicants must not attempt to influence any person involved in the NHMRC review of the application with the purpose in mind of affecting the decision of that person¹⁰.
- Applicants must disclose in the application all sources of research funding.

Institutions proposing to administer NHMRC grant money have the following obligations-

- Administering institutions must comply with the terms of the NHMRC funding agreement.
- Administering institutions should take responsibility for the quality of applications submitted to NHMRC, in order to minimize the burden on the peer review system.

⁹ See the Australian Code for the Responsible Conduct of Research

¹⁰ Australian Code for the Responsible Conduct of Research, 6.3.

ATTACHMENT D - DOHA/NHMRC SUP SUB 89.1

Grant Id	CIA	Grant Subtype	Scientific Title	Admin Institution	State	Total	Broad Research Area	Field Of Research	Media Summary
303172	A/Pr Nicola T Lautenschlager	Standard Project Grant	A randomised clinical trial of Physical activity for the treatment of older adults with mild cognitive impairment	University of Western Australia	WA	\$280,250	Clinical Medicine and Science	Geriatrics and Gerontology	Australia's population is aging rapidly and so is the frequency of age-related diseases. Dementia and depression are the most frequent mental health disorders of older people. They are also the leading causes of years of life lost due to disability in Australia. The results of recent studies have shown that memory difficulties and dementia are associated with potentially modifiable risk factors, such as physical activity. The purpose of this study is to investigate whether a physical activity program for older adults decreases cognitive decline and conversion to dementia in a population at risk: mild cognitive impairment (MCI). 168 subjects with MCI will be randomised (by chance, like the flip of a coin) to either the intervention program of physical activity or usual care - their cognitive (such as memory) performance will be compared at the end of 24 months.
481929	Dr Marie Cooke	Dementia Research Grant	The Effect of Music on Agitated Behaviours in Older People with Dementia: A Randomised Control Trial	Griffith University	QLD	\$153,635	Basic Science	Aged Care Nursing	This study uses a cost effective non-pharmacological intervention, that being music therapy to improve quality of life (QOL) in people with dementia. Dementia results in a decline in mood and cognitive functioning and the emergence of behaviour problems that include aggressive acts, agitation, and sleep-wake and rest-activity pattern disturbance. Aggressive behaviour is a common burden for caregivers in residential and family care. The subsequent stress that aggression places on caregivers can lead to staff and family burn out, an increase in restraint use, and decreased quality of care. Research suggests that disruptive behaviours are recognised as a predictor in staff resignation and carer stress, both of which add significantly to the current costs of aged care. This project therefore has the potential to benefit both people living with dementia and their carers. The positive outcomes of music on people of all ages and health status have been established in various clinical settings. Recent research suggests that music therapy may be useful in the management of disruptive behaviours in people with dementia. Music therapy for people with dementia has the potential to improve their quality of life (QOL) through an improvement in depression, and a reduction in aggression and agitation. This study will investigate the effect of a live music program (where participants use their voices and instruments to perform and create music) on agitated behaviours in older people with dementia. It will provide evidence contributing to better understandings about music therapy and its contribution to QOL and disruptive behaviours in people with dementia that can be transferred to other settings such as the community.
487318	A/Pr Glynda J Kinsella	Dementia Research Grant	Early Intervention for Amnesic Mild Cognitive Impairment : A Randomised Trial of Memory Management	La Trobe University	VIC	\$577,556	Clinical Medicine and Science	Neurosciences not elsewhere classified	It is increasingly recognised that Alzheimer's disease can emerge slowly over years and persons presenting with memory impairment, or mild cognitive impairment (MCI), are at increased risk of developing Alzheimer's disease. Following diagnosis of MCI, active management through symptomatic drug treatment remains equivocal, therefore, memory impairment continues to be troublesome and patients and families are seeking interventions that offer improvement in quality of life. Cognitive interventions are low cost and, where effective, can provide a stand-alone intervention or add value to the pharmacological approach. The primary aim of this study is to evaluate whether an early intervention program of memory training is effective in improving use of memory strategies in everyday life, and whether this has psychological and emotional benefits for individuals with MCI and their families. We will evaluate through a randomised controlled trial the efficacy of a memory-group program which will involve the family and patient, rather than just the person with MCI, in developing increased awareness of memory issues and specific strategies to prevent memory failures. Over successive cohorts recruited from memory clinics, families will be randomly assigned to either an immediate intervention or a delayed intervention (waiting-list control) group. We will also recruit a sample of healthy older adults who will be similarly randomised into early and late intervention groups. Healthy older adults will provide a means of establishing whether any improvements in the MCI groups are (i) to the same extent as healthy older adults and (ii) to normative levels. Evaluation will be at pre- and post-intervention and at six months follow-up on tests of memory, questionnaires of knowledge and use of memory strategies in everyday life, and appraisal of level of wellbeing. Information about memory and systematic training in compensatory memory skills are expected to significantly improve the capacity of patients and families to cope with everyday memory difficulties. Through active participation in the management of memory impairment, it is expected that quality of life will be improved.
