Australian Government
Department of Health, Disability and Ageing
National Health and Medical Research Council

NHMRC and MRFF Open Science Policy

Medical Research Future Fund

NHMRC

BUILDING A HEALTHY AUSTRALIA

Contents

1. Introduction

The Australian Government makes a major investment in health and medical research to improve the health and wellbeing of society. The National Health and Medical Research Council (NHMRC) and the Health and Medical Research Office at the Australian Government Department of Health, Disability and Ageing, responsible for the Medical Research Future Fund (hereafter referred to as MRFF), fund health and medical research. High-quality research that is rigorous, transparent and reproducible maximises the opportunity for improving health and wellbeing.

Open science supports and improves transparency, reproducibility and replicability of research, aiming to reduce waste, minimise unnecessary research duplication and maximise the benefits and value arising from research funding. Open science helps to increase the dissemination and improve accessibility of research, increase reuse of research data, improve research integrity and contribute to a stronger knowledge economy. Open science assists with reporting and demonstrating research achievement, supports track record assessment processes and contributes to better collaborations. Open science increases scientific collaborations and sharing of information for the benefits of science and society. It opens the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community.

NHMRC and MRFF support and expect open science practices as outlined throughout this Policy to maximise the benefits and value arising from their funding. Researchers are expected to consider open science practices across the entire research cycle covering, but not limited to:

- formulation of hypotheses
- development and testing of methodologies
- data collection, management and storage
- peer review and other evaluation and verification methods
- analyses, reflection and interpretation
- sharing and discussion of ideas and results
- communication, distribution and uptake
- use and re-use.

This Policy applies to all research that is funded in whole or in part by NHMRC and/or MRFF.

All recipients of NHMRC and MRFF grants must comply with all elements of this Policy. The Policy applies to research that has been funded in whole or in part through an NHMRC and/or MRFF grant (either during the award or after the funding period has ended).

Researchers are required to comply with this Policy as per the following grant agreements:

- NHMRC Funding Agreement
- MRFF grant agreements (Business Grants Hub-administered and NHMRC-administered).

This Policy is intended to complement a range of existing NHMRC and MRFF guidance, which researchers must continue to adhere to, including the:

- Australian Code for the Responsible Conduct of Research
- National Statement on Ethical Conduct in Human Research
- Ethical guidelines for research with Aboriginal and Torres Strait Islander Peoples and communities
- Principles for consumer involvement in research funded by the Medical Research Future Fund
- Statement on consumer and community involvement in health and medical research

- Australian code for the care and use of animals for scientific purposes
- NHMRC's Research Quality Strategy
- Statement on Sex, Gender, Variations of Sex Characteristics and Sexual Orientation in Health and Medical Research.

If relevant, researchers must adhere to the requirements relating to the sharing of research outputs in the *Defence Trade Controls Act (2012)*. Detailed requirements can be obtained from the Defence Export Controls Framework.

Administering organisations of NHMRC and MRFF grant funds are strongly encouraged to have or develop an institutional open science policy consistent with this Policy. They are also encouraged to consider rewarding open science practices as part of recruitment, evaluation and promotion processes.

If researchers collaborate with researchers funded by other funding bodies with differing policies, they should be aware of any obligation to comply with the partner funding agency requirements. This may require consultation with the partner researcher(s) and/or funding agency. Compliance with this Policy should be discussed and agreed when establishing a research collaboration to ensure that all parties, including those associated with another funding agency that may not have an open science policy similar to this Policy, agree to the responsibilities of NHMRC and MRFF-funded researchers.

1.1 Executive summary

This Policy requires:

- all research that is funded in whole or in part by NHMRC and/or MRFF to comply with the requirements outlined herein
- all research outputs to clearly acknowledge the funder(s) and include the unique grant identification number(s)
- research outputs from grants to be identified in final reports using appropriate persistent identifiers
- at least one version of a research paper (preprints, peer-reviewed preprints, author accepted manuscripts and versions of record) to be:
  - made immediately open access, that is, without any embargo period at the time of first online publication
  - published with a Creative Commons Attribution 'CC BY' licence
- metadata for research papers to be made open access in an institutional repository as soon as possible, but no later than 3 months after first online publication
- researchers to take reasonable steps to share research data and associated metadata, using an 'as open as possible, as closed as necessary' approach, adhering to the CARE (Collective Benefit, Authority to control, Responsibility, Ethics) and FAIR (Findable, Accessible, Interoperable, Reusable) principles
- research papers to have a data availability statement
- in the case of a public health emergency, researchers to deposit data relevant to the public health emergency and associated metadata in a trusted repository, using an 'as open as possible as closed as necessary' approach and in line with the CARE and FAIR principles
- for research outputs involving Aboriginal and Torres Strait Islander people and communities, researchers to take actions that consider ownership, management, use of, access to, and distribution of research results and outputs
- for research outputs involving Aboriginal and Torres Strait Islander people and communities, researchers to recognise and protect Indigenous Cultural and Intellectual Property (ICIP)
- research involving clinical trials to be registered in the Australian New Zealand Clinical Trials Registry or equivalent before recruitment of the first participant, and the trial registration ID provided in reports to NHMRC and MRFF
- for all newly awarded NHMRC grants, CIAs must have a valid ORCID recorded in their Sapphire profile to be eligible to hold NHMRC-funded grants.

This Policy recommends and encourages:

- administering organisations of NHMRC and MRFF grant funds to have or develop an institutional open science policy consistent with this Policy
- administering organisations of NHMRC and MRFF grant funds to consider rewarding open science practices as part of recruitment, evaluation and promotion processes
- authors of scholarly books, scholarly book chapters and edited research books, including prestigious reference works, to make them open access where possible
- planning for management and sharing of research outputs at the beginning of research projects and for this to be formalised in documents such as data management plans
- research software and code to be shared using the FAIR Principles for Research Software (FAIR4RS) and CARE principles, under an open license
- appropriate metadata to accompany all research outputs
- the use of persistent identifiers (PIDs), such as Digital Object Identifiers (DOIs) for research papers, ORCIDs for researchers, Research Activity Identifiers (RAiDs) for research activities and Research Organization Registry identifiers (RORs) for research organisations
- methods and protocols to be fully described
- research outputs to have an appropriate open licence (CC BY) applied when they are shared
- open engagement of societal actors through extended collaboration between scientists and societal actors beyond the scientific community
- researchers to share educational materials (such as training tools, presentations and resources) with an open licence
- any reuse of research outputs to be appropriately acknowledged and cited, with appropriate reference to any PIDs for that output
- the timely sharing of results from clinical trials, ideally within 12 months from primary study completion, and the trial registration ID provided in all trial materials
- the data from clinical trials to be described in the data discovery and request service Health Data Australia
- in circumstances where research outputs, research data, datasets, software, and associated code generated is commercial in-confidence or where the sharing of data risks business or commercialisation prospects to:
  - consult with relevant commercialisation and intellectual property (IP) experts on the development of a knowledge dissemination and/or data sharing plan
  - document any restrictions or limitations to the knowledge dissemination and/or data sharing plan as part of any required reporting process to NHMRC and/or MRFF.
- all researchers funded by NHMRC and/or MRFF will have or obtain an ORCID and provide it to the funder(s).

