Synergy Grants 2025 Peer Review Guidelines

Opening date:	**5 February 2025**
Closing date and time:	5:00 pm ACT local time on 2 April 2025
Commonwealth policy entity:	National Health and Medical Research Council (NHMRC)
Sapphire assistance and enquiries:	NHMRC Research Help Centre ▪ Phone: 1800 500 983 (+61 2 6217 9451 for international callers) ▪ Email: help@nhmrc.gov.au Note: NHMRC's Research Help Centre aims to provide a reply to all requests for general assistance within 2 working days. This timeframe may be longer during peak periods or for more detailed requests for assistance.
Synergy Grants enquiries:	Email: Synergy.Grants@nhmrc.gov.au

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1. Introduction

The National Health and Medical Research Council (NHMRC) is responsible for managing the Australian Government's investment in health and medical research in a manner consistent with Commonwealth legislation, guidelines and policies. NHMRC has a responsibility to ensure taxpayers' funds are invested appropriately to support the best health and medical research. Expert peer review assists us in fulfilling this responsibility.

This guide outlines the overarching principles and obligations under which the Synergy Grant peer review process operates, including:

- obligations in accordance with legislation, guidelines and policies
- how to disclose interests and manage conflicts, and
- standards and best practice for the conduct of peer review.

NHMRC will publicly notify the sector of any change in peer review process via its communications, such as through NHMRC's website and newsletters.

This guide should be read in conjunction with the:

- Synergy Grants2025 Guidelines, available on GrantConnect, which set out the rules, objectives and other considerations relevant to NHMRC funding.
- *Policy on the Disclosure of Interests requirements for prospective and appointed NHMRC committee members* (Section 39 Committees). This Policy outlines peer reviewers' responsibilities to ensure all disclosures of interests are addressed in a rigorous and transparent way throughout the period of a peer reviewer's participation in NHMRC Committees.

2. Key changes

Peer reviewers should note the following significant changes to the Synergy Grants 2025 grant opportunity:

- Applicants are no longer required to respond to the 3 research impact sub elements separately, however they will continue to be independently assessed by the peer reviewer. Applicants will provide their response to the 3 sub elements in a single field in the application form. There is a second field for applicants to use when providing evidence for their research impact claims. This follows feedback that addressing the 3 research impact sub elements separately can be more challenging/restrictive for applicants and can result in information being repeated across the 3 separate fields in the application form (see section 6.5.3 of Appendix E in the *Synergy Grants 2025 Guidelines*).
- Addition of section 7.7 of the *Synergy Grants 2025 Guidelines* including the *Statement on Sex, Gender, Variations of Sex Characteristics and Sexual Orientation in Health and Medical Research* (the Sex and Gender Statement).
- Clarification in Appendix D that any publication type can be included to illustrate the Chief Investigator's (CI's) involvement, the quality of the research and its contribution to science.

3. Principles, conduct and obligations during peer review

The peer review process requires all applications to be reviewed by individuals with appropriate expertise. This carries an obligation on the part of peer reviewers to act in good faith, in the best interests of NHMRC and the research community and in accordance with NHMRC policies (outlined below). This includes adhering to the key principles and applicable requirements of the *Commonwealth Grants Rules and Principles 2024* (CGRPs) and the published grant opportunity guidelines.

3.1. NHMRC's Principles of Peer Review

NHMRC's Principles of Peer Review (the Principles) are high-level, guiding statements that underpin all NHMRC's peer review processes, and include:

- **Fairness.** Peer review processes are fair and seen to be fair by all.
- **Transparency.** Applies to all stages of peer review.
- **Independence.** Peer reviewers provide independent advice. There is also independent oversight of peer review processes by independent Chairs, Peer Review Mentors and Observers, where relevant.
- **Appropriateness and balance.** There is appropriate experience, expertise and representation of peer reviewers assessing applications.
- **Research community participation.** Persons holding taxpayer-funded grants should willingly make themselves available to participate in peer review processes, whenever possible, in accordance with the obligations in the Funding Agreement.
- **Confidentiality.** Participants respect that confidentiality is important to the fairness and robustness of peer review.
- **Impartiality.** Peer review is objective and impartial, with appropriate processes in place to manage disclosures of interest.
- **Quality and excellence.** NHMRC will continue to introduce evidence-based improvements into its processes to achieve the highest quality decision-making through peer review.

Additional details underpinning the Principles can be found at Appendix A.

3.2. The Australian Code for the Responsible Conduct of Research

The *Australian Code for the Responsible Conduct of Research* (the Code) requires researchers participating in peer review do so in a way that is 'fair, rigorous and timely and maintains the confidentiality of the content'.

The Code is supported by additional supplementary guidance, including *Peer Review: A guide supporting the Australian Code for the Responsible Conduct of Research.*

3.3. Use of generative artificial intelligence in peer review

Peer reviewers must not input any part of a grant application, or any information from a grant application, into a natural language processing and/or artificial intelligence technology system to assist them in the assessment of applications, as per NHMRC's *Policy on Use of Generative Artificial Intelligence in Grant Applications and Peer Review*.

3.4. Disclosures of interest

3.4.1. What is an interest?

NHMRC is committed to ensuring that interests of any kind are dealt with consistently, transparently and with rigour, in accordance with sections 16A and 16B of the *Public Governance, Performance and Accountability Rule 2014* (made under the subsection 29(2) of the *Public Governance, Performance and Accountability Rule 2013* (PGPA Act)).

In particular, under section 29 of the PGPA Act, 'an official of a Commonwealth entity who has a material personal interest that relates to the affairs of the entity must disclose details of the 'interest'. This obligation is ongoing and not limited to a particular point in time.

For the purposes of this document, the terms 'material personal interest' and 'interest' are regarded as interchangeable and whilst the term 'interest/s' has been used for ease of reading, this policy includes guidance on each.

3.4.2. What is a conflict of interest (CoI)?

A CoI exists when there is a divergence between professional responsibilities (as a peer reviewer) and personal interests. Such conflicts have the potential to lead to biased advice affecting objectivity and impartiality. By managing any conflict, NHMRC maintains the integrity of its processes in the assessment of scientific and technical merit of the application.

For NHMRC peer review purposes, interests may fall into the broad domains of:

- Involvement with the application under review
- Working relationships
- Professional relationships and associations
- Social relationships or associations
- Collaborations
- Teaching or supervisory relationships
- Financial relationships or interests
- Other relevant interests or relationships.

For further information, peer reviewers should consult the NHMRC *Policy on the Disclosure of Interests Requirements for Prospective and Appointed NHMRC Committee Members* (Section 39 Committees).

Researchers frequently have a CoI that cannot be avoided. Decision making processes in research often need expert advice, and the pool of experts in a field can be so small that all the experts have some link with the matter under consideration. An individual researcher should therefore expect to be conflicted from time to time, be ready to acknowledge the conflict and make disclosures as appropriate.

An outline of potential CoI situations and guidance is provided for peer reviewers at Appendix B.

3.4.3. Disclosure of interests in the peer review process

Peer reviewers must identify and disclose interests they may have with any of the Chief Investigators (CIs) and Associate Investigators (AIs) on applications they will be reviewing. After appointment as a peer reviewer, but before assessing any applications, peer reviewers are required to disclose their interests in writing. While interests must be disclosed at the beginning of the peer review process, new or previously unrecognised interests must be disclosed at any stage of the peer review process. Declarations must include details that substantiate when collaborations occurred (i.e. month and year). NHMRC will use these details to verify and determine the level of conflict. Any peer reviewer who has an interest that is determined by NHMRC to be a 'high' CoI will not be able to participate in the review of that application. However, they can provide scientific advice at the request of NHMRC.

3.4.4. Failure to disclose an interest

A failure to disclose an interest without a reasonable excuse will result in the termination of the peer reviewer's appointment under section 44B of the *National Health and Medical Research Council Act 1992* (NHMRC Act) (section 44B also covers failure to comply with section 29 of the *PGPA Act*).

It is important for peer reviewers to inform NHMRC of any circumstances which may constitute an interest, at any point during the peer review process. Accordingly, peer reviewers are encouraged to consult the secretariat if they are uncertain about any disclosure of interest matter.

3.5. Freedom of information (FoI)

NHMRC is subject to the *Freedom of Information Act 1982* which provides a statutory right for an individual to seek access to documents. If documents that deal with peer review fall within the scope of a request, the FoI process includes consultation and exemptions. NHMRC endeavours to protect the identity of peer reviewers assigned to a particular application.

3.6. Complaints

NHMRC deals with any complaints, objections and requests for clarification on the peer review process. NHMRC may contact peer reviewers involved to obtain additional information on particular application/s. Further information about the NHMRC complaints process can be found on the NHMRC website.

