

Revision of the *Joint NHMRC/AVCC
Statement and Guidelines on Research
Practice*

**Australian code for the responsible
conduct of research**

Second consultation draft
February 2006



Australian Government
National Health and Medical Research Council



Australian Government
Australian Research Council



Australian Vice-Chancellors' Committee
the council of Australia's university presidents

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This *Australian Code for the Responsible Conduct of Research* has been jointly authored by the Australian Research Council (ARC), the Australian Vice-Chancellors' Committee (AVCC), and the National Health and Medical Research Council (NHMRC). Submissions in response to the first draft of the document (then referred to as the *Australian Code for Conducting Research 2004*) have been considered in preparing this revised draft.

This code is intended to be used as the standard for responsible conduct of research in Australia. When finalised, it will replace the *Joint NHMRC/AVCC Statement and Guidelines on Research Practice* (1997).

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Part A

Introduction

1 Background

Purpose

The purpose of the *Australian Code for the Responsible Conduct of Research* is to guide institutions and researchers in how to achieve and maintain responsible research practice. The code addresses the role of institutions in establishing research policies that promote high standards of research integrity and an environment in which research will be conducted responsibly.

Research plays an essential role in the development and wellbeing of our society. The community forms its views on research not only by its outcomes but also by the standards by which it is carried out. Through integrity, honesty and a commitment to excellence, institutions and researchers fulfil their responsibility to the community, encouraging public support for their research and maintaining their own and Australia's reputation.

As well as promoting high standards of research integrity, this code provides advice on how institutions should investigate apparent failures to adhere to these standards.

While written particularly for public sector institutions that undertake and support research in Australia, this code will also have relevance to private sector institutions. These institutions are urged to adopt this code as far as possible within their operating environments.

Auspicing bodies

This code replaces the *Joint NHMRC/AVCC Statement and Guidelines on Research Practice* (1997). It has been jointly developed by the Australian Research Council (ARC), the Australian Vice-Chancellors' Committee (AVCC), and the National Health and Medical Research Council (NHMRC), and has broad relevance across all research disciplines.

In issuing this code, the ARC, the AVCC and the NHMRC assert that they expect high standards in the conduct of research in Australia, and specify how this should be achieved. All institutions that receive funding from the ARC or the NHMRC to support their research are required to adhere to this code.

As well as this code, researchers and institutions need to be aware of, and comply with, laws, regulations, guidelines and other codes of practice that apply to the conduct of research in Australia.

Structure of this code

This code consists of three sections:

- Part A outlines the general principles for the responsible conduct of research.

- Part B provides guidance on specific practices that promote the responsible conduct of research.
- Part C provides advice to institutions on processes for handling allegations of research misconduct.

Defining research

In this code, the term ‘research’ refers to original investigation undertaken to gain knowledge and understanding.

For a fuller explanation of the extent and limits of this definition of research, a definition based on the *Research Assessment Exercise* (RAE) for universities in the United Kingdom may be helpful. It states that research:

... includes work of direct relevance to the needs of commerce, industry, and to the public and voluntary sectors; scholarship; the invention and generation of ideas, images, performances, artefacts including design, where these lead to new or substantially improved insights; and the use of existing knowledge in experimental development to produce new or substantially improved materials, devices, products and processes, including design and construction. It excludes routine testing and routine analysis of materials, components and processes such as for the maintenance of national standards, as distinct from the development of new analytical techniques. It also excludes the development of teaching materials that do not embody original research.¹

This code uses the term ‘scholarship’ in the same way as the RAE:

... the creation, development and maintenance of the intellectual infrastructure of subjects and disciplines, in forms such as dictionaries, scholarly editions, catalogues and contributions to major research databases.

¹ RAE 2008 *Research Assessment Exercise: Guidance on Submissions*, June 2005, Ref RAE 03/2005 Annex B Definition of research for the RAE

2 General principles of responsible research

Introduction

Good research conduct arises from a research culture of respect for the truth and for those involved in the research process. This section outlines the general principles that underpin the responsible conduct of research.

Responsibilities of institutions

2.1 Promote the responsible conduct of research

Policies and procedures on research conduct should foster and maintain high standards of research conduct. Institutions therefore have the following responsibilities:

- 2.1.1 Use and promote clearly formulated, documented, accessible and current policies and procedures based on this code. These policies and procedures should include maintenance of research records, data retention, publication and authorship, management of intellectual property, privacy and confidentiality, and all forms of conflicts of interest.
- 2.1.2 Monitor conduct to ensure conformity to these guidelines and to laws.
- 2.1.3 Establish a climate of open exchange of ideas with peers, mutual cooperation, and respect for academic freedom of expression, in which responsible and ethical behaviour in research is expected.
- 2.1.4 Promote awareness of other relevant national guidelines and legislation relating to the conduct of research.

2.2 Establish good governance and management practices

Good institutional governance and management practices are essential to ensure the responsible conduct of research. These practices promote quality in research and enhance the reputation of the institution and its researchers, and minimise the risk of harm for all involved. Institutions therefore have the following responsibilities:

- 2.2.1 Establish and clearly document systems of research governance that include the roles, responsibilities and accountabilities of all those who play a part in research. This includes the institution itself, researchers (including research trainees), other employers, sponsors and those who provide funding for the research.
- 2.2.2 Ensure effective research governance and risk management by having systems that address the relevant principles of this code.

- 2.2.3 Ensure that research governance policies and procedures comply with laws, regulations, guidelines and other codes of practice that apply to the conduct of research in Australia. Common law obligations also arise from the relationships between institutions, researchers and participants, while contractual arrangements may impose further obligations.
- 2.2.4 Recognise that, in addition to requirements established by law, other documents have an essential role in guiding institutions in establishing good research governance and management. These include the *National Statement on Ethical Conduct in Research Involving Humans*,² which sets the ethical standards for research involving humans, and the *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes*.³ Institutions that receive funding from the ARC or the NHMRC must comply with the requirements of these two documents, as well as with this code, and these documents must be included in governance arrangements.

2.3 Train staff

To maintain a culture of responsible research conduct, it is important that institutions provide induction, formal training and continuing education for all research staff, including students and research trainees. Training should cover research methods, ethics, principles of confidentiality, data storage and records retention, as well as regulation and governance. Training should also cover the institution's policies and procedures regarding responsible research conduct, all aspects of this code, and the other sources of guidance that are available.

Smaller institutions may make joint arrangements for induction and training with other institutions.