1.2 Acknowledgement of NHMRC and MRFF funding

All research outputs from NHMRC and/or MRFF-funded research must clearly acknowledge the funder(s) and include the unique grant identification number(s). For NHMRC-funded research outputs, the Research Organization Registry Identifier for NHMRC (https://ror.org/011kf5r70) must also be cited. A suggested format for this is:

'This research was funded in whole or part by [select the most appropriate]:

- The National Health and Medical Research Council (ROR https://ror.org/011kf5r70) [grant number(s)]
- The Medical Research Future Fund [grant number(s)]

- The Medical Research Future Fund [grant number(s)] and National Health and Medical Research Council (ROR https://ror.org/011kf5r70) [grant number(s)].

This can occur in an acknowledgements section if available and ideally should also be in the metadata for the research output. Adding this information allows the tracking of the impact of funding, which helps to demonstrate the value of funding.

1.3 Reporting

For grant opportunities that require submission of a final report, research outputs from the grant must be identified in that final report. Appropriate persistent identifiers, such as a DOI, must be provided for each listed research output.

1.4 Monitoring

Initial monitoring involves assessing institutional support for researchers to comply with this Policy (e.g. policies, provision of assistance and infrastructure). Later stages of monitoring will involve assessing compliance at an institutional level, for example examining rates of open access research papers through open bibliometric data.

NHMRC and MRFF are engaging in national and international discussions about assessing the status and trends of open science[1], and will develop further monitoring and evaluation processes as appropriate. Evaluation may include the implementation and impact of this Policy, including on broader health and medical research outcomes.

[1] UNESCO. 2023. UNESCO Open Science Outlook 1: Status and trends around the world. Paris, UNESCO

2. Research papers

2.1 Policy

When NHMRC and/or MRFF-funded research is described in a research paper *at least one* version of the research paper ***must*** be:

- made immediately open access, that is, without any embargo period at the time of first online publication
- published with a Creative Commons Attribution 'CC BY' licence (see **Section 5.7**).

Versions of research papers include preprints, peer-reviewed preprints, author accepted manuscripts and versions of record.

Where possible, metadata for research papers must be made open access in an institutional repository as soon as possible, but no later than 3 months after first online publication.

2.2 Guidance for implementation

2.2.1 Routes to compliance

Researchers may comply with the requirements for research papers in this Policy through one of three routes.

Route One: Version of Record open access (journal-based open access)

Making the Version of Record (VoR) immediately open access with a CC BY licence.

This route can be used when an article is being published in an open access journal.

This route may be associated with the payment of a fee or article processing charge (APC). The APC may be paid directly by the author or institution or may be covered by a formal agreement between an institution or group of institutions and a publisher (for example, a 'read and publish' or transformative agreement).

This route may be described as 'gold' or 'diamond' open access depending upon the business model of the journal.

Route Two: Author Accepted Manuscript open access (repository-based open access)

Making the Author Accepted Manuscript (AAM) immediately open access with a CC BY licence by depositing the AAM in an open online repository such as an institutional or other subject-based repository.

This route is sometimes called 'green' open access. There is usually no fee or APC associated with this route.

This route can be used when an article is being published in a subscription/closed journal with no open access option. A publisher-requested delay or 'embargo period' for the AAM does not meet the requirements of this Policy and should be refused.

To use this route the author (or their organisation) needs to retain sufficient rights to apply a CC BY licence to the AAM. This is known as rights retention. The licensing arrangements must be in place prior to any publishing agreement through either (1) or (2).

(1) For an author to retain the right to self-archive, they must let the publisher know, for example, in the cover letter, at the point of submission by using the following statement:

'This research was funded in whole or part by [select the most appropriate]:

- The National Health and Medical Research Council [grant number(s)]
- The Medical Research Future Fund [grant number(s)]
- The Medical Research Future Fund [grant number(s)] and National Health and Medical Research Council [grant number(s)].

For the purposes of open access, the author has applied a CC BY licence to any Author Accepted Manuscript version arising from this submission'.

OR

(2) If an organisation has a rights-retention policy, they may provide standard language for the author to use.

The Author Accepted Manuscript metadata should be linked to the Version of Record metadata, to ensure transparency of versions of the same manuscript.

Route Three: Preprints

Making a preprint immediately open access with a CC BY licence in a publicly accessible archive or preprint server. This route can be used to make the research paper available at any time before publication of the Version of Record.

Preprints must be deposited in a recognised publicly accessible archive or preprint server such as, but not limited to, arXiv, bioRxiv, medRxiv, Peer J Preprints and F1000 Research, that ensures the content is accessible, provides versioning options, and links to the published Version of Record. Most preprints are indexed, so are findable and citable.

NHMRC and MRFF encourage the posting of preprints for all manuscripts, regardless of whether they are choosing to achieve compliance with this policy through Route Three. By posting manuscripts early as a preprint, authors establish primacy with a fully citable version. Authors retain full control of when their work will be disseminated and bypass the lengthy publishing timelines that can delay access. Authors can receive feedback and commentary on their preprint and then publish updated versions.

Researchers are encouraged to pursue peer-reviewed publication of their preprints to establish a Version of Record, where feasible. When a preprint is subsequently published in a peer-reviewed journal, it is best practice to link the preprint and Version of Record metadata, to ensure transparency of versions of the same manuscript. Most journals accept articles that have been shared as preprints. Researchers should check the journal's policies on this matter prior to submitting an article that they have previously shared as a preprint.