4. Synergy Grants 2025 peer review process

4.1. Overview of the synergy grants Peer review process

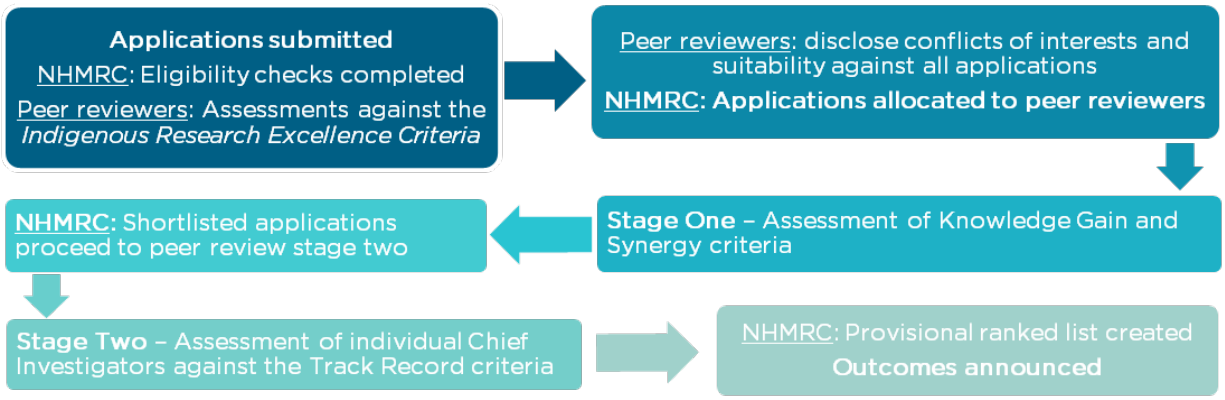

Table 1. Synergy Grants 2025 peer review process

Date	Activity
2 April 2025	Deadline for Synergy Grants 2025 application submission
April 2025	Application eligibility review and confirmation
April – May 2025	Peer reviewers disclosure of interests and suitability against all applications
Early May 2025	Assessments against the *Indigenous Research Excellence Criteria*
May 2025	Peer reviewer briefing
Stage One — Assessment of Knowledge Gain and Synergy criteria	
May 2025	Stage One assessments allocated to peer reviewers
May – June 2025	Peer reviewers assess applications and submit comments and scores against the assessment criteria for Knowledge Gain and Synergy (Appendix C)
June 2025	Peer reviewers provided opportunity to review comments made by fellow peer reviewers for those also allocated to review the application
June 2025	Shortlist of applications is produced, based on Stage One scores
Stage Two — Assessment of Individual Track Records	
June - July 2025	Assessments allocated to peer reviewers
July 2025	Peer reviewers assess individual Chief Investigators against the track record assessment criteria
October 2025[1]	Notification of outcomes under embargo

Further information on the steps outlined in this process is provided in section 4.3.

[1] Dates are indicative and subject to change

4.2. Roles and responsibilities

The roles and responsibilities of those participating in the Synergy Grant 2025 peer review process are identified below.

4.2.1. Peer reviewers

Peer reviewers need to:

- familiarise themselves with this Guide and other material as identified by NHMRC staff
- identify and advise NHMRC of all interests they have with applications assigned to them
- provide a fair and impartial assessment against the Synergy Grants assessment criteria and associated score descriptors (Appendix C and Appendix D) in a timely manner, for each non-conflicted application assigned
- assess track record by taking into consideration research achievements 'relative to opportunity', including any career disruptions, where applicable
- consider the assessment against the *Indigenous Research Excellence Criteria* (Appendix E) provided for applications confirmed to have an Aboriginal and Torres Strait Islander health focus
- provide applicant feedback and scores for each application assigned to them in Stage One assessment of Knowledge Gain and Synergy.
- review the applicant feedback provided by other peer reviewers of the same applications they have assessed

4.2.2. Peer review mentors (PRMs)

PRMs are senior researchers with experience in conducting Synergy Grant peer review. The PRMs' role is to assist with the training and mentoring of peer reviewers on peer review process. PRMs do not assess applications or provide advice on the scientific (or other) merits of individual applications. PRMs need to:

- familiarise themselves with this Guideline and other material as identified by NHMRC staff
- mentor peer reviewers through the assessments stage of peer review, as required/requested, including responding to peer reviewer enquiries ensuring that:
  - the advice provided is consistent with NHMRC peer review processes and leads to an outcome where applications are appropriately considered against the Synergy Grant assessment criteria (Appendix C) and score descriptors (Appendix D)
  - peer reviewers consider relative to opportunity, including career disruption where applicable
  - peer reviewers consistently consider the assessment against the *Indigenous Research Excellence Criteria* (Appendix E) for applications with an Aboriginal and Torres Strait islander health focus.

4.2.3. NHMRC Staff

Under direction from the CEO, NHMRC staff will be responsible for overall administration of the peer review process and for the conduct of specific activities. NHMRC staff will:

- invite individuals to participate in the Synergy Grant scheme peer review process as required
- determine whether disclosed interests pose a conflict and the level of that conflict
- act as the first point of contact for peer reviewers
- provide briefings to peer reviewers

- determine eligibility of applications
- assign applications to the appropriate peer reviewers based on peer reviewers' declaration of interests and suitability
- ensure that all peer reviewers are provided with the necessary information to review each application, and assisting and advising on the peer review process as required
- review peer reviewers' application feedback for inappropriate comments (Stage One only).
- perform checks to identify potential outlier scores against applications
- conduct an outlier screening process to identify applications with outlier scores. NHMRC will review those applications where there is a clear discrepancy between the scores and comments provided and will seek clarification from the relevant peer reviewer(s)
- assist the PRMs in responding to peer reviewer enquiries
- act as the first point of contact for peer reviewers, peer review mentors and community observers
- seek feedback from participants in the peer review process on improvements for future processes.

4.2.4. Indigenous health research peer reviewers

Applications nominated as focussing on Aboriginal and Torres Strait Islander health research will be considered by an Indigenous health research peer reviewer with appropriate discipline-based expertise. Indigenous health research peer reviewers will review how well each application addresses NHMRC's *Indigenous Research Excellence Criteria* (Appendix E), where applicable. Indigenous health research peer reviewers will also provide an assessment against the Synergy Grant scheme assessment criteria (Appendix C) and associated score descriptors (Appendix D).

4.2.5. Community observers

NHMRC invites respected members of the general community to observe whether NHMRC policy and procedures are being adhered to during the peer review process. Observers assist NHMRC in ensuring that the assessment of all applications is fair, equitable and impartial.

Observers will be briefed on the processes and procedures of the peer review of Synergy Grant applications. They will not participate in the review of any application.

Observers will:

- monitor the procedural aspects of peer review
- provide feedback to NHMRC on the consistency of peer review processes and policies.

Observers may raise issues of a general nature for advice or action as appropriate with NHMRC staff.

4.3. Reviewing Synergy Grant applications

All Synergy Grant applications are assessed against the Synergy Grant assessment criteria and the associated score descriptors at Appendix C and Appendix D. Applications that are accepted by NHMRC as relating to the improvement of Aboriginal and Torres Strait Islander health (see section 4.3.1) are also assessed against the *Indigenous Research Excellence Criteria* as set out at Appendix E. Further guidance on assessing applications against the Synergy criterion are set out at Appendix G.

4.3.1. Identification of applications with an Aboriginal and Torres Strait Islander health focus

Applications relating specifically to Aboriginal and Torres Strait Islander people's health will be identified by information provided in the application. Peer reviewers with Aboriginal and Torres Strait Islander health expertise will check whether these applications have at least 20% of their research effort and/or capability building focused on Aboriginal and Torres Strait Islander health.

For applications confirmed as relating specifically to Aboriginal and Torres Strait Islander health research, NHMRC will endeavour to obtain at least one external assessment against the *Indigenous Research Excellence Criteria* (Appendix E), from an assessor with expertise in Aboriginal and Torres Strait Islander health. For further information on assessing applications that have a focus on the health of Indigenous Australians, see *Guidance for assessing applications against the Indigenous Research Excellence Criteria* at Appendix F.

The assessment against the *Indigenous Research Excellence Criteria* will be considered by peer reviewers when scoring the assessment criteria at Appendix C.

4.3.2. Receipt and initial processing of applications

NHMRC staff will verify that Synergy Grant applications meet eligibility criteria. Applicants will be advised if their application is ineligible. However, in some instances these applications will remain in the peer review process until their ineligibility is confirmed. Eligibility rulings may be made at any point in the peer review process.

4.3.3. Disclosure of interests and peer reviewer suitability

Peer reviewers will be provided with a summary of each application and disclose their interests within Sapphire, in accordance with the guidance provided at section 3.4 and Appendix B.

Some peer reviewers may have a disclosure of interest for which they require a decision. In this case, NHMRC will assess the information provided by the peer reviewer and provide a ruling on the level of CoI.

Peer reviewers are also required to select their level of suitability to assess each application, based on the information available to them in the application summary. Instructions and tutorials for selecting this in Sapphire are provided in the *Sapphire Learning and Training Resources*, under Researcher — My Assessments.

4.3.4. Assignment of applications to peer reviewers

Considering CoIs and peer reviewer suitability, NHMRC staff will assign applications and peer reviewers. It is expected each individual will be assigned a maximum of 20 applications in Stage One, and up to 30 individual track records for assessment in Stage Two. However, this is subject to change, depending on the number and peer review area of applications. Each application in Stage One, and each track record assessment will be assigned up to 5 peer reviewers.

Applications are allocated primarily based on the applicant's nominated peer review areas. Allocation may also be informed by the proposed field of research and other key words entered into Sapphire.

4.3.5. Briefing

NHMRC will provide peer reviewers briefing and supporting materials, as necessary, with further details on their duties and responsibilities in the Synergy Grant peer review process. This will be made available to peer reviewers prior to assessing applications. Additional information may be provided as necessary throughout the peer review process. Further information and tutorials are available from *Sapphire*.