2.4 Promote mentoring

Institutions should promote effective mentoring and supervision of students and research trainees. This includes advising on research ethics, research design and methods, and the responsible conduct of research (see Section 4 for further details about students and research trainees).

2.5 Provide clear contractual arrangements

Before a research project begins, institutions should ensure that their research contracts for employing research staff within their own organisation, and for involving researchers from other organisations, provide clarity about issues such as financial arrangements, intellectual property, authorship and publication, consultancies, secondment, ethics clearance and ownership of equipment (see Section 9 for further information on collaboration between institutions).

² NHMRC (1999). *National Statement on Ethical Conduct in Research Involving Humans*, Commonwealth of Australia, Canberra.

Available at: <http://www.nhmrc.gov.au/publications/synopses/e35syn.htm>. Note that this document is currently being reviewed.

³ NHMRC (2004). *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes* (7th ed), Commonwealth of Australia, Canberra.

Available at: <http://www.nhmrc.gov.au/publications/synopses/ea16syn.htm>.

2.6 Manage alleged research misconduct

Institutions have a responsibility to have in place effective procedures for receiving and investigating allegations of research misconduct (see Section 10 for further details about managing research misconduct).

Responsibilities of researchers

2.7 Develop an awareness of the responsible conduct of research

To conduct research responsibly, researchers must inform themselves of, and conform to, their institution's policies and procedures on research conduct and other relevant national guidelines and laws.

2.8 Maintain high standards of responsible research

Researchers have an obligation to society, funding agencies, their discipline or field, their colleagues and those whom they supervise or train, to foster and maintain a research environment that encourages intellectual honesty and integrity, and scholarly and scientific rigour. Researchers therefore have the following responsibilities:

- 2.8.1 Act with respect for the truth and for the rights of those affected by their research.
- 2.8.2 Ensure that personal ambition and expectation of economic gain or material advantage do not compromise ethical or scholarly considerations.
- 2.8.3 Understand and appropriately manage actual or potential conflicts of interest, whether financial or non-financial. This will generally require open disclosure and discussion, with the involvement of supervisors, managers and colleagues (see Section 8 for further information on conflicts of interest).
- 2.8.4 Design or develop their research using methods appropriate for achieving the aims of the proposal.
- 2.8.5 Cite awards, degrees conferred and research publications accurately, including the status of any publication (under review, in press, etc).
- 2.8.6 Promote adherence to this code, and reject departures from the responsible conduct of research (see also Section 10 for further information on handling allegations of research misconduct).

2.9 Comply with institutional policies and contractual arrangements

To contribute to a culture of responsible research, researchers must be aware of, and comply with, institutional policies regarding issues such as financial arrangements, intellectual property, authorship and publication, consultancies, secondment, commercial-in-confidence issues, reporting requirements (including reporting potential safety or environmental hazards), ethics clearance, and ownership of equipment (see Section 9 for further information on collaboration between

institutions). Thus, researchers must be aware of their contractual arrangements with their employing institution, and with sponsors or funders of their research.

2.10 Respect research participants

Responsible researchers demonstrate respect for the dignity, privacy and cultural differences of human participants, and avoid harming them.^{4,5} Researchers therefore have the following responsibilities:

- 2.10.1 Understand and comply with ethical principles of integrity, respect for persons, justice and beneficence.
- 2.10.2 Treat animals used in research according to the requirements of the *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes*.⁶
- 2.10.3 Act to ensure a safe research environment and minimise, where possible, the effects of research activities on the environment beyond the laboratory.
- 2.10.4 Where required, gain written approval for research from a human or animal ethics committee, or from other safety or regulatory committees.

2.11 Report research misconduct

It is important that a researcher who forms a reasonable suspicion that research misconduct has occurred acts in a timely manner in accordance with the institution's procedures, and brings that suspicion to the attention of the relevant person(s) (see Section 10 for further information on handling research misconduct).

⁴ NHMRC (2002, 2005). *Statement on Consumer and Community Participation in Health and Medical Research (the Statement on Participation)*, Commonwealth of Australia, Canberra.

Available at: <http://www.nhmrc.gov.au/publications/synopses/r22syn.htm>

⁵ NHMRC (1999). *National Statement on Ethical Conduct in Research Involving Humans*, Commonwealth of Australia, Canberra.

Available at: <http://www.nhmrc.gov.au/publications/synopses/e35syn.htm>

⁶ NHMRC (2004). *Australian Code of Practice for the Care and Use of Animals for Scientific Purposes* (7th ed), Commonwealth of Australia, Canberra.

Available at: <http://www.nhmrc.gov.au/publications/synopses/ea16syn.htm>

Part B

Practices for encouraging responsible research conduct

3 Research data and records management

Introduction

The responsible conduct of research includes the proper handling and storage of research data. While it is difficult to develop an all-encompassing definition of research data across all discipline fields, a central concept is that it includes the originally constituted body of evidence, or other material, on which the findings or interpretations of the research are based.

In many fields, primary material includes notes of methods and procedures, approvals, field notes or the output of research equipment (eg mass spectrometry). Data are then commonly developed from this primary material. It is not possible to list comprehensively all the material that should be kept. In general, the researcher is responsible for this decision and should take into account:

- the adequacy of the research data and records to justify the conclusions made, and to be useful to other researchers wishing to extend the research
- the possibility of challenges to research data
- whether the original material has heritage or other community value.

Maintaining 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 some of the original 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 kept. The research data retained should allow others to confirm that published findings are genuine, analysed appropriately, and not fabricated. In some cases, retention of the original material is required by law; retention of original material for other researchers to use is increasingly required by a funding agency or convention in the discipline.

Responsibilities of institutions

3.1 Retain research data and records

Institutional policies and procedures are important for guiding an institution's researchers about what research data should be retained and how they should be held. The procedures should be consistent with relevant legislation, codes and guidelines. Institutions therefore have the following responsibilities:

- 3.1.1 Develop policies specifying the time that research data are to be retained. The minimum recommended period for retention is 5 years from the date of publication; however, for specific types of research (such as clinical trials), 15 years or more may be appropriate.

- 3.1.2 Ensure that data obtained by researchers are retained in an accessible form and are under the control of the institution where all or most of the work was undertaken.