Bibliodiversity: various routes to achieving open access for research papers

NHMRC and MRFF recognise the valuable contribution provided by all routes to achieving open access to research papers. They appreciate that many people, organisations and companies have committed time and resources to developing the various routes now available to researchers. NHMRC and MRFF have no preferred route for open access and respect a diversity of approaches. For further information about types of open access, see **Section 9.2**.

NHMRC and MRFF acknowledge that authors consider a wide range of factors when deciding on the best outlets for research papers arising from their research to maximise the impact of their work and further dissemination and production of knowledge. The decision to publish in particular formats and journal titles is therefore the decision of authors. Authors are strongly encouraged to consider whether the principles of open access apply to their location of choice. Authors should also be aware of questionable or unscrupulous practices, such as 'predatory' publishing and 'hijacked' journals, and never publish in such journals. Additional information to assist authors when considering where to publish their work is provided in **Section 9.2.**

Author choice

Under this Policy, authors have the freedom to submit manuscripts to their publication location of choice, including subscription journals. There are no limits on where authors can submit manuscripts, except for avoiding fraudulent journals.

Non-compliant publishing sites

Professional scholarly communications networks (e.g. ResearchGate, Academia.edu) are primarily file sharing and social networking platforms and are not acceptable repositories for the purposes of this Policy as they may not provide the appropriate support for long-term storage, curation and/or rights retention through open licensing (CC BY).

While this Policy fosters full open access to research papers, NHMRC and MRFF do not support the posting of research papers on 'pirate' sites. That is, sites that provide free access to paywalled journal articles without regard to copyright.

Hybrid journals

'Hybrid' journals require the payment of an APC for an individual journal article to be made open access in an otherwise subscription journal. Unless these journals are included as part of a formal agreement between an institution or group of institutions and a publisher (for example, a 'read and publish' or a transformative agreement), hybrid journals do not meet the intent of this Policy.

2.2.2 Use of NHMRC and MRFF funding to pay open access costs

When researchers apply for research funding, it is not possible to predict where and how knowledge translation and knowledge transfer of their work will occur (because the research is yet to be undertaken). Further, not all routes to open access require payment of a fee and it is recommended that authors consider this factor when deciding where to publish their work. NHMRC and MRFF also recognise the role of read and publish/transformative agreements in achieving a sustainable and cost-effective transition to open access for the research sector.

Use of NHMRC funding

Open science costs are not to be included as Direct Research Costs (DRCs) in grant application budgets. However, over the grant lifetime, **funds can be used to support costs associated with publishing open access such as article processing charges**, which are the result of the research activity and which are in accordance with the DRC Principles.[2]

Use of MRFF funding

The eligible use of MRFF funds for open science costs differs by grant opportunity. Applicants should review the grant opportunity guidelines during application preparation to determine the eligibility of including open access costs in their application. If funded, grantees should review the guidelines again to determine the eligibility of using MRFF funds for open science costs during the grant period.

[2] NHMRC Direct Research Costs Guidelines. Available from: https://www.nhmrc.gov.au/funding/manage-your-funding/funding-agreement

3. CARE and FAIR research data

3.1 Policy

Researchers are expected to take reasonable steps to share research data and associated metadata, using an 'as open as possible, as closed as necessary' approach. Researchers must adhere to the CARE and FAIR Principles.

Making research data available in a timely and responsible way maximises the benefit that can be derived from research by ensuring other researchers can verify the data, build on it and use it to advance knowledge and improve the health and wellbeing of society. This also honours research participants' contributions to science, as it maximises the potential for turning research discoveries into medical advancements for the individuals who volunteer and the communities they represent.

Where data is derived from human research participants, the sharing of data must comply with the terms of consent under which the data was collected and any requirements of the Human Research Ethics Committee which approved the project. For Indigenous data, researchers must also ensure that consent processes and data governance arrangements reflect the CARE Principles, including community-led decision-making and culturally appropriate data stewardship.

When NHMRC or MRFF-funded research is described in a research paper, the research paper must have a data availability statement. Conditions for access should also be made clear in the metadata of a deposited dataset.

3.1.1 Data sharing in public health emergencies

Sharing of data is crucial during public health emergencies. Public health emergencies are special cases where rapid data sharing may be necessary to enable an effective response to a crisis. A public health emergency is an event such as a public health emergency of international concern in accordance with the World Health Organization, or a public health emergency under applicable national frameworks and regulations.

In the case of a public health emergency, researchers must deposit data relevant to the public health emergency and associated metadata in a trusted repository, using an 'as open as possible, as closed as necessary' approach and in line with the CARE and FAIR principles. Data should be deposited as soon as its quality is appropriately assured, and at most within one month of acquisition.

3.2 Guidance for implementation

Data sharing requires an overall strategy for managing data from the conception and planning stages of all projects. It is important to consider ethical and legal aspects of the data before deciding to share data. For Indigenous data, this includes engaging with communities early, respecting Indigenous Data Sovereignty, and ensuring that data sharing aligns with community values and expectations.

When sharing research data, researchers must consider the appropriate level of access to provide and communicate this clearly in the metadata. The level of access may range from highly restricted (e.g. commercial in confidence, patient level, culturally sensitive, national security) to fully open access. Researchers should refer to the Five Safes Framework, a risk management model designed to help, identify, assess, and manage risks associated with data sharing and release.

Research data and metadata should be deposited in a well curated, openly accessible data repository. The repository should facilitate access to the data and may manage any necessary approval processes that consider any sensitivities associated with the data or metadata. The data should be assigned a persistent identifier, such as a DOI. Making data, metadata, provenance information and workflows available in established and certified repositories will increase how FAIR the data is. For Indigenous data, repositories should also support CARE-aligned practices, such as community governance, culturally appropriate metadata, and benefit-sharing mechanisms.

For the data to be of value to other researchers and for proper analyses to be conducted, the analytical techniques, assumptions, software, data dictionary and other details relevant to the research should also be shared alongside the

data. Openly available research data should be licensed with a suitable open licence, such as Creative Commons Attribution 'CC BY' licence.

In some cases researchers can't share data, because they do not have rights for it (e.g. data from third parties like data linkage services or hospitals), due to cross-jurisdictional restrictions on data sharing, or because the data is subject to data protection regulations due to the location of collaborators (e.g. European collaborators subject to the General Data Protection Regulation). In cases like this, the researcher should provide detailed information in the research paper about how they accessed the data, what data they used and what time-period it covered.

