

# Health and Medical Research Strategic Review

Implementation of the Government's Response

FINAL REPORT

---

**October 2000**

**NHMRC**

National Health and Medical Research Council

© Commonwealth of Australia 2001

ISBN Print: 0442456615      Online: 0642456623

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without prior written permission from AusInfo. Requests and enquiries concerning reproduction and rights should be addressed to the Manager, Legislative Services, AusInfo, GPO Box 1920, Canberra ACT 2601.  
Email address: Cwealthcopyright@dofa.gov.au

The strategic intent of the National Health and Medical Research Council is to provide leadership and work with other relevant organisations to improve the health of all Australians by:

- fostering and supporting a high quality and internationally recognised research base;
- providing evidence based advice;
- applying research evidence to health issues thus translating research into better health practice and outcomes; and
- promoting informed debate on health and medical research, health ethics and related issues.

NHMRC web address: <http://www.nhmrc.health.gov.au>

---

## CONTENTS

<b>FOREWORD</b>	<b>v</b>
<b>ABBREVIATIONS</b>	<b>vii</b>
<b>EXECUTIVE SUMMARY</b>	<b>ix</b>
<b>BACKGROUND</b>	<b>xi</b>
<b>1. Research Outcome Evaluation</b>	<b>1</b>
<b>2. Reinforcing the research funding system</b>	<b>3</b>
2.1 Maintaining research excellence	3
2.2 Grant types	5
2.3 Support for researchers	6
2.4 Transfer of block-funding scheme	7
<b>3. World Class Research Capacity</b>	<b>9</b>
3.1 Research workforce	9
3.2 Research infrastructure	10
<b>4. Priority Driven Research</b>	<b>13</b>
<b>5. Translation of Research into Policy and Practice</b>	<b>15</b>
<b>6. An Effective Human Research Ethics Review System</b>	<b>17</b>
6.1 National Statement on Ethical Conduct in Research Involving Humans	17
6.2 Multi Centre Trials	17
6.3 Uniform processes	18
6.4 HREC Database	18
6.5 Collaborations	18
6.6 Looking to the future	18
<b>7. Community Participation</b>	<b>19</b>
7.1 Priority-setting	20
7.2 Information dissemination	20
<b>8. Technology Transfer and Research Commercialisation</b>	<b>21</b>
8.1 Guidelines for Intellectual Property Management and Commercialisation for Health and Medical Research	21
8.2 Industry Committee	22
<b>9. International Cooperation</b>	<b>25</b>
<b>10. Management and Resourcing of the Office of the NHMRC</b>	<b>27</b>
<b>APPENDICES</b>	<b>29</b>
<b>Appendix 1</b> Government response to the recommendations and actions of the HMRSR – NHMRC to Action	31
<b>Appendix 2</b> NHMRC Strategic Plan 2000–2003	45
<b>Appendix 3</b> Reshaping NHMRC Research Funding Mechanisms – As at 27 February 2000	69

---

## FIGURES AND BOXES

Figure 1.1	Increase in total NHMRC funding as a result of the additional money secured in the 1999-2000 Federal Budget	1
Figure 2.1	Discipline panel assessment of Project Grants. Discipline Panels have replaced Regional Grant Interview Committees (RGICs)	4
Figure 2.2	The current and proposed funding mix for NHMRC support. The proposed mix reflects careful forward planning to address the three key themes identified by the Review – Research, People, and National Research Capacity. The enhanced focus on larger, longer duration Program Grants is reflected in the significant increase over the proportion of current funding given to these types of grants.	7

### **BOXES**

Box 1.1	GrantNet – Electronic grant lodgement and data collection	2
Box 2.1	International Peer-Review	4
Box 2.2	New Program (TypeII) Grants	5
Box 2.3	Health Research Partnership Grants	6
Box 2.4	Block-funding and the NHMRC	8
Box 3.1	Access to the Human Genome – An important resource for Australian research	11
Box 4.1	Possible dangers of mobile phones – A strategic research program	14
Box 4.2	Engagement with policy-makers in setting research priorities	14
Box 5.1	Helping others to produce evidence based Clinical Practice Guidelines	15
Box 5.2	Tailoring advice to specific consumers	16
Box 6.1	Support for HRECs in consideration of Gene Therapy	18
Box 7.1	Greater community involvement through the Consumers' Health Forum	19
Box 7.2	Indigenous community involvement on NHMRC Discipline Panels	20
Box 8.1	Recognition of entrepreneurial and commercial excellence	22
Box 9.1	Joint initiatives with the Juvenile Diabetes Foundation	25
Box 9.2	OECD initiatives for global research collaboration	26
Box 10.1	The Chief Executive Officer of the NHMRC	27

---

## FOREWORD

Eighteen months ago, the Government took the bold step to double funding available for health and medical research through the National Health and Medical Research Council (NHMRC). This vote of confidence in the nation's capacity to perform world-class medical and health related research followed the wide ranging Health and Medical Research Strategic Review, led by Mr Peter Wills, AM.

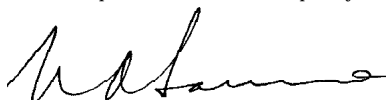
The report of the Review – *The Virtuous Cycle: Working together for Health and Medical Research* – made many recommendations about how Australia's health and medical research effort might be enhanced to further benefit the health and wealth of the nation. Approximately half of the Review's recommendations were referred to the NHMRC for response and implementation.

In the last twelve months, Council has been laying the foundations to ensure that the Government's increased research investment leads to outcomes that benefit the health and welfare of all Australians. This report sets out the NHMRC's achievements during this exciting period of development. Much progress has been made. I would like to highlight:

- increased collaboration among researchers, facilitated by new joint funding programs;
- greater support for individual researchers with new and more flexible arrangements for the research workforce and stronger emphasis on research as a career;
- more focus on strategic research and the development of criteria by which research priorities can be assessed;
- increased community participation in setting research priorities, developing evidence-based advice and ethical review of research;
- maintenance of a high quality ethical framework through the work of the Australian Health Ethics Committee and its support of the more than 200 Human Research Ethics Committees across the nation; and
- strengthened partnerships between researchers and policy makers, and between researchers and industry, to ensure translation of research findings into health policy, clinical practice and wealth creation.

The NHMRC looks forward to this period of growth over the next four years and it will place emphasis on technology transfer and commercialisation, and stronger relationships among Australian researchers and with their international counterparts.

Australia has a deserved reputation for quality and innovation on its health and medical research effort. The NHMRC will provide strong support and leadership to build on this capacity in the years ahead.



N A Saunders  
Chair – National Health and Medical Research Council  
October 2000



Professor Nick Saunders  
Chair  
NHMRC

---

---

## ABBREVIATIONS

AGRF	Australian Genome Research Facility
AHEC	Australian Health Ethics Committee
AHMAC	Australian Health Minister's Advisory Council
AIHW	Australian Institute of Health and Welfare
ALRC	Australian Law Reform Commission
ARC	Australian Research Council
ASMR	Australian Society for Medical Research
AVCC	Australian Vice Chancellor's Committee
CCST	Coordination Committee on Science and Technology
CHF	Consumers' Health Forum of Australia Inc
CHIF	Commercialising Health Innovations Forum
CRC	Cooperative Research Centre
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTLS	Clinical Trials Large Scale
DETYA	Commonwealth Department of Education, Training and Youth Affairs
DHAC	Commonwealth Department of Health and Aged Care
DISR	Commonwealth Department of Industry, Science and Resources
DP	Discipline Panel
EBCP	Evidence-based Clinical Practice
EME	Electromagnetic Energy
EU	European Union
GTRAP	Gene and Related Therapies Research Advisory Panel
GBIF	Global Biodiversity Information Facility
HAC	Health Advisory Committee
HMRSR	Health and Medical Research Strategic Review
HREC	Human Research Ethics Committee
IC	Implementation Committee
JDFI	Juvenile Diabetes Foundation International
MOU	Memorandum of Understanding
NHMRC	National Health and Medical Research Council
NI	New Investigator

---

NIH	National Institutes of Health (United States)
NZ	New Zealand
OATSIH	Office of Aboriginal and Torres Strait Islander Health
RC	Research Committee
RGIC	Regional Grant Interview Committee
RAWG	Aboriginal and Torres Strait Islander Health Research Agenda Working Group
SPIRT	Strategic Partnerships with Industry – Research and Training Scheme
SRC	Special Research Centre
SRDC	Strategic Research Development Committee
TGA	Therapeutic Goods Administration
UK	United Kingdom
US	United States of America

---

## EXECUTIVE SUMMARY

In 1998, the Commonwealth Minister for Health and Aged Care commissioned a comprehensive review of the state of Australian health and medical research. The Health and Medical Research Strategic Review (the 'Review') identified the challenges and obstacles to maintaining Australia's world class research capacity, and the areas requiring attention to secure a vibrant and responsive health and medical research environment into the future.

The report of the Review, *The Virtuous Cycle – Working together for health and medical research*, made far-reaching recommendations on various aspects of health and medical research. The Government referred 56 specific recommendations for National Health and Medical Research Council (NHMRC) action.

Since the Review, the NHMRC has made many changes to the way it fulfils its role as the nation's peak supporter of health and medical research, in direct response to the issues raised by the Review. Specific areas of NHMRC activity include:

- **Research Outcome Evaluation:** The NHMRC took part in the development of a model for the monitoring, evaluation and reporting of NHMRC research activities. The Research Outcome Evaluation Model will form the basis of performance reporting in relation to funds managed by the NHMRC in conducting health and medical research, thus providing links between the outputs of NHMRC-funded research, and the broader health outcomes sought by Government. The NHMRC is developing evaluation methodologies and data collection strategies to accommodate the model's performance indicators.
- **Reinforcing the Research Funding System:** The NHMRC has significantly reshaped its research funding system and grant assessment procedures. This includes implementation of review by discipline-based panels, Project (Type I) and Program (Type II) grants, and Health Research Partnership Grants. The initiatives will transfer block-funded institutes to the main grants scheme, simplify the rules for the support of Research Fellows and provide greater flexibility, while changing project funding to one-line grants to simplify administration.
- **World Class Research Capacity:** The NHMRC recognises the importance of increasing infrastructure funding and attracting, supporting and retaining a world class medical research workforce. Strategies are being implemented to promote health and medical research as a career choice, improve training opportunities, involve health practitioners in research, provide national facilities such as the Australian Genome Research Facility and encourage greater investment in research infrastructure.
- **Priority Driven Research:** The NHMRC has developed a framework to identify areas of strategic research priority involving considerable stakeholder consultation. Current priorities have been established at a national level and future funding strategies to address these areas will be reviewed and updated.
- **Translation of Research into Policy and Practice:** The NHMRC has developed processes to draw upon the expertise of research organisations, government agencies, researchers and consumer groups in developing policy and advice. In order to increase the speed and efficiency of guideline development, legislative changes have been passed to facilitate the review and endorsement of externally developed guidelines.
- **Effective Health Ethics Review System:** Since the *NHMRC's National Statement on Ethical Conduct in Research Involving Humans* was released in 1999, the NHMRC has been working with relevant stakeholders to ensure consistent implementation and standardisation of ethical review in Australia, including the capacity to handle multi-centre trials, a matter of particular concern identified by the Review. The NHMRC has also led the public debate on ethical issues such as the use of genetic information.

- 
- **Community Participation:** Consumer representation is intrinsic to the composition of all principal committees, and the NHMRC is developing systems for greater community involvement in work programs and grant assessment procedures. The NHMRC has also shown leadership in its involvement of Indigenous Australians in the grants review processes.
  - **Technology Transfer and Research Commercialisation:** In order to minimise barriers to the translation and commercialisation of research, the NHMRC is developing guidelines for Intellectual Property Management, and has introduced Development Grants and Industry Fellowships. The NHMRC is also investigating the possibility of Research Management Training Schemes to help expand expertise in commercialisation and management.
  - **International Cooperation:** The NHMRC has developed closer links with the Department of Industry, Science and Resources and the Australian Academy of Science to increase the awareness of international researcher exchange programs. The NHMRC is building on existing, and forging new, international links to encourage collaborative research using various international agencies.
  - **Office of the NHMRC:** Changes to the *National Health and Medical Research Council Act 1992* created the position of Chief Executive Officer (CEO). Professor Alan Pettigrew has been recently recruited as the inaugural CEO. Under the CEO the Office will operate more independently from the Department of Health and Aged Care than previously and will establish resources and structures appropriate to facilitating the operations of the NHMRC.

---

## BACKGROUND

Health and medical research provides the base that enables improvements in health care and clinical medicine, as well as the development of a high quality health care workforce. Advances arising from health and medical research in Australia will continue to benefit the Australian community, in terms of improved treatment and health care services, while also delivering a more cost-effective service. In 1998, the Commonwealth Minister for Health and Aged Care commissioned a comprehensive review of the state of Australian health and medical research. While the excellence of Australian health and medical research was applauded, the Health and Medical Research Strategic Review Committee was asked to identify challenges and obstacles to maintaining this world-class research capacity in the future. The Review's brief was to identify areas requiring attention to secure a vibrant and responsive health and medical research sector. The Review adopted a holistic approach in its examination, identifying the roles and relationships of the various components involved in the research effort, and indicating opportunities for further cooperation.

The report of the Review, released in May 1999, entitled *The Virtuous Cycle – Working together for health and medical research*, emphasises the relationships between government, industry and the research community in ensuring the continuation of high quality health and medical research, and the translation of this research into tangible benefits for the Australian community. The report provides a strategic framework for the development of Australian health and medical research into the next decade and beyond.

Following the release of the report, the 1999–2000 Federal Budget illustrated the Government's recognition of the important place health and medical research will occupy into the new century, with the announcement of a doubling of the annual NHMRC budget over six years to \$350 million per annum by 2005. The rapidly developing areas of biotechnology, genomics and bioinformatics will have profound implications for the way in which disease is identified, treated and prevented, and for how health care services are delivered. The commitment of an additional \$614 million to the NHMRC, over six years, confirmed the critical role of health and medical research in this process.

The additional funds have provided the health and medical research sector with the impetus to initiate the structural changes identified by the Review as necessary to secure competitiveness and efficiency.

Of the 126 recommendations of the Review, the Government referred 56 specific recommendations to the NHMRC for its consideration and action. The remaining recommendations were referred to other Commonwealth agencies, including the Strategic Review Implementation Committee which was established to consider a number of recommendations that required a whole-of-government approach.

In the last 15 months, the NHMRC has worked closely with the research community, the Health and Medical Research Strategic Review Implementation Committee and other agencies to implement the relevant recommendations of the Strategic Review. The NHMRC has undertaken a significant restructuring of its activities and the way it discharges its statutory functions.

This report provides a description of the recommendations referred to the NHMRC by Government, outlining the achievements and ongoing activities of the NHMRC in responding to these recommendations. The recent changes are aimed at reinvigorating the NHMRC and the health and medical research sector as a whole. The NHMRC is keenly aware of the important role it will continue to play in promoting and guiding the sector and in directing the benefits to improve health for all Australians. These changes form a vital part of a continuing process with the NHMRC remaining responsive to the changing needs of the sector and the community.

---

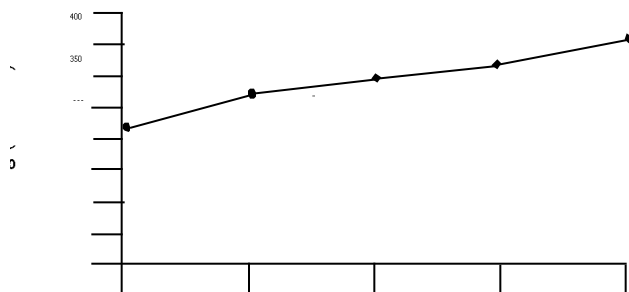
As many of the recommendations referred to the NHMRC are interrelated, they have been grouped thematically into ten areas of activity. A table (Appendix 1) summarises how each recommendation has been dealt with and refers to the relevant parts of the report. Addressing the issues identified in the Review's recommendations is an important part of the NHMRC's work program and has helped shape the NHMRC's Strategic Plan for the 2000–2003 triennium. (Appendix 2).

---

## 1 RESEARCH OUTCOME EVALUATION

The development of mechanisms to monitor and report on the outcomes of research is recognised as an important step towards efficiency and accountability by research funding organisations worldwide. In recent years, the Australian Government has placed increasing emphasis on measuring the return on public investment. Scrutiny of the returns from the investment in research is one of the consequences of the introduction of an outcome-based accrual budgeting framework.

The doubling of funding to the NHMRC, and the recommendations arising from the Review, have encouraged the NHMRC to re-examine the way it performs its role as the peak funding body for Australian health and medical research.



A key underlying theme of the Review calls for the NHMRC to develop an evaluation framework to quantify the outcomes of its investment in health and medical research. The development of a framework for measuring the performance of the NHMRC's investment was one of the issues referred to the Implementation Committee for its consideration.

While the Research Committee and the Strategic Research Development Committee of the NHMRC currently evaluate and monitor their research programs, Research Committee undertook to examine the approaches taken by other national and international peak research funding bodies to develop a best-practice framework for evaluation. The Research Outcomes Workshop, convened by Research Committee in November 1999, invited prominent researchers and research managers to discuss this issue and contribute to the development of such a framework.

As a result of the workshop, and later work conducted by Commonwealth officials and representatives of the NHMRC and other relevant organisations, a model for the monitoring, evaluation and reporting of NHMRC research activities was developed. The Research Outcome Evaluation model:

- identifies indicators by which the performance of the NHMRC can be measured;
- clearly reflects the Government's objectives and the NHMRC's priorities in health and medical research for the new triennium; and

- 
- provides clear links between the outputs of the NHMRC and the outcomes and outputs sought by Government.