3.2 Provide secure research data storage and record-keeping facilities

Institutions conducting research are responsible for developing policies and providing facilities for the safe and secure storage of research data collected by researchers, as well as for maintaining clear and durable records of the location of stored research data. Institutions therefore have the following responsibilities:

- 3.2.1 Develop policies and procedures for research data ownership and storage that also cover situations when researchers move between institutions or employers, or when data are held outside Australia. When people move between institutions, an agreement can be made to transfer research data.
- 3.2.2 Wherever possible, retain research data in the researchers' department(s), research unit(s), institutional repository or other multisite storage facility, although individual researchers should be permitted to hold copies of the research data for their own use. Arrangements for material held in another location should be documented specifically.
- 3.2.3 In projects that include multiple institutions, reach an agreement at the outset about the responsibility for research data and records storage within each institution (see Section 9 for further information on collaborative research).
- 3.2.4 Ensure that researchers store research data and records in the safe and secure storage provided.

3.3 Identify ownership of research data and records

Institutions must have policies on the ownership of research materials, research data, databases and other material retained at the end of a research project, where this is not established by the funding arrangements for the project. As a general rule, the most satisfactory arrangement will be that the materials and data retained at the end of a project are the property of the institution that hosted the project, another institution with an interest in the research, or a central repository.

As far as possible, the data should be available for use by other researchers.

3.4 Ensure security and confidentiality of research data and records

It is important that institutions have policies and procedures for the establishment and ownership of, and access to, databases and archives containing confidential information, and that these procedures are consistent with relevant legislation or other guidelines, including privacy guidelines. To achieve this, institutions have the following responsibilities:

- 3.4.1 Develop procedures to guide researchers on matters concerning the ownership and use of research data and original material, and the confidentiality of these.

- 3.4.2 Ensure that researchers are informed of confidentiality agreements and restrictions on the use of research data relating to any research project, and ensure that supervisors inform researchers of their obligations in respect of such agreements.
- 3.4.3 Ensure that computing systems, especially those that are accessible through networks, are secure.
- 3.4.4 Ensure that security and confidentiality take into account use by multiple researchers and the departure of individual researchers.
- 3.4.5 Ensure that those holding original material (including electronic material) understand their responsibilities regarding security and access to research data.
- 3.4.6 Ensure that information technology staff understand their responsibilities regarding network security and access to research data.

Responsibilities of researchers

3.5 Retain research data and records

It is important that researchers are cognisant of professional standards, legal requirements and contractual arrangements when determining how long research data and records are to be retained. Researchers therefore have the following responsibilities:

- 3.5.1 Ensure that research data are retained appropriately.
- 3.5.2 Hold research data and records 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 persists following publication.
- 3.5.3 Retain research data for a minimum of 5 years from the date of publication. However, for specific types of research (eg clinical trials), 15 years or more may be appropriate.
- 3.5.4 Ensure that, when a researcher moves elsewhere, retires or dies, the responsibility for holding research data continues to rest with the institution where the data were collected.
- 3.5.5 Retain all relevant material in cases where the results from research have been challenged, until any such matter is resolved. Research records relevant to allegations of research misconduct must not be destroyed.

3.6 Manage storage of research data and records

Researchers have primary responsibility for the appropriate and secure management of research data, original material and records, according to the institution's policies.

Retention of records solely by the researcher does not necessarily provide protection in the case of a challenge. Researchers therefore have the following responsibilities:

- 3.6.1 Keep clear and accurate records of the research methods, procedures, approvals and data sources (including any approvals granted) before, during and after the research process.
- 3.6.2 Ensure that, when not in direct use, research data and records are kept in safe and secure storage provided by the institution.
- 3.6.3 Provide the same level of care and protection to primary research records, such as laboratory notebooks, as to the research data.
- 3.6.4 Retain research data, including electronic data, in a durable, appropriately indexed and retrievable form.
- 3.6.5 Manage research data and records according to ethical protocols and relevant legislation, such as those relating to privacy, records (including medical records), management of heritage material, and unregulated therapeutic goods.
- 3.6.6 Ensure appropriate security of research data and records.
- 3.6.7 Maintain a catalogue of research data in an accessible form.

3.7 Maintain confidentiality of research data and records

When researchers are given access to confidential information, they need to maintain that confidentiality. Researchers must ensure that the information is not used for purposes other than those agreed to by the person who provided the information (see also Section 7 on peer review). Researchers therefore have the following responsibilities:

- 3.7.1 Comply with all confidentiality agreements that apply to any given research project.
- 3.7.2 Provide details of any confidentiality agreements to the head of the research institution (or nominated representative), before such agreements are signed (see also paragraph 5.2).
- 3.7.3 Ensure that research data and records are stored in a manner that protects the privacy of participants, and are in accordance with any confidentiality agreements that may apply.
- 3.7.4 Keep data confidential when making available for discussion research data that form the basis of publications of any kind. Research data and records should be kept in such a way that reference to them by third parties can occur without breaching such confidentiality.

4 Supervision of students and research trainees

Introduction

Institutions, supervisors and research trainees (ie those new to research) all contribute to the culture in which research is conducted.

It is important that high standards of integrity and responsible attitudes are instilled from the beginning of a research career. Therefore, all research trainees should receive training on research ethics, this code and the research policies of the institution concerned, as well as the practices that are relevant to their discipline(s). Researchers need to 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.

It is important that research trainees appreciate that, in undertaking research, they are joining a serious endeavour that requires dedication and accountability, where public or private funding has been provided to support activities that will increase knowledge and solve problems.

Students and research trainees also have responsibilities under this section.

Responsibilities of institutions

4.1 Set standards for supervision and mentorship

Institutions need to have clear lines of responsibility for, and standards of, supervision and mentorship to be provided by research staff. Institutions therefore have the following responsibilities:

- 4.1.1 Ensure that each research trainee or researcher new to research in the institution has an appropriately qualified supervisor.
- 4.1.2 Ensure that the ratio of trainees to supervisors is low enough to provide effective intellectual interaction and supervision of the research, and guidance in appropriate behaviour.

4.2 Inform research trainees

Institutions need to ensure that all research trainees are aware of the importance of responsible research conduct. Institutions therefore have the following responsibilities:

- 4.2.1 Provide each research trainee with a copy of this code and any written material on applicable government and institutional guidelines for the conduct of research, including those covering ethical requirements for

studies on humans and animals, requirements for privacy and confidentiality, occupational health and safety matters, environmental protection matters, and the institution's mechanisms for dispute resolution.

- 4.2.2 Make available formal induction and training for all research trainees in research ethics, occupational health and safety, environmental protection, principles of research design and research management.