4.3.6. Assessment of applications - Stage One - Knowledge Gain and Synergy assessment

Stage One of Synergy Grants peer review is the assessment of Knowledge Gain (30%) and Synergy (30%).

Peer reviewers will provide comments and scores in Stage One against applications for these 2 criteria. Peer reviewer comments and scores will be provided to Stage One applicants deemed not for further consideration after the shortlisting process. All applicants that progress to Stage Two will receive comments only at this time.

Peer reviewers will be given access to applications (where no high CoI exists) and will be required to enter their scores and applicant feedback in Sapphire relating to the assessment of these 2 criteria. Peer reviewers will assess all applications assigned to them against the assessment criteria, using the score descriptors, taking into account eligible career disruptions and other 'relative to opportunity' considerations, where applicable.

NHMRC will aim to obtain 5 independent assessments for each application.

To ensure that independent scores are provided, peer reviewers are not to discuss applications with other peer reviewers. Peer reviewers who become aware of any previously undeclared CoI should contact the NHMRC secretariat immediately. Peer reviewers will be required to delete or destroy any files in their possession pertaining to an applicant, and their application, where they become aware of a late high CoI.

With respect to multidisciplinarity, diversity and collaborative gain, only the CIs of the proposed research team will be assessed; the Associate Investigators (AIs) are not considered for this criterion. Further guidance on the assessment of Synergy Grant applications and the concept of 'Synergy' can be found at Appendix G and Appendix H. Peer reviewers are not to discuss applications and track records with other peer reviewers. This is to ensure peer reviewers provide independent assessments.

Peer reviewers must ensure applicant feedback and scores are completed by the nominated due date. It is essential that peer reviewers plan their workloads as best as possible and commence their assessments shortly after receiving their assigned applications. If peer reviewers are unable to meet this requirement, they must contact NHMRC promptly to discuss alternative arrangements. Peer reviewers will be able to seek clarification from independent PRMs on peer review policies and processes during the assessment phase.

4.3.6.1. Providing feedback on applications

When conducting Stage One assessments for Knowledge Gain and Synergy and in addition to providing scores, peer reviewers are also required to submit constructive qualitative feedback that focuses on the strengths and weaknesses of the application. This feedback will be provided to the applicant. Peer reviewers must remember their obligation to remain fair and impartial when providing their feedback to applicants.

When providing feedback, you should use neutral language and focus only on what has been provided in the application, avoiding extraneous comments or considerations you might have about the research/er. Feedback should be factual and dispassionate. Avoid reference to your own experience of reviewing the application or overly expressive words that convey emotion. You should be mindful to frame your feedback against the **assessment criteria** (Appendix C) **and score descriptors** (Appendix D).

Following the completion of assessments at Stage One, peer reviewers will be provided with the opportunity to view the de-identified applicant feedback provided by other assessors on their assigned applications. The NHMRC Peer Review disclaimer provides information to applicants who receive qualitative feedback.

4.3.6.2. Threshold scores and shortlisting

To ensure focus on the objective of the Synergy Grant scheme 'to support outstanding multidisciplinary teams of investigators to work together to answer major questions that cannot be answered by a single investigator', applications will be subject to minimum ('threshold') scores of 4.801 for both 'Knowledge Gain' and 'Synergy'. Applications that fall below the threshold score for either criterion will not be considered further.

A single ranked list of the remaining applications will be produced with the most competitive applications shortlisted. It should be noted, due to the amount of funding available, not all applications that meet the threshold scores will be automatically shortlisted. All other applications will be deemed non-competitive. CIAs of applications that are deemed non-competitive may be notified at this stage of the peer review process.

4.3.7. Assessment of applications - Stage Two – Individual Track Record assessment

Peer reviewers will be provided with a track record PDF for each CI on each application assigned to them. Track record assessment only includes CIs, not AIs. When accessing this document, peer reviewers should declare any new CoIs with the CI not previously evident. Peer reviewers who become aware of any previously undeclared CoI should contact the NHMRC secretariat immediately. Peer reviewers will be required to delete or destroy any files in their possession pertaining to an applicant, and their application, where they become aware of a late high CoI.

Peer reviewers will provide track record scores only for CIs allocated to them against the Synergy Grants 2025 Assessment Criteria (Appendix C) using the score descriptors (see Tables 3–7 of Appendix D).

To ensure impartiality and independence of assessments peer reviewers must not discuss the track records with other peer reviewers.

Peer reviewers' scores will be used to create a provisional ranked list of applications from which funding recommendations will be derived. The overall score for each application will be determined using each peer reviewer's score for each of the assessment criteria. The overall score, as calculated arithmetically to 3 decimal places, will take account of the weighting of each criterion.

4.3.7.1. Relative to opportunity and career disruption

Peer reviewers must assess productivity relative to opportunity and, where applicable, career disruption considerations, in the assessment of all applications. This is reflected in *NHMRC's Relative to Opportunity Policy* that peer reviewers should assess an applicant's track record of research productivity and professional contribution in the context of their career stage and circumstances, by taking into consideration whether the applicant's productivity and contribution are commensurate with the opportunities available to them.

To assist peer reviewers with their assessment, further details regarding relative to opportunity and career disruptions as well as track record assessment for Synergy Grant applications are provided at Appendix I and Appendix J.

4.3.7.2. Mitigating bias in peer review

NHMRC is raising peer reviewers' awareness of unconscious bias in the assessment process, in alignment with international practice and to ensure that NHMRC grant applications continue to receive objective and impartial assessments. Understanding bias enables peer reviewers' to critically and independently review applications and avoid suboptimal or unfair outcomes.

This is underpinned by NHMRC's document: *Peer Review: A guide supporting the Australian Code for the Responsible Conduct of Research*, which states that peer reviewers should be aware of how their own biases (conscious or unconscious) could affect the peer review process, including in relation to gender, ethnicity, nationality, institutional employer and research discipline.

To minimise or avoid bias, peer reviewers are encouraged to take action to address the unintended and systematic biases which prevent unprejudiced consideration of an application. To increase peer reviewers' awareness of the types of cognitive biases that can occur during peer review, NHMRC recommends the San Francisco Declaration on Research Assessment (DoRA) guidance on *Rethinking Research Assessment*.

NHMRC is committed to its vision of a gender diverse and inclusive health and medical research workforce to take advantage of the full range of talent needed to build a healthy Australia. Fostering gender equity in peer review is a strategic objective underpinned by *NHMRC's Gender Equity Strategy*.

Peer reviewer participation in the online Harvard Implicit Association Test (IAT) for gender and science.

In support of the objective, NHMRC encourages peer reviewers to complete the online IAT for gender and science. The IAT for gender and science, used by several research funding agencies nationally and internationally, is designed to help participants identify any implicit associations they may have between gender and participation in a science career.

By completing the test, peer reviewers gain a better understanding and increased awareness of how unconscious attitudes may affect their decisions, which prepares them to carry out their duties to the high standards of fairness and rigour expected by NHMRC. Peer reviewers should continue to follow all peer review principles and processes outlined in these guidelines, ensuring that each application is accurately reviewed against the assessment criteria (Appendix C). NHMRC does not have access to, nor does it seek, peer reviewers' information and results for the IAT for gender and science in the peer review process.

Peer reviewers must also familiarise themselves with any additional materials provided by NHMRC about unconscious bias awareness and implicit associations during the peer review process.

4.3.7.3. Industry-relevant experience

Peer reviewers are to recognise an applicant's industry-relevant experience and outputs. To assist peer reviewers with their assessment, the *Guide to Evaluating Industry-Relevant Experience* is provided at Appendix J.

4.3.7.4. Assessment of the publication component of an applicant's track record

Peer reviewers are to consider their expert knowledge of their field of research, as well as the citation and publication practices of that field, when assessing the publication component of an applicant's track record.

Track record assessment considers the overall impact, quality and contribution to the field of the published journal articles from the grant applicant, not just the standing of the journal in which those articles are published. It is not appropriate to use publication metrics such as Journal Impact Factors. Journal-based metrics, if included by an applicant, should not be taken into consideration in the assessment of publications.

Instead, peer reviewers are to focus on the creativity and innovation of ideas, rigour of experimental design, appropriate use of statistical methods, reproducibility of results, analytical strength of interpretations and significance of outcomes, all of which serve as surrogates for measuring research quality of a publication, irrespective of the field of research.

NHMRC also encourages the use of research quality guidelines such as the Hong Kong Principles for assessing researchers[2], which recommends focussing on responsible research practices, transparent reporting, open science, diversity of research and recognition of all contributions to research as hallmarks of publication quality.

The San Francisco Declaration on Research Assessment (DoRA) makes recommendations for improving the evaluation of research assessment. NHMRC is a signatory to DoRA and adheres to the recommendations outlined in DoRA for its peer review processes.

4.3.7.5. Enhancing reproducibility and applicability of research outcomes

Peer reviewers are required to consider the general strengths and weaknesses of the experimental design of the proposal to ensure robust and unbiased results. Assessment of the experimental design should include consideration of the following, as appropriate:

- scientific premise of the proposed research (i.e. how rigorous were previous experimental designs that form the basis for this proposal)
- techniques to be used
- details for appropriate blinding (during allocation, assessment and analysis)
- strategies for randomisation
- details and justification for control groups

[2] https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3000737

- effect size and power calculations to determine the number of samples/subjects in the study (where appropriate)
- consideration of relevant experimental variables
- sex and gender elements of the research to maximise impact and any other considerations relevant to the field of research necessary to assess the rigour of the proposed design.