Issues related to proprietary data also can arise when co-funding is provided by the private sector (for example, the pharmaceutical or biotechnology industries). The extent of data sharing may be limited by restrictions imposed by licensing limitations attached to materials needed to conduct the research. Researchers should discuss projects with proposed collaborators early to avoid agreements that unnecessarily restrict data sharing.

3.2.1 Sensitive data

Sensitive data subject to privacy legislation (e.g. identifiable human medical/health and personal data or information) may be appropriately shared through mediated access arrangements and the application of a risk assessment framework like the Five Safes Framework, which may include data treatments such as anonymisation. Researchers must ensure that the security and privacy measures that are used for research data are proportional to the risks associated with the confidentiality or sensitivities of these data. These measures relate to storage, access and sharing of the data and should be recorded in a data management plan.

The National Statement on Ethical Conduct in Human Research provides guidance for researchers about sharing sensitive data, including consent.

For Indigenous data, sensitivity may extend beyond privacy to include cultural, spiritual, and community considerations. Researchers must work with Indigenous communities to identify what constitutes sensitive data and ensure that data sharing practices reflect community values, protocols, and governance structures.

4. Research involving Aboriginal and Torres Strait Islander people and communities

This section provides additional guidance for research outputs from research involving Aboriginal and Torres Strait Islander people and communities. This section must be read in conjunction with other guidance about the conduct of research involving Aboriginal and Torres Strait Islander people and communities (see **Section 9.4**). Researchers must remain up to date with current requirements.

Aboriginal and Torres Strait Islander people and communities have the right to assert and retain ownership of the cultural and Intellectual Property produced as part of the conduct of research.[3,4,5] For research outputs arising from NHMRC and/or MRFF-funded research involving Aboriginal and Torres Strait Islander people and communities, researchers must undertake actions, which demonstrate commitment to the values of justice, equity, respect and responsibility, and the principles of Aboriginal and Torres Strait Islander self-determination and leadership, sustainability and accountability, such as:[3,4,5,6]

- discussing ownership, management, use of, access to, and distribution of research results and outputs at the start of a research project and formalising this in a written research agreement
- including principles of Indigenous Data Governance and Indigenous Data Sovereignty through actions such as:
  - aligning with the Maiam Nayri Wingara principles of Indigenous Data Sovereignty[7] that Indigenous peoples have the right to:
    (1) Exercise control of the data ecosystem including creation, development, stewardship, analysis, dissemination and infrastructure.
    (2) Data that are contextual and disaggregated (available and accessible at individual, community and First Nations levels).
    (3) Data that are relevant and empowers sustainable self-determination and effective self-governance.
    (4) Data structures that are accountable to Indigenous peoples and First Nations.
    (5) Data that are protective and respects their individual and collective interests.
  - establishing Indigenous-led governance arrangements, such as advisory groups or committees, to oversee data use, sharing, and interpretation
  - providing capacity building and support for communities to engage in governance roles
  - formalising agreements specifying ownership and custodianship of data, conditions for data sharing and reuse, and processes for withdrawal or restriction of data access if community requirements change
  - incorporating mechanisms to evaluate how Indigenous Data Sovereignty principles were implemented, using frameworks such as OCCAAARS (Ownership, Collection, Control, Access, Analysis, Application, Archiving, Responsibilities)

[3] National Health and Medical Research Council. Ethical conduct in research with Aboriginal and Torres Strait Islander Peoples and communities: Guidelines for researchers and stakeholders. Available from: www.nhmrc.gov.au/about-us/resources/ethical-conduct-research-aboriginal-and-torres-strait-islander-peoples-and-communities

[4] Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS). AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research. Available from: https://aiatsis.gov.au/research/ethical-research

[5] Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS). A Guide to applying the AIATSIS Code of Ethics for Aboriginal and Torres Strait Islander Research. Available from: https://aiatsis.gov.au/research/ethical-research

[6] National Health and Medical Research Council, Australian Research Council and Universities Australia (2025). National Statement on Ethical Conduct in Human Research. Available from: https://www.nhmrc.gov.au/research-policy/ethics/national-statement-ethical-conduct-human-research

[7] Maiam nayri Wingara. (2018). Indigenous Data Sovereignty Communique Indigenous Data Sovereignty Summit 20th June 2018, Canberra, ACT. https://www.maiamnayriwingara.org/mnw-resources

- incorporating data sharing sensitivities in plans for data management and sharing
- sharing of Intellectual Property rights for research outputs
- sharing of copyright for research outputs
- co-authorship on research outputs
- using Traditional Knowledge Notices in research output metadata
- encouraging the use of Traditional Knowledge labels in research output metadata by Aboriginal and Torres Strait Islander communities and local organisations
- recognising and acknowledging the individual and collective contribution of Aboriginal and Torres Strait Islander people and communities (e.g. through acknowledgement in final reports, research outputs and/or presentations)
- contributing to the Indigenous Research Exchange platform managed by the Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS)
- adopting a more restrictive Creative Commons licence for openly shared research outputs if and as appropriate, such as the Creative Commons Attribution No-derivatives licence (CC BY-ND). Use of a more restrictive Creative Commons licence for research involving Aboriginal and Torres Strait Islander people and communities is an allowable exception to the otherwise mandatory use of the fully open Creative Commons Attribution licence (CC BY) for research papers. Express permission or approval from NHMRC or MRFF is not required.

5. Open science practices

NHMRC and MRFF strongly encourage the following open science practices.

Research outputs related to research papers that are openly licensed should be deposited in a suitable open repository, following appropriate technical standards that allow them to be properly linked to the research papers.

NHMRC and MRFF encourage authors of scholarly books, scholarly book chapters and edited research books, including prestigious reference works, to make them open access where possible.

5.1 Planning

Planning for management and sharing of research outputs should always be considered at the beginning of research projects and can be formalised in documents such as data management plans.

Researchers should develop a data management plan at the start of each research project, as a matter of best practice**.** Data management plans should consider collection, curation, quality assurance, storage, preservation and dissemination in an appropriate manner. Planning for well-managed data collections before the project commences will facilitate making the data FAIR.

To maximise the usefulness of data from NHMRC and/or MRFF-funded research, researchers are encouraged to use the broadest consent that appropriately considers the codes, laws, ethics and cultural sensitivities of the community in which the research is to be conducted.