Responsibilities of researchers and supervisors

4.3 Mentor and provide support

Supervisors are responsible for guiding the professional development of the research trainee. Supervisors therefore have the following responsibilities:

- 4.3.1 Provide guidance in all matters of research conduct.
- 4.3.2 Oversee all stages of the research process, such as developing a hypothesis or research objective, selecting appropriate methods, preparing applications for funding, gaining ethics approval (where applicable), collecting and recording data, and summarising, analysing and reporting findings. Public dissemination of research findings at conferences and meetings is an important component of this training.

4.4 Ensure training

Supervisors are responsible for ensuring that training in research conduct starts as soon as possible in the career of a researcher. This training will be both formal and practical (eg specific to the research unit). Training should encompass discipline-based research methods and other relevant skills, such as skills for interactions with industry and working with diverse communities.

4.5 Ensure valid and accurate research

The supervisor must make every reasonable effort to ensure the validity of research data obtained by a research trainee under their supervision.

4.6 Ensure appropriate attribution

Senior researchers are responsible for ensuring that students and research trainees receive appropriate credit for their work.

Responsibilities of research trainees

4.7 Seek guidance

As part of their training, research trainees must develop an understanding of responsible research conduct according to the standards described in this code and in other relevant guidelines. This is an ongoing process. Therefore, research trainees are responsible for ensuring that they seek clarification and further information from their

supervisor or another senior researcher in their discipline, on any aspect of research conduct about which they are unsure.

4.8 Develop a personal ethos

Research trainees are responsible for developing a personal ethos that embodies the principles of this code.

4.9 Undertake induction

Research trainees must complete all relevant induction courses (such as training in research ethics, occupational health and safety, environmental protection, research methods and research management), as soon as possible after starting research in a new institution.

4.10 Raise any issues where policy is not clear

Research trainees are responsible for seeking guidance from their supervisor or other experienced mentor if they are unsure about the policies relating to any aspect of research.

5 Publication and dissemination of research findings

Introduction

Publication and dissemination of research findings are essential parts of the research process and are required to inform other researchers, professional practitioners and the wider community. The research process is not complete until the results have been made available to others as widely as possible in an accessible form. There are many ways of disseminating research findings, and although formal publication of the results of research will usually take place in academic journals or books, this is not always the case. Research may also be disseminated through non-refereed publications (such as web pages) or through other media (such as exhibitions or films). However, it is essential that reports of research are as accurate and truthful as possible, and preferably have been reviewed by independent experts before dissemination.

This section should be read in conjunction with Sections 6 (Authorship) and 7 (Peer review).

Responsibilities of institutions

5.1 Promote responsible publication and dissemination of research findings

Institutions should promote an environment of honesty, integrity, accuracy and responsibility in publication (see also subparagraph 2.1.3).

5.2 Protect confidentiality and manage intellectual property

Institutions must have policies for protecting confidentiality and intellectual property. Therefore, institutions have the following responsibilities:

- 5.2.1 Ensure that there are processes to make all parties to the research aware of the nature of confidentiality provisions where they apply (see also paragraph 3.7).
- 5.2.2 Follow policies that protect the intellectual property rights of the institution, the researcher and sponsors of the research.
- 5.2.3 Ensure that researchers are aware of contractual arrangements that limit publication.
- 5.2.4 Ensure that external sponsors of research understand the importance of publication in research and that sponsors do not discourage publication or dissemination of research findings for longer than the minimum time required for the necessary protection of intellectual property or other relevant interests (usually 6 to 12 months).

5.3 Support communication of research findings to the wider public

Institutions should provide guidance (such as a media relations officer) to assist researchers to communicate their research findings through the media (see paragraph 5.12). The reporting benchmark is that researchers avoid publicly reporting research until the conclusions have been reviewed by peers. Instances where this is not the case must be approved by the institution.

When reporting research results for publicity purposes, institutions must acknowledge all partner institutions involved in collaborative research activities as far as possible (see Section 9 for further information on collaboration).

Responsibilities of researchers

5.4 Disseminate all research findings

Researchers have a responsibility to their colleagues and the wider community to disseminate a full account of their research, including negative findings and results contrary to their hypotheses.

Researchers must also acknowledge the contribution that research subjects made to the research, and, where feasible, provide them with feedback on the research results.⁷

5.5 Ensure accuracy of results

Researchers are responsible for the accuracy and validity of the results they disseminate. Researchers therefore have the following responsibilities:

- 5.5.1 Take all reasonable steps to ensure that the results of research are disseminated in a way that is accurate and not misleading.
- 5.5.2 Distinguish between research findings (evidence) and their own interpretation and comment (opinion).
- 5.5.3 Correct the record, in cases where misleading or inaccurate statements have been made, as soon as they are aware of the error.

5.6 Disclose multiple submissions of research findings

It is not acceptable to include the same research findings in multiple publications, except in some particular and clearly explained circumstances (eg review articles). An author who submits substantially similar work to more than one publisher, or who submits work substantially similar to a work that has already been published, must disclose this to the (second) publisher at the time of submission.

⁷ NHMRC (2002, 2005). *Statement on Consumer and Community Participation in Health and Medical Research (the Statement on Participation)*, Commonwealth of Australia, Canberra. Available at: <http://www.nhmrc.gov.au/publications/synopses/r22syn.htm>

5.7 Obtain permission for republishing

Researchers should make every effort to obtain permission from the original publisher before republishing research findings.

5.8 Disclose research support accurately

Publications must include information on the sources of financial support for the research, as well as any potential conflicts of interest. Researchers are responsible for attributing accurately the institution(s) and funding sources that supported the research.

5.9 Register clinical trials

Researchers must register clinical trials with a recognised register to promote access to the results of all clinical trials.

5.10 Cite publications accurately

Researchers must be accurate in citing their own work and that of others in all publications.

5.11 Protect intellectual property and manage confidentiality

Research sponsors sometimes require confidential reports. Where there is confidential reporting or potential use of research that has not been subjected to peer review, researchers must include a description of the status of the work.

5.12 Responsibly communicate research findings to the wider public

Communicating research findings to the media is in the public interest, and researchers should seek to do so responsibly. Advice from the institution's media relations officer may be useful. Researchers have the following responsibilities:

- 5.12.1 Ensure that research findings that have the potential to influence community behaviour or professional conduct are peer reviewed before reporting.
- 5.12.2 Ensure that the status of the research findings — whether preliminary, complete, peer reviewed or otherwise — is explicitly disclosed when reporting research findings to the media, or for other purposes.

6 Authorship

Introduction

This section focuses on the enduring record of research, such as written material in journals or other scholarly publications, although the results of research may be disseminated in a wide variety of ways (see Section 5 for further information on the publication and dissemination of research findings).