The Research Outcome Evaluation model was approved by the Minister for Health and Aged Care and the Government in the early part of 2000, and has been included in the NHMRC's Strategic Plan for 2000–2003 (Appendix 2). The model will form the basis of performance reporting for research funds managed by the NHMRC for the conduct of health and medical research. The NHMRC is currently developing detailed evaluation and data collection methodologies aimed at ensuring implementation of, and compliance with, the model.

With improved data collection and analysis, the NHMRC will be able to report on its performance in managing the funding of Australian health and medical research, but also provide enhanced leadership and direction to the research effort. A greater understanding of the types and amount of research being conducted will provide more opportunities for greater responsiveness to the needs and priorities of the health system. Improved information on the outcomes of the research funded by the NHMRC will allow not only better management of its grant portfolio, but also an indication of those areas where directed support might be provided to ensure important health outcomes. This may be through providing support for improved translation of research findings into clinical practice, or providing information to potential partners for commercialisation of research findings.

---

**Box 1.1: GrantNet – Electronic grant lodgement and data collection**

---

The NHMRC currently utilises an electronic grant application scheme for the management of its portfolio of project grants. The system, known as GrantNet, enables grant applicants to submit applications for NHMRC project grants 'on-line'. This system is unique in the world. The system aims to improve the interface between the NHMRC and its researchers through providing enhanced data collection about researchers, their collaborations, funding and experience to allow for better assessment and more accurate storage and reporting of NHMRC grant progress and outcomes.

The NHMRC is currently investigating the ways it can expand and enhance the use of GrantNet to provide more reliable data for measuring and cataloguing the range and outcomes of its health and medical research. It is envisaged that through more effective use of electronic resources, the NHMRC will be able to provide faster and more useful information about research progress to both researchers and the Australian community, in a form that will be accessible to all parties, but retain privacy for individual researchers.

---

While the evaluation framework has been developed to assess the NHMRC's management of its health and medical research agenda, improved evaluation of research outcomes will also help in the implementation of the programs aimed at addressing other thematic areas covered in this paper. The NHMRC places great importance on implementing improved monitoring and evaluation to allow for more informed decisions about the management of the NHMRC's activities.

---

## 2 REINFORCING THE RESEARCH FUNDING SYSTEM

In fostering health and medical research throughout Australia, the NHMRC dedicates a significant proportion of its resources to the conduct of that research.

The Review made sixteen recommendations (1-13, 32, 40, and 47) relating to the way the NHMRC supports health and medical research through its funding mechanisms.

Over the last two years the Research Committee of the NHMRC has undertaken a significant reform of its grant assessment procedures and funding mechanisms. This exercise addresses many of the areas identified by the Review as requiring urgent attention, and is part of the NHMRC's ongoing effort to ensure that it remains responsive to the needs of the health and medical research sector and the community.

Appendix 3 summarises the proposed mechanisms for future research funding. The reshaping has focused on the following areas of the NHMRC's grant scheme.



Professor Warwick Anderson  
*Chair*  
*Research Committee*

---

### 2.1 MAINTAINING RESEARCH EXCELLENCE

#### 2.1.1 Peer review

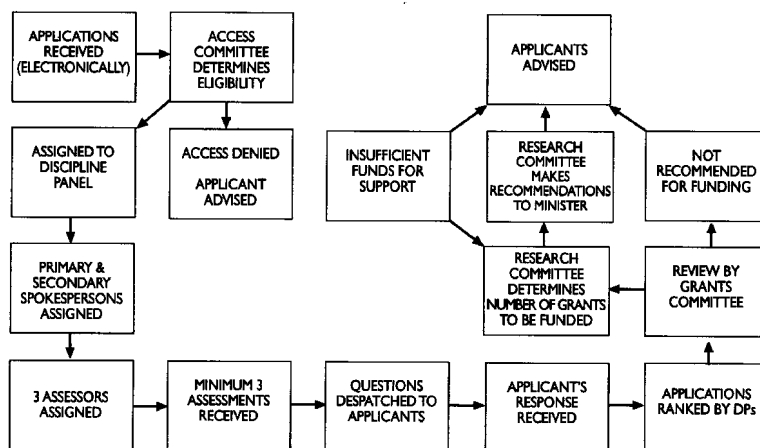
The NHMRC will continue to fund high quality, investigator initiated, peer review research, which is recognised as the breeding ground for future health innovations. This type of research has been secured in the new Project (Type I) and Program (Type II) grants, developed as part of Research Committee's reshaping program.

The NHMRC recognises that effective peer review is essential to ensure that Australian health and medical research continues to be a major player in the international arena.

During 1999–2000, NHMRC changed its peer review processes from the traditional Regional Grants Interviewing Committees to discipline-based panels. The Discipline Panels in the 2000 round were set up with membership widely representative of the different States and include many NHMRC Research Fellows. Particular efforts were made to avoid conflicts of interest. Applications will continue to be reviewed by up to fifteen peers with relevant experience. Communication with external assessors and with spokespersons on the panels was entirely by email in 2000, and this process will be refined in future years as technology improves. Mechanisms to limit the load of assessment, while preserving the rigour of expert peer review, are under consideration.

Figure 2.1 Discipline panel assessment of Project Grants. Discipline Panels have replaced Regional Grant Interview Committees (RGICs).

### Discipline Panel Process



International peer review has been a routine part of the assessment process for larger Program and Institute grants. The new Program in Medical Genomics, for example, is being evaluated by US experts in the area. In 2000, New Zealand researchers participated in the peer review team for assessment of NHMRC project grants and in NHMRC Discipline Panels.

#### Box 2.1: International peer review

The NHMRC is investigating opportunities for further international collaboration in grant assessment, and discussions with granting bodies from Singapore, Hong Kong and New Zealand will explore the possibility of shared assessors and electronic grant assessment processes for the Asia-Pacific region.

The NHMRC is also engaged in continuing discussions with the National Institutes of Health in the US and The Wellcome Trust in the UK to strengthen collaboration on peer review processes and to establish international benchmarking of NHMRC and Australian research.

---

## 2.2 GRANT TYPES

### 2.2.1 Reshaping NHMRC's research grants

The new Project (Type I) and Program (Type II) grants will provide greater flexibility in funding, with support available for periods of up to five years, as well as the standard three-year Project grant. This will allow researchers to spend less time completing grant applications and more time focusing on the conduct of high quality health and medical research. The changes are aimed at encouraging greater cooperation in generating research proposals for research that spans teams and disciplines.

---

#### Box 2.2: New Program (Type II) Grants

---

The Review recommended increasing the number of large research grants and having them last for a longer time. The Research Committee also wanted to make the research support mechanisms more suited to the rapid pace of contemporary health and medical research. The New Program Grants will deliver on these requirements with much more flexibility and a minimum of conditions.

The grant support is for a team of established researchers rather than for a project with specific research objectives. This type of support will encourage researchers to work collaboratively across a broad theme or to bring a multidisciplinary approach to one area of research. Awards will be made primarily on the basis of the excellent track record of the researchers.

---

In order to foster the development of new talent, the NHMRC has 27 New Investigator Grants commencing in 2000. To encourage industry collaboration and participation in the research effort, eight Industry Fellowships have been offered in 2001.

### 2.2.2 Quantum grants

In the past the NHMRC developed budgets for its grants based on detailed budget requests, using its own salary scales for research personnel, although the NHMRC does not directly employ the research staff. While the NHMRC has since permitted considerable flexibility for recipients in the use of grant funds, significant management has been required both by the Office of the NHMRC and the administering institutions. This is particularly onerous when additional entitlements (eg contributory superannuation) are claimed. Commencing with the 2000 grant round, budgets are now being formulated on a more streamlined basis, with all on-costs included in the grant. This will simplify accounting without diminishing accountability.

### 2.2.3 Collaboration and multi-disciplinary approaches

The NHMRC is seeking to promote collaboration and multi-disciplinary approaches to the conduct of health and medical research.

Funding commenced in 2000 for the first clinical trials/large-scale patient recruitment studies which will use NHMRC support to attract co-funding by other organisations for these types of expensive programs. The NHMRC will establish links with other national funding organisations and Government agencies as a means of ensuring long-term funding for this type of research.

---

**Box 2.3: Health Research Partnership Grants**

---

Few health problems are amenable to simple solutions. We need high quality research to solve these complex problems and make a real difference to disease prevention and the delivery of health care. We also need to benefit from our excellence in health research through developing an Australian biotechnology industry. The Health Research Partnership Grant initiative is designed to establish innovative collaborative mechanisms to address specific health issues and achieve clear health outcomes by the end of a five-year research effort.

Health Research Partnership Grants will be multi-disciplinary, embracing all aspects of health research from basic to health services delivery. They will be awarded to researchers who can bring together a spread of sponsors, including government, industry, and the community, who provide the funds for at least fifty per cent of the total research cost. The first partnership (about to be awarded) is for a program in injury prevention and the next (about to be advertised) will be in Type II diabetes.

---

Program (Type II) grants will be available in the 2001 round of applications. These will encourage multi-disciplinary associations and develop productive teams working in a broad area. The structure of these grants will encourage more collaboration, both between researchers working in different disciplines, and between researchers and the health care delivery sector and/or industry.

In order to foster research of direct relevance to clinical practice, the Research Committee has developed new rules for the accreditation of research institutes which require demonstrable links to both academic institutions and health care centres. Research Committee has also recently established a special sub-committee to review and promote clinical research activities. This sub-committee will include members from the Strategic Research Development Committee.

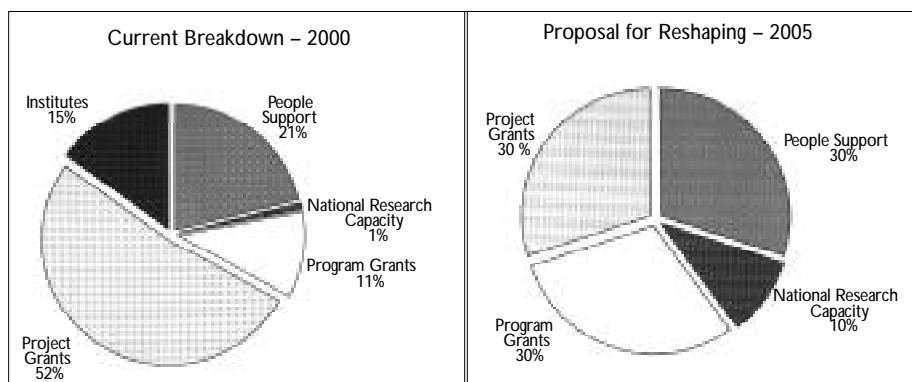
These initiatives seek to encourage research aimed at addressing particular health needs, and to present the findings of such research to the practitioners who can use them, thereby facilitating the translation of research findings into improved health outcomes.

## 2.3 SUPPORT FOR RESEARCHERS

### 2.3.1 NHMRC Fellowships

The NHMRC currently supports the careers of health and medical researchers through its Fellowship scheme. This scheme offers financial support to outstanding health and medical researchers. The NHMRC is investigating mechanisms for enhancing the number and scope of these fellowships in the context of its budget considerations for the next triennium.

Figure 2.2 The current and proposed funding mix for NHMRC support. The proposed mix reflects careful forward planning to address the three key themes identified by the Review – Research, People, and National Research Capacity. The enhanced focus on larger, longer duration Program Grants is reflected in the significant increase over the proportion of current funding given to these types of grants.



### 2.3.2 Independent support for Research Fellows

The NHMRC has initiated steps to ‘uncouple’ NHMRC Fellowships from individual Project and Program grant support to provide researchers with greater flexibility and promote collaboration within the research community. This will be implemented from the beginning of 2001. In the future, Research Fellows must hold appropriate research grant support through one of the NHMRC’s funding schemes (Project Grant, Program Grant, Health Research Partnership, etc.) or other competitive peer reviewed sources. All types of NHMRC support will also be available to Fellows upon application and assessment in accordance with the advertised grant rounds.

### 2.3.3 Increased mobility

Traditionally, the movement of Fellows in and out of the block-funded institutes has been a problem as their funding was linked to the Institute’s research program. The NHMRC has recognised that this is incompatible with the collaborative and multi-disciplinary approaches required in the current and future research environment.

Accordingly, the NHMRC has provided the Research Fellows within Block-Funded Institutes with conditions equivalent to those of independent Fellows, in terms of mobility of fellowship support and associated research grants. This will allow free movement of all Fellows into and out of research institutes. This improved flexibility was implemented recently when the block-funded institutes agreed to undertake a transition to funding through the standard Project and Program Grants mechanisms.

## 2.4 TRANSFER OF BLOCK-FUNDING SCHEME

The NHMRC has been working over the past year to restructure the arrangements for the funding of the five institutes it presently supports through the ‘block-funding scheme’. The proposed new arrangements were finalised and agreed to by all current block-funded institutes in July 2000. Details are being developed for a gradual transition over the next three years to permit access to Project and Program Grant funding. This change will enhance the competitiveness of the NHMRC funding scheme and equalise access to NHMRC support for all researchers.

---

Part of the funding support in the first five years will be a special 'Institute Grant' which will provide support for regional and/or national use of facilities.

---

**Box 2.4: Block-funding and the NHMRC**

---

It is widely accepted that while NHMRC block-funding has been a valuable mechanism in the expansion and consolidation of Australian research, it no longer provides the responsiveness and flexibility needed for the conduct of internationally recognised health and medical research.

Institutes participating in the NHMRC's current block-funding scheme have agreed, through a transitional process, to enter the new NHMRC funding schemes. This will involve progressive access to Research Support schemes as individual researchers and groups move from the Block Grant system into the competitive grant funding round each year over the next five years.

The details of when each researcher, or research group, will be granted access will be determined following the Administrative Review of all institutes during late 2000.

---

---

### 3. WORLD CLASS RESEARCH CAPACITY

As the peak funding body for health and medical research within Australia, the NHMRC is in a unique position to influence the character and composition of the health and medical research sector.

A major focus of the Review was the strengthening of Australia's capacity to conduct health and medical research at a standard of world excellence. The Review, recognising the key role the NHMRC must play in order for this to be realised, linked a large number of recommendations to the NHMRC aimed at enhancing this capacity. The Review identified two main areas for achieving this capacity — the research workforce and research infrastructure.

#### 3.1 RESEARCH WORKFORCE

The NHMRC, as one of the main sources of support for the development of high-level health and medical researchers in Australia, influences the quality and standard of the research workforce through the way it structures its support for the sector generally. Fifteen recommendations (17-24, 26-30, and 39-40) identify strategies aimed at improving and supporting the research workforce.

##### 3.1.1 Training

###### 3.1.1.1 *Promotion of health and medical research as a career choice*

The NHMRC is keenly aware of the need to encourage participation of highly skilled and talented individuals in the research enterprise. Raising public awareness of health and medical research, and of the career opportunities within the sector, are the goals of initiatives like Tall Poppies and National Science Week, and the NHMRC has in the past supported these initiatives.

The NHMRC is currently engaged in discussions with the Department of Education, Training and Youth Affairs (DETYA) to enhance science within the school and tertiary curricula, and is investigating opportunities to enhance the attractiveness of science as a career choice.

###### 3.1.1.2 *Graduate training*

Another key factor for the development and maintenance of the health and medical research sector is the need for broader training. The NHMRC is working with DETYA to ensure that science graduates are trained in the spectrum of skills required for successful conduct and promotion of research, including areas of patent law, finance, health management and journalism. This is important for biotechnology, especially bioinformatics and genomics, where there is a need for scientists who are literate in the tools of information technology and appreciate their limitations, but also understand the biological questions that can be answered by them.

The NHMRC Training Awards Committee has provided a system for mentoring young NHMRC scholars and postdoctoral fellows. Further opportunities to encourage more widespread and effective mentoring within the sector are under consideration by Research Committee.

###### 3.1.1.3 *A multi-skilled, multi-disciplinary workforce*

The NHMRC provides support for the employment of a large number of skilled individuals through its research programs. These people range from technical assistants who use and maintain specialised equipment and research resources, for example, by preparing tissues for cell culture or providing post-operative care for research animals, to senior postdoctoral scientists who conduct research projects and manage the laboratories and teams headed by leading researchers. These personnel form the base of the pyramid of researchers described in

---

the Review. The NHMRC has an interest in ensuring that this vast skill base in Australia is utilised to best advantage by enhancing ongoing training in advanced techniques and continued employment opportunities in the face of the realities of support through competitive funding schemes.

Industry Fellowships (see sect 8.2.1) are aimed at fostering the participation of researchers in an industry research program and transferring this experience to the academic research environment.

In addition, the NHMRC is looking at ways of encouraging the continued involvement of health practitioners in clinical and public health research. New Practitioner Fellowships will commence in 2001. These will develop and promote the activities of clinician researchers by allowing them to spend between thirty and seventy percent of their time undertaking research, while continuing their active participation in public health and/or clinical practice.

#### **3.1.1.4 International experience to develop expertise**

Links between Australian researchers and their counterparts overseas are essential ingredients for scientific success in the next century. These links are facilitated through the provision of travel support and bilateral exchanges of postdoctoral researchers with other countries to develop the relationships that will foster future collaboration. Training Awards schemes send the best researchers away for experience overseas and bring them and others back to Australia to introduce new skills over subsequent years. The NHMRC has a number of international agreements that it will continue to develop to encourage and enhance such exchanges.

### **3.1.2 Career Development**

The NHMRC has a number of schemes in place to support the career development of health and medical researchers. Changes to the Research Fellowship scheme arising from the reshaping of Research Committee's grant program are well-advanced (see section 2.3).

The NHMRC is also working with other relevant bodies to examine issues that require a sectoral approach to improve career development opportunities and rewards for the best researchers.