5.2 Research software and code

Research software and code are research outputs in their own right. They should be shared using the FAIR4RS and CARE principles, under an open license that grants others the right to use, access, modify, expand, study, create derivative works and share the software and its source code, design or blueprint.

Research software and code should be deposited in trusted, public repositories that maximise discovery, collaborative development, version control, and long-term preservation.

In the context of open science, when open code is a component of a research process, enabling reuse and replication generally requires that it be accompanied with open data and open specifications of the environment required to compile and run it.

5.3 Metadata and Persistent Identifiers

Appropriate metadata should accompany all research outputs. This allows others to fully understand the research output and any other details relevant to the interpretation and reuse of the research output.

Use of standardised metadata and PIDs by researchers when applying for funding, reporting research results, submitting manuscripts, and reporting progress on research projects enables more robust cross-linking of researchers, funding sources and research outputs. This allows funding agencies to track the impacts of funded research more effectively.

In accordance with the National Persistent Identifier Strategy and Roadmap, NHMRC and MRFF strongly encourage the use of PIDs, such as DOIs for research papers, ORCIDs for researchers, RAiDs for research activities and RORs for research organisations.

NHMRC and MRFF expect that all researchers funded by NHMRC and/or MRFF will have or obtain an ORCID and provide it to the funder(s), by entering it into their profile in Sapphire or including it as part of the chief investigator information during application for BGH-administered MRFF grants. For all newly awarded NHMRC grants, CIAs must have a valid ORCID recorded in their Sapphire profile to be eligible to hold NHMRC-funded grants.

The NHMRC Funding Agreement requires research outputs to include the unique NHMRC Grant Identification Number and the Research Organization Registry Identifier for NHMRC (https://ror.org/011kf5r70). One way to meet this requirement is to ensure that the metadata for research outputs from NHMRC-funded research include the NHMRC Grant Identification Number(s) and the Research Organization Registry Identifier for NHMRC (https://ror.org/011kf5r70).

5.4 Publication of negative and/or null results

The bias produced by selective publishing of studies with positive or significant findings distorts the scientific record and wastes time and money through unnecessary duplication of studies. Additionally, a focus on producing research papers with positive or significant findings can lead to selective reporting and exaggeration of statistical significance and effect sizes. It can also lead to bias in any large language models that are trained with such research papers, and when the results are summarised in systematic reviews and meta-analyses. Negative results and those that do not conform to the results expected by the researchers who carried them out also contribute to the advancement of scientific knowledge.

Researchers should address these issues through open science practices such as:

- preregistration of studies
- publishing research protocols
- using registered reports with peer review prior to data collection
- publishing research findings as a preprint
- adding clinical trial results and associated trial materials to the Australian New Zealand Clinical Trials Registry (ANZCTR) or other WHO-recognised trial registry.

5.5 Preregistration

For research that involves pre-planned hypothesis testing, decisions about hypotheses, research design and analysis plans should be made at the beginning of a study. These should be recorded in a research plan that is preregistered in a time-stamped repository.

Preregistration enhances research integrity by increasing transparency about research design and analysis plans, helping distinguish between planned and unplanned research, reducing potential biases, and improving the replicability of scientific findings. It can enhance the credibility of findings, demonstrate methodological rigor, reduce the risk of being 'scooped' by establishing claims to research approaches, and improve research planning.

ANZCTR accepts registration of observational studies in addition to clinical trials. NHMRC and MRFF strongly encourage that all observational studies be registered in ANZCTR.

For preregistration of clinical trials see **Section 6**.

5.6 Methods

Methods and protocols should be fully described for transparency, and to enable others to reproduce the research. Description of methods should use an appropriate reporting guideline, such as those collated by the EQUATOR network.

5.7 Licensing

Open science is about more than a research output being freely available to read or view, it also needs to be free to reuse and share. Open licensing allows freely available research outputs to be legally shared and reused. Research outputs should have an appropriate open licence (CC BY) applied when they are shared. Use of this open licensing ensures that authors retain rights to their output whilst providing a broad licence that grants public permission for use of the work.

For research outputs related to research involving Aboriginal and Torres Strait Islander people and communities, Indigenous attribution must be considered (see **Section 4)**. Licensing of a research output to allow sharing and reuse is separate to protection of Intellectual Property, which is discussed in **Section 7**.

About the CC BY licence

CC BY is an internationally accepted open licence widely used in scholarly publishing and research outputs. It removes barriers to reuse of research outputs, such as uncertainty about how information can be used or the need to seek permission, while preserving the moral rights of authors in line with established scholarly norms. It ensures proper attribution to the author(s) and allows research outputs to be:

- freely available to use and share
- copied and redistributed in any medium or format
- adapted, transformed, remixed and built upon.

Other versions of the CC licences (for example, CC BY ND, CC BY NC) are more restrictive and do not meet the intent of this Policy, with an exception for some research involving Aboriginal and Torres Strait Islander people and communities (see **Section 4**).

5.7.1 Third-party materials

These licensing requirements do not apply to any materials included within a research output that are provided or owned by third-party copyright holders. Research outputs with a CC BY licence can include third-party materials (such as images, photographs or maps) that are subject to a more restrictive licence. NHMRC and MRFF consider this approach compliant with this Policy.

5.8 Open engagement of societal actors

NHMRC and MRFF encourage open engagement of societal actors through extended collaboration between scientists and societal actors beyond the scientific community. This may include opening up practices and tools that are part of the research cycle, making the scientific process more inclusive and accessible to the broader inquiring society based on new forms of collaboration, and work such as crowdsourcing and scientific volunteering.

5.9 Open educational resources

Researchers should share educational materials, such as training tools, presentations and resources developed from NHMRC and/or MRFF-funded research. These materials must have an open licence.

5.10 Citation

Any reuse of research outputs should be appropriately acknowledged and cited, with appropriate reference to any PID for that output.

6. Clinical trials

Research involving clinical trials must be registered in the Australian New Zealand Clinical Trials Registry (ANZCTR) or equivalent WHO-accredited clinical trial registry before recruitment of the first participant. This requirement extends to providing regular updates of trial amendments and publication of outcomes at the conclusion of the trial, in accordance with standard best practice. The trial registration ID must be provided in reports to NHMRC and MRFF.