To be named as an author, a researcher must have made a substantial scholarly contribution to the publication, and be able to take responsibility for its content. Authorship credit is based on substantial contributions that include any or a combination of:

- conception and design of the project
- analysis and interpretation of research data
- drafting parts or all of the article or critically revising it.

An author's role in a publication or other research output must be sufficient for that person to take responsibility for, and to defend publicly, at least that part of the output to which that person contributed. Authorship should honestly reflect the contribution to the work being published. Consistent with this, no person who qualifies as an author may be included or excluded as an author without their permission in writing.

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

Responsibilities of institutions

6.1 Develop and maintain criteria for authorship

Institutions must have a policy on the criteria for authorship, consistent with this code. This policy needs to comply with authorship criteria appropriate to each institution's range of disciplines.

6.2 Maintain signed acknowledgments of authorship for all publications

Institutions must have policies whereby an executive author is appointed to record authorship and communicate with the institution and the publisher. The department of the executive or senior author is responsible for retaining a written acknowledgment of authorship of each research publication, signed by all authors at the time of submission and any resubmission of the research paper for publication. This record must be retained in safekeeping in that department. Where a signature is not practical,

faxed or emailed consent is acceptable. For this purpose, published conference abstracts and similar publications are included.

6.3 Prevent and manage authorship disputes

Institutions must establish procedures to help prevent conflicts arising from disputes about authorship, and to help resolve disputes if they arise.

Responsibilities of researchers

6.4 Follow policies on authorship

Researchers must follow the institution's policies on the criteria for authorship, including the role of the executive author who is responsible for recording authorship and communicating with the institution and the publisher (see paragraph 6.2).

6.5 Agree on authorship

Collaborating researchers should discuss and agree on authorship of a publication or other research dissemination at an early stage in a research project, and review their decisions whenever there are changes in participation. One person should be nominated as executive author, and this person is responsible for ensuring that this is done.

6.6 Include all authors

Researchers cannot omit from authorship any person who meets the criteria for authorship listed above, under 'Introduction'.

6.7 Do not allow unacceptable inclusions of authorship

It is important that researchers allocate authorship responsibly. The following examples are not sufficient reasons for including a person as an author:

- being head of department, or holding other positions of authority, or solely on the basis of personal friendship, without having met the criteria above
- providing technical writing without input into the physical or intellectual work involved in the research or the analysis and interpretation of the findings
- participating only in the routine acquisition of data or the acquisition of funding, or in a role relating only to general overall supervision of the research group.

6.8 Acknowledge other contributions fairly

Researchers are responsible for ensuring that others who have made substantial contributions to the research and those individuals and organisations who have provided facilities or material are acknowledged (eg research assistants, technical writers). Where individuals are named, their consent must first be obtained.

6.9 Follow journal authorship requirements

Researchers must comply with authorship criteria appropriate to their discipline, and according to the requirements of the journal in which their work is to be published.⁸

6.10 Extend authorship policies to web-based publications

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

⁸ There are a number of published guidelines for authorship, including:
The Vancouver Protocol, International Committee of Medical Journal Editors
<http://www.annals.org/cgi/content/full/126/1/36?ck=nck>
Guidelines on Good Publication Practice, Committee on Publication Ethics
<http://www.publicationethics.org.uk/guidelines>
Publication Policies, Nature
<http://www.nature.com/nature/submit/policies/index.html>

7 Peer review

Introduction

The term ‘peer review’ is used here to describe impartial and independent expert scholarly assessment of research activities. Peer review supports honesty and integrity in research and helps to maintain high standards by encouraging accurate, thorough and credible research reporting. The peer review process may also detect deviations from the principles of this code (eg double publication, errors and misleading statements); however, it cannot ensure research integrity. Peer review is an essential element of the responsible conduct of research, being involved in the assessment of grant applications and material submitted for publication, the review of performance, and the selection of staff.

Responsibilities of institutions

7.1 Encourage participation in peer review

Institutions should recognise the importance of the peer review process and encourage and support researchers to participate.

Responsibilities of peer reviewers

7.2 Conduct peer review responsibly

It is important that peer reviewers:

- are fair and timely in their review
- act in confidence and do not disclose the content or outcome of any process in which they are involved
- do not introduce considerations that are irrelevant to the selection criteria
- do not take advantage of knowledge obtained during the peer review process
- ensure that they are informed about, and comply with, the policies and selection criteria to be applied
- do not permit personal prejudice to influence the peer review process
- do not agree to peer review beyond their area of expertise.

Responsibilities of researchers

7.3 Do not interfere during the peer review process

Researchers whose work is undergoing peer review must not seek to influence the decision-making process.

7.4 Participate in peer review

Researchers have a responsibility to participate in the peer review process, such as the assessments of grants and of papers submitted for publication. Those in receipt of substantial public funding support have a particular obligation to contribute to the peer review process.

7.5 Mentor trainees in peer review

Supervising researchers have a responsibility to assist trainee researchers in developing the necessary skills for peer review and understanding their obligations to participate.

8 Conflicts of interest

Introduction

A conflict of interest in the conduct of research exists where there is divergence between the interests of a person or an institution and their obligation to the research activities, such that an independent observer might reasonably question whether the professional actions or decisions of that person or institution are affected by their other interests.

Researchers must not allow personal advantage to influence decisions or the representation or interpretation of research findings, nor gain personal advantage by not revealing a conflict of interest. Conflicts of interest are serious issues in research, because they can compromise impartial judgment. They also undermine community trust in research. While financial conflicts of interest are foremost in the public mind, other potential conflicts of interest include private benefit dependent on research outcomes and other personal or professional advantage.

A perception that a conflict of interest exists can also have serious consequences, raising concerns about the integrity of individuals or the management practices of the institution.

Management of conflicts of interest can be complicated, and institutions need to have comprehensive procedures in place to cover the likely range of circumstances. Smaller institutions may wish to use the policies of larger institutions.

Responsibilities of institutions

8.1 Maintain policies and procedures on conflicts of interest

The most important step in dealing with a conflict of interest is disclosure. Institutional policies for managing conflicts of interest should cover a range of responses, from recommending removal from the situation to other actions that prevent researchers from being able to influence decisions unfairly to their benefit, or prevent the perception that this has occurred. Institutions therefore have the following responsibilities:

- 8.1.1 Develop clearly formulated policies and readily accessible procedures for the management of actual and potential conflicts of interest in research.
- 8.1.2 Advise their research staff of procedures regarding appropriate disclosure of affiliation with, or financial involvement in, any organisation or entity that is potentially affected by the outcomes of the research. These procedures should include guidelines on how to handle conflict of interest in a variety of research settings, as well as procedures to ensure proper disclosure.