513772	Ms Mandy Vidovich	Dementia Research Grant	A Randomised Clinical Trial of Cognitive Activity for Older Adults with Mild Cognitive Impairment	University of Western Australia	WA	\$490,127	Clinical Medicine and Science	Geriatrics and Gerontology	Australia's population is aging rapidly and so is the frequency of age-related disorders. Dementia is one of the most frequent mental health disorders of older people and one of the leading causes of years of life lost due to disability in Australia. Mild Cognitive Impairment (MCI) in old age is considered an important clinical state potentially predictive of future cognitive decline. There is increasing evidence that the onset of dementia can be delayed with targeting potentially modifiable risk factors. In older adults, frequent participation in mentally stimulating leisure activities has been associated with stronger cognitive (abilities such as memory) performances and reduced risk of dementia. Further, the rate of cognitive and functional decline can be influenced by cognitive intervention strategies, though few randomised control studies have explored these findings with individuals who have a diagnosis of MCI. The primary focus of this research is to determine whether a structured program of cognitive activity (CA) can delay progression of cognitive decline amongst older adults with MCI. 160 older adults will be randomised (by chance, like the flip of a coin) to either a 10 week CA intervention with a focus on cognitive training and rehabilitation techniques or a 10 week control educational intervention providing information on aging and retirement. Their cognitive performance, quality of life and functional level will be monitored during follow-up. The proposed study will improve the understanding of possible modifying factors of cognition and highlight the potential of intervention in an older age population. The obtained results will have implications for policy recommendations regarding health care resources and facilitate changes in the approach and management of individuals with MCI.
533531	Prof John C Mamo	Standard Project Grant	An investigation into the mechanisms of how dietary fats influence Alzheimer's Disease risk.	Curtin University of Technology	WA	\$567,789	Clinical Medicine and Science	Geriatrics and Gerontology	There is some evidence to suggest that diet may influence the risk for developing Alzheimer's Disease. This project will explore if dietary fats that are 'bad-for-the-heart', are also 'bad-for-the-head'. Conversely, these researchers will test whether heart-healthy-oils are brain-healthy. The researchers will investigate the mechanisms by which dietary fats influence risk and hope to be able to develop nutritional guidelines for the prevention or slowing of Alzheimer's Disease.
568787	Prof Henry Brodaty	Standard Project Grant	Sydney Multisite Intervention of LaughterBosses and ElderClowns (SMILE): An RCT of humour therapy in residential care	University of New South Wales	NSW	\$852,238	Health Services Research	Residential Client Care	Sydney Multisite Intervention of LaughterBosses and ElderClowns (SMILE) is a trial of humour therapy. About 400 residents from 36 hostels and nursing homes will be randomly assigned to receive the SMILE treatment or usual care. ElderClowns will visit weekly, and staff volunteers will be trained to be LaughterBosses and bring humour to daily care routines. SMILE will evaluate whether humour therapy improves resident quality-of-life and mood, and reduces staff burnout and turnover.
572563	Prof Nicola T Lautenschlager	Standard Project Grant	A multicentre randomised clinical trial of physical activity for the treatment of patients with Alzheimer's Disease	University of Western Australia	WA	\$773,753	Clinical Medicine and Science	Geriatrics and Gerontology	The number of older adults living with Alzheimer's disease (AD) will increase from 26.6 million to 106.2 million by 2050. In the absence of curative treatment options it is important to focus on non-pharmacological interventions such as physical activity. We propose to investigate whether a home-based physical activity program of 24 weeks for patients with AD can successfully decrease the rate of cognitive and functional decline and improve quality of life and psychological well-being.
578800	Dr Vanessa Danhiir	Standard Project Grant	Testing the effect of long-chain Omega-3 polyunsaturated fatty acids on cognitive ageing in the elderly	CSIRO Human Nutrition	SA	\$738,908	Clinical Medicine and Science	Complementary/Alternative Medicine not elsewhere classified	The ageing profile of our population holds challenges for society, with some of the major impact due to loss of independence and quality of life in older people, arising from decline in cognitive functioning. Evidence suggests a benefit of Omega-3 fatty acids on cognitive functioning in older people but claims that Omega-3 slows cognitive decline have not been adequately tested. This study tests the effect of Omega-3 supplementation on cognition in healthy older people, over an 18-month period.