4.3.8. Research Integrity Issues

The peer review process can sometimes identify possible research integrity issues with applications or applicants (e.g. concerns about possible plagiarism, inconsistencies in the presentation of data, inaccuracies in the presentation of track record information) or the behaviour of other peer reviewers. NHMRC has established specific processes for addressing research integrity concerns that arise in peer review. Peer reviewers must not discuss their concerns with other peer reviewers as this may jeopardise the fair assessment of an application. Instead, these issues should be raised with NHMRC separately from the peer review process. NHMRC provides advice about how to raise concerns and a description of how this process is managed.

Applications that are the subject of a research misconduct allegation will continue to progress through NHMRC peer review processes while any investigations are ongoing. NHMRC liaises with the institution regarding the outcome of any investigation and, if necessary, will take action under the *NHMRC Research Integrity and Misconduct Policy*.

4.3.8.1. Contact between peer reviewers and applicants

Peer reviewers must not contact applicants about their application under review. If this occurs, the peer reviewer may be removed from the process, and there is the potential for exclusion from future NHMRC peer review.

Where an applicant contacts a peer reviewer, the relevant application may be excluded from consideration.

In either case, contact between applicants and peer reviewers may raise concerns about research integrity and NHMRC may refer such concerns to the relevant Administering Institution.

4.3.9. Minimum number of assessments

The minimum number of assessments for an application is regarded as 50% plus one of the peer reviewers assigned to score an application. If there is an uneven number of peer reviewers assigned to an application, the minimum number of assessments is the next full number after 50% (e.g. 3 assessments in the case of 5 peer reviewers).

4.3.10. Principles for setting conditions of funding for NHMRC grants

Setting a condition of funding (CoF) on a grant through the peer review process is, and should be, a rare event. When this does occur, the peer reviewers or NHMRC will use the principles set out below to decide the CoF. These principles aim to achieve a consistent approach, minimise the number of conditions set and ensure conditions are unambiguous and able to be assessed.

CoFs relate to the award of funding, the continuation of funding or the level of funding. They do not relate to conditions which affect either eligibility to apply or subsequent peer review.

The principles are:

- NHMRC seeks to minimise the administrative burden on researchers and Administering Institutions
- CoFs must not relate to the competitiveness of an application (e.g. project requires more community engagement); these issues should be considered during peer review and be reflected in the scores for the application
- Any CoFs must be clear and measurable, so that the condition can be readily assessed as having been met.

4.3.11. Documentation

Peer reviewers may be required to retain personal notes that they made during the peer review process for a certain period, and if so, these must be held securely and in accordance with reviewers' obligations of confidentiality. NHMRC will notify peer reviewers of any such requirements prior to the peer review process.

4.3.12. Funding recommendation

Application scores from shortlisted applications in Stage One and CI Track Record scores from Stage Two are used to create a ranked list. Final application scores from all peer reviewers are used to create a ranked list. This final ranked list will be used to prepare funding recommendations to the Minister for Health and Aged Care.

4.3.13. Notification of outcomes

NHMRC will notify applicants and their Administering Institution's Research Administration Officer of grant application outcomes.

Feedback will be provided to all applicants in the form of an Application Assessment Summary (AAS). The AAS will contain constructive, qualitative feedback from peer reviewers. In addition, numerical information, about the application-level scores for Stage One will be provided to all applicants and combined track record scores for Stage Two provided to shortlisted applicants.

Appendix A. Understanding the Principles of Peer Review

Fairness

- Peer review processes are designed to ensure that peer review is fair and seen to be fair by all involved.
- Peer reviewers have an obligation to ensure that each application is judged consistently and objectively on its own merits, against published assessment criteria. Peer reviewers must not introduce irrelevant issues into the assessment of an application.
- Peer reviewers must only address information provided in the application based on its relevance to the assessment criteria. Any information or issues relating to the applicant(s) outside of the application must not be considered in the peer reviewers' assessment. Applications will be subject to scrutiny and evaluation by individuals who have appropriate knowledge of the fields covered in the application.
- Peer reviewers should ensure that their assessments are accurate and that all statements are capable of being verified.
- Complaints processes are outlined in the NHMRC *Complaints Policy*. All complaints to NHMRC relating to the peer review process are dealt with independently and impartially.

Transparency

- NHMRC will publish key dates, all relevant material for applicants and peer reviewers, and grant announcements on its website and/or via GrantConnect.
- NHMRC publicly recognises the contribution of participants in the peer review process, through publishing their names on the NHMRC website.[3]

Independence

- Peer reviewers must provide independent and impartial assessment of applications. Peer reviewer assessments may be informed by input from other experts (e.g. in panel meetings or when considering expert reports) but must not be unduly influenced by the views of other researchers or stakeholders.
- The order of merit determined by peer reviewers is not altered by NHMRC. However, additional applications may be funded 'below the funding line' in priority or strategic areas.
- Peer review mentors (PRMs) are independent and are not involved in the peer review of any application. PRMs act to ensure that NHMRC's processes are followed for each scheme, including adherence to the principles of this Guide.

Appropriateness and balance

- Peer reviewers are selected to meet the scheme's objectives and to ensure adequate expertise to assess the applications received.
- NHMRC endeavours to ensure that peer reviewers are selected with regard to an appropriate representation of gender, geography and large and small institutions.

Confidentiality

- NHMRC provides a process by which applications are considered by peer reviewers in-confidence. In addition, NHMRC is bound by the provisions of the *Privacy Act 1988* in relation to its collections and

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

use of personal information, and by the commercial confidentiality requirements under section 80 of the NHMRC Act.

- Peer reviewers are to treat applications in-confidence and must not disclose any matter regarding applications under review to people who are not part of the process.
- Any information or documents made available to peer reviewers in the peer review process are confidential and must not be used other than to fulfil their role.
- NHMRC is subject to the *Freedom of Information Act 1982* which provides a statutory right for an individual to seek access to documents. If documents that deal with peer review fall within the scope of a request, there is a process for consultation and there are exemptions from release. NHMRC will endeavour to protect the identity of peer reviewers assigned to a particular application.

Impartiality

- Peer reviewers must disclose all interests and matters that may, or may be perceived to, affect objectivity in considering particular applications.
- Peer reviewers must disclose interests with applications being reviewed, including:
  - research collaborations
  - student, teacher or mentoring relationships
  - employment arrangements
  - any other relationship that may, or may be seen to, undermine fair and impartial judgement.
- Disclosures of interest are managed to ensure that no one with a high conflict is involved in the assessment of relevant applications.

Quality and Excellence

- NHMRC will continue to introduce evidence-based improvements into its peer review processes.
- Any significant change will be developed in consultation with the research community and may involve piloting new processes.
- NHMRC will strive to introduce new technologies that are demonstrated to maximise the benefits of peer review and improve the efficiency and effectiveness of the process while minimising individual workloads.
- NHMRC will undertake post-scheme assessment of all its schemes with feedback from the sector.
- NHMRC will provide advice, training and feedback for peer reviewers new to NHMRC peer review.
- Where NHMRC finds peer reviewers to be substandard in their performance, NHMRC may provide such feedback directly to the peer reviewer or their institution.

Appendix B. Guidance for declaring and assessing disclosures of interest

Peer reviewers[4] are required to disclose all interests that are relevant, or could appear to be relevant, to the proposed research.

An interest is a collaboration or relationship which may, or could be perceived to, affect impartial peer review and thus needs to be disclosed and transparently managed (where necessary) to safeguard the integrity of the peer review process. It is essential that peer reviewers not only disclose their own actual interests relating to proposed research (real interest), but also collaborations and relationships that could be perceived by stakeholders to affect impartial peer review (perceived interest). Failure to do so without a reasonable excuse may result in the peer reviewer being removed from the peer review process in accordance with subsection 44B (3) of the NHMRC Act.

A disclosure does not always equate to a conflict of interest (CoI). In determining if an interest is a conflict, peer reviewers should give consideration to the following values that underpin the robust nature of peer review:

- **Impartiality:** The benefits of peer reviewers' expert advice needs to be balanced with the risk of real or perceived interests affecting an impartial review.
- **Significance:** Not all interests are equal. The type of interest needs to be considered in terms of its significance and time when it occurred.
- **Integrity through disclosure:** Peer review rests on the integrity of peer reviewers to disclose any interests and contribute to transparently managing any real or perceived conflicts in a rigorous way. The peer review system cannot be effective without trusting peer reviewers' integrity.

In determining if an interest is a 'High', 'Low', or 'No' conflict, the responsibility is on the peer reviewer to consider the specific circumstances of the situation. This includes:

- the interest's significance
- its impact on the impartiality of the reviewer, and
- maintaining the integrity of the peer review process.

Once a peer reviewer discloses an interest, they can provide an explanation of the interest in Sapphire to enable a judgement of its significance. Wherever possible, peer reviewers are required to provide sufficient detail in the explanation, such as date (month and year) and nature of the interest.

The written declaration of interest is retained for auditing purposes by NHMRC. The details below provide general examples and are not to be regarded as a prescriptive checklist.

[4] For the purposes of disclosing interests, in Appendix B the term peer reviewers also includes community observers and NHMRC staff.