- 8.1.3 Ensure that their procedures cover the full range of potential conflicts of interest, including any situation in which the conflict of interest may be perceived to affect any decision regarding other people.

Responsibilities of researchers

8.2 Manage conflicts of interest

Researchers have a responsibility to disclose any actual or potential conflict of interest at the appropriate time.

8.3 Follow rules for dealing with conflicts of interest

Researchers must comply with their research institution's policies and procedures for identifying, disclosing and managing actual or potential conflicts of interest.

Researchers have the right not to disclose the details of a conflict of interest in some circumstances. In these situations, however, the researcher must disclose the existence of a conflict and withdraw fully from the situation.

9 Collaborative research

Introduction

This section deals with collaborations between researchers at more than one institution. Collaborative research has increased markedly in recent times, and is undertaken for many reasons. However, in undertaking collaborative research, there are a number of issues that need to be addressed, including sharing intellectual property, managing research findings and conflicts of interest, and commercialising research outcomes.

It is important to note that research practice may differ between countries, but Australian researchers should make every effort to comply with this code.

Responsibilities of institutions

9.1 Have written agreements for each collaboration

Institutions involved in a multi-institutional research project, or in a collaborative project between public and private research organisations and sponsors, need to have written agreements to manage all aspects of the research. The written agreement must cover the following:

- intellectual property
- copyright issues
- sharing commercial returns
- reporting to appropriate agencies (see also paragraph 2.9 about contractual arrangements).

Institutions have a responsibility to ensure that researchers understand the policies and written agreements of multi-institutional research collaborations.

9.2 Manage conflicts of interest

Institutions should have procedures that ensure disclosure of conflicts of interest that arise specifically in collaborative research, as well as procedures to deal with them, once disclosed (see Section 8 for further details on conflicts of interest).

9.3 Provide access to collaborative research data and records

Institutions should have policies that address data management in collaborative research, and also need to develop agreements with other institutions involved with them in collaboration (see also subparagraph 3.2.3). Institutions therefore have the following responsibilities:

- 9.3.1 Develop written agreements regarding access to, and the confidentiality of, research data generated at multiple institutions.

- 9.3.2 Identify a person to be involved in the management of research data and records storage. Each institution should also have procedures in place for when such people retire or move between institutions.

9.4 Disseminate collaborative research responsibly

It is important that institutions have policies and procedures to provide guidance on institutional obligations when disseminating collaborative research.

As far as practical, institutions must acknowledge all partner institutions involved in collaborative research activities when reporting research results for publicity purposes.

Responsibilities of researchers

9.5 Comply with multi-institutional agreements

Researchers involved in multi-institutional research need to be aware of, and comply with, all policies and written agreements affecting their research (see also paragraph 2.9 about contractual arrangements).

9.6 Declare conflicts of interest

When establishing a research collaboration, researchers have a responsibility to disclose, at the time of proposing or reporting research, any potential conflicts of interest that may influence or be seen to influence any aspect of the conduct of the research (see Section 8 for further information on conflicts of interest).

9.7 Store and manage research data and records as prescribed

Researchers are responsible for being aware of their institutions' policies and procedures relating to research data and records in collaborative research projects.

9.8 Disseminate collaborative research responsibly

Researchers are responsible for following institutional arrangements for disseminating collaborative research, including agreed practice in acknowledging support (see paragraphs 5.8 and 9.4). Collaborating researchers should also discuss and agree on authorship of a publication or other research dissemination at an early stage in a research project.

Part C

Research misconduct: responsibilities of institutions and researchers

10 Handling allegations of research misconduct

10.1 Introduction

The *Australian Code for the Responsible Conduct of Research* has been developed to promote good research practices and foster high standards of integrity and responsibility among those who conduct research. While promoting good practice is the most effective way of preventing research misconduct, allegations of research misconduct will arise from time to time and must be handled fairly, promptly and effectively, and with regard to the principles of natural justice.

This section of the code defines research misconduct and provides an overall process for institutions to handle allegations of research misconduct, covering the roles and responsibilities of staff. Institutions that conduct research must establish policies and procedures for handling allegations that are consistent with this code. These procedures must include:

- publishing the definition of research misconduct within the institution
- having standard procedures that are consistently applied
- making the procedures widely known within the institution
- ensuring that processes for handling allegations of research misconduct are linked to the institution's procedures for dealing with other forms of misconduct.

A number of people have responsibilities under this process, including:

- heads of departments or research centres, where appropriate
- advisers in research integrity, appointed by the institution
- 'designated persons', who conduct a preliminary investigation to assess the allegations and provide advice to the chief executive officer (vice-chancellor, director or equivalent)
- the chief executive officer (vice-chancellor, director or equivalent), who must consider the advice of the designated person and decide whether the institution must establish an institutional inquiry or an independent inquiry, as described below.

It is important that all those involved in research are aware of their own responsibilities as individual researchers, supervisors, mentors and research unit heads. It is also essential that researchers are aware of institutional policies that govern research, and the processes for receiving and handling allegations of research misconduct.

10.1.1 Research misconduct

Research misconduct is defined as deviation from the *Australian Code for the Responsible Conduct of Research*. Some examples of research misconduct are provided in Box 10.1.

Box 10.1 Examples of research misconduct

There are many ways in which researchers may deviate from the standards and provisions of this code, including (but not limited to):

- fabrication of results
- falsification of results
- plagiarism
- misrepresentation of findings and data
- dishonest, manipulative and selective use of information
- misleading ascription of authorship, including omitting those who have contributed appropriately to the work, or listing authors without their permission
- attribution of work to others who have not contributed to the research
- lack of appropriate acknowledgment of work primarily produced by a research student, trainee or associate in the course of their employment
- failure to declare, avoid or manage serious conflicts of interest
- abusive supervision
- inaccuracy and carelessness in record keeping or in the preparation of grant applications or publications
- facilitation of misconduct in research by collusion in, or the concealment of, such actions by others
- any attempt to do any of the above things.

Deviations from this code also include:

- failure to follow agreed or approved research protocols (eg as approved by a research ethics committee)
- risking the safety of human participants, or the wellbeing of animals or the environment
- those deviations from this code that occur through negligence.