Funding schemes such as Practitioner Fellowships (see section 3.1.1.3) have been developed that provide greater flexibility and more opportunity to enable translation of research into practice. Also, the shift to larger grants of longer duration will provide researchers with more stable opportunities for career development within the NHMRC scheme.

The NHMRC is planning to:

- examine workforce needs and strengthen training opportunities, introducing new schemes for researchers specifically in clinical research and population health;
- identify workforce implications of emerging priority areas; and
- increase and widen the scope of the Research Fellowship program.

## **3.2 RESEARCH INFRASTRUCTURE**

While only two recommendations (11 and 16) explicitly deal with the issue of research infrastructure, much of the Review recognises the need to support the workforce with adequate resources and the equipment required in undertaking high quality research.

The NHMRC recognises the urgent need to address major deficiencies in national research infrastructure through better coordination of existing investment and boosting direct strategic investment. Adequate research infrastructure will be crucial for the new era in Australian health and medical research and the development of a buoyant biotechnology industry for this country.

---

The NHMRC supports the Chief Scientist's paper *The Chance to Change*, released in August 2000, which emphasises the importance of research in order to establish knowledge-based industries in the new millennium.

While most of the funding increases for the NHMRC will be directed towards grants and fellowships, a portion of funds will specifically be allocated to building infrastructure for medical research. The NHMRC has, for example, allocated funding to the Australian Genome Research Facility (AGRF), beginning in the 2000 grant round, to ensure the AGRF maintains its high international standards, and can provide support for the emerging field of medical genomics in Australia.

---

**Box 3.1: Access to the Human Genome – An important resource for Australian research**

---

The NHMRC recently signed an agreement with the US-based firm Celera Genomics to gain access to the vast genomic databases that Celera possess. Australia was the first country to sign such an agreement – a lead that several other countries are now following. The Celera Discovery System will be available to researchers in all Australian publicly-funded institutions at an academic subscription rate, to search the human, mouse and *Drosophila* genome databases for three years. Celera will provide training and support for the use of its databases throughout the subscription period. The agreement ensures that intellectual property arising from discoveries by academic Australian researchers will be retained.

This agreement will provide an invaluable resource for Australian health and medical researchers as our focus turns to the investigation of the role of genes in disease and illness.

The agreement reflects the efforts of the NHMRC at securing a greater presence in the international arena and closer relationships with leading edge researchers and research organisations in all areas of health and medical research.

---

Other initiatives include the continued funding of non-human primate colonies and the provision of support for major items of equipment.

The NHMRC is working with the Department of Industry, Science and Resources, through the Coordinating Committee on Science and Technology, to develop inventories of current infrastructure as a first step towards better planning and provision of shared facilities in the future. The NHMRC currently encourages the sharing of infrastructure such as registers, databases, animal facilities and expensive equipment. Sharing of infrastructure is a criterion for NHMRC grants and capital funding.

All these initiatives are aimed at ensuring Australian researchers have access to the facilities necessary to conduct high quality research. A mechanism for the provision of research infrastructure, especially in response to the demands of changing technologies, will ensure that Australia is best positioned to benefit from the new tools of genomics and proteomics.

The NHMRC anticipates that, by 2005, around 10 per cent of its research budget will be allocated to support facilities and infrastructure that contribute to the national research capacity.

---

The NHMRC is continuing to:

- identify specific areas where research capacity is deficient with a particular emphasis on clinical and population health and health services; and
- advocate and support shared funding of research infrastructure and increased investment.



Staff from Celera join the Minister for Health and Aged Care and staff of the Office of NHMRC to celebrate the agreement

---

---

## 4. PRIORITY DRIVEN RESEARCH

A critical component of an effective health and medical research sector is the capacity to perform research that covers strategic, development and evaluation research with a focus on health services priorities. This is what NHMRC terms priority driven research. Areas of need and health inequality must be identified and addressed in a focused way. Priority driven research aims to ensure the results of Australia's health and medical research are translated and applied to the health system, to realise the benefits of greater knowledge.

The Review noted that support for the conduct of priority driven research within Australia is relatively low. This is especially evident when viewed in the context of the general excellence of our health and medical research sector. The Review recommended that this issue needed to be addressed by improving the sector's capacity to undertake research and by removing structural barriers within the framework for research support in this country.



Dr Jack Best  
*Chair*  
*Strategic Research*  
*Development Committee*

The Review also recognised the need to establish a more coordinated approach to identifying national health service priority areas. While eight recommendations of the Review (33-39, and 49) were referred to the NHMRC for its consideration, the Government assigned to the Implementation Committee the task of developing strategies to expand Australia's capacity in this area.

The Strategic Research Development Committee (SRDC) was established in 1997 in response to the need for a mechanism to direct NHMRC research funds to areas of urgent research priority.

During its first triennium, the SRDC recognised the need to have a more comprehensive and overarching priority setting methodology, and developed a framework to identify areas of strategic research priority. As part of this process, the SRDC convened widespread consultations with key stakeholders including researchers, health care providers, consumers, policy makers and State and Territory governments.

The consultations identified issues as priorities for Australian health on the basis of:

- burden of disease and its persistence;
- uniqueness to Australia;
- emerging problems;
- impact on disadvantaged groups;
- impact on cost and quality of health care;
- availability of expertise; and
- cost benefit concerns.

As a result, SRDC identified the following areas of research priority:

- Ageing;
- Chronic Diseases;
- Emerging/Re-emerging Diseases;

- 
- Indigenous Health; and
  - Socio-Economic Determinants of Health.

With the commencement of the new triennium (2000–2003), the NHMRC will continue to promote research in these strategic priority areas and contribute to the development and dissemination of strategic research findings throughout the community. It will be active in monitoring the output of priority driven research programs and the translation of outcomes of such research into improved clinical practice and policy.

---

**Box 4.1: Possible dangers of mobile phones – A strategic research program**

---

Following public concern about the possible health risks of mobile phones, the Commonwealth Government allocated \$3.4 million to the NHMRC to conduct a special research program.

The SRDC set up an ElectroMagnetic Energy (EME) Expert Committee to manage this program. The NHMRC is part of a global collaboration to look at this important public health issue. Australia is playing a crucial role by funding important studies on whether the use of mobile phones in humans increases the risk of brain tumours or affects problem solving and memory. In addition, basic research aims to determine whether electromagnetic fields affect the generation of cancers in mice.

A second funding round is focusing on identified gaps in knowledge. Proposals have been called for research into the possible effects of EME on vision, hearing, immunological effects, memory loss, headaches, sleep disorders, neuroendocrine effects and other neurological effects. Grants are expected to be awarded at the beginning of 2001.

---

The system for determining research priorities employed by SRDC provides a framework to guide priority-setting processes across the full range of health and research issues. The process also demonstrates one way in which stakeholders can successfully contribute to the development of a priority-driven strategic research agenda.

---

**Box 4.2: Engagement with policy-makers in setting research priorities**

---

Since the Research and Development Committee of the Department of Health and Aged Care was re-established in 1999, NHMRC officers have been actively promoting evaluation procedures for research proposals developed internally. This Committee is about to embark on a process to identify the most important projects for potential support in the pilot Commonwealth-State priority driven research program currently being set up by the Australian Health Ministers Advisory Council. It should be noted that the NHMRC has worked closely with the Implementation Committee in its consideration of priority driven research, and the latter's soon-to-be-released response to the Health and Medical Research Strategic Review will provide further guidance on the direction of this important area over the coming years.

---

---

## 5. TRANSLATION OF RESEARCH INTO POLICY AND PRACTICE

In order for Australia to reap the full benefits of its health and medical research effort, it is crucial that relevant advances arising from research are used to inform decisions on clinical treatment and the management and provision of health care services. The Review highlighted the need for timely dissemination of research findings to clinical practitioners, health care managers and the community at large (recommendations 13, 15, 21, 23, and 42-45).

The Health Advisory Committee (HAC) of the NHMRC draws on the expertise of a range of research organisations, government agencies, individual researchers and consumer groups, to provide advice to the government and the community in a timely and efficient manner. The HAC has developed various strategies including:

- developing processes for assessing and prioritising requests for advice;
- forming partnerships with public health and clinical groups, to be able to access the best available evidence for the purpose of developing advice;
- revising its Guidelines for the development, implementation and evaluation of Clinical Practice Guidelines; and
- developing information dissemination methodologies to communicate advice to practitioners, consumers and policy-makers.

Recent changes to the *National Health and Medical Research Council Act 1992* will facilitate the NHMRC's processes of issuing its own, and endorsing externally developed guidelines.



Professor Adele Green  
Chair  
*Health Advisory Committee*

---

### Box 5.1: Helping others to produce evidence-based Clinical Practice Guidelines

---

A key strategy of the Health Advisory Committee is to encourage the development of evidence-based clinical practice guidelines by other expert bodies, and to provide assistance and support for this process. These externally developed guidelines supplement guidelines issued by the NHMRC itself.

In 1998, 1999 and 2000, the NHMRC published a range of new and updated source materials, in the form of handbooks, for external bodies producing guidelines. These handbooks provide a complete guide to developing, disseminating and implementing clinical practice guidelines, covering issues such as the systematic identification and review of scientific literature, the assessment and application of scientific evidence, the presentation of evidence for consumers, and dissemination and implementation strategies. A further handbook on comparing costs and benefits through assessment of economic evidence is in preparation.

These publications will assist external organisations to develop guidelines that meet the standards for endorsement by the NHMRC.

---

---

The NHMRC is aware of the need to tailor its health advice to specific audiences in order to facilitate the uptake of advice by the community. The HAC will contribute to, and act upon, Council's communication plan, a major focus of the strategic plan for 2000–2003.

---

**Box 5.2: Tailoring advice to specific consumers**

---

The NHMRC ensures that advice it issues, usually in the form of guidelines, is published in several versions, each tailored to a specific audience.

The *Dietary Guidelines for Older Australians* produced in 1999, are available as a 200 page scientific document, a free 30 page practical guide, a free pamphlet, and a poster. Well over 100,000 copies of both the practical guide and the pamphlet have been distributed through targeted mail-outs and in response to calls to a toll-free information telephone line.

Dissemination and implementation strategies for *An information paper on Nutrition in Aboriginal and Torres Strait Islander Peoples* (NHMRC 2000) are currently being developed in consultation with specialist Indigenous health agencies.

---

---

## 6. AN EFFECTIVE HUMAN RESEARCH ETHICS REVIEW SYSTEM

The Review identified the need to develop a more efficient and effective ethics committee system for health and medical research in Australia, particularly with respect to quality and speed of ethical review, mechanisms for handling multi-centre research proposals, and uniformity of application processes. Two recommendations (14 and 15) articulate this need and further suggest the audit and simplification of existing registers of human clinical trials in order to achieve balance between the needs of research proponents, participants and the broader community. These improvements in the ethical review processes will assist in further developing consistency and accuracy across the ethics committee system.



Dr Kerry Breen  
Chair  
Australian Health  
Ethics Committee

### 6.1 NATIONAL STATEMENT ON ETHICAL CONDUCT IN RESEARCH INVOLVING HUMANS

The Australian Health Ethics Committee (AHEC) of NHMRC has been working with key stakeholders to establish uniform ethical standards across the spectrum of health and medical research, and to develop a more efficient and effective ethical review system. This culminated in the release of the *National Statement on ethical conduct in research involving humans* (known as the National Statement) in 1999. The National Statement was endorsed by the Australian Vice-Chancellors' Committee (AVCC); the Australian Research Council (ARC); the Australian Academy of the Humanities; the Australian Academy of Science; and the Academy of the Social Sciences in Australia, and is supported by the Academy of Technological Sciences and Engineering.

Due to this endorsement by the peak national research funding, higher education and academic bodies of Australia, the ethical guidelines contained in the National Statement now have a much wider reach in the research community. All research involving human participants conducted in Australian universities, or involving the learned academies, will have to be conducted in accordance with these guidelines, whether the research is funded by the NHMRC or the ARC, or not. This has effectively standardised the ethical review of health and medical research, and the operation of institutional Human Research Ethics Committees (HRECs) nationwide.

The Australian Health Ethics Committee will shortly publish a manual designed to assist Human Research Ethics Committees in interpreting and applying the new National Statement.

### 6.2 MULTI-CENTRE TRIALS

The effectiveness of the ethics committee system in handling large, complex multi-centre trials has been simplified and enhanced by new guidelines developed in the National Statement that specifically address such research. The AHEC will support and encourage HRECs to fully utilise this opportunity so that review of multi-centre research proposals is not delayed unnecessarily.

---

### 6.3 UNIFORM PROCESSES

The AHEC has also been encouraging the development of uniform application processes. Networks of HRECs across Australia are developing standard application forms for ethical review of research proposals. The Chairs of AHEC and Council participated in the launch of a common HREC application form that was developed in Victoria by a collective of HRECs, led by the HREC of the Department of Human Services. This follows a similar initiative in New South Wales.

### 6.4 HREC DATABASE

A special database in which information about Human Research Ethics Committees' compliance with the NHMRC guidelines is recorded has been developed to support the accountability system. The system has been updated to reflect the *Guidelines under Section 95 of the Privacy Act 1988*, developed by AHEC. It has also been streamlined thereby minimising HRECs reporting workload to the AHEC. The accountability system will be reviewed in late 2000.

---

#### Box 6.1: Support for HRECs in consideration of Gene Therapy

---

While the AHEC works with the TGA to support HRECs in their consideration of clinical trial proposals, additional advice on the conduct and assessment of gene therapy and similar evolving treatments is supplied by the NHMRC's Gene and Related Therapies Research Advisory Panel (GTRAP).

The GTRAP not only provides expert advice relating to the safety and scientific merit of these clinical trial proposals, but also maintains a register of all human gene therapy trials conducted in Australia. While the intention of the register is for the purposes of tracking should problems arise in the future, the NHMRC is considering making some of this information available to researchers and the public via the Internet. This is part of the NHMRC's strategy of evaluating the outcomes of its research portfolio and making more effective use of the data it collects.

---

### 6.5 COLLABORATIONS

Collaboration will continue between AHEC and other organisations in order to maintain high ethical standards in the conduct of health and medical research. The AHEC is providing input into a Therapeutic Goods Administration document being developed to assist HRECs in considering and monitoring clinical trials, and has been asked to participate with the Australian Law Reform Commission in an Inquiry into Human Genetic Information, including related privacy and discrimination issues.

### 6.6 LOOKING TO THE FUTURE

An effective HREC system is the cornerstone for the protection of the interests of research participants, researchers, institutions, and the community. AHEC proposes to put more resources and effort into supporting HRECs, including the publication of the manual complementing the National Statement and the establishment of regular regional workshops for HREC members. Such workshops will be arranged collaboratively with HRECs to meet their perceived needs. They will provide opportunities for sharing skills and experience, developing new skills and inducting new members.

---

## 7. COMMUNITY PARTICIPATION

The outcomes of health and medical research have widespread implications and impact on the everyday health and wellbeing of all Australians. The community, therefore, has a large stake in the direction of health and medical research, especially where it leads to innovation in health care and treatment of disease. Consumer awareness and concerns have increased in recent times, primarily with respect to safety, privacy, and the ethics of health research and health care. Rapid development of technology is continually raising new issues for consumers to consider (for example, cloning of human tissue and the development and use of genetically modified foods and medicines).

As part of its theme of the virtuous cycle of health and medical research, the Review identified important roles for the community in (a) setting the direction of Australia's health and medical research effort; (b) advancing awareness of the benefits such research brings; and in (c) securing the support for such research. Six recommendations (33, 43, and 49-52) expand on these themes and direct attention to a number of areas for further effort.

The NHMRC has a good track record of community consultation. Indeed the NHMRC is required by the *National Health and Medical Research Council Act 1992*, to consult widely with the community and other interested stakeholders as part of the process of formulating guidelines and advice.

---

### Box 7.1: Greater community involvement through the Consumers' Health Forum

---

The NHMRC has actively acknowledged the importance of strong partnerships between researchers and consumers in undertaking research activities. Following recent discussions between the Consumers' Health Forum (CHF) and the NHMRC, it has been proposed that the organisations jointly develop:

- a formal Statement on the role of consumers in research; and
- a set of principles to guide consumers and researchers and help promote stronger partnerships between them.

The CHF has recently signed a contract to complete this project.

It is anticipated that the proposed Statement will help researchers develop more open and equal relationships with consumers and communities who participate in research. The development of the Statement and principles should be completed in the near future.

---

The *National Health and Medical Research Council Act 1992* also provides for consumer representation on the Council, as well as its Principal Committees. This community involvement facilitates the dissemination and discussion of research findings. It also allows the NHMRC to be more responsive to community demands in setting the direction for Australian health and medical research, and in formulating public health policy.

The Strategic Research Development Committee attempts to involve the community in all areas of its work program, and the Research Committee is developing ways to involve consumers in grant review procedures.

To help in the review of Project Grant applications that will involve or potentially involve Indigenous Australians, a special Indigenous Australian Health Research Panel was set up for the 2000 round (see Box 7.2).

---

Box 7.2: Indigenous community involvement on NHMRC Discipline Panels

---

The NHMRC has refined its processes to ensure greater involvement of Indigenous Australians in grant assessment. This year a special panel including Indigenous Australians was involved in the assessment of project grant applications. Indigenous people from various communities across Australia came together with researchers experienced in working in Indigenous health research.

The panel reviewed all applications in which Indigenous people were the subjects or the potential beneficiaries of the research project. It focused on the cultural implications of the proposal where community participation, sustainability and transferability of the outcomes were the important aspects considered. The Panel provided specific feedback on these matters to the Discipline Panels that evaluated the scientific aspects, with these important cultural factors contributing to the assessment process.