597415	Prof Wendy Moyie	Standard Project grant	The effect of foot massage on agitation in people living with dementia in residential care settings: An RCT	Griffith University	QLD	\$286,301	Public Health	Residential Client Care	This study investigates the effect of a 10-minute foot massage on agitated behaviours of older people living with dementia in residential care settings. The study builds on previous complementary research and provides further evidence to help assess whether foot massage is, indeed, a low cost, low risk, non-pharmacological and easily applied procedure that produces tangible positive psychological and physiological effects.
602543	Dr Kerry E Pike	Australian Clinical Research ECF	Memory training in people at risk for dementia: Who benefits and do research findings translate to everyday situations?	La Trobe University	VIC	\$296,457	Clinical Medicine and Science	n/a	People at risk of developing dementia may benefit from learning strategies to improve memory performance. This project addresses several knowledge gaps including which strategies are most successful and which characteristics predict who will benefit. Strategy use will be assessed in research and everyday settings. The results will enable specific effective strategies to be targeted at those who will benefit. Follow-up over time will establish if training moderates future cognitive decline.
630739	Dr Iman Ridde	Australian Clinical Research ECF	centenarian lifestyle and predictors of positive ageing	University of New South Wales	NSW	\$293,947	Clinical Medicine and Science	Psychiatry (incl. Psychotherapy)	Evidence suggests that people accumulate life experience that will affect their health, wellbeing and quality of life. This study will conduct large scale psychological, social, genetic and immune testing of Australian to develop a predictive model of positive ageing. It will contribute new understanding about factors that will keep the population mentally and physically healthy as they age and facilitate the development of intervention to enhance these factors.
1002560	Prof Kaarin Anstey	NHMRC Research Fellowship	Promoting healthy ageing of brain and mind through epidemiology and intervention research	Australian National University	ACT	\$650,583	Public Health	Mental Health	This project focuses on identifying ways that individuals and societies can promote healthy ageing to prevent dementia and mental health problems in later life. Large-scale longitudinal studies and intervention studies will be evaluated to identify factors that lead to healthy and unhealthy ageing.
1005942	Prof Nicola Lautenschlager	Standard Project Grant	A randomised clinical trial of physical activity to delay the progression of cerebrovascular pathology	National Ageing Research Institute	VIC	\$650,202	Clinical Medicine and Science	Neurosciences not elsewhere classified	The aim of this randomised clinical trial is to establish whether a 24 months physical activity (PA) program for older adults with memory problems can delay the progression of damage to the blood vessel system in the brain, measured on an MRI scan. It also will investigate whether cognition, mood, quality of life, functional level, fitness and biological markers will improve with the intervention. If successful this PA program could become part of clinical care for adults at risk of dementia.
1008117	A/Pr Sharon Naismith	Clinical CDF	Modifiable risks and interventions for cognitive decline, depression and dementia in older people	University of Sydney	NSW	\$396,061	Clinical Medicine and Science	Clinical Sciences not elsewhere classified	This research proposal will explore the modifiable risk factors for cognitive decline (ie. changes in memory and thinking functions) in older people. It will examine the pertinence of critical contributors to glial-neuronal networks including depression, cardiovascular disease, sleep-wake systems, mental and physical exercise, inflammatory processes and diet, as well as test interventions that target these risk factors. It will use sophisticated brain scanning methods to examine which factors promote neuroplasticity.
1020675	Prof Stephen Lord	NHMRC Research Fellowship	Research Fellowship	University of New South Wales	NSW	\$883,373	Public Health	Aged Health Care	This research program is aimed at finding effective prevention strategies for the important issue of falls in older people. It will: a) conduct studies to improve our understanding of fall risk in people with Parkinson's disease and dementia; b) undertake a study to improve our management of dizziness; c) seek treatments for fear of falling; and d) evaluate home exercise interventions for older people at risk of falls and strength and cued walking training for people with Parkinson's disease.

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SUMMARY OF DEMENTIA FUNDING: PERCENTAGE OF THE TOTAL FUNDS APPROVED PER SCHEME