HIGH Conflict of Interest – situations and examples

Associated with Application and/or Chief Investigator (CI)

- Peer reviewer is a CI named on the application under review.
- Peer reviewer has had discussions/significant input into the study design or research proposal of this application.

Collaborations

- Peer reviewer is actively collaborating or has collaborated with the CI in the last 3 calendar years on publications (co-authorship), pending grant applications and/or existing grants.

Working relationships

- Peer reviewer and a CI currently work or are negotiating future employment in the same:
  - research field at an independent Medical Research Institute.
  - Department or School of a university.
  - Department of a hospital.
- Peer reviewer is in a position of influence within the same organisation as a CI, or has a pecuniary interest in the organisation (either perceived or real) e.g. Dean of Faculty or School/Institute Directors.
- Peer reviewer and a CI are on the same committee/board and the peer reviewer or their affiliated organisation would stand to benefit from, or be affected, by the outcome of the application (i.e. vested interested in the proposed research). For example, peer reviewer and CI are both on the same governing board within their organisation.

Professional relationships and interests

- Peer reviewer or a peer reviewer's employer is directly affiliated or associated with an organisation(s) that may have, or may be perceived to have, a vested interest in the research. For example, a pharmaceutical company, which has provided drugs for testing, has a vested interest in the outcome.

Social relationship and / or interests

- The peer reviewer or a peer reviewer's immediate family member has a personal or social relationship with a CI on the application.

Teaching or supervisory relationship

- Peer reviewer has taught or supervised a CI for either undergraduate or postgraduate studies within the last 3 years.
- Peer reviewer and a CI co-supervise an undergraduate or postgraduate student and collaborate with each other on the student's research.

Direct financial interest in the application

- Peer reviewer has the potential for financial gain if the application is successful, such as benefits from: payments from resulting patents, supply of goods and services, access to facilities, and provision of cells/animals as part of the collaboration.
- Peer reviewer receives research funding or other support from a company and the research proposal may involve collaboration/association with that company.
- Peer reviewer receives research funding or other support from a company and the research proposal may affect the company.

Other interests or situations

- Peer reviewer had or has an ongoing scientific disagreement and/or dispute with a CI. This may still be ruled as a high conflict if the events in question occurred beyond the last 3 years.
- There are other interests or situations not covered above that could influence/or be perceived to influence the peer review process. In these instances, sufficient details must be provided to allow NHMRC to make a ruling.

LOW Conflict of Interest – situations and examples

Collaborations

- Peer reviewer and a CI on the application have collaborated more than 3 years ago.
- Within the last 3 years, the peer reviewer was part of large collaborations involving the CI, but did not interact or collaborate with the CI directly. Examples include:
  - publication(s) as part of a multi-author collaborative team (i.e. ≥10 authors)
  - pending grant applications or existing grants involving more than 10 CIs (e.g. large collaborative research centres and network grants)
  - A colleague is planning future collaborations with a CI.
  - Peer reviewer and a named AI on the application are actively collaborating or have previously collaborated within the last 3 years.
  - Without financial gain or exchange, a peer reviewer and a member of the research team have shared cells/animals/reagents/specialist expertise (biostatistician) etc. but have no other connection to each other.
  - Collaboration between a peer reviewer's colleague/research group and a CI on the application, where the peer reviewer did not participate or have a perceived interest (e.g. direct leadership or responsibility for the researchers involved in the collaboration) in the collaboration, or vice versa.
  - Peer reviewer is considering, planning or has planned a future collaboration with a CI on the application but has no current collaborations, including joint publications/applications under development.
  - Peer reviewer and CI have previously proposed or planned a collaboration that did not progress.

Working relationships

- Peer reviewer and a CI currently work or are negotiating future employment in:
  - the same institution but have no direct association or collaboration.
  - the same Faculty or College of a university but in different Schools or Departments
- Peer reviewer and a CI work for 2 organisations that are affiliated but there is no direct association/collaboration.
- Peer reviewer and a CI are on the same committee/board, but otherwise have no working or social relationships that constitute a high conflict and the peer reviewer and/or their affiliated organisation would not benefit from, or be affected by, the outcome of the application (i.e. do not have a vested interest in the proposed research). For example, the peer reviewer and CI are both on an external government advisory committee.

Professional relationships and interests

- Peer reviewer and a CI's organisations are affiliated but there is no direct association/collaboration between the CI and peer reviewer and there is no other link that would constitute a high conflict.

Social relationship and/or interests

- Peer reviewer's partner or immediate family member has a known personal/social (non-work) or perceived relationship with a CI on the application, but the peer reviewer themselves does not have any link with the CI that would be perceived or constitute a high conflict.

Teaching or supervisory relationship

- Peer reviewer taught or supervised the CI for either undergraduate or postgraduate studies, co-supervised a CI or the peer reviewer's research was supervised by a CI, more than 3 years ago.
- Peer reviewer and a CI are co-supervisors of an undergraduate or postgraduate student, but they are not collaborating with each other on the student's research (e.g. where one of the supervisors may provide additional expert input or guidance to the student's project or thesis).

Financial interest in the application

- Peer reviewer has an associated patent pending, supplied goods and services, improved access to facilities, or provided cells/animals etc. to a named CI for either undergraduate or postgraduate studies.
- Peer reviewer has intellectual property that is being commercialised by an affiliated institution. Peer reviewer has previously provided and/or received cells/animals to/from a CI on the application, but has no other financial interests directly relating to this application that would constitute a high conflict.

Other interests or situations

- Peer reviewer may be, or may be perceived to be, biased in their review of the application. For example, peer reviewer is a lobbyist on an issue related to the application.

Appendix C. Synergy Grants 2025 assessment criteria

Applications for Synergy Grants 2025 are assessed by peers on the extent to which they address the assessment criteria:

- Knowledge Gain (30%)
- Synergy (30%)
- Track Record, relative to opportunity (40%).

Applications will be assessed against the score descriptors at Appendix D.

Knowledge Gain – NHMRC defines 'Knowledge Gain' for the Synergy Grant scheme as the quality of the proposed research and significance of the knowledge gained. It incorporates theoretical concepts, hypotheses, research design, robustness and the extent to which the research findings will contribute to the research area and health outcomes (by advancing knowledge, practice or policy).

Synergy – NHMRC defines 'Synergy' for the Synergy Grant scheme as the quality of a diverse team's multidisciplinary and collaborative approach to solve a major health and medical research question, while building workforce capability.

Track Record – NHMRC defines 'Track Record' for the Synergy Grant scheme as the value of an individual Chief Investigator's past research achievement, relative to opportunity, not prospective achievements, using evidence-based components. The Publications and Leadership track record components must only be drawn from the past 10 years (taking into account any career disruptions).

While it is expected the Research Impact will be recent, this can be drawn from any time in the researcher's career. Assessment of track record comprises peer reviewers' consideration of:

- Publications (20%)
- Research Impact (15%)
- Leadership (5%).

Assessment of publication track record focuses on the quality and contribution to science rather than the quantity of publications. Further guidance on how to assess Synergy Grant applications against the assessment criteria is at Appendix D.

Chief Investigator's track records are assessed relative to opportunity, taking into consideration any career disruptions (Appendix I), where applicable.

NHMRC recognises that Aboriginal and Torres Strait Islander applicants often make additional valuable contributions to policy development, clinical/ public health leadership and/or service delivery, community activities and linkages, and are often representatives on key committees. If applicable, these contributions will be considered when assessing research output and track record.

Appendix D. Synergy Grants 2025 Score descriptors

The following score descriptors are used as a guide to score an application against each of the assessment criteria. While the score descriptors provide peer reviewers with some benchmarks for appropriately scoring, each application, **it is not essential that all descriptors relating to a given score are met.**

The score descriptors are a guide to a 'best fit' outcome. Peer reviewers will consistently refer to these score descriptors to ensure thorough, equitable and transparent assessment of applications.

Assessing Aboriginal and Torres Strait Islander contributions

It is recognised that Aboriginal and Torres Strait Islander applicants make additional valuable contributions to policy development, clinical/ public health leadership and/or service delivery, community activities and linkages and are often representatives on key committees. If applicable, **these contributions should be considered when assessing research output and track record.**

Stage One – Knowledge Gain (30%) and Synergy (30%)

Knowledge gain (30%)

Table 1. Knowledge Gain

Score	Performance indicator	Score descriptors
7	Exceptional	The proposed multidisciplinary research represents **exceptional knowledge gain** as it: • **Comprehensively integrates complementary** information, data, techniques, tools, perspectives, concepts and/or theories, from 2 or more disciplines or bodies of specialised knowledge, that are essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: – is supported by an **extremely well** justified and reasoned hypothesis/hypotheses/rationale – the scientific framework, design, methods and analyses are **flawless**, **highly** developed, **completely** complementary and integrated and **highly** appropriate – the integration of research components is **extremely likely** to result in novel conceptual approaches and insights. • Demonstrates to an **extremely high level** that the research proposal tackles a **major** question addressing an issue of **critical importance** to advance the research or health area (not prevalence or magnitude of the issue) • Collectively has or has access to **exceptional** technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes • **Will** result in **extremely** significant and **transformative** changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues • **Will** lead to **extremely** significant research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.) • **Would be extremely** competitive with the best, similar, research proposals internationally.
6	Outstanding	The proposed multidisciplinary research represents **outstanding knowledge gain** as it: • **Integrates complementary** information, data, techniques, tools, perspectives, concepts and/or theories, from 2 or more disciplines or bodies of specialised knowledge, that are essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: – is supported by a **very well** justified and reasoned hypothesis/hypotheses/rationale – the scientific framework, design, methods and analyses **are well** developed, complementary and integrated and **highly** appropriate with **only a few minor weaknesses** – the integration of research components is **highly likely** to result in novel conceptual approaches and insights. • Demonstrates to a **very high level** that the research proposal tackles a major question addressing an issue that is **very important** to advance the research or health area (not prevalence or magnitude of the issue)