---

## 7.1 PRIORITY SETTING

The SRDC has established mechanisms for the identification of research priorities (see section 4) that include the involvement of consumers in this process. One of these was the convening of workshops with representatives of major organisations and policy makers, as well as a special consultation organised by the Consumers' Health Forum, in order to identify research priorities for this triennium.

## 7.2 INFORMATION DISSEMINATION

The Review repeatedly emphasised the necessity for establishing mechanisms to ensure that the results of research are communicated to relevant stakeholders, so that the best use of such results can be employed.

The NHMRC is currently undertaking a review of its information capabilities and a critical part of this will be the effectiveness of its mechanisms for distributing relevant information to the community. The NHMRC provides free public access to many of its publications and reports on its website, while also distributing hard copies of its publications to relevant stakeholders. The website is currently being reorganised for more effective access to information. The NHMRC intends to identify the information needs of its various stakeholder groups and investigate the most appropriate mechanisms for the dissemination of information to each group.

The NHMRC will continue to promote public understanding of the role of health and medical research and its contributions to the health of all Australians. The NHMRC will also initiate discussions with other relevant bodies about ways to raise science awareness within the community.

Conscious of the important role of the community in the conduct of human clinical trials, the NHMRC undertakes frequent reviews of its guidelines. The NHMRC consults extensively with the community to ensure that its guidelines on the conduct of human research continue to reflect prevailing community views and attitudes. The joint NHMRC/AVCC *Guidelines on Good Research Practice* are an example of the NHMRC's continuing efforts to ensure community concerns about research continue to be adequately addressed. The role the NHMRC has played in ensuring community concerns regarding animal welfare are considered in the conduct of research, is another example of the NHMRC's activities in this area.

Through the Australian Health Ethics Committee, the NHMRC has played a lead role in ensuring an open discussion of the ethical issues raised in health and medical research and the provision of health services in general. AHEC guidelines play an integral part in ensuring community views and expectations are followed in the practice of health and medical research and in the delivery of health care services.

---

## 8. TECHNOLOGY TRANSFER AND RESEARCH COMMERCIALISATION

The rapid development of science and technology, especially the emergence of modern biotechnology, provides Australia with unprecedented opportunities to use its strong health and medical research position to build knowledge-based industries that can compete in the global economy. Commercialisation of research facilitates the delivery of new medicines and treatments to the community. If managed appropriately, it further benefits the community through employment and wealth generation. Minimising barriers between research and industry was a key element of the virtuous cycle outlined in the Review.

Many of the recommendations of the Review relating to technology transfer and commercialisation were referred to other agencies and the Implementation Committee for further consideration. However, the NHMRC is in a unique position to influence the development of intellectual property management and commercialisation in Australia. It holds a high profile and reputation in the community, both nationally and internationally, and has significant influence as the main public funding provider for health and medical research in Australia. With this in mind, three recommendations (39, 47 and 48) dealing with the research workforce, as well as the facilitation of greater industry participation in research funding, were referred to the NHMRC for further action. The NHMRC has focused attention on this area, and a number of the more advanced policy proposals are outlined below.

### 8.1 GUIDELINES FOR INTELLECTUAL PROPERTY MANAGEMENT AND COMMERCIALISATION FOR HEALTH AND MEDICAL RESEARCH

To ensure Australia captures the benefits of publicly-funded health and medical research, it is essential to have the skills and appropriate mechanisms to identify, value, protect and develop these resources. Therefore, good management of intellectual property becomes one of the most critical steps in the translation of research into practice, ensuring the Australian community reaps maximum benefits.

The NHMRC, in consultation with the research community, State and Territory governments and other agencies, has developed a set of draft guidelines to assist researchers and administering institutions improve their intellectual property management. The guidelines will be further developed in the course of public consultation and will eventually form part of the NHMRC grant application and approval procedures. It is envisaged that all NHMRC-funded research will be conducted in an environment where the results of that research are managed to ensure that valuable intellectual property is identified and any flow-on benefits are captured. It should be noted that, while the NHMRC will continue its current practice of not retaining ownership of any intellectual property resulting from research it funds, it will strongly foster the development of intellectual property with the potential to yield useful applications to benefit the Australian community.

---

**Box 8.1: Recognition of entrepreneurial and commercial excellence**

---

In order to encourage entrepreneurship within the sector, and to reduce barriers to risk taking, the NHMRC has introduced changes to its assessment criteria to give recognition to commercialisation activities. In the same way that publications have long been used as an indicator of past research performance, the NHMRC now considers the patent and commercialisation history of applicants in assessing potential research proponents.

NHMRC Development Grants are specifically directed at enhancing the commercial uptake of research results. Novel assessment criteria for such grants are being developed that will be aimed at focusing on commercialisation as an important outcome. Relevant expertise of applicants will be an important criterion in the evaluation of feasibility of these proposals.

---

The NHMRC is consulting with other agencies, including the AVCC and DETYA, to investigate ways of fostering a culture of innovation and commercialisation of research findings within the research sector, so that traditional barriers inhibiting mobility between the academic and industry sectors are removed.

## 8.2 INDUSTRY COMMITTEE

The NHMRC has recently constituted an Industry Committee that will give access to the knowledge and experience of the commercial world arising from biomedical research activities. Several informed and successful industry representatives will sit with researchers experienced in commercialising their discoveries. They will be involved in evaluation and development of commercialisation activities for Research Committee.

### 8.2.1 Industry fellowships

The recent introduction of the NHMRC Industry Fellowships, announced by the Prime Minister, is aimed at establishing closer links between researchers and industry. This will facilitate the understanding of commercial research paradigms in the academic community, and encourage links between industry and academic researchers.

The NHMRC advertised, initially, for up to ten Industry Fellowships to be awarded for 2001. Young postdoctoral researchers will spend half their time in a commercial environment during a four-year program. Up to \$800,000 per annum will be allocated to this program.

### 8.2.2 Development grants

The gap between basic research and commercial development has proven to be a key barrier to the commercialisation of research findings and has been difficult to bridge under traditional funding schemes. The NHMRC's Development Grants are aimed at filling this gap by facilitating the further development of products, processes and procedures with potential for commercialisation. The Development Grant applications are peer reviewed by Discipline Panels and, subsequently, evaluated by the Industry Committee prior to recommendation for funding. These are aimed at offsetting the traditional lag between research and its uptake by commercial partners.

In recognition of the difficulty of securing the commercialisation of valuable research findings, the NHMRC will continue to encourage and support the concept of networking between researchers, research managers, patent experts, government agencies, and representatives of industry and investors. The NHMRC was an important sponsor of the Commercialising Health Innovations Forum (CHIF) held in Melbourne in 1999, aimed at enhancing the transition of health applications, from bench-top to clinic, and ensuring that the transition is a smooth one.

---

Industry needs to be aware of potential applications from an early stage, and researchers need to be aware of potential industry interest in sufficient time. These factors are essential to capturing important research findings for the benefit of the Australian community.

The Research Committee is investigating ways to encourage young researchers to undertake training in research management. These skills are needed to provide an appropriate workforce for future commercial development. The aim is to foster mobility of researchers into, and out of, various research areas. The NHMRC will continue to work with the Department of Industry, Science and Resources to ensure greater coordination in responding to these challenges.

---

## 9. INTERNATIONAL COOPERATION

Australian health and medical research is increasingly influenced by developments in the international arena. Australian researchers are also increasingly dependent on close links with international researchers for the exchange of information and knowledge and to learn new developments and techniques.

The NHMRC must ensure that the research it supports is of a high standard at national and international levels for Australia to continue to contribute in the international research arena in the 21st Century. Four recommendations of the Review (27 and 54-56) are aimed at increasing Australia's involvement in the international research scene and fostering greater ties with international research partners.

---

### Box 9.1: Joint initiatives with the Juvenile Diabetes Foundation

---

The Juvenile Diabetes Foundation International (JDFI) recently chose Australia to be a partner country in a worldwide search for a diabetes vaccine. JDFI is one of the major non-government funding bodies of diabetes research in the world. This year they will give \$US85 million to biomedical research. The JDFI and NHMRC will support the vaccine research with \$A10 million over three years.

Funding for other forms of basic research into the prevention and treatment of Type 1 diabetes is also being boosted by joint JDFI/NHMRC Program Grants. This activity and the decision to fund vaccine research will inject \$A33 million into biomedical research in Australia and enable new research to go ahead that would not otherwise have happened.

---

The NHMRC has formed stronger links with the Department of Industry, Science and Resources and the Australian Academy of Science to contribute to many international exchange programs for researchers and postdoctoral fellows. A number of close relationships have been established with overseas funding agencies and with other international bodies involved in health and medical research. Some benefits already yielded from these links include:

- new joint initiatives with the Juvenile Diabetes Foundation International have been set up during 2000 (see Box 9.1);
- Memoranda of Understanding (MoUs) with the Deutsche Forschungsgemeinschaft (Germany), the Swiss National Science Foundation and the Government of Thailand to encourage collaboration in research and training; and
- a new agreement with L'Institut National de la Santé et de la Recherche Medicale (France) for continued funding of exchange postdoctoral fellowships is being developed.

In addition:

- the NHMRC will support Australian partners involved in collaborations successful through the next rounds of the European Union's Fifth Framework Program;
- discussions have been undertaken with medical research funding bodies about current methods of evaluation and funding of research programs in Canada, USA, UK, Spain, and Sweden; and
- research councils in New Zealand, Hong Kong and Singapore have been approached with a view to joint involvement in peer review and exchange schemes for scientists.

---

The Chair of Research Committee has visited the National Institutes of Health (USA) and The Wellcome Trust (UK) with a view to developing international research partnerships concentrating on areas of similar interest and priority. Special joint programs that focus on the health problems of the South Asian-Pacific countries are also under discussion.

---

**Box 9.2: OECD Initiatives for global research collaboration**

---

The NHMRC has been involved in Commonwealth discussions regarding the establishment of the OECD Global Biodiversity Information Facility (GBIF), a compendium of gene and protein data on a diverse array of international, non-human species. The Facility will bring together data from many member nations in a cooperative attempt to better catalogue, understand and preserve our biodiversity. The Facility will provide an invaluable resource in the search for novel bio-pharmaceuticals. The NHMRC has indicated its support for GBIF and Australia is currently negotiating a bid to host the Facility, which should be operational within the next three years.

Another OECD Global Science Forum initiative is the Global Neuroinformatics Network. The NHMRC supports Australia's representative on a working group set up to develop international database linkages for integrating genetic, biophysical, cellular, systems and clinical information about the nervous system and neurological disease. This program will greatly advance progress in understanding the function of the brain and nervous system and the basis of disease processes that are beginning to dominate health systems as our population ages.

---

---

## 10. MANAGEMENT AND RESOURCING OF THE OFFICE OF THE NHMRC

As the peak body providing public funding for health and medical research, in addition to the leading agency providing ethical and public health advice, the NHMRC has a key role in shaping and maintaining the state of Australia's health and medical research sector. The Review places significant focus on the NHMRC and the way it discharges its important functions, along with the support provided by the Office of the NHMRC. Five recommendations (C2 – C6) deal specifically with the way the NHMRC and its Office are structured and supported.

The NHMRC strongly supports the vision portrayed by the Review of an independent and strong NHMRC, with the capacity to support all of its functions in research management, health advice and ethics.

Recent changes to the *National Health and Medical Research Council Act 1992*, passed in the first half of 2000, created the position of Chief Executive Officer (CEO) for the Office of the NHMRC. Under the CEO, the Office of the NHMRC will develop an identity separate from the Commonwealth Department of Health and Aged Care. This separate identity will be important in consolidating the independence of the NHMRC and its links with key stakeholders.



Professor Alan Pettigrew  
Chief Executive Officer  
designate  
NHMRC

---

---

### Box 10.1: The Chief Executive Officer of the NHMRC

---

The Government and NHMRC have just finalised an extensive search and recruitment process for the new Chief Executive Officer of the NHMRC. On 14 September 2000, it was announced that Professor Alan Pettigrew, current Deputy Vice Chancellor (Academic Planning and Resources) at the University of New South Wales, would take up this position at the beginning of 2001.

Professor Pettigrew has a distinguished record in neuroscience research and considerable experience on the Committees of NHMRC, as well as administrative and commercial experience in academic institutions. The new CEO will bring to the Office of NHMRC independence not previously seen since the establishment of the *National Health and Medical Research Council Act 1992*.

---

A major focus in recent months has been the restructuring of the Office of the NHMRC to provide better support to the NHMRC. Additional staff have been appointed to enhance the capacity for research management and the development of research policy. The Office is now located independently of the Department of Health and Aged Care. The new CEO will ensure that the most appropriate administrative structures and support is provided for the effective operation of the NHMRC.

---

## APPENDICES

### Appendix 1

Government response to the recommendations and actions in the report of the Health and Medical Research Strategic Review – NHMRC to action

### Appendix 2

NHMRC Strategic Plan 2000 – 2003

### Appendix 3

Reshaping NHMRC Research Funding Mechanisms – As at 27 February 2000

---

# APPENDIX 1 GOVERNMENT RESPONSE TO THE RECOMMENDATIONS AND ACTIONS IN THE REPORT OF THE HEALTH AND MEDICAL RESEARCH STRATEGIC REVIEW – NHMRC TO ACTION

## SECTION 2

An effective health and medical research sector built on high impact fundamental research, and world-class workforce and infrastructure.

### **2.1 An effective health and medical research sector**

Strengthen individual investigator-initiated, peer-reviewed research with effective team structures; grant allocation mechanisms, management and governance, and support from efficient shared systems.

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
1	Reinforce individual investigator-initiated, peer reviewed research, appropriately fund competitively selected research projects, and remove barriers to mobility of researchers and their funding between institutions, including block-funded institutes	Develop ongoing programs to promote investigator-initiated, peer-reviewed research to stakeholders as the best approach for fundamental research	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	Investigator initiated, peer reviewed research forms the basis for both the Research Committee work on reshaping the grants program and the development of the new Type I (Project)/II(Program) grants	2.2
2		Facilitate portability of fellowships and project and program grants in and out of institutions including block-funded institutes	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget. DETYA to be consulted	RC	Research Committee and ONHMRC have been closely involved with DETYA in discussions of the Green Paper and other initiatives that will affect the operation of the higher education sector and its research activities  Agreement has been reached with the block-funded institutes and Fellows are now free to move in and out of Institutes	2.3
3		Restructure block-funding arrangements by increasing effective competition for a component of funds received by these institutions	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget. DETYA to be consulted?	RC	The block-funded institutes have agreed to mainstream their funding arrangements and a transition process is being planned over 3-4 years	2.4
4	Where appropriate, encourage larger, multi-disciplinary, investigator-initiated projects, research programs and networks	Direct real increases in government investment into larger projects and more programs, employing a variety of grant sizes and duration as appropriate for high impact research across all fields	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC/SRDC	Development of New Program Grants discussion paper on website – scheme to be implemented in the 2001 round of applications; Partnership Grants introduced in the areas of Injury and Diabetes	2.2
5		Extend usual project grant duration from three to five years over a period of time	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	As part of the work to reshape the NHMRC grant programs, Type I and Type II grants will provide greater flexibility in funding research for 3 to 5 years. The impact on funding commitments is continuously being monitored and modelled	2.2
6		Create a portfolio of Network Grants, as proposed by the Research Committee, to promote cross-disciplinary collaboration	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	Partnership grants introduced already. New Program grants facilitate cross-disciplinary collaboration	2.2

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
7		Develop mechanisms to fund research such as cohort studies that require long-term funding commitment	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	Funding commenced in 2000 for the first clinical trials/large-scale patient recruitment studies which use NHMRC support to attract co-funding by other organisations	2.2
8	Continuously review the grant allocation system to ensure that the best, most relevant peers review each others application against internationally recognised criteria to identify and fund world-class, high impact research	Develop bilateral agreements with other countries to cooperate in peer review and use electronic communication to make greater use of international peers especially for program, network, centre and block grants for fellowships	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	International peer review is already a routine part of the assessment process for larger program and institute grants. In 2000, a cohort of NZ researchers joined the peer review team for project grant assessment  NHMRC is investigating a possible wider role in electronic assessment in the South East Asian-Pacific region Discussions are under way with NIH and The Wellcome Trust to strengthen collaboration on peer review and benchmarking of research  A review of existing multilateral and bilateral MOUs has begun with the intention of making more effective use of these agreements	2.1
9		Adopt grant assessment criteria that are internationally recognised, well developed and specifically address concerns about promoting innovation, accountability and international impact	Agreed in principle. Referred to NHMRC for further development in consultation with the ARC with additional funds provided in 1999/2000 budget	RC	Continual improvement of grant assessment processes is in train as part of reshaping the program. Criteria to be addressed by reviewers are similar to those used by NIH, etc. International benchmarks are being developed for ranking within disciplines	2.1
10		Quarantine a portion of NHMRC grant funds for innovative, higher risk research	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	Mechanisms are being considered as part of the development of Type II grants	2.2
11	Create incentives for researchers and groups to come together with stronger management and governance and to strengthen links with teaching and patient care	Facilitate research units and institutions to find potential partners with whom to interact regularly and share infrastructure, fund raising, management and governance	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	RC is currently seeking and actively encouraging strategic partnerships with co-funders, particularly for larger grants  Application criteria for the new Partnership grants require these issues to be addressed.  Future support of facilities designated as part of the national research capacity will place emphasis on sharing infrastructure between research groups. Enhancement of virtual institutes is under discussion	2.2

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
12		Allocate new, short-term funding by a competitive process to introduce or build professional management in a number of research groups, preferably covering a variety of organisational forms, including virtual institutes, with at least 150 or more research staff [\$12 million over three years]	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget		This is being considered as part of the broader work being done to develop management skills across the research sector. DETYA/DISR and DISR are looking at aspects of this issue. There is scope to coordinate activities to provide more effective support	
13		Develop explicit plans and coordinating mechanisms to strengthen links between centres of research excellence and centres of teaching and health care practice	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget		The new rules for accreditation of Institutes by NHMRC specify a requirement for demonstrable links to both academic institutions and health care centres	2.2 5
14	Improve efficiency and effectiveness of shared systems and processes	Develop a more efficient and effective ethics committee system particularly with respect to uniformity of application processes, quality of review and the handling of large, complex, and multi-centre proposals	Referred to AHEC for consideration		Released the <i>National Statement on Ethical Conduct in Research Involving Humans</i> (1999); Producing a manual for Human Research Ethics Committees (HRECs) to complement the National Statement; Development of common application forms by HREC networks supported by AHEC; Modification of a special HREC database, which is used to monitor HREC accountability; Proposing to hold regular workshops for HRECs to support and educate HRECs	6.1 6.4
15		Audit existing research registers [of clinical trials] and develop plans to simplify the processes and reduce the load on researchers, while satisfying the needs of users, and improving accuracy	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget		Discussion is required in relation to accessing clinical trials information through TGA. Further plans to interlink NHMRC supported registers will be developed	5 6.4
16		Promote sharing of infrastructure such as registers, databases, research libraries, genetically modified mice facilities and expensive equipment	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget		This is the concept behind the development of support for the National Research Capacity  These issues are already reflected in the criteria for NHMRC equipment grants  RC and ONHMRC are working with other portfolios, States and Territories to develop inventories of current infrastructure as a first step towards better planning and provision of shared facilities in the future	

## 2.2 Education and workforce

Enhance recruitment, training, and development of a talented and suitably skilled workforce through a range of initiatives including an improved approach to career development.