Research misconduct does not include differences in interpretation of, or judgements about, data.

Research misconduct is a serious matter requiring specific processes by institutions. It can have many consequences, including danger to participants, risks to animal welfare, harm to the environment, damage to the reputation and careers of other researchers or collaborators, undermining of public trust, and distortion of the public record of research findings. Research misconduct jeopardises the reputation of researchers, institutions and the entire research endeavour. It may have consequences well beyond the specific institution and the employer–employee relationship. This code sets out mechanisms for investigating research misconduct specifically, but

recognises that institutions will have to link these mechanisms to their general misconduct procedures.

This code allows for two levels of response to allegations (an internal inquiry or an independent inquiry), both of which can remain the responsibility of the institution. However, for more serious allegations, a process that allows for independent advice to the institution is required. It is difficult in the abstract to define precisely which types of research misconduct are more serious than others and each situation must be evaluated carefully, with attention to the actual or potential harm involved. The institution must consider the potential consequences for the researcher of an investigation with or without subsequent penalty, and ensure that the allegations are handled in a process that provides for proper representation and for an appeal.

The definition of research misconduct and the institution's processes for handling allegations must be included in all induction and training materials for new researchers and for new employees undertaking research. Natural justice demands that any person against whom research misconduct is alleged has been provided with sufficient information (eg at the time of employment or the start of a research career), to be aware of what constitutes research misconduct.

10.1.2 Linking research misconduct to the institution's procedures for dealing with other misconduct

Processes for dealing with research misconduct involving employees must be in accord with their employment agreements and contracts, even when the misconduct affects people and organisations beyond the institution. Research misconduct may occur in conjunction with other forms of misconduct, including bullying, harassment or discrimination, which are handled through processes that are not the subject of this code. Institutions must therefore ensure that these other processes can accommodate the specific requirements of this code for handling research misconduct.

10.2 Institutional processes for handling research misconduct

10.2.1 Responsibilities at the departmental or research centre level

Establishing a responsible research environment in research groups, departments, units and centres is the most effective way of preventing research misconduct, and detecting and dealing with research misconduct should it arise. Thus, research groups should agree on how they will implement this code. Whenever possible, supervisors and heads of departments should be the first point of contact when concerns arise, and they must comply with institutional policies and procedures, including referral of the issues to the designated person (see below) as required.

Although dealing with allegations of research misconduct at the research unit or centre level is the preferred route, people who feel uncomfortable about raising the matters with their supervisor or head of department can go directly to an adviser in research integrity (see Box 10.2), the designated person, or another appropriate officer of the institution.

Researchers may inadvertently transgress the provisions of this code through ignorance, misjudgement or inexperience. So long as such alleged transgressions are not deemed to have resulted in harm, every effort should be made to deal with matters at the level of the department or equivalent. The process should involve the researcher acknowledging the breach and taking appropriate steps to prevent recurrence. Where needed, the public record must be corrected.

Where alleged misconduct is denied, breaches of this code are repeated or multiple, serious harm has resulted, or where the allegations, if proven, would require disciplinary action, the situation must be referred to the designated person (see Box 10.2).

Box 10.2 Definitions

Adviser on research integrity

An adviser on research integrity is a senior staff member who advises and guides staff on matters of research integrity. Advisers should be people with research experience, wisdom, analytical skills, empathy, and knowledge about the institution's procedures and management structures, and the accepted practices in research.

Designated person

The designated person is a senior person within the institution's management structure, experienced in research and research management. The designated person receives written allegations, conducts a preliminary investigation and provides advice to the CEO or equivalent. In most university settings, the designated person will be the deputy vice-chancellor (research) or similar. The designated person must not be the CEO.

10.2.2 Responsibilities at the institutional level

Institutions must provide advice and guidance for researchers, and have in place processes for handling allegations of research misconduct, and ensure that they are known and readily accessible to research staff.

The person(s) who is the subject of the allegations must be treated fairly and provided with opportunities to respond to allegations in writing. The person(s) who makes the allegations must also be treated fairly and according to legislative provisions for whistleblowers, during and following investigation of the allegations.

A designated person to receive allegations and conduct a preliminary assessment

A senior staff member(s), as defined in Box 10.2, must be designated to have responsibility for receiving the written allegation(s) of research misconduct. This designated person must carefully assess allegations, conduct a preliminary investigation and advise the institution, via the CEO or equivalent, of their conclusions, including their advice on the appropriate means of handling any allegations.

The role of the designated person is to undertake a preliminary assessment of allegations of research misconduct, taking into account the requirements of this code and the institution's published policies on research misconduct and its handling. The

designated person should also consider whether any intermediate actions need to be taken, such as referral of allegations not related to research to other institutional disciplinary processes. Where necessary, the designated person should also ensure that arrangements in the local workplace are fair to all parties until the allegations are resolved. The designated person must be authorised by the institution to take steps to secure all relevant documents and evidence so that they are available, should the designated person make a decision that the allegations are potentially serious.

Upon forming an assessment of the allegations, the designated person must inform the CEO, the person(s) making the allegations and the person(s) against whom allegations have been made, of that assessment.

The designated person must recommend to the CEO whether the allegations should be:

- dismissed
- dealt with under misconduct provisions unrelated to research misconduct
- referred back to the department level with instructions as to how they are to be handled
- investigated further through an inquiry.

If the designated person decides that the allegation deserves further investigation, they should recommend one of the following:

- an institutional inquiry (see Section 10.3.2)
- an independent inquiry (see Section 10.3.3).

After providing an opinion to the CEO, the designated person must not play any further role in any subsequent investigation or inquiry conducted into allegations, except that the designated person may be called to give evidence or expert opinion.

The designated person must maintain full records of all matters handled that relate to allegations of research misconduct.

Where a complaint relating to research misconduct is made against the designated person, the matter must be referred to the CEO forthwith. Where a complaint about research misconduct might directly involve the CEO, the matter must be referred to the most senior person in the institution (eg chancellor or the chair of the board of directors), who must arrange for an appropriate inquiry.

Adviser in research integrity

Institutions must appoint one or more advisers on research integrity, or have access to an adviser, for example by agreement with another institution.

The role of an adviser is to counsel the person(s) making or considering making allegation(s) of research misconduct. This role includes:

- assisting the complainant in preparing a written account of any allegations

- being available to guide and advise the person making the allegation(s) for the duration of the subsequent proceedings (this includes keeping them informed of the progress of the proceedings).