		• Collectively has or has access to outstanding technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes • Will result in very highly significant and substantial changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues • Will lead to very highly significant research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.) • Would be highly competitive with the best, similar, research proposals internationally.
5	Excellent	The proposed multidisciplinary research represents excellent knowledge gain as it: • Integrates complementary information, data, techniques, tools, perspectives, concepts and/or theories, from 2 or more disciplines or bodies of specialised knowledge, that are essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: – is supported by a well justified and reasoned hypothesis/hypotheses/rationale the scientific framework, design, methods and analyses are well developed, complementary and integrated and highly appropriate with several minor weaknesses – the scientific framework, design, methods and analyses are well developed, complementary and integrated and highly appropriate with several minor weaknesses – the integration of research components is likely to result in novel conceptual approaches and insights. • Demonstrates to a high level that the research proposal tackles a major question addressing an issue that is of considerable importance to advance the research or health area (not prevalence or magnitude of the issue) • Collectively has or has access to excellent technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes • Will result in highly significant and substantial changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues • Will lead to highly significant research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.) • Would be competitive with the best, similar, research proposals internationally
4	Very good	The proposed multidisciplinary research represents very good knowledge gain as it: • Integrates broadly complementary information, data, techniques, tools, perspectives, concepts and/or theories, from 2 or more disciplines or bodies of specialised knowledge, that are essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: – is supported by a well justified and reasoned hypothesis/hypotheses/rationale – the scientific framework, design, methods and analyses are well developed, broadly complementary and integrated and highly appropriate with a few minor concerns – the integration of research components is likely to result in novel conceptual approaches and insights. • Demonstrates that the research proposal tackles a major question addressing an issue that is of importance to advance the research or health area (not prevalence or magnitude of the issue)

		• Collectively has or has access to very good technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes • Likely to result in significant and substantial changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues • Likely to lead to significant research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.) • Would be likely to be competitive with high quality, similar research proposals internationally.
3	Good	The proposed multidisciplinary research represents good knowledge gain as it: • Integrates broadly complementary information, data, techniques, tools, perspectives, concepts and/or theories, from 2 or more disciplines or bodies of specialised knowledge, essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: – is supported by a justified and sound hypothesis/hypotheses/rationale – the scientific framework, design, methods and analyses are developed, broadly complementary and integrated and appropriate with several minor concerns – the integration of research components could result in novel conceptual approaches and insights. • Demonstrates that the research proposal tackles a major question addressing an issue that is of some importance to advance the research or health area (not prevalence or magnitude of the issue) • Collectively has or has access to good technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes • Could result in significant and substantial changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues • Could lead to significant research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.) • Would be somewhat competitive with high quality, similar research proposals internationally.
2	Satisfactory	The proposed multidisciplinary research represents satisfactory knowledge gain as it: • Integrates broadly complementary information, data, techniques, tools, perspectives, concepts and/or theories, from 2 or more disciplines or bodies of specialised knowledge, essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: – is supported by a reasoned hypothesis/hypotheses/rationale – the scientific framework, design, methods and analyses are generally sound, complementary and integrated but may lack clarity in some aspects and/or may contain notable weaknesses/concerns – the integration of research components could result in some novel conceptual approaches and insights. • Demonstrates that the research proposal tackles a major question addressing an issue that is of marginal importance to advance the research or health area (not prevalence or magnitude of the issue)

		• Collectively has or has access to some/most but not all of the technical resources, infrastructure, equipment and facilities, and if required, has access to additional expertise necessary to achieve project outcomes • Could result in appreciable improvements/outcomes in the scientific knowledge, practice or policy underpinning human health issues • Could lead to moderately significant research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.) • Would be marginally competitive with high quality, similar research proposals internationally.
1	Marginal to Poor	The proposed multidisciplinary research: • Does not integrate information, data, techniques, tools, perspectives, concepts and/or theories, from 2 or more disciplines or bodies of specialised knowledge, essential to solve a major research question that is beyond the scope of a single discipline or area of research practice: – has a weak hypothesis/hypotheses/rationale – the scientific framework, design, methods and analyses have significant shortcomings and may contain major weaknesses. • Fails to demonstrate that the research proposal tackles a major research question • Does not have access to the technical resources, infrastructure, equipment and facilities, or access to additional expertise necessary to achieve project outcomes • Is unlikely to result in improvements/outcomes in the scientific knowledge, practice or policy underpinning human health issues of significance • Is unlikely to lead to research outputs (e.g. intellectual property, publications, policy advice, products, services, teaching aids, consulting, contract research, spin-offs, licensing etc.) of significance • Is unlikely to be competitive with similar research proposals internationally.

Synergy (30%)

Table 2. Synergy

Score	Performance indicator	Score descriptors
7	Exceptional	The proposed research team provides **exceptional synergy** (*diversity*, *multidisciplinarity* and *collaborative gain*) as it: *Diversity* • **Comprises a diverse team** (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise **and** build capability aligned to the research question – Provides investigators' diverse experience and vital perspectives, without which the research question cannot be addressed. **AND** *Multidisciplinarity* • **Comprehensively** demonstrates why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily • Integrates researchers with **highly complementary expertise and insights** across disciplines **necessary** and **sufficient** to address the major research question and lead to **transformative** outcomes – Achieves integration of the various researchers' skills and perspectives that is **extremely likely** to produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects, or with a different composition of CIs. **AND** *Collaborative gain* • **Demonstrates to an extremely high degree**, comprehensive and suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources • Demonstrates sustainable collaborations that are **highly** likely to extend beyond the life of the project • Demonstrates each investigator's previous experience and success in collaborative research (with the same or other collaborators) • Incorporates **comprehensive and exceptional** strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).

6	Outstanding	The proposed research team provides **outstanding synergy** (*diversity*, *multidisciplinarity* and *collaborative gain*) as it: *Diversity* • **Comprises a diverse team** (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise **and** build capability aligned to the research question – Provides investigators' diverse experience and vital perspectives, without which the research question cannot be addressed. **AND** *Multidisciplinarity* • Demonstrates to a **very high degree** why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily • Integrates researchers with **complementary expertise and insights** across disciplines **necessary** and **sufficient** to address the major research question and lead to **substantial** outcomes – Achieves integration of the various researchers' skills and perspectives that is **highly likely** to produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects, or with a different composition of CIs. **AND** *Collaborative gain* • **Demonstrates to a very high degree**, comprehensive and suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources • Demonstrates sustainable collaborations that are **highly** likely to extend beyond the life of the project • Demonstrates each investigator's previous experience and success in collaborative research (with the same or other collaborators) • Incorporates **comprehensive** and **outstanding** strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).

5	Excellent	The proposed research team provides **excellent synergy** (*diversity*, *multidisciplinarity* and *collaborative gain*) as it: *Diversity* • **Comprises a diverse team** (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise and build capability aligned to the research question – Provides investigators' diverse experience and vital perspectives, without which the research question cannot be addressed. **AND** *Multidisciplinarity* • Demonstrates to a **high degree** why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily • Integrates researchers with **complementary expertise and insights** across disciplines **necessary** and **sufficient** to address the major research question and lead to **substantial** outcomes – Achieves integration of the various researchers' skills and perspectives that is likely to produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects, or with a different composition of CIs. **AND** *Collaborative gain* • **Demonstrates to a high degree**, comprehensive and suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources • Demonstrates sustainable collaborations that are **likely** to extend beyond the life of the project • Demonstrates each investigator's previous experience and success in collaborative research (with the same or other collaborators) • Incorporates **comprehensive** and **excellent** strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).

4	Very good	The proposed research team provides very good synergy (*diversity, multidisciplinarity* and *collaborative gain*) as it: *Diversity* • Comprises a diverse team (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise **and** build capability aligned to the research question – Provides investigators' diverse experience and vital perspectives, without which the research question cannot be addressed. **AND** *Multidisciplinarity* • Broadly demonstrates why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily • Integrates researchers with complementary expertise and insights across disciplines necessary and sufficient to address the major research question and likely lead to substantial outcomes – Achieves integration of the various researchers' skills and perspectives that could produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects, or with a different composition of CIs. **AND** *Collaborative gain* • Demonstrates comprehensive and suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources • Demonstrates sustainable collaborations that could extend beyond the life of the project • Demonstrates each investigator's previous experience and success in collaborative research (with the same or other collaborators) • Incorporates comprehensive and very good strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).