NHMRC and MRFF encourage the use of core outcome sets for clinical trials, such as those described by the Core Outcome Measures in Effectiveness Trials Initiative. They represent the minimum outcome sets that should be

measured and reported in clinical trials of specific conditions to ensure that the results can be compared and/or combined if required.

NHMRC and MRFF encourage the sharing of other clinical trial materials, such as protocols, lay summaries and summary results on the clinical trial registry where the clinical trial was registered.

NHMRC and MRFF expect the timely sharing of results from clinical trials, ideally within 12 months from primary study completion. This may be in formats such as an open access research paper and/or reporting summary results in a clinical trial registry such as ANZCTR. All trial materials and communication of results from clinical trials should include reference to the trial registration ID.

NHMRC and MRFF strongly encourage the data from clinical trials to be described in Health Data Australia, which is a data discovery and request service developed by the Australian Research Data Commons in partnership with the health research sector. Health Data Australia helps users to find, access, and reuse data for research from Australian health research organisations, government agencies, and cultural institutions. It does not store the data itself but provides descriptions of the data from its data publishing partners.

Researchers planning to share data from clinical trials should follow these key principles[8]:

- establish clear, documented governance structures
- define the data to be shared
- confirm scope of consent
- optimise collection practices
- establish data security plans
- share safely
- engage with participant groups.

[8] CT:IQ, ARDC. Responsibilities for the Secondary Sharing of Clinical Trial Data in Australia. Available from https://ctiq.com.au/wp-content/uploads/Responsibilities-for-the-Secondary-Sharing-of-Clinical-Trial-Data-in-Australia-2025.pdf

7. Intellectual property, commercial in confidence

IP resulting from NHMRC and/or MRFF-funded research enables collaboration between researchers and business or the commercial sector, including opportunities for commercialisation.

NHMRC and MRFF recognise that research funded through NHMRC and/or MRFF grant opportunities designed to support translation and commercialisation may encounter circumstances where the research outputs, research data, datasets, software, and associated code generated is commercial in-confidence or where the sharing of data risks business or commercialisation prospects. In such cases, NHMRC and MRFF recommends that the grantees:

- consult with relevant commercialisation and IP experts within their respective organisations on the development of a knowledge dissemination and/or data sharing plan
- document any restrictions or limitations to the knowledge dissemination and/or data sharing plan as part of any required reporting process to NHMRC and/or MRFF.

Researchers are encouraged to develop best practice in identifying, managing and protecting IP. The National Principles of IP Management for Publicly Funded Research provide guidance on the ownership, promotion, dissemination, exploitation and, where appropriate, protection of IP generated through Australian Government funded research by public sector institutions. Guidance on Intellectual Property, commercialisation and collaboration is provided by IP Australia.

Where research involves Aboriginal and Torres Strait Islander people and communities, researchers must also recognise and protect Indigenous Cultural and Intellectual Property (ICIP). ICIP refers to the rights that Indigenous peoples have to their cultural heritage, including traditional knowledge, cultural expressions, and data. These rights are distinct from Western IP systems and are not always adequately protected by standard IP frameworks. To achieve this, researchers can embed principles, such as the True Tracks framework, to recognise and respect ICIP rights in all research practices, particularly IP management and data management plans.

8. Definitions

For the purposes of this Policy, terms are defined as outlined below.

Article Processing Charge (APC): A fee charged by a journal or publisher for publishing an open access article, which may be paid by the author's institution or funding body or by the author. APCs may also be paid as part of 'read and publish' or transformative agreements.

Author Accepted Manuscript: The version of an article that has been accepted for publication in a journal, including all changes made as a result of the peer review process, but excluding any editing, typesetting or other changes made by the journal or publisher.

Clinical trial: Any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes. This incorporates not only Phase 0 to IV trials but also implementation science and comparative effectiveness trials.

Creative Commons Attribution 'CC BY' licence: The most open licence where creators retain their copyright while allowing others to distribute, remix, adapt, and build upon the material in any medium or format, so long as attribution is given to the creator.

Hybrid journal: A journal that charges an article processing charge for an individual journal article to be made open access in an otherwise subscription journal.

Indigenous Cultural and Intellectual Property: Refers to all aspects of Indigenous peoples' cultural heritage, including the tangible and intangible. This cultural heritage includes all traditional and cultural knowledge (sciences, plant and animal knowledge, stories, designs and symbols, ritual knowledge, literature and language), cultural objects (including, but not limited to, arts, crafts, ceramics, jewellery, weapons, tools, visual arts, photographs, textiles and contemporary art practices), performances (ceremonies, dance and song), human remains, the secret and sacred (including sites) and documentation of Indigenous heritage.

Indigenous Data Governance: The right of Indigenous peoples to autonomously decide what, how and why Indigenous data are collected, accessed and used. It ensures that data on or about Indigenous peoples reflects [their] priorities, values, cultures, worldviews and diversity.

Indigenous data sovereignty: The right of Indigenous people to exercise ownership over Indigenous data. Ownership of data can be expressed through the creation, collection, access, analysis, interpretation, management, dissemination and reuse of Indigenous data.

Intellectual Property: Intellectual Property is the property of your mind or proprietary knowledge. It is a productive new idea you create. This can be an invention, trademark, design, brand or even the application of your idea. (IP Australia, www.ipaustralia.gov.au).

Metadata: Information that describes a research output. It may include (but is not limited to) grant IDs, funding source(s), Digital Object Identifier (DOI) or other persistent identifier (PID), names and PIDs/ORCIDs for all research contributors, affiliation (or PID for affiliation) for all research contributors, publisher(s), title, volume number, issue, date of publication, page number(s), type of research output, ISBN/ISSN/other standard number, licence type, access and rights information, and other details such as experimental conditions or project descriptions.

Open access: Refers to the availability of research papers via the internet, such that any user can find, freely access, read, share and reuse the paper. Sharing and reuse is facilitated through open licensing.

Open licensing: Use of free licences (usually Creative Commons licences) that let the owner of a work indicate clearly under what conditions the work can be reused and shared, and that reuse requires full and proper attribution.