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
17	Attract students by exposing them to the excitement of science, presenting inspirational and well-rewarded role models and informing them of realistic career opportunities	Develop programs for students from primary to tertiary levels to observe and participate in scientific research	Endorsed. Referred to NHMRC for further development	Council Exec	NHMRC has encouraged the Tall Poppies initiatives and has participated in Science Week promotions to raise public awareness  Discussions with DETYA about further programs to enhance the science curriculum are planned  NHMRC has established a Communications Committee to prepare strategy. Proposals will include students as an audience	3.1.1 3.1.2
18		Actively promote a range of researcher role models	Endorsed. Referred to NHMRC for further development	Council Exec	Discussions are planned with AVCC, Academy of Science and ASMR on possible activities	3.1.1
19	Broaden and update graduate training to produce more diverse and well-rounded graduates	Promote broader training within health and medical research PhD graduates including, eg patent law, finance, journalism, health management, research coursework, and early exposure to different laboratories	Endorsed. Referred to NHMRC to consult with relevant bodies	RC	Discussions with DETYA are planned	3.1.1
20		Promote stronger links between universities and external centres of excellence to stimulate PhD and undergraduate training in developing fields and methods such as genetics, molecular biology and bioinformatics	Agreed in principle. Referred to NHMRC for further consideration in consultation with DETYA	RC SRDC	Additional targeted scholarships in conjunction with the larger molecular bioscience institutes to be discussed with DETYA	2.2 3.1.1
21		Build capacity for quality research involving health practitioners of all kinds including those in under-researched areas such as alternative and complementary therapy	Develop and promote training of clinician researchers by: encouraging combined MBBS/PhDs and MD/PhDs; offering Fractional Fellowships to allow clinical fellows to continue to practice, and exposing clinicians to quality research through greater interaction with centres of research excellence	RC	Practitioner Fellowships were advertised in December 1999 and will be awarded for 2001. Discussions with Deans of Medical Schools and Universities to be undertaken. Mechanisms to encourage involvement of clinicians in research are under consideration.	3.1.1

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
22		Ensure broad representation of research backgrounds on grant assessment panels including clinical, public health and health services research expertise	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	Review by discipline panels from 2000 will continue to include clinical, public health and health services researchers to ensure the relevance and rigour of the NHMRC peer review process. Peer review of New Program Grants will include representation of all research approaches	3.1.1
23		Encourage partnerships between research scientists and health practitioners in applying for research grant support	Agreed. Referred to NHMRC	RC	The current Partnership grants and the proposed New Program grants will encourage this kind of collaboration	2.7 7
24		Train and develop indigenous health workers as researchers	Agreed in principle. Referred to NHMRC for further consideration	RC/ SRDC	Continuation of RAWG program (joint with OATSIH)	2.2 3.1
25		Recruit and train researchers in a range of under-researched areas such as non-traditional and complementary treatments for which there is recognised tertiary training	Agree in principle, examine in context of NHMRC strategic plan	SRDC	The SRDC priority setting process has identified under-researched areas and the need to build research capabilities. Targetted research grants in these areas are hoped to attract a wider range of researchers. A collaborative research program in Complementary Medicine is under discussion with TGA and industry	3.1
26	Improve research career development to create opportunities for, and reward the best researchers	Develop ways for talented and experienced research assistants and research officers to develop their careers and remuneration beyond present limitations without doing a PhD	Agreed in principle. Referred to NHMRC for further consideration in consultation with DETYA	SRDC	Discussions are under way with DETYA to explore options	3.1.2
27		Form bilateral agreements with other countries for exchange of early postdoctoral researchers	Agreed in principle. Referred to NHMRC for further consideration	RC	A review of existing multilateral and bilateral MOUs has begun with the intention of making more effective use of these. New agreements will be sought	3.1.1 9
28		Create a strong culture of mentorship by developing a program to build mentoring skills amongst researchers and by embedding mentoring requirements into fellowship awards	Agreed in principle. Referred to NHMRC for further consideration	RC	A mentor system already operates for overseas training fellows. These issues will be considered by Training Awards Committee and by Fellowships Committee in developing the new fellowship program	3.1.1

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
29		Quarantine a portion of NHMRC funds for three year project awards to new investigators, perhaps incorporating a mid-term review and mentorship requirements	Referred to NHMRC for further consideration	RC	New Investigator Grants have been awarded in the current and next round of grants. Budget mechanism under consideration in reshaping program	3.1.2
30		Track Australian researchers overseas, maintain mentor contact, and assist the best to apply for returning fellowships	Agreed in principle. Referred to NHMRC for further consideration	RC	Mentorship program already in place for NHMRC training fellows. Work will be done to raise awareness of NHMRC programs, including the Howard Florey Fellowships for returning researchers	3.1.1
31		Develop, in collaboration with research institutions, industry and private non-profit organisations, a number of generously funded fellowships to attract or retain the best 3-7 year postdoctoral researchers to Australia	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	Industry Fellowships have been advertised for two years in industry and two years in academic institution. Expect up to 10 to be awarded for 2001. Industry has so far not contributed to funding these	
32		Reinvigorate the NHMRC Fellowship scheme by: introducing more entry positions; steepening the pay scales; and adopting measures to ensure that the best researchers have a realistic opportunity to move through to the top of the scheme	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	Changes to the Fellowships scheme are planned as part of reshaping. Support in the form of "packages" is planned for 2002 onwards	2.3.1

## SECTION 3

Priority-driven research that contributes directly to population health and evidence based health care.

### 3.1 Developing priorities

Develop a consultative priority-setting program, managed through an enhanced NHMRC, to establish strategic priorities across the full array of health issues.

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
C1	Specify and develop information to support the priority-setting process	Develop technical capabilities within the Office of the NHMRC to support the synthesis and analytical components of priority setting	Agreed	RC		
33	Consult with researchers, health care providers, and consumers in setting priorities across the full range of health issues	Involve a broader range of participants at lower levels of the process, including consumers and people involved in day-to-day health care delivery, management and policy formation	Agreed in principle. Referred to NHMRC for further consideration	CEO	The process conducted by SRDC to identify research priorities for the next triennium has included workshops with representatives of major organisations and policy makers and a special consultation organised by Consumer Health Forum	4 7.1 7.2
34	Build on the work of the Strategic Research Development Committee to address urgent research needs	Strengthen the existing system, as developed by SRDC, to meet health system needs for urgent research	Agreed. Referred to NHMRC for further development	SRDC	SRDC has done further work to refine the mechanisms to assess urgent research requirements and the mechanism is performing well	4 7

### 3.2 Application of the research investment within these priorities

Identify sources and efficiently and rigorously allocate and track funds devoted to priority-driven research.

35	Adopt a range of funding tactics extending from investigator-initiated research targeted to priority areas to commissioned research on carefully formulated questions, and allocate funds by way of rigorous, scientific peer-review of competitive proposals	Consider new grant structures that better suit the needs of strategic, development and evaluation research	Agreed in principle. Referred to NHMRC for further consideration	RC/ SRDC	The reshaping of the NHMRC grants programs will provide greater flexibility in responding to these research needs through the development of Type I/II grants and an expansion of the SRDC processes for research in priority areas  A different joint funding mechanism between the Commonwealth, State and Territories will fund priority driven research in 2001	4
36		Develop a mix of funding tactics that ensures a tight focus on the defined priorities and the best use of available research expertise	Agreed in principle. Referred to NHMRC for further consideration	RC/ SRDC	The new Type I & II grants and priority research funding mechanisms will provide a range of options to support research priorities	4

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
37		Include an iterative process involving a review committee of stakeholders and experts and the investigators in moulding research questions and proposals to the priority-driven research program's objectives	Agreed in principle. Referred to NHMRC for further consideration	SRDC	Processes for defining research questions are still being explored in consultation with state/territory government departments as the principal co-funders	7.1
38		Include scientific peer review in processes for allocation of funds for priority-driven research	Agreed	SRDC	All research funded through NHMRC, including research in nominated areas, is subject to peer review. This process is being used in some programs funded by government departments	2.1.1

### 3.3 Capacity to execute this research

Build capacity to execute strategic, development and evaluation research across the broad spectrum of research fields.

39	Improve research training and mentoring for researchers and decision-makers to promote effective priority driven research across the full range of health issues		Agreed in principle. Refer to NHMRC for consideration	RC/ SRDC	Development Grants have been modified towards the SPIRT model for projects with potential commercial outcomes. Partnership Grants will resemble the SRC/CRCs by involving Government, universities, non-government institutions and community/ commercial interests in research in a particular area	3.1.1 8.2.2
40		Institute a scholarship scheme or other means of support, perhaps linked to a Special Research Centres program for trainee and early researchers in applied fields	Refer to NHMRC for consideration	RC/ SRDC	Training Awards Committee will further consider this in the new triennium	2.3 3.1 7.2 5
41	Maintain support for existing shared resources and build new ones, exploiting information technology	Increase ethically acceptable access to and linkage between large population health databases for research purposes	Agreed in principle. Referred to NHMRC for further consideration	Council Exec	This will form part of a larger information capabilities project in the next triennium	

### 3.4 Interface with policy and practice

Improve mechanisms for integration of research-based knowledge into policy and practice.

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
42	Disseminate knowledge widely to practitioners, managers and the community to build understanding and bring pressure to adopt best practice	Recognise research reports targeted specifically to decision-makers for the purposes of measurement of research performance	Agree in principle. Referred to NHMRC for further consideration in consultation with DETYA	SRDC/ RC	Mechanisms for more effective communication of research results are being considered in developing the monitoring and evaluation framework for research translation  SRDC has developed translational research programs, such as injury and evidence based clinical practice	5 7.2
43		Develop a strategy for early and effective dissemination of research results to practitioners, policy-developers, decision-makers and consumers in Australia	Agreed. Referred to NHMRC for further development	Council Exec	Work is being done to identify current mechanisms and their effectiveness in reaching target audiences. This information will be used in developing reporting and translation requirements to be in future application criteria and conditions of award  NHMRC Communications Committee is preparing a strategy to address communication with a wide range of audiences	5 7.2
44		Require applications for strategic, development and evaluation research to include transfer plans and commitments	Referred to NHMRC for further consideration	RC/ SRDC	Further action to strengthen translation of research into practice will be included in the Strategic Plan for 2000-2003  Increasingly a focus, eg for special Aboriginal and Torres Strait Islander health research	
45		Fund research transfer infrastructure within strategic, development and evaluation research organisations, including expertise in mass media, web sites and public relations	Referred to NHMRC for further consideration	RC/ SRDC	This will be examined in the context of the information capabilities project for the next triennium	5
46	Develop methods and infrastructure to promote the uptake of new knowledge into practice, and prompt improvement where transfer is deficient	Fund research into promoting the uptake of knowledge into practice and measuring research payback	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	HAC/ SRDC	Work is being done as part of the development of research outcomes monitoring and evaluation	5

## CHAPTER 4

An industry sector that mutually reinforces the research sector.

### 4.1 Technology transfer and new business formation

Develop the culture and management skills needed to support technology transfer and new business venture establishment.

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
47	Develop a research culture that is positive toward commercialisation, transfer of researchers to industry, risk-taking and wealth accumulation	Develop programs to reduce barriers to risk taking and entrepreneurship such as incorporating measures of commercialisation like patents in assessment of track record, and promoting education programs for researchers	Agree in principle. Referred to NHMRC for further consideration in consultation with DETYA	RC	Patents have been recognised for assessment of track record for some years. Development Grants are directed to enhance commercial uptake of research results. Changes to the grant application criteria and conditions of award will point to commercialisation as an important outcome  Further development of research monitoring and evaluation is being undertaken in consultation with DETYA regarding incentives and past impediments	2.1 3.1.1 8.1 8.2

### 4.3 Investment by established industries

Support and enhance the presence and research investment of established pharmaceutical and related industries.

48	Achieve a world competitive basis for investment by major established firms such as pharmaceutical companies to reinforce other initiatives	Develop collaborative research grants for joint industry-research proposals based on the ARC SPIRT scheme	Agreed in principle. Referred to NHMRC for further development with additional funds provided in 1999/2000 budget	RC	As well as further enhancement of the Development Grants mentioned above, discussions have begun with DISR and DETYA about better integration of fundamental research programs and industry R&D programs. The aim is to bridge the current funding gap and better use existing support programs	8.2
----	---	---	---	----	---	-----

## CHAPTER 5

Public Investment in a well-managed research sector.

### 5.1 The NHMRC

Enhance the organisation, management and resourcing of the NHMRC.

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
IC	Appoint a full-time Chief Executive Officer with specific skills and background to lead and reshape the NHMRC to realise its full potential as the peak body for health and medical research	Prepare a position description and implement an international search for a full-time CEO of the NHMRC. The appointment should be made during 1999	Agree	Implementation Group/Minister	Appointment announced 14th September, 2000	10
C2	Support the major NHMRC functions with full-time senior managers with strong research of health care backgrounds and dedicated research-literate secretariat staff while retaining the Office within the DHAC	Define roles and appoint other senior managers in relation to each of the principal committees of the NHMRC (including the Priority-Driven Research Committee as recommended in Chapter 3)	For the incoming CEO to action	CEO	Training Awards Committee will further consider this in the new triennium	10
C3		Define the relationship between the Office of the NHMRC and the Council and the Office of the NHMRC and the Secretary of DHAC	Agree. To be incorporated in an MOU between the Secretary of DHAC and the CEO of NHMRC	CEO		10
M1	Provide governance and advice needed in the context of these full-time management initiatives by recasting the roles and composition of the Council, the Council Executive and the Committees	Develop guidelines for operation of the Council, its Executive Board and the Committees in recognition of the new full-time scientific management	Agree. The Minister for Health and Aged Care to implement in conjunction with new appointments to the NHMRC from January 2000	Minister		
M2	Strengthen NHMRC's obligations and linkages to the DHAC and other health departments and bodies through formal agreements	Constitute a ten to twelve member Executive Board with broad representation including 3-4 State and Territory representatives and an eminent, experienced chairman	Agree. The Minister to settle with the incoming CEO and the Chairman of Council in the context of approving the Council's strategic plan	Minister		10
C4	Assess NHMRC's administrative funding in the light of this reorganisation, the roles of the NHMRC envisaged by this Review, and relevant international benchmarks	Develop Memoranda of Understanding between NHMRC, DHAC and State and Territory health authorities to cover definition of roles and responsibilities, performance of services and delegated authorities	Refer to AHMAC and NHMRC	CEO		10

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
C5	Assess NHMRC's administrative funding in the light of this reorganisation, the roles of the NHMRC envisaged by this Review, and relevant international benchmarks	Formally clarify relationships between NHMRC, AHMAC, NPHP, AIHW and ARC	Agree. NHMRC to action bilaterally with these bodies	CEO		10
C6		Determine the level of administrative funding and support required for the [Office of the] NHMRC under the new arrangements, and provide the funds	Additional funding provided in 1999/2000 budget. Resource agreement to be incorporated in an MOU between the Secretary of DHAC and the CEO of NHMRC	CEO		10

## 5.2 The Community

Engage and involve the community as stakeholders in the research effort.