3	Good	The proposed research team provides **good synergy** (*diversity*, *multidisciplinarity* and *collaborative gain*) as it: *Diversity* • **Comprises a diverse team** (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise **and** build capability aligned to the research question – Provides investigators' diverse experience and vital perspectives, without which the research question cannot be addressed. **AND** *Multidisciplinarity* • **Largely** demonstrates why the research requires the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily. • Integrates researchers with expertise and insights across disciplines **necessary** and **sufficient** to address the major research question and **could** lead to substantial outcomes – Achieves integration of the various researchers' skills and perspectives that could in general produce sustainable synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects, or with a different composition of CIs. **AND** *Collaborative gain* • **Demonstrates suitable** plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources • Demonstrates collaborations that **could** extend beyond the life of the project • Demonstrates each investigator's previous experience and success in collaborative research (with the same or other collaborators) • Incorporates **clear** and **good** strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).

2	Satisfactory	The proposed research team provides moderate synergy (*diversity*, *multidisciplinarity* and *collaborative gain*) as it: *Diversity* • Comprises a diverse team (in terms of gender, career stage and/or researchers from different cultures) that will provide expertise **and** build capability aligned to the research question – Provides investigators' diverse experience and vital perspectives, without which the research question cannot be addressed. **AND** *Multidisciplinarity* • Demonstrates to some degree why the research could require the integration of knowledge from multiple disciplines and has processes to ensure the research question is addressed using these different disciplines complementarily, but poses some concerns • Integrates researchers with expertise and insights across disciplines that are relevant to the major research question and may lead to improved outcomes: – Achieves integration of the various researchers' skills and perspectives that could produce some synergy and novel outcomes, which would not be possible by the CIs pursuing the components as separate projects, or with a different composition of CIs. **AND** *Collaborative gain* • Demonstrates moderately suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources • Demonstrates to some extent collaborations that may extend beyond the life of the project • Demonstrates to some extent each investigator's previous experience and success in collaborative research (with the same or other collaborators) • Incorporates moderate strategies to integrate, provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).

1	Marginal to Poor	The proposed research team provides limited synergy (*diversity*, *multidisciplinarity* and *collaborative gain*) as it: *Diversity* • Does not comprise a diverse team (in terms of gender, career stage and/or researchers from different cultures) **or** the proposed team is diverse but investigators do not provide diverse experience and vital perspectives aligned to the research question. **AND** *Multidisciplinarity* • Does not demonstrate why the research requires the integration of knowledge from multiple disciplines and has no processes to ensure the research question is addressed using these different disciplines complementarily • Does not integrate researchers with expertise and insights across disciplines necessary to address the major research question. **AND** *Collaborative gain* • Does not demonstrate suitable plan(s) for the research team to work synergistically, including milestones and evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources • Does not demonstrate collaborations that are likely to extend beyond the life of the project • Does not demonstrate each investigator's previous experience and success in collaborative research (with the same or other collaborators) • Does not incorporate strategies to integrate provide mentoring and development opportunities and increase capability of under-represented groups/researchers (e.g. health professionals, consumers, community groups, policy makers and people from different cultures).

Stage Two – Track record (40%), relative to opportunity

Publications (20%)

Any publication type can be included to illustrate the Chief Investigator's (CI's) involvement, the quality of the research and its contribution to science. Publication assessment will focus on up to 10 of each individual Chief Investigator's (CI's) top publications in the past 10 years (taking into account career disruptions), supported by the CI's explanation for the nomination of each publication.

Assessment of publication track record will focus on the quality of the research and contribution to science rather than the quantity of publications.

Table 3. Publications

Descriptor Relative to opportunity (including career stage) and to their field of research, the individual Chief Investigator demonstrates a(n) [performance indicator] record of **publications** in terms of quality and contribution to science

Score	1	2	3	4	5	6	7
Performance Indicator	Weak or limited	Satisfactory	Good	Very Good	Excellent	Outstanding	Exceptional

Research Impact (15%)

Table 4. Reach and significance of the research impact (5%)

Less than 10 years post-PhD (taking into account career disruptions)	Score descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	*Note: Individual Chief Investigator's do not need to demonstrate all types of research impact*	*There is robust, verifiable evidence of:*	
7	an **exceptional** *knowledge*, *health*, *economic* **and/or** *social impact*	*Knowledge* • a **paradigm changing** development that has led to (a) new knowledge within the field that is recognised across multiple countries, (b) significant influence beyond the specific field of research **or** (c) the development of a new field(s) of research that has been recognised across multiple countries/beneficiaries *Health* • a **paradigm changing** development that has improved health or health systems, services, policy, programs or clinical practice that (a) had a significant impact on health with an extensive reach, (b) had a profound impact on health with a modest reach, (c) profoundly improved the health of Australia's Indigenous people **or** (d) led to a significant, scalable and sustainable change in health systems and services in a large number of communities.	an **exceptional** *knowledge*, *health*, *economic* and/or *social impact*	7
		Economic • development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of **significant** commercial income **or** (b) a **profound reduction** in healthcare costs *Social* • changes in policy that have had (a) a **significant** impact on the social well-being, equality or social inclusion of very large numbers of people at a national level or across multiple countries **or** (b) a **profound impact** on the social well-being of the end-user, public and community of a smaller number of individuals at a national level or across multiple countries.	an **outstanding** *knowledge*, *health*, *economic* and/or *social impact*	6

Less than 10 years post-PhD (taking into account career disruptions)	Score descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	*Note: Individual Chief Investigator's <u>do not</u> need to demonstrate all types of research impact*	*There is robust, verifiable evidence of:*	
7	an **exceptional** *knowledge*, *health*, *economic* **and/or** *social impact*	*Knowledge* • a **major development** that has led to (a) new knowledge within the field that is recognised nationally or across multiple countries, (b) a **major** influence beyond the specific field of research or (c) a **major** influence on the development of a new field(s) of research that has been recognised nationally or across multiple countries/beneficiaries *Health* • an **important development** that has improved health or health systems, services, policy, programs or clinical practice that (a) had a **major** impact on health with an extensive reach, (b) had a **significant** impact on health with a modest reach, (c) led to a **significant** improvement in the health of Australia's Indigenous people or (d) led to major scalable and sustainable change in health systems and services in a number of communities	an **excellent** knowledge, health, economic and/or social impact	5
6	an **outstanding** *knowledge*, *health*, *economic* and/or *social impact*	*Economic* • development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of **considerable** commercial income or (b) a **major** reduction in healthcare costs *Social* • changes in policy that have either had (a) a **major** impact on the social well-being, equality or social inclusion of very large numbers of people at a local, state/territory or national level or (b) a **significant** impact on the social well-being of the end-user, public and community of a smaller number of individuals at a local, state/territory or national level	a **very good** knowledge, health, economic and/or social impact	4

<table>
<tr><th rowspan="2">Less than 10 years post-PhD (taking into account career disruptions)</th><th colspan="3">Score descriptors</th><th rowspan="2">More than 10 years post-PhD (taking into account career disruptions)</th></tr>
<tr><th>There is robust, verifiable evidence of:</th><th>Note: Individual Chief Investigator's <u>do not</u> need to demonstrate all types of research impact</th><th>There is robust, verifiable evidence of:</th></tr>
<tr><td>5</td><td>an excellent knowledge, health, economic and/or social impact</td><td rowspan="4">Knowledge
a change that has led to (a) new knowledge within the field that is recognised nationally or across multiple countries, (b) had some influence beyond the specific field of research, or (c) some influence on the development of a new field(s) of research that has been recognised nationally or across multiple countries/beneficiaries
Health
a development that has improved health or health systems, services, policy, programs or clinical practice that (a) had some impact on health with an extensive reach, (b) had a major impact on health with a modest reach, (c) led to a major improvement in the health of Australia's Indigenous people, or (d) led to some scalable and sustainable change in health systems and services in a small number of communities.
Economic
development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of some commercial income or (b) some reduction in healthcare costs
Social
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<tr><td>4</td><td>a very good knowledge, health, economic and/or social impact</td></tr>
<tr><td>3</td><td>a good knowledge, health, economic and/or social impact</td><td rowspan="2">a satisfactory knowledge, health, economic and/or social impact</td><td rowspan="2">2</td></tr>
<tr><td>2</td><td>a satisfactory knowledge, health,</td></tr>
</table>

Less than 10 years post-PhD (taking into account career disruptions)	Score descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	*Note: Individual Chief Investigator's <u>do not</u> need to demonstrate all types of research impact*	*There is robust, verifiable evidence of:*	
	economic and/or *social impact*	of a smaller number of individuals at a local, state/territory or national level		
1	a **weak** or **limited** *knowledge*, *health*, *economic* and/or *social impact* **and/or** the applicant has **not supplied robust verifiable evidence**	***There is limited*** *or* ***weak evidence of:*** • the development of new knowledge • improved health systems and services • reductions in health care costs or economic growth • improvements in social well-being, equality or social inclusion.	a **weak** or **limited** *knowledge*, *health*, *economic* and/or *social impact* **and/or** the applicant has **not supplied robust verifiable evidence**	1
	Less than 10 years post-PhD (taking into account career disruptions)	**Score descriptors** *Note: Individual Chief Investigators <u>do not</u> need to demonstrate all types of research impact*	**More than 10 years post-PhD** (taking into account career disruptions)	

