

NHMRC Code for Research Conduct

1 GENERAL PRINCIPLES OF RESPONSIBLE RESEARCH

Introduction

Responsible research is encouraged and guided by the research culture of the organisation.

- A strong research culture will demonstrate:
- honesty and integrity
- respect for human research participants, animals and the environment
- good stewardship of public resources used to conduct research
- appropriate acknowledgment of the role of others in research
- responsible communication of research results.

This section discusses the responsibilities of institutions and researchers to maintain an environment that fosters responsible research.

Responsibilities of Researchers

1.6 Maintain high standards of responsible research

Researchers must foster and maintain a research environment of intellectual honesty and integrity, and scholarly and scientific rigour. Researchers must:

- respect the truth and the rights of those affected by their research
- manage conflicts of interest so that ambition and personal advantage do not compromise ethical or scholarly considerations
- adopt methods appropriate for achieving the aims of each research proposal
- follow proper practices for safety and security
- cite awards, degrees conferred and research publications accurately, including the status of any publication, such as under review or in press
- promote adoption of this Code and avoid departures from the responsible conduct of research
- conform to the policies adopted by their institutions and bodies funding the research.

1.7 Report research responsibly

Researchers should ensure that research findings are disseminated responsibly.

1.8 Respect research participants

Researchers must comply with ethical principles of integrity, respect for persons, justice and beneficence.

Written approval from appropriate ethics committees, safety and other regulatory bodies

must be obtained when required.

The *National Statement on Ethical Conduct in Human Research and Values and Ethics — Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research* (or any replacement documents) sets out principles for protecting human participants in research (see Appendix 3).

1.9 Respect animals used in research

Researchers must respect the animals they use in research, in accordance with the *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes* (see Appendix 3).

1.10 Respect the environment

Researchers should conduct their research so as to minimise adverse effects on the wider community and the environment.

1.11 Report research misconduct

A researcher who considers that research misconduct may have occurred must act in a timely manner, having regard to the institution's policies.

2 MANAGEMENT OF RESEARCH DATA AND PRIMARY MATERIALS

Introduction

Policies are required that address the ownership of research materials and data, their storage, their retention beyond the end of the project, and appropriate access to them by the research community.

The responsible conduct of research includes the proper management and retention of the research data. Retaining the research data is important because it may be all that remains of the research work at the end of the project. While it may not be practical to keep all the primary material (such as ore, biological material, questionnaires or recordings), durable records derived from them (such as assays, test results, transcripts, and laboratory and field notes) must be retained and accessible.

The researcher must decide which data and materials should be retained, although in some cases this is determined by law, funding agency, publisher or by convention in the discipline. The central aim is that sufficient materials and data are retained to justify the outcomes of the research and to defend them if they are challenged. The potential value of the material for further research should also be considered, particularly where the research would be difficult or impossible to repeat.

Responsibilities of Researchers

2.5 Retain research data and primary materials

When considering how long research data and primary materials are to be retained, the researcher must take account of professional standards, legal requirements and contractual arrangements.

2.5.1 Researchers should retain research data and primary materials for sufficient time to allow reference to them by other researchers and interested parties. For published research data, this may be for as long as interest and discussion persist following publication.

2.5.2 Research data should be made available for use by other researchers unless this is prevented by ethical, privacy or confidentiality matters.

2.5.3 Research data should be retained for at least the minimum period specified in the institutional policy.

2.5.4 If the results from research are challenged, all relevant data and materials must be retained until the matter is resolved. Research records that may be relevant to allegations of research misconduct must not be destroyed.

2.5.5 The institutional policy on the secure and safe disposal of primary materials and research data must be followed.

2.6 Manage storage of research data and primary materials

Researchers must manage research data and primary materials in accordance with the policy of the institution. To achieve this, researchers must:

2.6.1 Keep clear and accurate records of the research methods and data sources, including any approvals granted, during and after the research process.

2.6.2 Ensure that research data and primary materials are kept in safe and secure storage provided, even when not in current use.

2.6.3 Provide the same level of care and protection to primary research records, such as laboratory notebooks, as to the analysed research data.

2.6.4 Retain research data, including electronic data, in a durable, indexed and retrievable form.

2.6.5 Maintain a catalogue of research data in an accessible form.

2.6.6 Manage research data and primary materials according to ethical protocols and relevant legislation.

2.7 Maintain confidentiality of research data and primary materials

Researchers given access to confidential information must maintain that confidentiality. Primary materials and confidential research data must be kept in secure storage. Confidential information must only be used in ways agreed with those who provided it. Particular care must be exercised when confidential data are made available for discussion.

3 RESEARCH TRAINEES

Introduction

All research trainees must receive training on research ethics, this Code and the research policies of the institution concerned. This should have high priority for completion early in their careers. Researchers and supervisors must ensure that the role model they provide to junior colleagues is positive and conducive to a research culture of excellence, integrity, professionalism and mutual respect.

In return, research trainees must understand that in undertaking research they are joining an endeavour that requires dedication and accountability. Thus, research trainees also have responsibilities under this section.

Responsibilities of research trainees

3.7 Seek guidance

A research trainee must demonstrate a professional attitude towards the research. Frequent sessions with the supervisor are important, requiring the cooperation of both parties. The trainee should not wait until approached by the supervisor but should play an active part in maintaining an appropriate schedule of meetings.

3.8 Undertake induction and training

A research trainee should complete all induction and training courses as soon as practical after starting research in an institution.

4 PUBLICATIONS AND DISSEMINATION OF RESEARCH FINDINGS

Dissemination of research findings is an important part of the research process, passing on the benefits to other researchers, professional practitioners and the wider community.