Open Science: An inclusive construct that combines various movements and practices aiming to make multilingual scientific knowledge openly available, accessible and reusable for everyone, to increase scientific collaborations and sharing of information for the benefits of science and society, and to open the processes of scientific knowledge creation, evaluation and communication to societal actors beyond the traditional scientific community. It comprises all

scientific disciplines and aspects of scholarly practices, including basic and applied sciences, natural and social sciences and the humanities, and it builds on the following key pillars: open scientific knowledge, open science infrastructures, science communication, open engagement of societal actors and open dialogue with other knowledge systems. (UNESCO Recommendation on Open Science)

Open scientific knowledge: open access to research papers, research data, metadata, open educational resources, software, and source code and hardware that are available in the public domain or under copyright and licensed under an open licence that allows access, re-use, repurpose, adaptation and distribution under specific conditions, provided to all actors immediately or as quickly as possible regardless of location, nationality, race, age, gender, income, socio-economic circumstances, career stage, discipline, language, religion, disability, ethnicity or migratory status or any other grounds, and free of charge. It also refers to the possibility of opening research methodologies and evaluation processes. (UNESCO Recommendation on Open Science)

Ownership (regarding Indigenous cultural and Intellectual Property): Ownership is a complex matter and should not be confused with Intellectual Property or confined to a legally recognised right to possession and exclusive use of land or a thing. Ownership of Indigenous cultural and Intellectual Property may be shared or communal and may arise through traditional use or occupation. It may extend to the tangible or intangible (e.g. 'heritage').

Peer review (for research papers): A process involving at least one expert reviewer who reviews in accordance with the Committee On Publication Ethics (COPE) *Ethical guidelines for peer reviewers* and do not have a conflict of interest with the author(s) of the research paper. The peer review process can be conducted by journals or by journal-independent initiatives.

Persistent Identifiers (PIDs): A core infrastructure component of a world-class, global digital information ecosystem. They provide a universal, machine-readable, interoperable method to uniquely identify and connect entities such as researchers and innovators, funders, organisations, articles, datasets, projects, software, instruments and samples.

Predatory publisher: A publisher whose practice is to fraudulently publish journals without following usual publication best practices, including peer review and editorial oversight.

Preprint: A complete and public draft of a scientific document, yet to be certified through peer review. A preprint should be:

- available in a recognised scientific public archive or preprint server such as arXiv, bioRxiv, medRxiv, Peer J Preprints and F1000 Research
- uniquely identifiable and searchable via a digital object identifier (DOI); for preprints that are incrementally updated as work progresses, each version should have a unique DOI.

Some preprints undergo an open process of peer review and then are called a peer-reviewed preprint.

Preregistration: The practice of specifying a research plan and posting it to a public repository before data collection begins for a study. Information might include details about a study's hypotheses, research design and analysis plans. Clinical trial registration is a specific form of preregistration.

'Read and publish' agreement: Contracts negotiated between institutions (libraries, national and regional consortia) and publishers where institutions pay for both 'read' access to specified journals and for academics to 'publish' in those journals. These agreements may be known as transformative agreements when they aim to transform the business model underlying journal publishing, moving from one based on subscriptions to one in which the journals are fully open access.

Repository: An online repository that is publicly accessible in which the metadata of research outputs and the output themselves can be stored, managed and preserved for the long term. A repository may be hosted by a research institution (institutional), subject based or general purpose.

Research data: Data partially or entirely generated by, collected or accessed for, or used in NHMRC and/or MRFF-funded research. Open research data includes, among others, digital and analogue data, both raw and processed, and the accompanying metadata, as well as numerical scores, textual records, images and sounds, protocols, analysis code and workflows that can be openly used, reused, retained and redistributed by anyone, subject to acknowledgement.

Open research data are available in a timely and user-friendly, human- and machine-readable and actionable format, in accordance with principles of good data governance and stewardship, notably the FAIR principles, supported by regular curation and maintenance. (UNESCO Recommendation on Open Science)

Research outputs: Outputs from NHMRC and/or MRFF-funded research. Includes research papers, research data, research software and code.

Research papers: Versions of research papers includes preprints, peer-reviewed preprints, author accepted manuscripts and versions of record.

Research software: Research Software includes source code files, algorithms, scripts, computational workflows and executables that were created during the research process or for a research purpose. Software components (for example, operating systems, libraries, dependencies, packages, scripts, etc.) that are used for research but were not created during or with a clear research intent should be considered software in research and not Research Software. This differentiation may vary between disciplines.

Subscription/closed journal: A journal where the journal or publisher retains copyright and the content is generally only available to subscribers of the journal (pay to read). None of the content of a subscription/closed journal is open access.

Version of Record: The peer-reviewed, edited, formatted and typeset version of the article, including any tagging, indexing and other enhancements from a publisher. It includes any post publication corrections made by a publisher.

9. Resources

9.1 General

Australian Code for the Responsible Conduct of Research, 2018 www.nhmrc.gov.au/about-us/publications/australian-code-responsible-conduct-research-2018

Australian National PID Strategy and Roadmap https://pidroadmap.ardc.edu.au/pids/

Australian New Zealand Clinical Trials Registry https://www.anzctr.org.au/

Committee on Publication Ethics (COPE) https://publicationethics.org

Committee on Publication Ethics (COPE). Discussion document: Predatory Publishing (2019). https://publicationethics.org/predatory-publishing-discussion-document

Committee on Publication Ethics (COPE). Ethical guidelines for peer reviewers (2013). https://publicationethics.org/files/Peer%20review%20guidelines.pdf

Enhancing the QUAlity and Transparency Of health Research (EQUATOR network) https://www.equator-network.org/

Intellectual property, commercialisation and collaboration https://www.ipaustralia.gov.au/manage-my-ip/how-to-commercialise-my-ip/commercialisation-and-collaboration

Maximising the impact of every clinical trial using the ANZCTR https://www.anzctr.org.au/News.aspx?id=3

National Health and Medical Research Council, Australian Research Council and Universities Australia (2025). National Statement on Ethical Conduct in Human Research. https://www.nhmrc.gov.au/research-policy/ethics/national-statement-ethical-conduct-human-research

National Principles of IP management for publicly funded research https://www.nhmrc.gov.au/about-us/resources/national-principles-ip-management-publicly-funded-research

NHMRC's Research Quality Strategy https://www.nhmrc.gov.au/about-us/publications/nhmrcs-research-quality-strategy

Preregistration essentials: Enhancing transparency in research. Centre for Open Science. https://osf.io/cp4x5

Think, Check, Submit (tool for assisting researchers to identify trusted journals and publishers for their research) https://thinkchecksubmit.org