FUNDING SCHEME	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	TOTAL
Career Development Fellowships		*3.8% #1 of 26	2.9% 1 of 38	2.6% 1 of 40	1.5% 1 of 42			2.8% 2 of 67		2.1% 1 of 50	3.5% 2 of 56	3.2% 2 of 68	4.7% 3 of 62	2.3% 14 of 611
Centres For Research Excellence										6.4% 1 of 15				1.4% 1 of 78
Early Career Fellowships	1.0% 1 of 52	1.0% 1 of 70	1.5% 1 of 88		1.1% 1 of 108	1.9% 3 of 133	2.3% 3 of 127	1.6% 2 of 129	4.3% 5 of 123	3.5% 4 of 110	1.9% 2 of 114	3.1% 4 of 122	4.2% 6 of 124	1.9% 27 of 1396
International Exchange Fellowships									6.8% 1 of 9		18.4% 1 of 4	10.4% 1 of 9		5.0% 3 of 70
Development Grants	100.0% 1 of 1	4.2% 1 of 21					4.0% 1 of 22	5.6% 1 of 29	4.5% 1 of 23					2.1% 5 of 242
National Health Research Enabling Capabilities				12.0% 1 of 9										1.2% 1 of 77
Postgraduate Scholarships		0.7% 1 of 124	1.3% 2 of 155		0.8% 1 of 192	1.2% 2 of 159			1.8% 2 of 138	1.3% 2 of 128	2.1% 3 of 126		1.9% 3 of 123	0.8% 16 of 1862
Project Grants	4.5% 14 of 403	1.7% 7 of 360	2.6% 11 of 412	4.1% 14 of 410	3.6% 10 of 421	1.5% 7 of 443	2.1% 11 of 604	3.8% 19 of 664	3.5% 23 of 685	3.3% 26 of 681	4.1% 32 of 755	2.4% 31 of 787	1.9% 17 of 731	3.0% 222 of 7356
Strategic Awards					2.3% 1 of 16	7.8% 3 of 77	16.5% 8 of 25	56.8% 18 of 38						11.3% 30 of 225
Practitioner Fellowship									6.7% 1 of 15		12.5% 2 of 16		4.1% 1 of 19	2.6% 4 of 156
NHMRC Research Fellowship	0.7% 1 of 111		2.3% 1 of 39	1.7% 1 of 63	3.2% 2 of 69	2.3% 2 of 80			6.3% 5 of 76	4.0% 3 of 73	6.2% 6 of 85	2.5% 2 of 87	2.5% 2 of 85	2.4% 25 of 1027
Programs		4.9% 1 of 16			4.3% 1 of 20	14.5% 1 of 11			2.7% 1 of 27	13.7% 1 of 10		11.7% 1 of 10		3.9% 6 of 170

* Percentage of funded dementia grants.

Number of funded dementia grants against total number of funded grants.

Note: Shaded areas denote years where no applications for dementia research were received.

Attachment E

SUMMARY OF DEMENTIA APPLICATION SUCCESS RATES COMPARED TO OVERALL SUCCESS RATES – 2003-2012

Attachment F

PEOPLE SUPPORT SCHEMES

Ten Year Total	ALL APPLICATIONS			DEMENTIA		
	# APPS	# FUNDED	FUNDED RATE	# APPS	# FUNDED	FUNDED RATE
	11411	3891	34.1%	281	86	31%
2003	873	386	44.2%	9	1	11%
2004	1055	415	39.3%	20	5	25%
2005	1125	431	38.3%	21	7	33%
2006	1229	471	38.3%	16	5	31%
2007	1429	488	34.1%	29	4	14%
2008	1414	430	30.4%	37	14	38%
2009	1420	400	28.2%	49	11	22%
2010	1481	426	28.8%	47	21	45%
2011	1385	444	32.1%	35	10	29%
2012	1266	417	32.9%	18	8	44%

RESEARCH SUPPORT SCHEMES

Ten Year Total	ALL APPLICATIONS			DEMENTIA		
	# APPS	# FUNDED	FUNDED RATE	# APPS	# FUNDED	FUNDED RATE
	25730	6170	24.0%	892	217	24%
2003	2025	474	23.4%	59	21	36%
2004	2148	492	22.9%	60	10	17%
2005	2287	540	23.6%	67	11	16%
2006	3095	708	22.9%	91	20	22%
2007	2778	769	27.7%	135	40	30%
2008	3004	819	27.3%	93	26	28%
2009	3283	734	22.4%	121	28	23%
2010	3502	800	22.8%	122	32	26%
2011	3608	834	23.1%	62	16	26%
2012	3970	825	20.8%	82	13	16%

NHMRC PROJECT GRANT SUCCESS RATES

ALL PROJECT GRANTS

Ten Year Total	All Apps	Funded	Funded Rate
	23498	5441	23%
2003	1847	411	22%
2004	1982	421	21%
2005	2109	445	21%
2006	2841	605	21%
2007	2420	665	27%
2008	2587	685	26%
2009	2999	681	23%
2010	3344	757	23%
2011	3369	771	23%
2012	3570	731	20%

DEMENTIA PROJECT GRANTS ONLY

Ten Year Total	All Apps	Funded	Funded Rate
	765	174	23%
2003	55	20	36%
2004	55	8	15%
2005	58	7	12%
2006	67	11	16%
2007	74	19	26%
2008	86	24	28%
2009	115	26	23%
2010	120	32	27%
2011	58	15	26%
2012	77	12	16%