Research activities supported by public funding are rarely complete until the results have been made widely available. However, research is expensive and often cannot be undertaken without the support of commercial sponsors, who seek rewards in the form of rights to commercial exploitation of the research outcomes. In such cases, sponsors may seek to delay or otherwise restrict the release of research results. In publications and dissemination in such instances, the general principles of responsible research set out in Section 1 of this Code apply.

There are many ways of disseminating research findings. Formal publication of the results of research will usually take place in academic journals or books, but this is not always the case. This section of the Code applies to all forms of dissemination, including non-refereed publications, such as web pages, and other media such as exhibitions or films, as well as professional and institutional repositories.

This section should be read in conjunction with Sections 5 (Authorship) and 6 (Peer review).

Responsibilities of researchers

4.4 Disseminate all research findings

Researchers have a responsibility to their colleagues and the wider community to disseminate a full account of their research as broadly as possible.

4.4.1 The account should be complete, and, where applicable, include negative findings and results contrary to their hypotheses.

4.4.2 Publication activities must take account of any restrictions relating to intellectual property or culturally sensitive data.

4.4.3 Researchers must, where feasible, also provide research participants with an appropriate summary of the research results; see, for example, the *Statement on Consumer and Community Participation in Health and Medical Research* (see Appendix 3).

4.5 Ensure accuracy of publication and dissemination

Researchers must take all reasonable steps to ensure that their findings are accurate and properly reported. If they become aware of misleading or inaccurate statements about their work, they must correct the record as soon as possible.

4.6 Cite the work of other authors fully and accurately

Researchers must ensure that they cite other relevant work appropriately and accurately when disseminating research findings. Use of the work of other authors without

acknowledgement is unethical.

4.10 Register clinical trials

Researchers must register clinical trials with a recognised register to promote access to information about all clinical trials.

5 AUTHORSHIP

Introduction

The outcomes of research may be disseminated in a variety of ways but enduring forms, such as journal articles, are particularly important and to be an author for such a form is meritorious. To be named as an author, a researcher must have made a substantial scholarly contribution to the work and be able to take responsibility for at least that part of the work they contributed.

Attribution of authorship depends to some extent on the discipline, but in all cases, authorship must be based on substantial contributions in a combination of:

- conception and design of the project
- analysis and interpretation of research data
- drafting significant parts of the work or critically revising it so as to contribute to the
- interpretation.

The right to authorship is not tied to position or profession and does not depend on whether the contribution was paid for or voluntary. It is not enough to have provided materials or routine technical support, or to have made the measurements on which the publication is based. Substantial intellectual involvement is required.

A person who qualifies as an author must not be included or excluded as an author without their permission. This should be in writing, and include a brief description of their contribution to the work.

Responsibilities of researchers

5.2 Follow policies on authorship

Researchers should adhere to the authorship criteria of this Code and their institution's policies.

5.3 Agree on authorship

Collaborating researchers should agree on authorship of a publication at an early stage in the research project and should review their decisions periodically.

5.4 Include all authors

Researchers must offer authorship to all people, including research trainees, who meet the criteria for authorship listed above. Those offered authorship must accept or decline in writing.

5.5 Do not allow unacceptable inclusions of authorship

Authorship should not be offered to those who do not meet the requirements set out above. For example, none of the following contributions, in and of themselves, justifies including a person as an author:

- being head of department, holding other positions of authority, or personal friendship with the authors
- providing a technical contribution but no other intellectual input to the project or publication
- providing routine assistance in some aspects of the project, the acquisition of funding or general supervision of the research team
- providing data that has already been published or materials obtained from third parties, but with no other intellectual input.

5.6 Acknowledge other contributions fairly

Researchers must ensure that all those who have contributed to the research, facilities or materials are properly acknowledged, such as research assistants and technical writers. Where individuals are to be named, their written consent must be obtained.

5.7 Extend the authorship policy to web-based publications

Authors of web-based publications must be able to take responsibility for the publication's content and must be clearly identified in the publication.

7 CONFLICTS OF INTEREST

Introduction

A conflict of interest exists where there is a divergence between the individual interests of a person and their professional responsibilities such that an independent observer might reasonably conclude that the professional actions of that person are unduly influenced by their own interests.

Conflicts of interest in the research area are common and it is important that they are

disclosed and dealt with properly. Conflicts of interest have the potential to compromise judgments and decisions that should be made impartially. Such compromise could undermine community trust in research.

Financial conflicts of interest are foremost in the public mind but other conflicts of interest also occur in research, including personal, professional and institutional advantages. The perception that a conflict of interest exists is also a serious matter and raises concerns about the integrity of individuals or the management practices of the institution.

There is a broad range of actual and potential conflicts of interest in the research environment, and institutions need to have a comprehensive policy in place to cover the likely range of circumstances.

Responsibilities of researchers

7.2 Disclose conflicts of interest

Researchers frequently have a conflict of interest that cannot be avoided. Decisionmaking processes in research often need expert advice, and the pool of experts in a field can be so small that all the experts have some link with the matter under decision.

An individual researcher should therefore expect to be conflicted from time to time, and be ready to acknowledge the conflict and make disclosures as appropriate.

7.2.1 Researchers should use the following approach to manage conflicts of interest:

- read and understand the policy of the institution
- maintain records of activities that may lead to conflicts, for example: consultancies; membership of committees, boards of directors, advisory groups, or selection committees; and financial delegation or in receipt of cash, services or equipment from outside bodies to support research activities
- when invited to join a committee or equivalent, review current activities for actual or apparent conflicts and bring possible conflicts of interest to the attention of those running the process
- disclose any actual or apparent conflict of interest as soon as it becomes apparent.

7.2.2 While there is no requirement to disclose the details of a conflict of interest, for example, because of a confidentiality agreement or for personal reasons, the existence of the conflict must be declared, followed by withdrawal from the situation.