UNESCO Recommendation on Open Science https://www.unesco.org/en/open-science/about

9.2 Open access research papers

Action Plan for Diamond Open Access www.scienceeurope.org/our-resources/action-plan-for-diamond-open-access

cOAlition S www.coalition-s.org

cOAlition S: Journal Checker Tool https://journalcheckertool.org

www.coalition-s.org/blog/unboxing-the-journal-checker-tool

Directory of Open Access Journals https://doaj.org

Directory Of Open Access Repositories https://v2.sherpa.ac.uk/opendoar

Directory of Open Access Preprint Repositories https://doapr.coar-repositories.org/repositories/

Google Scholar profiles and open access compliance https://scholar.google.com/intl/en/scholar/citations.html#publicaccess

Journal Article Versions (JAV): Recommendations of the NISO/ALPSP JAV Technical Working Group April 2008 NISO-RP-8-2008 www.niso.org/publications/niso-rp-8-2008-jav

Open Access Australasia https://oaaustralasia.org

Peer review: Journal peer review and journal-independent peer-review (cOAlition S Statement) www.coalition-s.org/statement-on-peer-reviewed-publications

Plan S www.coalition-s.org/plan_s_principles

Read and publish agreements in Australia https://caul.libguides.com/read-and-publish

Registry of Open Access Repositories http://roar.eprints.org/cgi/search/advanced

Why hybrid journals do not lead to full and immediate open access www.coalition-s.org/why-hybrid-journals-do-not-lead-to-full-and-immediate-open-access

9.3 Open Licensing

Creative Commons Australia https://au.creativecommons.net/cOAlition S: The Rights Retention Strategy and publisher equivocation: an open letter to researchers www.coalition-s.org/the-rrs-and-publisher-equivocation-an-open-letter-to-researchers

9.4 Research involving Aboriginal and Torres Strait Islander people and communities

Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS). Code of Ethics for Aboriginal and Torres Strait Islander Research https://aiatsis.gov.au/research/ethical-research

Australian Research Data Commons. Indigenous Data https://ardc.edu.au/resource/indigenous-data/

CARE Principles for Indigenous Data Governance https://www.gida-global.org/careprinciples

Citing Indigenous Elders and Knowledge Keepers. MacLeod L. 2021. More Than Personal Communication: Templates for Citing Indigenous Elders and Knowledge Keepers. KULA: Knowledge Creation, Dissemination, and Preservation Studies 5 (1). https://doi.org/10.18357/kula.135

Framework for Governance of Indigenous Data, Commonwealth of Australia. The Framework for Governance of Indigenous Data was co-designed by Australian Public Service (APS) agencies, and Aboriginal and Torres Strait Islander and non-government partners. https://www.niaa.gov.au/sites/default/files/documents/2024-05/framework-governance-indigenous-data.pdf

Indigenous Cultural and Intellectual Property https://www.terrijanke.com.au/resources

Indigenous Data Sovereignty and Governance. KOWA collaboration. https://www.kowacollaboration.com/ids-g

Indigenous Data Sovereignty Readiness Assessment and Evaluation Toolkit https://www.lowitja.org.au/tools/indigenous-data-sovereignty-readiness-assessment-and-evaluation-toolkit/

Indigenous Research Exchange https://aiatsis.gov.au/research/indigenous-research-exchange

Information about ethical guidelines for research with Aboriginal and Torres Strait Islander people and communities www.nhmrc.gov.au/research-policy/ethics/ethical-guidelines-research-aboriginal-and-torres-strait-islander-peoples

Local Contexts https://localcontexts.org

Maiam nayri Wingara (2018), Indigenous Data Sovereignty Summit Communique, Canberra, Australia https://www.maiamnayriwingara.org/mnw-resources

NHMRC guideline: Ethical conduct in research with Aboriginal and Torres Strait Islander Peoples and communities: Guidelines for researchers and stakeholders (2018) www.nhmrc.gov.au/about-us/resources/ethical-conduct-research-aboriginal-and-torres-strait-islander-peoples-and-communities

NHMRC guideline: Keeping research on track II (2018) www.nhmrc.gov.au/about-us/resources/keeping-research-track-ii

Taking Control of Our Data: A Discussion Paper on Indigenous Data Governance for Aboriginal and Torres Strait Islander People and Communities, Discussion Paper, Lowitja Institute, Melbourne. DOI: 10.48455/rtvd-7782 https://www.lowitja.org.au/resource/taking-control-of-our-data-a-discussion-paper-on-indigenous-data-governance-for-aboriginal-and-torres-strait-islander-people-and-communities/

9.5 Research data

Australian Research Data Commons. Making Data FAIR https://ardc.edu.au/resource-hub/making-data-fair/

Carroll SR, Garba I, Figueroa-Rodríguez OL, Holbrook J, Lovett R, Materechera S, et al. The CARE Principles for Indigenous Data Governance. Data Science Journal. 2020;19(1):43. http://doi.org/10.5334/dsj-2020-043

F.A.I.R. (Findable, Accessible, Interoperable and Reusable) Principles www.go-fair.org/fair-principles

Management of Data and Information in Research: A guide to support the Australian Code for Responsible Conduct of Research, 2018 www.nhmrc.gov.au/about-us/publications/australian-code-responsible-conduct-research-2018

NHMRC Principles for Accessing and Using Publicly Funded Data for Health Research. www.nhmrc.gov.au/about-us/publications/principles-accessing-and-using-publicly-funded-data-health-research

Responsibilities for the Secondary Sharing of Clinical Trial Data in Australia https://ctiq.com.au/wp-content/uploads/Responsibilities-for-the-Secondary-Sharing-of-Clinical-Trial-Data-in-Australia-2025.pdf

9.6 Research software

Australian Research Data Commons. Working with research software https://ardc.edu.au/resource-hub/working-with-research-software/

Chue Hong, N. P., Katz, D. S., Barker, M., Lamprecht, A.-L., Martinez, C., Psomopoulos, F. E., Harrow, J., Castro, L. J., Gruenpeter, M., Martinez, P. A., Honeyman, T., Struck, A., Lee, A., Loewe, A., van Werkhoven, B., Jones, C., Garijo, D., Plomp, E., Genova, F., … RDA FAIR4RS WG. (2022). FAIR Principles for Research Software (FAIR4RS Principles) (1.0). Zenodo https://doi.org/10.15497/RDA00068