49	Involve the community in the research process and communicate about the role, benefits and results of research, consequences of new fields such as genomics, and ethical issues	Involve the community in setting the agenda for priority-driven research (See Chapter 3)	Agree. Referred to NHMRC for further consideration by SRDC (See earlier comments under 33)	SRDC	(See earlier comments under 33)	4 7.1
50		Consider whether grant conditions should require greater commitment to informing community participants in research about the purposes, risks and results of research in which they are involved	Referred to NHMRC for further consideration	RC	Review current requirements established by AHEC guidelines and the Statement of Good Scientific Practice to identify where concerns remain to be addressed. Special panel included in review of applications in Indigenous Australian Health Research	7
51		Promote public understanding and appreciation of research and "how science is done" through several initiatives such as organised direct communication by "citizen scientists" to the community; more public communication from NHMRC and its Committees; and programs like the CSIRO community education and participation schemes	Agree. Action already taken with "Tall Poppies" initiative. Committee of Ministers/Implementation Committee and NHMRC to consider further development	Council Exec	Encourage support for Tall Poppies in the new triennium  Initiate discussions with DETYA, DISR, CCST and other relevant bodies about initiatives to raise science awareness in general and the role of health and medical research in particular  NHMRC Communications Committee is preparing a strategy to address communication with a wide range of audiences  Statement being developed jointly with Consumers Health Forum Australia Inc.	7

Rec. No	Recommendations	Actions	Government Response	Responsibility	Action	Report Ref.
52		Consider whether devices like disease, organ or patient group based streams within the NHMRC research administration processes should be adopted to raise the relevance of the research to the community	Referred to NHMRC for further consideration	RC	The concept of research streams is under active consideration, for both assessment and presentation, as part of the reshaping exercise. Nearly half the peer review panels were centred around disease processes or organ systems in 2000	
53	Develop an effective, cohesive voice in the research sector for communication to politicians and policy makers	Develop an ongoing program to inform politicians and policy makers about research	Referred to NHMRC for further consideration	Council Exec	Will be addressed by the Council in the new triennium as part of the communications strategy	
54	Broaden the funding base by facilitating international and cooperative opportunities, improving the tax environment for philanthropy and considering innovative funding ideas	Develop a facilitation arm within NHMRC – perhaps with part-time representatives in US and other countries – to review NHMRC processes to enable jointly funded and executed research projects, to identify international opportunities, promote them to Australian researchers and advise Australian researchers on preparing applications	To be considered by the NHMRC	RC	Discussions to be commenced with Austrade, other portfolios and the States that maintain an overseas presence. Contact has been made with Counsellor (DISR) at Australian Embassy in Washington. The options being considered will use existing resources to explore opportunities for the health and medical research sector	9
55		Negotiate bilateral agreements or alliances with other countries to cover fellowship exchanges, regular conferences of the countries' best young researchers, agreements on cooperating in peer review	Existing agreements to be reviewed by NHMRC	RC	Review of existing multilateral and bilateral MOUs has begun with the intention of making more effective use of these agreements and to identify the need for new agreements	9
56		Develop a strategic alliance with the US on particular disease issues where a combined approach may be beneficial and where Australia has special interest and skills relating to a problem or more ready access to populations (eg malaria, skin cancer)	Referred to NHMRC for consideration	RC	Further discussions to be held with NIH in the new triennium following the appointment of the new director of the NIH. Planned discussion with Senator Neal Lane (US Sec of State for S&T) re- Australian research in infectious diseases. Similar arrangements will be pursued with European (Wellcome Trust, EU Fifth Framework, etc.) and Asian (particularly Japanese) organisations	9

---

APPENDIX 2      NATIONAL HEALTH AND MEDICAL  
RESEARCH COUNCIL  
- STRATEGIC PLAN 2000-2003

---

## CONTENTS

<b>Introduction</b>	1
Central themes of the Strategic Plan	2
The goals of the NHMRC	3
Statement of Strategic Intent	3
The role of the NHMRC	3
The external strategic environment	4
Government	4
Research	4
Industry	4
Community involvement	4
Internationalisation	5
Information management	5
Summary	5
Major national health issues facing the NHMRC	5
Relationships within the NHMRC	6
Objectives	7
Key strategies	9
Committee strategies	9
Health Advisory Committee	9
Research Committee	10
Strategic Research Advisory Committee	11
Australian Health Ethics Committee	11
Performance measures	12
<b>Appendix 1</b>	
Research outcomes evaluation model	13
Knowledge, information and training for developing better strategies to improve the health of the Australian community	15
<b>Figures</b>	
Figure 1 Structure of the NHMRC	2
Figure 2 Research outcomes framework	14

## INTRODUCTION

The National Health and Medical Research Council (the NHMRC) is a statutory body established under the *National Health and Medical Research Council Act 1992* (the Act).

The Act sets down four statutory obligations for the NHMRC:

1. To raise the standard of individual and public health throughout Australia.
2. To foster the development of consistent health standards between the States and Territories.
3. To foster medical research and training and public health research and training throughout Australia.
4. To foster consideration of ethical issues relating to health.

Each Council is appointed for a three-year term, requiring the drafting of a Strategic Plan to guide its work for the triennium.

The NHMRC is unique among national research funding and advisory bodies because it consolidates within a single national organisation the often-independent functions of research funding and development of advice. Its great strength is that it draws upon all components of the health system including governments, medical practitioners, nurses and allied health professionals, biomedical and social science researchers, teaching and research institutions, public and private program managers, service administrators, community health organisations, and consumers.

The strategies set out in this Strategic Plan are designed to achieve outcomes in research, advice, and health ethics.

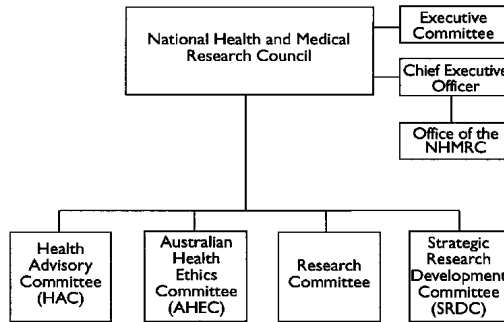
These outcomes are contributed to by the four Principal Committees of the NHMRC namely the Research Committee, the Strategic Research Development Committee, the Health Advisory Committee and the Australian Health Ethics Committee.

The NHMRC reports on its activities annually to the Minister for Health and Aged Care and, towards the end of every triennium, provides the Minister with a major review of implementation of its Strategic Plan.

The work of the NHMRC and its Committees is, in turn, supported by the Office of the National Health and Medical Research Council. Recent amendments to the *National Health and Medical Research Council Act 1992* established the position of Chief Executive Officer. An appointment to this position will be made early in this triennium.

Figure 1 below shows the structure of the NHMRC.

Figure 1 Structure of the NHMRC



#### CENTRAL THEMES OF THE STRATEGIC PLAN

In this triennium the NHMRC faces particular challenges resulting from recent rapid developments in biotechnology, globalisation and commercialisation, coupled with the increasing importance of population-based and preventative approaches to health and the emergence and re-emergence of specific diseases. However a number of opportunities also present themselves, pre-eminent of which is significantly increased research funding over the triennium. Rapid change in the external environment requires the NHMRC to be particularly responsive and to work more effectively with others in Australia and overseas.

Collaboration and communication are key themes in this plan.

The NHMRC needs to communicate the results of its work—whether research or health advice—to the Australian community. This communication must be effective. Collaboration and partnerships with key organisations will assist effective communication.

A major thrust of the NHMRC’s strategies will be to maximise collaboration between its Principal Committees to strengthen its ability to respond to emerging issues. In addition, collaboration with key partners will further strengthen the NHMRC’s relevance and responsiveness to local, national and international issues.

This Strategic Plan sets out the NHMRC’s goals, its role in achieving those goals, and the responsibilities of the Principal Committees in contributing to the NHMRC’s agenda.

#### THE GOALS OF THE NHMRC

1. The NHMRC will provide leadership to enhance an effective Australian health and medical research sector and promote high impact research.
2. The NHMRC will support research within an ethical framework that meets the high standards expected by the Australian and international communities.
3. The NHMRC will develop health advice based on the best available evidence.

#### STATEMENT OF STRATEGIC INTENT

To achieve these goals the NHMRC will provide leadership and work with other relevant organisations to improve the health of all Australians by:

- fostering and supporting a high quality and internationally recognised research base;
- providing evidence based advice;
- applying research evidence to health issues thus translating research into better health practice and outcomes; and
- promoting informed debate on health and medical research, health ethics and related policy issues.

#### THE ROLE OF THE NHMRC

The NHMRC is an independent, trusted and authoritative source of health information and advice to the wider Australian community. As such the NHMRC plays a leading role in protecting and improving the health of all Australians. This role is demonstrated through the development and funding of high quality research, within an ethical framework, and the application of the best available evidence to advice on a range of individual and population health issues. Furthermore, the NHMRC is committed to continuous monitoring of its own performance and to communication with the community to ensure that knowledge of its activities is widespread.

In all of its activities the NHMRC strives for:

- consultation and collaboration with key interest groups;
- effective communication;
- relevance to the health and research sectors;
- innovation and responsiveness;
- high quality; and
- high ethical standards.

## THE EXTERNAL STRATEGIC ENVIRONMENT

The environment within which the NHMRC operates is complex, largely due to the number of stakeholders and their inter-connecting relationships. By way of illustration, Government and non-government bodies contribute to health care in Australia on a variety of issues ranging from clinical practice to information management to consumer advocacy. These organisations may have competing priorities that will sometimes make consensus difficult. Nevertheless, knowledge of those issues and attempts to address them, where appropriate, are an essential part of the NHMRC's ability to maintain its position at the forefront of research and health advice in Australia.

### **Government**

Government sees the NHMRC as a source of advice on evidence-based approaches to health care. Council membership includes representatives of the Commonwealth and each State and Territory health authority. This brings to the NHMRC not only the opportunities afforded by a breadth of experience and knowledge but also the challenges embedded within a wide range of competing issues and priorities. In addition there are numerous national and state government agencies and other bodies that have an interest in health care with whom the NHMRC should establish formal or informal networks.

### **Research**

Research institutions funded by the NHMRC, those seeking funding, and those pursuing other forms of partnership with the NHMRC all contribute to the debate on health and medical research. The different perspectives each brings to the NHMRC strengthens Council's ability to develop policy initiatives in research.

### **Industry**

The need to strengthen relationships with industry is a direct response to the increasing knowledge-based economy and commercialisation of health and medical research. The NHMRC needs to take new approaches to relationships with industry in order to promote the application of research findings for both health and economic benefit.

### **Community involvement**

Consumers are becoming increasingly concerned about health and health care and this concern has in recent times been broadened to include concerns about the ethics of health and health care. Improvements in privacy legislation and ethical conduct of research involving people and animals are all responses to this increasing concern. The challenge for the NHMRC is to ensure that it not only maintains the highest standards within its own programs but that it demonstrates leadership to the research and health care communities. Engaging consumers and the community in setting these standards is a continuing priority.

### **Internationalisation**

The NHMRC must continue to contribute in international research fora and develop links with international health and medical research agencies. Partnerships with international agencies and organisations and collaboration in fellowships and research projects will assist the NHMRC to maintain strong international links.

### **Information management**

Internationalisation of health is in part brought about by the enormous leaps in communication and the opportunities afforded by electronic commerce and the internet. The capacity to share information worldwide in real time will facilitate knowledge transfer and contribute to national and international collaborations. This offers both opportunities and challenges—the opportunity to be part of an international effort and the challenge to maintain momentum and stay at the leading edge.

### **Summary**

In summary, governments, non-government organisations, research bodies, consumer groups and individual consumers, all have a stake in the work of the NHMRC. This, coupled with rapidly improving means of communication and internationalisation and commercialisation of health care and health and medical research, all make up the environment within which the NHMRC works.

### **MAJOR NATIONAL HEALTH ISSUES FACING THE NHMRC**

The health and medical environment is constantly changing and this presents a number of opportunities and challenges. The *Review of Implementation of the Strategic Plan 1997–2000*<sup>1</sup> identified a number of future challenges for the NHMRC which included new and emerging diseases, interactions with industry, internationalisation, the transfer of research into policy and practice, and strategic research.

The incoming Council endorses the thrust of the *Review* and has identified the following major national health issues as likely to arise during the life of this Strategic Plan:

- the health of indigenous Australians;
- mental health;
- nutrition and food safety;
- consequences of physical inactivity and obesity;
- assisted reproductive technology and the use of cloning technology;

---

1 National Health and Medical Research Council (1999) *Review of Implementation of the Strategic Plan 1997–2000*. AusInfo

- biotechnology broadly including human genomics, gene-related therapies and xenotransplantation;
- emerging and re-emerging diseases including antibiotic resistant bacteria and their impact on infection control;
- rural and remote health care;
- non-evidence based clinical practice;
- health inequalities including social and economic determinants of health; and
- safety and quality in health care.

In addressing these significant issues there are a range of health system issues which should be taken into account. These are:

- relationships with other organisations, government sectors and the community;
- relationships with the States and Territories;
- internationalisation and global competition in research;
- changes in societal structures and values;
- cultural diversity in Australia;
- the ageing population;
- environmental impact including climate change and patterns of human settlement; and
- research infrastructure and related workforce issues.

It is important that the NHMRC remains in a position to respond to these challenges. The objectives and key strategies detailed in this Strategic Plan reflect the NHMRC's intention to work towards addressing the many issues highlighted above.

The list is not exhaustive and priorities may change over the life of the Strategic Plan.

#### RELATIONSHIPS WITHIN THE NHMRC

Each of the four Principal Committees will contribute to the work of the NHMRC.

Both the Research Committee and the Strategic Research Development Committee contribute to the research outcomes. The Research Committee is primarily responsible for research funding across the whole spectrum of biomedical, clinical and population health services. The Strategic Research Development Committee identifies knowledge gaps and initiates priority and urgent research in particular areas. The Australian Health Ethics Committee is a key partner in that it sets the ethical framework and standards for research involving people.

The Health Advisory Committee provides health advice to governments and the Australian community. In doing this, the Committee provides input to the two research committees to assist in identifying gaps in research knowledge.

The Australian Health Ethics Committee is responsible for providing and supporting the health ethics framework essential for the ethical conduct of research involving people. The Committee also facilitates debate and consideration of issues relating to health ethics more generally—in this it liaises with the other Principal Committees to ensure a broad range of views are canvassed.

Each Principal Committee interacts with each of the other Principal Committees, as well as reporting to Council. For example, the research committees cannot achieve their objectives in isolation from the dialogue and guidance on ethical issues and the scope for disseminating the knowledge gained from the research into the public domain. In turn, the two research committees may also play a role in alerting the advisory and ethics committees about public health or ethical issues being raised by prospective research.

These collaborative relationships need further development during the currency of this Strategic Plan to ensure that the greatest possible value is delivered by the NHMRC to the community. Many of the NHMRC's objectives require coordinated effort by the Principal Committees.

Collaboration is a very important theme for the NHMRC. The Strategic Plan calls for a collaborative working environment within the NHMRC that will be achieved largely through improved internal co-ordination.

## OBJECTIVES

In this triennium the NHMRC will continue to build an effective Australian health and medical research sector based on high impact research and a world class work force and infrastructure, delivering knowledge to increase the health and wealth of the Australian community.

The NHMRC will facilitate Australia's contribution to international health and medical research and the health care arena by sharing its knowledge with the local region and the broader international community.

The NHMRC will work to achieve the following specific objectives:

- the creation of internationally competitive knowledge;
- further development of world class research capacity;
- translation of knowledge for the benefit of the community;
- maintenance and promulgation of high ethical standards;
- engagement with the Australian community; and
- improvement of communication strategies.

The NHMRC can best achieve its objectives through collaboration with other organisations. Throughout the triennium the NHMRC will work to build strong relationships with: Commonwealth and State and Territory governments; government established agencies including peak councils; the research community including social and public health researchers and institutions; Human Research Ethics Committees; other research funding organisations; universities; health service providers; the community including consumer groups; industry; and international agencies and organisations.

- Internationally competitive knowledge creation:
  - identify and support research at the highest international level;
  - fund research covering a broad range of health and medical issues;
  - gather and maintain knowledge in key priority areas for individual and population health for the purpose of developing advice and guidelines; and
  - identify and fund priority areas for research.
- World class research capacity:
  - provide leadership in the development of facilities required for national research;
  - identify specific areas where research capacity is deficient;
  - identify opportunities to build capacity;
  - facilitate development of health and medical research in the public interest;
  - utilise advocacy and leverage capabilities to achieve increased investment in research infrastructure;
  - examine workforce needs and strengthen training opportunities;
  - identify workforce implications of emerging priority areas; and
  - increase and widen the scope of fellowship programs.
- Translation of knowledge for the benefit of the community:
  - provide timely advice based on the best available evidence for individual and population health;
  - ensure that the advice is disseminated effectively both nationally and internationally; and
  - foster research and action that encourages changes in community and clinical practice.
- Maintenance of high ethical standards:
  - provide high quality advice and guidance on ethical issues in health research and health care, including guidelines;
  - liaise with relevant national and international bodies;
  - ensure that research reflects high ethical standards;

- 
- identify ethical issues arising from the research and advisory programs; and
  - support and monitor the work of institutional ethics committees (human and animal).
  - Engagement with the Australian community and development of communication strategies:
    - ensure wide consultation and communication on the advice arising from the NHMRC's research program;
    - engage relevant areas of the Australian community in the development of priority research strategies; and
    - engage the Australian community in dialogue on major ethical issues.

#### KEY STRATEGIES

To achieve these objectives, the NHMRC will:

- build stronger external relationships;
- maintain Australia's excellent research capacity across all areas;
- engage the community in ongoing dialogue on issues in health, including health ethics and other matters;
- adopt creative approaches to communication of health and medical advice to ensure the results of research are translated into practice in the Australian community;
- foster priority driven research to address the key health issues; and
- develop mechanisms for measuring and reporting performance.

Each of these key strategies will be embedded in the work plan of Council and its Committees. Each Committee will also adopt specific strategies to enable the achievement of these objectives.

#### COMMITTEE STRATEGIES

Whilst being mindful of the need for collaboration between Committees, each Committee has identified specific strategies to enable them to contribute to the NHMRC's goals. These strategies will be translated into work programs at the Committee level and are set out below.

#### **Health Advisory Committee (HAC)**

The primary role of the Health Advisory Committee is to translate the findings of research into policy and practice and to advise the community on health and health issues.