An adviser's role does not extend to the investigation or assessment of the allegation(s). They must not make contact with the person who is the subject of the allegation and they would normally not be called to give evidence at any inquiry. The role includes providing advice on institutional policy, how the complainant(s) should proceed in accordance with institutional policy, and the possible implications for the complainant. An adviser should not be involved if they have a conflict of interest.

An adviser's advice should assist the person making allegations to decide whether or not the matters represent research misconduct, or whether the allegations should be lodged with the designated person at the institution. The advice must cover the options open to the person, including whether to:

- withdraw the allegation(s), if discussions with an adviser resolve the concerns
- refer the matter directly to the person against whom the allegation is being made
- refer the allegations to a person in a supervisory capacity for resolution at the local or departmental level
- proceed further with the allegations by making a written allegation directly to the designated person (see above).

Institutions have a responsibility to provide similar support and advice to any researcher who is asked to respond to allegations of research misconduct. However, one adviser must not fulfil both roles at the same time. Again, an adviser should have no conflict of interest.

10.3 Conducting an inquiry

10.3.1 The role of the CEO

Upon receiving the designated person's advice, the CEO must decide whether to accept the advice and how to proceed (eg whether to establish an institutional or an independent inquiry).

If the CEO does not proceed to an inquiry, he or she must notify (in writing) at least those making the allegation(s), the subject(s) of the allegation(s), the adviser, and the designated person.

If the CEO decides to proceed to an inquiry, he or she must provide this decision in writing to those making the allegation(s), the subject(s) of the allegation(s), the adviser, the designated person, and any third parties as required under any agreement (eg funding bodies and collaborating institutions).

10.3.2 Institutional inquiry

An institutional inquiry is established within the institution, using appointed people without any conflicts of interest (other than employment within the institution). An

institutional inquiry may be used in cases that are deemed by the CEO as unlikely to jeopardise the employment conditions of the staff member facing the allegations, taking into account the nature and seriousness of allegations, precedents (where they exist), and this code. An institutional inquiry should not be used if the allegations involve significant deviations from this code, repeated deviations, or deviations in multiple areas of this code.

In establishing an institutional inquiry, the CEO must select a tribunal membership appropriate to the task. The tribunal will generally require at least one member with knowledge and experience in the relevant field of research, as well as others familiar with the responsible conduct of research. One member should have experience in such tribunals or be familiar with the principles of procedural fairness (see Box 10.3). At an institutional inquiry, legal representatives are not permitted to appear before the tribunal; however, the person who is the subject of the inquiry may be granted permission to have a person present for support and advice. Institutional inquiries will normally be closed.

The tribunal will report its findings to the CEO and the CEO will decide what disciplinary actions, if any, are required. Disciplinary actions involving curtailment of position, salary or conditions of employment normally will follow only from an independent inquiry (see below), where legal representation is permitted.

Box 10.3 Procedural fairness and disciplinary tribunals

When an institution establishes a group of people (a tribunal) to conduct an inquiry that may lead to disciplinary action, the person who is the subject of the inquiry must be granted a fair hearing under the legal principle of procedural fairness⁹ (also known as ‘natural justice’). To ensure procedural fairness, the following conditions must be met:

- the allegations of research misconduct must be stated clearly in writing
- the person facing the allegations has a right to be heard (ie to show why any adverse actions should not be taken)
- the members of the tribunal must be free from bias or preconception and must conduct themselves in a matter that demonstrates this.

In addition:

- the tribunal should provide its findings, and the reasons for those findings, in writing
- there should be an avenue for the findings to be appealed (in an institutional inquiry, appeals may be to a new, independent inquiry).

10.3.3 Independent inquiry

An independent inquiry is one established by the research institution, but comprised of people external to the institution. It must be used for allegations of research misconduct that, in the opinion of the CEO, may represent significant or repeated deviations from this code, if proven by the inquiry. An independent inquiry must provide for legal representation of the parties, and be established as a panel or tribunal.

⁹ See Forbes (2002) *Justice in Tribunals* (3rd ed) for a more detailed discussion of procedural fairness and natural justice.

In establishing an independent inquiry, the following conditions should apply:

- the panel or tribunal must have a minimum membership of three people
- at least one member must have knowledge and research experience in the relevant broad field of research
- one panel member should be a lawyer
- no panel or tribunal member may be employed by the institution, nor have other current or recent significant dealings with the institution or any other conflicts of interest
- the person facing the allegations is entitled to legal representation
- the panel or tribunal is not bound by the rules of evidence but its procedures must be consistent with the principles of natural justice and due process
- the inquiry should apply the civil standard of proof¹⁰
- any findings of the panel or tribunal must relate only to transgressions of the provisions of this code
- the panel or tribunal should normally be assisted by a legally qualified person acting as ‘counsel assisting’
- the panel or tribunal must have the powers to call and examine witnesses, and to call for and receive evidence
- inquiries may be open according to the discretion of the CEO
- the panel or tribunal must be established such that it reports back to the CEO, who must inform the governing body
- the findings of the panel or tribunal must be considered by the CEO and appropriate actions taken (those actions that represent disciplinary steps, including penalties such as demotion or dismissal, must be provided for in institutional policies and employment agreements and will be subject to appeal via those employment-related procedures)
- the CEO must inform all relevant parties of the findings of the panel or tribunal, as well as the actions taken by the institution (relevant parties may include affected staff, research collaborators (including those at other institutions), all funders of the research, sponsors and supporters of the research, journal editors and professional registration bodies)
- the findings of the external inquiry should be made available to the public.

In addition, the findings of the external inquiry should be considered by the CEO in the context of any other allegation of a non-research nature, such as whether the research unit requires specific action, either of a supportive, counselling or remedial nature.

¹⁰ The standard of proof applied in civil courts (ie the balance of probabilities) also applies in disciplinary proceedings. However, where allegations are serious and the potential consequences include a loss of professional reputation or employment, satisfying a ‘mere balance of probabilities’ does not suffice, and the standard of proof required moves closer to the criminal court standard of ‘beyond reasonable doubt’.

10.4 Disciplinary actions

Proven research misconduct may warrant disciplinary actions. Such actions are the responsibility of the research institution, which must ensure that employment agreements and contracts address how research misconduct will be handled in accordance with this code. An appropriate range of disciplinary actions must be available where a finding of research misconduct is the outcome of either an institutional or an independent inquiry. Appropriate actions may, for example, include demotion or other financial sanctions, termination of employment, denial of access to research funds, a period of supervision, referral to a professional registration body, or other conditions.