To achieve this the HAC will:

- gather and maintain current knowledge on key priority areas for individual health and population health (eg through surveys and systematic literature reviews sponsored by the HAC or its working parties);
- consider available research findings in priority areas and flag those that could be further developed as advice on policy;
- in collaboration with the SRDC, identify gaps in available knowledge and suggest research needs for consideration by Council and its Principal Committees;
- provide timely advice, based on available evidence, on matters of agreed priority relating to individual health and population health; and
- ensure that advice is widely accessible and provided in ways that are tailored to specific audiences.

#### ***Immediate priorities***

- support national strategies around protection of the blood supply;
- participate in the implementation of the national strategies arising from the report of the *Joint Expert Technical Advisory Committee on Antibiotic Resistance* (JETACAR); and
- promote development of clinical practice guidelines by expert external bodies in accordance with the NHMRC standards.

#### **Research Committee (RC)**

The primary role of the Research Committee is to build and support an effective Australian health and medical research sector built on high impact research, a high calibre workforce and infrastructure; and to fund research that will provide quality knowledge to increase the health and wealth of the Australian people.

To achieve this the RC will :

- increase knowledge in all areas relevant to better health by peer review and competition for funding support with increased focus on performance, output and outcomes in an international context;
- increase skills in research across the spectrum of health by expanding training schemes and fellowships; building research capacity with a particular emphasis on clinical, public health and health services; and working with others on a broad range of research matters; and
- help grow knowledge-based industries in Australia by providing increased support and incentives to bridge the research/industry gap and foster an environment that values industry achievement.

---

*Immediate priorities*

- progress the implementation of the research 'reshaping' agenda against the performance outcomes standards as set out in Appendix 1.

**Strategic Research Development Committee (SRDC)**

The primary role of the SRDC is to promote research in identified strategic areas where the current research is lacking and does not correspond to the weight of the issue for health and health care in Australia. The SRDC will assist in the development and dissemination of strategic research findings.

To achieve this the SRDC will:

- identify gaps in knowledge amenable to research;
- develop and implement a program of priority driven research in identified areas;
- refine and advance the priority setting process to ensure relevance and effectiveness, in consultation with stakeholders; and
- monitor the output of the SRDC-supported research and its translation into improved clinical practice to ensure the delivery of high quality health outcomes.

*Immediate priorities*

- develop action plans around the research priorities identified at the conclusion of the previous triennium;
- develop strategies to continue research capacity building in the areas of health economics and application of evidence-based guidelines into clinical practice; and
- continue existing strategies around electro-magnetic energy and the National Illicit Drugs Strategy.

**Australian Health Ethics Committee (AHEC)**

The primary role of the AHEC is to provide high quality ethical advice with respect to health research and health care.

To achieve this the AHEC will:

- continue to provide leadership in raising community awareness and facilitating debate;
- improve support for and liaison with Human Research Ethics Committees;
- consider specific ethical issues including xenotransplantation, human cloning and assisted reproductive technology;

- continue consideration of privacy issues; and
- liaise with relevant national and international organisations.

***Immediate priorities***

- develop guidelines on xenotransplantation;
- monitor compliance with the *National Statement on Ethical Conduct of Research in Humans* and *Guidelines under Section 95 of the Privacy Act 1988*; and
- revise the *Interim Guidelines on Ethical Matters in Aboriginal and Torres Strait Islander Health Research*.

PERFORMANCE MEASURES

Performance measures for the research function have been agreed with Ministers as a result of implementation of the Health and Medical Research Strategic Review. These are at Appendix 1.

Performance measures for the health advisory and health ethics functions will be developed by those committees separately within six months of establishment of the committees.

---

## APPENDIX 1

### RESEARCH OUTCOMES EVALUATION MODEL

#### **Introduction**

This paper outlines a conceptual model for use in developing the health and medical research outcomes framework. The model is based on the outcome-output framework used for the introduction of accrual budgeting in the Commonwealth government and the discussions at the Research Outcomes Workshop held in November 1999.

Once the model has been agreed it will be extended to include details of the monitoring and evaluation methodologies needed to provide performance and management information. The development of the final framework will complement and inform work on NHMRC's strategic plan and Council's reporting requirements.

The outcomes and outputs in the model have been developed in line with the Department of Finance and Administration (DoFA) guidelines on accrual budgeting. These guidelines have been used to ensure that performance information will be consistent with requirements of the annual reporting cycle and the preparation of the Portfolio Budget Statement as well as meeting the information needs of other stakeholders.

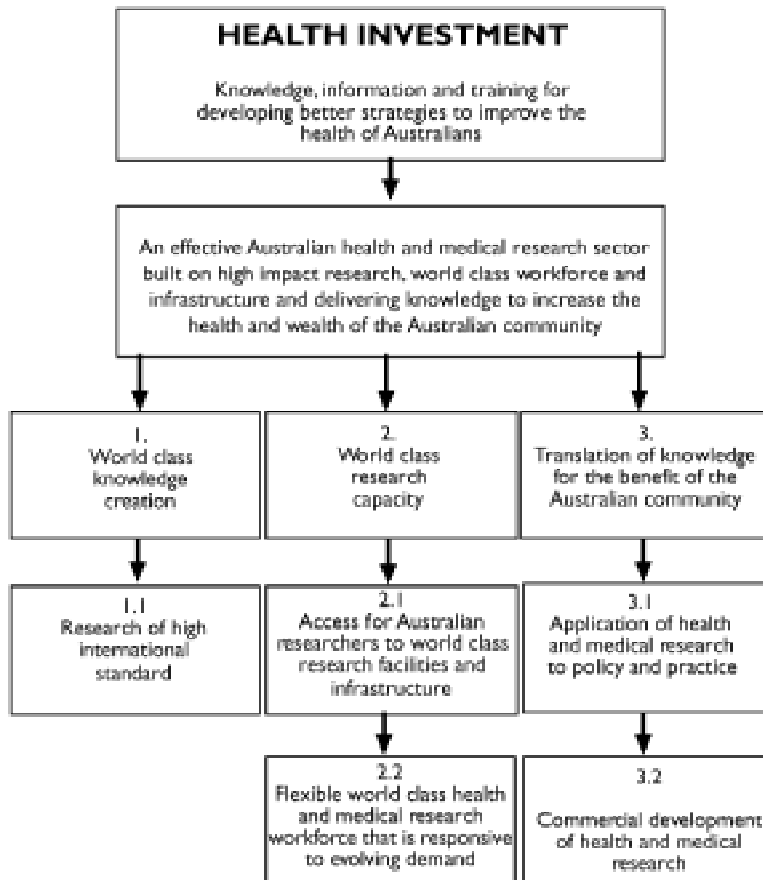
Possible metrics and indicators have been included in order to illustrate the scope of activities falling within the proposed outcomes and outputs. These metrics can also be used to provide the initial data needed for the performance evaluation proposed by the Health and Medical Research Strategic Review and required by the 1999 Budget decision to increase funding to the NHMRC.

The proposed model focuses on the need to:

- clearly reflect the Government's objectives and priorities for health and medical research;
- provide clear causal links between the actions of the NHMRC and the outcomes and outputs sought by Government;
- define outcomes that are distinct from the strategies pursued by the NHMRC to achieve them; and
- provide specific outcomes that allow for clear accountability and reporting.

Once the outcome and output definitions have been agreed, further work will be done to develop the methodologies for monitoring and evaluation. This will include performance indicators and targets as well as data required to establish baselines and benchmarks.

Figure 2 Research outcomes framework



KNOWLEDGE, INFORMATION AND TRAINING FOR DEVELOPING  
BETTER STRATEGIES TO IMPROVE THE HEALTH OF THE AUSTRALIAN  
COMMUNITY

**1. World Class Knowledge Creation**

**1.1 Research of high international standard**

*Characteristics:*

- high ethical standards;
- good scientific practice;
- the best research supported;
- innovative and excellent research; and
- high international recognition/citation of research output.

*Outputs:*

- Project grants; and
- Program grants

**Performance Information/Measures**

*Price:*

Value of grants by type

*Quantity:*

Number of grants by type (across the spectrum of research eg biomedical, population health etc. and in health areas eg cancer, diabetes, etc.)

- success rates of grants by type; and
- analysis of application quality at the funding margin.

*Effectiveness/Quality:*

- (i) Bibliometric analysis, which is the quantification of publication record in peer reviewed journals and the impact of these papers. Its advantages are:
  - that it covers basic research well;
  - there are databases and established methodologies for analysing them
  - it correlates with research quality;
  - can identify linkages between institutions at a national and international level;

- large numbers can minimise error; and
- anomalies such as self-citation can be recognised.

However, bibliometrics should be used as one of several tools, not by itself. Bibliometrics' disadvantages are important to acknowledge:

- bibliometrics does not capture public health and health services research when published only in institutional or government reports that can still have an effect on health gain or cost-effectiveness;
  - the correlation with quality is not perfect. In particular, this correlation may be poor for small research fields;
  - it is only a blunt tool that cannot replace peer review processes; and
  - there is a poor correlation with quality for research fields that are not large internationally speaking.
- (ii) Nature of publications arising from NHMRC funded research in relation to grant amount.<sup>2</sup>
- (iii) Monitor and report on quality of peer review. This would involve two aspects:
- (a) Assessor evaluation and feedback through peer review ranking panels. (Some of these data are already available.)
  - (b) Linking research outcomes back to the original scoring. This is a long-term task but the system to collect the information could be put into place now.
- (iv) Integrating the above data collections into a reporting system which gives a longitudinal sense of the impact of health and medical research.
- (v) International benchmarking of research outputs with other comparable nations (such as Canada, New Zealand, Denmark, Korea etc.), with due consideration given to developments occurring in other countries of relevance (eg USA, UK, rest of Europe).
- (vi) An Australian 'Comroe and Dripps' study at least once every 10 years.<sup>3,4</sup>

---

2 An indexed and searchable database of public health research technical reports needs to be established to allow easy access to information by all potential users. This database needs to be developed as soon as possible and would involve several agencies as well as Federal, States and Territory Government. NHMRC could provide leadership in taking this forward to relevant bodies for consideration.

3 Comroe and Dripps were US researchers who respectively investigated the origins of the knowledge which allowed clinical advances in the 1960s and 1970s such as electrocardiography and cardiac surgery.

4 Consideration needs to be given to allocating a percentage of NHMRC's total administered budget to undertake this type of evaluation and survey work.

## **2. World Class Research Capacity**

### **2.1 Access for Australian researchers to world class research infrastructure and facilities.**

#### *Characteristics:*

- NHMRC support for infrastructure is only a small component of overall support provided within the higher education, research institute and hospital systems; and
- therefore there are major influences outside the NHMRC that determine researcher access to facilities in general.

#### *Outputs:*

- capital funding/Infrastructure support;
- national research capacity program (proposed);
- clinical trials and large patient recruitment studies; and
- (support for access to overseas facilities through ARC).

#### **Performance Information/Measures**

##### *Price:*

Value of grants by type.

##### *Quantity:*

Number of grants given by type.

- success rate of grants.

##### *Effectiveness/Quality:*

- (i) Periodically survey the use of NHMRC-funded research facilities by NHMRC funded scientists and others (especially leveraging and linkages). This would require researchers to report on collaborations and linkages but thought needs to be given to defining precise measures and incentives for reporting. The leveraging of NHMRC funding should also be measured in this approach.
- (ii) Correlation between provision of, and access to, NHMRC-funded research infrastructure and facilities and research output, by assessing links between funding for facilities and quality and quantity of research produced using these facilities.<sup>5</sup>

---

5 Considered to be less reliable than the periodic survey approach

- (iii) Periodic benchmarking of the use of NHMRC-funded facilities and the relative quality of research output with that of other comparable nations to provide an international perspective.<sup>6</sup>

**2.2 Flexible world class health and medical research workforce that is responsive to evolving demands.**

*Outputs:*

- Training Scholarships;
- New Investigator Grants;
- Research Fellowships; and
- Practitioner Fellows.

**Performance Information/Measures**

*Price:*

Value of awards, grants and fellowships by type.

*Quantity:*

Number of awards, grants and fellowships awarded by type.

- success rates of applications; and
- analysis of quality of applications at the funding margins.

*Effectiveness/Quality:*

- (i) Numbers and proportion of NHMRC funded PhD students completing their degrees each year by discipline and a system for tracking their performance eg publications.
- (ii) Number and proportion of clinicians and public health researchers completing NHMRC fellowships and scholarships.
- (iii) Monitor the career paths of researchers after the completion of NHMRC awards through periodic survey of a sample or cohort of the workforce.<sup>7</sup>

---

6 Considered to be less reliable than the periodic survey approach.

7 This would include monitoring promotion through the existing career structure ie:

- (i) Number of NHMRC funded Research Fellows promoted to Senior Research Fellows;
- (ii) Number of NHMRC funded Senior Research Fellows promoted to Principal Research Fellow; and
- (iii) Number of NHMRC funded Principal Research Fellows promoted to Senior Principal Research Fellows as well as the flow of researchers into careers in other sectors, e.g. industry, higher education sector, health services, clinical practice etc.

### **3 Translation of Knowledge for the Benefit of the Australian Community**

#### **3.1 Application of health and medical research in policy and practice.**

*Characteristics:*

- There has been little international progress that could assist the development of such a system. The NHMRC is committed to achieving progress in this area and is actively pursuing opportunities with overseas funding organisations who are facing similar issues.

*Outputs:*

- Project and Program grants with a translation component;
- Priority Research (Collaboration with the States/Territories);
- Partnership grants;
- Practitioner Fellows;
- Strategic Research grants; and
- Clinical/Research Links Program (still under development).

#### **Performance Information/Measures**

*Price:*

Value of grants awarded by type.

*Quantity:*

Number of grants by type.

- success rates of grants; and
- analysis of quality at the funding margins.

*Effectiveness/Quality:*

- (i) Measure translation of research into practice.

While this is relatively uncharted territory there are possible solutions. For example one suggestion from the HMRSR (Rec 3.4) is self-assessment and reporting by researchers. Since there is no established method for evaluating the translation of research, a five-year trial is proposed which would utilise researchers themselves in a bottom-up exercise. As a condition of award researchers would be asked to monitor and report on the extent to which their findings, past and present, have been taken up clinically, in health policy or commercially. They would define their own means of proof and have to document the 'research into practice' trail. NHMRC would audit the researchers' claims.

Several possible outcomes of this trial have been suggested. New information will be obtained and it could be possible to identify common ground and innovative ideas that might allow a more standardised system to be introduced. Alternately, this evaluation could ask researchers to identify opportunities to translate their findings into practice and attempts they have made to put them into action, even if they failed. While it would take some time to establish these systems most researchers would take it seriously and try to make it credible.

- (ii) Measure the impact of research on health improvement
  - (a) Documenting the translation of 'research-into-practice' by monitoring the situations where research based evidence is deployed for use in clinical settings. Suggested approaches include:
    - Use of Australian and NHMRC funded research in the HAC Guidelines
    - Monitoring implementation of NHMRC Health Advisory Committee Guidelines
    - Surveying of practitioners for awareness of relevant NHMRC guidelines
    - Bibliometric analysis – publication of NHMRC funded research in traditional 'practitioner media' eg clinical journals, collegiate publications etc.
  - (b) Regular surveys to determine numbers of people in active clinical practice whom have had an NHMRC scholarship or grant (as proxies for research-trained clinicians).
  - (c) Number of clinicians and public health personnel completing NHMRC funded research fellowships and scholarships.
  - (d) Measuring and tracking the numbers of clinical collaborators involved in NHMRC funded projects.
  - (e) Tracking the output in clinical, public health and health services journals as well as in Cochrane reviews.
  - (f) Occasional Australian 'Comroe and Dripps'-type studies (see above) i.e. a retrospective case-study approach.

### **3.2 Commercial development of health and medical research**

#### *Characteristics:*

- barriers to industry collaboration/co-operation minimised (eg through revision of NHMRC grant guidelines);
- increased researcher awareness of commercialisation/IP issues; and
- greater ease for/exposure to experience in research in commercial sector and context.

**Outputs:**

- Postdoctoral Fellowships in Industry;
- Development (industry) grants; and
- (IP assistance).

**Performance Information/Measures**

**Price:**

Value of grants by type.

**Quantity:**

Number of grants by type.

- Success rate of grants.

**Effectiveness/Quality:**

- (i) Number of accredited research institutes and groups with IP certification included as part of an institution's NHMRC accreditation process.<sup>8</sup>
- (ii) Numbers of patents applied for, awarded and licensed based on health and medical research.
- (iii) Amount of private sector money/numbers of seed projects attracted to institutions for proof of concept or other development work based on their IP.
- (iv) Numbers of Australian start-up companies based on local IP or health service/health care know-how.
- (v) Number of applications, based on health and medical research, to START and COMET programs.
- (vi) Number of applications, based on health and medical research, to other industry development programs, including number of biomedical CRC's utilising NHMRC research/researchers.<sup>9</sup>
- (vii) Number and value of research agreements with public and private sector entities including spin-offs and joint ventures relative to the total NHMRC funding

---

8 IP certification could be a condition of being eligible to receive NHMRC grants. The process would help to indicate the support given by the institution to the IP protection and exploitation processes, the numbers of researchers within institutions who are IP competent and, through a system of grading, allow training programs and skill levels to be tracked.

9 Contributes to understanding, along with relevant citation data, a measure of collaboration between researchers along the commercialisation path.

---

APPENDIX 3 RESHAPING NHMRC RESEARCH  
FUNDING MECHANISMS  
- AS AT 27 FEBRUARY 2000

INDIVIDUAL AWARDS AND THEIR PROPOSED PARAMETERS  
UNDER EACH FUNDING TYPE

## 1 RESEARCH SUPPORT – TYPE I GRANT

Award Type	Description	Objectives	Business Guidelines/ Assessment Issues	Current Status
New Project Grants	Discrete research, within a designated time frame (usually 3 years), and with a specific aim and expected outcome.	<ul style="list-style-type: none"> <li>To provide an opportunity to extend knowledge into a specific field of research</li> <li>To provide a mechanism for new ideas to gain funding support</li> <li>To allow collaborating groups the opportunity to grow</li> <li>To facilitate the transfer of technology and research skills</li> </ul>	<p>Research proposal</p> <ul style="list-style-type: none"> <li>Proposal must be a specific research question or linked research questions</li> <li>Up to 5 years duration (normally 3)</li> </ul> <p>Budget</p> <ul style="list-style-type: none"> <li>No maximum budget request, but budgets to be of quantum type for support of direct research costs.</li> <li>Minor equipment (up to \$50,000) specific to research project to be included in budget.</li> </ul> <p>Chief investigator(s)</p> <ul style="list-style-type: none"> <li>Open to all health and medical researchers in Australia, who can apply as co-CI's.</li> <li>Application as sole CI limited to 'independent' Australian health and medical researchers.</li> <li>No limit on number of Type I grants held by any CI, but normally up to three maximum, due to expected time limitations. Additional applications to be argued with DP's on case by case basis.</li> <li>Qualitative statement regarding expected contribution for each Chief Investigator (ie no requirement for a fixed % commitment).</li> </ul> <p>Administering institutions</p> <ul style="list-style-type: none"> <li>Applications only accepted through administering institutions with policies and procedures for management of public funds and for the proper conduct of research, and which are able to provide appropriate infrastructure support.</li> </ul>	<p>New peer review arrangements (via Discipline Panel) fully implemented in 2000 application round.</p> <p>Personnel supported on the basis of Personnel Support Packages rather than old NHMRC salary scales, on-costs and claimable expenses</p> <p>Quantum, one-line budgets introduced for grants to be funded in 2001</p> <p>New Conditions of Award redeveloped in the form of Deed of Agreement between NHMRC and administering institution. Reflects quantum budget arrangements</p>
New Investigator Grants	<ul style="list-style-type: none"> <li>Discrete research, within a designated time frame (usually 3 years), and with a specific aim and expected outcome</li> <li>This grant is limited to a new investigator who has never held any NHMRC research grant (other than a workforce development grant, formerly a training award) as a chief investigator</li> </ul>	<ul style="list-style-type: none"> <li>To encourage independent investigators to undertake health and medical research</li> <li>To provide a mechanism for new investigators to gain funding support, and develop an independent 'track record'</li> </ul>	<ul style="list-style-type: none"> <li>Three years maximum duration (except some clinical trials which could be up to 5 years)</li> <li>Maximum of one (1) grant per NI</li> <li>Salary of NI may be included in budget (Level A or B only)</li> <li>No maximum budget request, but budgets to be of quantum type</li> </ul>	<ul style="list-style-type: none"> <li>Introduced in the 1999 application round. First grants funded in 2000</li> </ul>
Clinical trial and large scale patient recruitment study grants	Discrete research involving direct contact with patients/ subjects, within a designated time frame (up to 5 years), and with a specific aim and expected outcome	To provide an opportunity to answer a particular question in a specific field of research in clinical medicine, public health, or other field of research requiring recruitment of human patients/subjects	<ul style="list-style-type: none"> <li>Up to 5 years duration</li> <li>Milestones to be included in proposal and monitored</li> <li>Joint funding if cost above \$250,000</li> <li>No maximum budget, but RC reserves right to ask applicant to obtain 'partnership' funding</li> </ul>	<ul style="list-style-type: none"> <li>Introduced in the 1999 application round. First grants funded in 2000</li> <li>Assessment by new project grant DP process, but with specific mentoring by Clinical Trial Large Scale Committee, to assist with joint funding and assessment of epidemiology</li> </ul>

## 1 RESEARCH SUPPORT – TYPE I GRANT

Award Type	Description	Objectives	Business Guidelines/ Assessment Issues	Current Status
Partnership Grants (Health)	<p>Grants to provide support for multi-disciplinary research teams focussed on a specific research outcome</p> <ul style="list-style-type: none"> <li>Funding support must produce new knowledge that must be translatable into improved health practice</li> </ul>	<ul style="list-style-type: none"> <li>To encourage new links between basic, clinical and population/health services research</li> <li>To foster strategic alliances between NHMRC and other organisations</li> </ul>	<p>Applications must be from groups of investigators and should include contributions from each of the following partners:</p> <ul style="list-style-type: none"> <li>State and/or Commonwealth Health Department or other Government funded agency; and</li> <li>The private sector, including charitable funding bodies; and</li> <li>NHMRC to provide maximum of 50% of funding, joint partners should provide remainder (not in kind)</li> </ul> <p>Research Institutions will be expected to provide support in "kind". Must be strongly focussed on outcomes – a specific end-point or other definable outcome. Aim of the research must be measurable. The grant will be for 5 - 7 years (normally 5). The grant is not renewable</p>	<ul style="list-style-type: none"> <li>Injury Partnership/s will be funded in 2000</li> <li>Type II Diabetes Partnership/s will be funded in 2001</li> </ul>
"New Development Grants" Partnership Grants (Biotechnology and Industry)	<p>Grants to encourage interaction between health and medical researchers and industry</p>	<ul style="list-style-type: none"> <li>To encourage links between health and medical researchers and Australian-based biotechnology, pharmaceutical or other relevant industries</li> </ul>	<ul style="list-style-type: none"> <li>Application via Project grants with additional assessment undertaken by the Industry Committee</li> </ul>	<p>Industry Committee established to strengthen processes associated with Development Grants</p>

## 2 RESEARCH SUPPORT – TYPE II GRANTS

Award Type	Description	Objectives	Business Guidelines/ Assessment Issues	Current Status
'New program' grants	Broadly based, long-term research of an integrated nature, around a key theme	<ul style="list-style-type: none"> <li>. To provide an opportunity to extend knowledge into a specific field of research, but in greater depth and breadth than would be the case for Type I grants</li> <li>. To consolidate research activity in the national interest</li> <li>. To encourage innovative approaches to complex problems normally involving more than a single chief investigator and more than one Field of Research (FOR level to be defined)</li> <li>. To facilitate collaborative use of specialised facilities or expertise</li> </ul>	<ul style="list-style-type: none"> <li>. Proposal must be at forefront of international research, in both ideas and technologies</li> <li>. Proposal must demonstrate how a stronger overall effort is created through the collaboration</li> <li>. Five years maximum duration</li> <li>. No maximum budget request</li> <li>. Qualitative statement regarding expected contribution for each Chief Investigator (i.e., no requirement for a fixed % commitment)</li> <li>. If any CI applies for more than one Type II grant, it should be with a different group of collaborators, in which case time commitment becomes a key issue for review</li> </ul>	Discussion paper released. Scheme to be implemented in the 2001 round of applications. First New Program Grants to be funded in 2002
Institute grants	<ul style="list-style-type: none"> <li>. Funding for highly performing institutes</li> <li>. Recognises institutes of excellence</li> </ul>	<ul style="list-style-type: none"> <li>. To stimulate the capacity of the institutes to extend their leadership to support and enhance the national research</li> <li>. To encourage collaboration and a broadening of the national research base</li> </ul>	<ul style="list-style-type: none"> <li>. Transitional Institute grant available for institutes undergoing transition from block funding to the NHMRC 'reshaped' system</li> <li>. Must be applied for</li> <li>. Funds available on a competitive basis.</li> <li>. Assessed against pre-determined criteria</li> <li>. Five year award</li> </ul>	Policy finalised. Applications close march 2001 – to be funded in 2002

### 3 PEOPLE SUPPORT – ESTABLISHED INVESTIGATOR

Award Type	Description	Objectives	Business Guidelines/ Assessment Issues	Current Status
Research Fellowships	Support for salaries of senior researchers (Level C and above), that is not tied to any specific grant, but who are eligible to obtain additional research support from either type I or type II grants	<ul style="list-style-type: none"> <li>To develop and support highly productive Australian health and medical researchers so that they can continue to undertake research which is nationally and internationally competitive and which will improve health</li> <li>To provide health and medical researchers with a career structure in which appointment is based on stringent review of achievement and performance and potential for success in the future</li> </ul>	<ul style="list-style-type: none"> <li>Appointment will be on the basis of merit and achievement only</li> <li>Appointment will be for a period of 5 years, at a level to be determined by RC on advice from the Fellowships Committee</li> <li>Grants to be quantum in nature at levels to be determined</li> <li>At the time of application (for appt/ reappt etc) investigator must hold a research grant from an approved competitive, peer-reviewed source, that will allow the investigator's research to proceed</li> </ul>	<ul style="list-style-type: none"> <li>Research Fellowships will be uncoupled from 2001</li> <li>Quantum packages will be introduced in 2002</li> <li>Broad policy parameters finalised but further development required</li> </ul>
Part-time Research Fellowships	Partial support for salaries of senior researchers (Level C and above), that is not tied to any specific grant, but who are eligible to obtain additional research support from either type I or type II grants	<ul style="list-style-type: none"> <li>To expand the knowledge and skill base of health and medical researchers, through dual appointment in other related industry segments.</li> <li>To allow researchers from other industry sectors the opportunity to participate in health and medical research</li> <li>To encourage links between health and medical research and other industries</li> </ul>	<ul style="list-style-type: none"> <li>Appointment will be on the basis of merit and achievement</li> <li>Appointment will be for a fixed period of up to 5 years, at a level to be determined by RC on advice from the Fellowships Committee</li> <li>Appointment to be made in the range 30-70%, with the additional salary paid by an identified source (other than a University)</li> <li>At the time of application, investigator must hold a research grant from an approved competitive, peer-reviewed source, that will allow the investigator's research (associated with the Fellowship) to proceed</li> </ul>	<ul style="list-style-type: none"> <li>To be introduced in 2002.</li> <li>Practitioner fellowship model to be used</li> </ul>
Practitioner Fellowships	Partial support for salaries of clinical or public health practitioners (Level C and above), that is not tied to any specific NHMRC grant. These Fellows may obtain research support from either type I or type II grants or other sources	<ul style="list-style-type: none"> <li>To expand the research skill base of clinical and public health practitioners, through dual appointment with other health system employers</li> <li>To encourage the translation of research into practice</li> <li>To underpin and inform policy development in the health system</li> </ul>	<ul style="list-style-type: none"> <li>Partial salary support (at level C and above).</li> <li>Applicant to be employed in clinical or Public Health practice (eg hospital or Govt dept)</li> <li>Appointment on basis of merit and achievement within the discipline</li> <li>At time of application must have evidence of funding support to undertake the research proposed</li> </ul>	<ul style="list-style-type: none"> <li>Implemented in the 2000 round of applications. First Practitioner Fellowships to be funded in 2001 – up to 10 will be supported</li> </ul>
'Superfellows'	Salary support for outstanding Australian health and medical researchers	To Be Determined	<ul style="list-style-type: none"> <li>Appointment to be above level of Senior Principal Research Fellow To Be Determined</li> </ul>	To be developed in conjunction with finalisation of the Research Fellowships scheme
Eccles Award	Refer current Awards	[Refer current Awards] To enable senior researchers, returning from overseas to a position in Australia. To establish a research	Current conditions apply – three-year support of up to \$150,000 pa	To be abolished. Provision for researchers returning from overseas to be considered as part of Research Fellowship/ 'Superfellow' scheme

### 3 PEOPLE SUPPORT – ESTABLISHED INVESTIGATOR

Award Type	Description	Objectives	Business Guidelines/ Assessment Issues	Current Status
Burnet Fellowship	Refer current Awards	To encourage the return to Australia of outstanding Australian researchers currently overseas by providing a Fellowship and appropriate research support	<ul style="list-style-type: none"> <li>Current conditions apply – 5 yr Fellowship + funding of up to \$150,000 pa</li> </ul>	<ul style="list-style-type: none"> <li>Currently unchanged.</li> <li>Policy will be considered in conjunction with finalisation of the Research Fellowship/‘Superfellow’ scheme</li> </ul>
RD Wright Fellows	Salary support for years between early postdoc (CJ Martin etc) and Research Fellowship. At present does not need to hold other NHMRC research support	To provide salary support to postdoctoral researchers during key formative years, to build the national research capacity?		Current scheme applies for grants to be funded in 2001. No final decision regarding future policy for these grants. Further development to be undertaken
Postgraduate scholarships (Dora Lush etc)	Refer current Awards [see booklet describing awards]	Refer current Awards	<ul style="list-style-type: none"> <li>Appointment within any postgraduate scholarship program will be on the basis of merit, achievement and potential.</li> <li>Current conditions apply</li> </ul>	New Primary Health Care Scholarships introduced. Up to 3 to be funded in 2001
Postdoctoral Fellowships	Refer Current Awards [see booklet describing awards]	Refer current Awards	<ul style="list-style-type: none"> <li>Appointment within any fellowship structure will be on the basis of merit, achievement and potential.</li> <li>Current conditions apply</li> </ul>	Industry Research Fellowships introduced. Up to 10 valued at \$80,000 each to be funded in 2001

## NATIONAL RESEARCH CAPACITY – DEVELOPMENT TO BE UNDERTAKEN IN CONSULTATION WITH SRDC

Award Type	Description	Objectives	Business Guidelines/ Assessment Issues	Current Status
Grants for specific activities	Support for provision of essential research support mechanisms for a substantial number of NHMRC and other grants eg. Clinical Trials Centre, AGRF, bioinformatics support, special centres on population and health services research that will enhance the national health and medical research effort in its translation into better health and/or increase knowledge based industries	<ul style="list-style-type: none"> <li>. To provide a national research capability by the support of specific shared national resources (eg expensive large equipment, computing services including databases, tissue banks etc)</li> <li>. To enhance the effectiveness of linkages between, and translation of, health and medical research, with improvement of health and the creation and development of knowledge-based industries</li> </ul>	<ul style="list-style-type: none"> <li>. Normally Request for Proposal in peer-reviewed open competition. As required, commissioned approach to most appropriate administering institution for specific purpose</li> <li>. Facility/activity to be monitored and evaluated against pre-agreed terms of reference and outcomes</li> <li>. Budget for a fixed period. Opportunity for renewal, but in open competition</li> <li>. Facility/activity to have a Committee of management with NHMRC representation</li> </ul>	National Research Capacity is a major item for discussion at the November meeting of Research Committee
Animal Welfare support	NHMRC Commitment to the highest standards of care for animals used in NHMRC supported research, including the support of non-human primate colonies	<ul style="list-style-type: none"> <li>. To provide policy support to institutions and researchers to undertake research that requires the use of experimental animals.</li> <li>. To play a leadership role in development and maintenance of the code of Practice relating to animal experimentation</li> <li>. To provide a national capability for research using non-human primates or other purpose-bred animal species and/or facilities for special types of research by multiple research groups</li> </ul>	<p>Policy Support</p> <ul style="list-style-type: none"> <li>. NHMRC will support the position of an Animal Welfare Officer</li> <li>. Support for ANZCCART to be reviewed on regular basis against pre-agreed criteria</li> </ul> <p>Non-human primate colonies</p> <ul style="list-style-type: none"> <li>. Facility/activity to be evaluated against pre-agreed terms of reference and outcomes.</li> <li>. Facility to have a Committee of management with NHMRC representation</li> <li>. Administering institution to negotiate triennial budget to support long-term planning. Extension of support will be dependent on performance and reviewed in year 2 in a competitive system that will also seek additional expressions of interest</li> </ul> <p>Other species/facilities</p> <ul style="list-style-type: none"> <li>. As identified by RC as in the national interest. Via RFP</li> <li>. Conditions as for non-human primate colonies</li> <li>. RC may consider inclusion of commercial entities for the provision of this resource</li> </ul>	
Major Technology Grants	Support for researchers and institutions to provide state-of-the-art equipment and technology support to underpin the NHMRC supported research effort	To ensure that the national research effort in health and medical research is supported by access to the most appropriate technology and apparatus	<ul style="list-style-type: none"> <li>. Only NHMRC grant holders to be major beneficiaries of support</li> <li>. No upper limit on amount requested, but matching funding would normally be required.</li> <li>. Lower limit of \$50,000. Equipment of &lt;\$50,000 to be applied for within Type I and Type II grants.</li> <li>. Can be used to support the transfer of new technology to national advantage</li> </ul>	

4 NATIONAL RESEARCH CAPACITY – DEVELOPMENT TO BE UNDERTAKEN IN CONSULTATION WITH SRDC

Award Type	Description	Objectives	Business Guidelines/ Assessment Issues	Current Status
Requests for proposals (RFP) in areas of research identified by RC as being in the national interest	Grants to institutions, individuals or consortia to respond, within an appropriate timeframe, to areas in which health and medical research will advance national endeavour and to areas where there is unfilled need that has been identified through a rigorous process of determination and analysis	To provide a mechanism for Council, RC and other Principal Committees to support strategic development of research in areas of identified national need	<ul style="list-style-type: none"> <li>. Guidelines for each area of identified need will be developed.</li> <li>. Programs will be monitored and evaluated against pre-identified outcomes</li> </ul>	In collaboration with SRDC, RC would develop a range of RFPs
Other enhancements of the national research capacity	Support for research needs that would enhance the national research effort and keep Australia at, or advance it to, the international cutting edge in biomedical, clinical, public health and health systems research	To develop and maintain appropriate technological infrastructure and human resources to ensure that the nation has the potential and capacity to function at the forefront of international endeavour in health and medical research	As above	Further development required