Less than 10 years post-PhD (taking into account career disruptions)	Score descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	*Note: Individual Chief Investigator's <u>do not</u> need to demonstrate all types of research impact*	*There is robust, verifiable evidence of:*	
7	an **exceptional** *knowledge*, *health*, *economic* **and/or** *social impact*	*Knowledge* • a paradigm changing development that has led to (a) new knowledge within the field that is recognised across multiple countries, (b) significant influence beyond the specific field of research **or** (c) the development of a new field(s) of research that has been recognised across multiple countries/beneficiaries *Health* • a paradigm changing development that has improved health or health systems, services, policy, programs or clinical practice that (a) had a significant impact on health with an extensive reach, (b) had a profound impact on health with a modest reach, (c) profoundly improved the health of Australia's Indigenous people **or** (d) led to a significant, scalable and sustainable change in health systems and services in a large number of communities.	an **exceptional** *knowledge*, *health*, *economic* and/or *social impact*	7
		Economic • development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of significant commercial income **or** (b) a profound reduction in healthcare costs *Social* • changes in policy that have had (a) a significant impact on the social well-being, equality or social inclusion of very large numbers of people at a national level or across multiple countries **or** (b) a profound impact on the social well-being of the end-user, public and community of a smaller number of individuals at a national level or across multiple countries.	an **outstanding** *knowledge*, *health*, *economic* and/or *social impact*	6
7	an **exceptional**	*Knowledge* • a major development that has led to (a) new knowledge within the field that is	an **excellent** knowledge,	5

Less than 10 years post-PhD (taking into account career disruptions)	Score descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	*Note: Individual Chief Investigator's <u>do not</u> need to demonstrate all types of research impact*	*There is robust, verifiable evidence of:*	
	knowledge, *health*, *economic* **and/or** *social impact*	recognised nationally or across multiple countries, (b) a **major** influence beyond the specific field of research or (c) a **major** influence on the development of a new field(s) of research that has been recognised nationally or across multiple countries/beneficiaries *Health* • an **important development** that has improved health or health systems, services, policy, programs or clinical practice that (a) had a **major** impact on health with an extensive reach, (b) had a **significant** impact on health with a modest reach, (c) led to a **significant** improvement in the health of Australia's Indigenous people or (d) led to major scalable and sustainable change in health systems and services in a number of communities	health, economic and/or social impact	
6	an **outstanding** *knowledge*, *health*, *economic* and/or *social impact*	*Economic* • development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of **considerable** commercial income or (b) a **major** reduction in healthcare costs *Social* • changes in policy that have either had (a) a **major** impact on the social well-being, equality or social inclusion of very large numbers of people at a local, state/territory or national level or (b) a **significant** impact on the social well-being of the end-user, public and community of a smaller number of individuals at a local, state/territory or national level.	a **very good** knowledge, health, economic and/or social impact	4
5	an **excellent** *knowledge*, *health*, *economic* and/or	*Knowledge* • a change that has led to (a) new knowledge within the field that is recognised nationally or across multiple countries, (b) had **some** influence beyond the specific field of research, or (c) **some** influence on the development of a new field(s) of research that has been recognised nationally or across multiple countries/beneficiaries	a **good** *knowledge*, *health*, *economic*	3

<table>
<tr><th rowspan="2">Less than 10 years post-PhD (taking into account career disruptions)</th><th colspan="3">Score descriptors</th><th rowspan="2">More than 10 years post-PhD (taking into account career disruptions)</th></tr>
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<tr><td></td><td>social impact</td><td rowspan="4">Health
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Economic
development of a service delivery or system change, prevention program, intervention, device, therapeutic or change in clinical practice that led to (a) the generation of some commercial income or (b) some reduction in healthcare costs
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changes in policy that have had (a) some impact on the social well-being, equality or social inclusion of very large numbers of people at a local, state/territory or national level or (b) an impact on the social well-being of the end-user, public and community of a smaller number of individuals at a local, state/territory or national level.</td><td rowspan="2">and/or social impact</td><td></td></tr>
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</table>

Less than 10 years post-PhD (taking into account career disruptions)	Score descriptors			More than 10 years post-PhD (taking into account career disruptions)
	There is robust, verifiable evidence of:	*Note: Individual Chief Investigator's <u>do not</u> need to demonstrate all types of research impact*	*There is robust, verifiable evidence of:*	
	social impact			
1	a **weak** or **limited** *knowledge*, *health*, *economic* and/or *social impact* **and/or** the applicant has **not supplied robust verifiable evidence**	***There is limited*** *or* ***weak evidence of:*** • the development of new knowledge • improved health systems and services • reductions in health care costs or economic growth • improvements in social well-being, equality or social inclusion.	a **weak** or **limited** *knowledge*, *health*, *economic* and/or *social impact* **and/or** the applicant has **not supplied robust verifiable evidence**	1
	Less than 10 years post-PhD (taking into account career disruptions)	**Score descriptors** *Note: Individual Chief Investigators <u>do not</u> need to demonstrate all types of research impact*	**More than 10 years post-PhD** (taking into account career disruptions)	

Table 5. Research program's contribution to the research impact (5%)

Descriptor Relative to opportunity and to their field of research, there is robust verifiable evidence that the individual Chief Investigator's **research program** made a(n) [performance indicator] contribution to the claimed knowledge, health, economic and/or social impact.

Score	1	2	3	4	5	6	7
Performance Indicator	Weak or limited	Satisfactory	Good	Very Good	Excellent	Outstanding	Exceptional

Note: Individual Chief Investigators who do not supply robust verifiable evidence should receive a score of 1.

Table 6. Chief Investigator's contribution to the research program (5%)

Descriptor Relative to opportunity and to their field of research, there is robust verifiable evidence that the individual **Chief Investigator** made a(n) [performance indicator] contribution to the claimed knowledge, health, economic and/or social impact.

Score	1	2	3	4	5	6	7
Performance Indicator	Weak or limited	Satisfactory	Good	Very Good	Excellent	Outstanding	Exceptional

Note: Individual Chief Investigators who do not supply robust verifiable evidence should receive a score of 1.

Leadership (5%)

Table 7. Leadership

Descriptor Relative to opportunity (including career stage) and to their field of research, the individual Chief Investigator demonstrates [performance indicator] performance in:

- supervision, mentoring, training and/or career development of staff and/or students within and/or beyond their research group
- experience and contribution to the peer review of publications and grant applications, nationally and/or internationally
- contribution to community engagement, public advocacy, government advisory boards or committees, professional societies at a local, national and/or international level
- non-research contribution(s) to department, centre, institute or organisation e.g. people development, relationship building, stewardship, teaching, mentoring, contributions towards improving equity and diversity, behaviour and culture
- conception and direction of a research project or program
- building and maintaining collaborative networks necessary to achieve research outcomes within and/or beyond their institution.

Score	1	2	3	4	5	6	7
Performance Indicator	Weak or limited	Satisfactory	Good	Very Good	Excellent	Outstanding	Exceptional

Appendix E. Indigenous Research Excellence Criteria

To qualify as Aboriginal and Torres Strait Islander health research, at least 20% of the research effort and/or capability building must relate to Aboriginal and Torres Strait Islander health.

Qualifying applications must address the NHMRC Indigenous Research Excellence Criteria as follows:

- **Community engagement:** the proposal demonstrates how the research and potential outcomes are a priority for Aboriginal and Torres Strait Islander communities with relevant community engagement by individuals, communities and/or organisations in conceptualisation, development and approval, data collection and management, analysis, report writing and dissemination of results.
- **Benefit:** the potential health benefit of the project is demonstrated by addressing an important public health issue for Aboriginal and Torres Strait Islander people. This benefit can have a single focus or affect several areas, such as knowledge, finance and policy or quality of life. The benefit may be direct and immediate, or it can be indirect, gradual and considered.
- **Sustainability and transferability:** the proposal demonstrates how the results of the project have the potential to lead to achievable and effective contributions to health gain for Aboriginal and Torres Strait Islander people, beyond the life of the project. This may be through sustainability in the project setting and/or transferability to other settings such as evidence based practice and/or policy. In considering this issue, the proposal should address the relationship between costs and benefits.
- **Building capability:** the proposal demonstrates how Aboriginal and Torres Strait Islander people, communities and researchers will develop relevant capabilities through partnerships and participation in the project.

Peer reviewers will consider these in their overall assessment of the application, when scoring the Assessment Criteria set out in Appendix C.

Appendix F. Assessing applications against the *Indigenous Research Excellence Criteria*

Peer reviewers should consider the following when assessing applications that have a focus on the health of Indigenous Australians. The points below should be explicit throughout the application and not just addressed separately within the Indigenous criteria section.

Community engagement

- Does the proposal clearly demonstrate a thorough and culturally appropriate level of engagement with the Aboriginal and Torres Strait Islander community or health services prior to submission of the application?
- Is there clear evidence that the level of engagement throughout the project will ensure the feasibility of the proposed study?
- Has the application demonstrated evidence that any of the methods, objectives or key elements of the proposed work have been formed, influenced or defined by the community?
- Were the Indigenous community instrumental in identifying and inviting further research into the health issue and will the research outcomes directly benefit the 'named' communities?
- Is there a history of working together with the 'named' communities e.g. co-development of the grant, involvement in pilot studies or how the 'named' communities will have input/control over the research process and outcomes across the life of the project?

Benefit

- Does the proposal clearly outline the potential health benefits (both intermediate and long term, direct and indirect) to Aboriginal and Torres Strait Islander people?
- Does the proposal demonstrate that the benefit(s) of the project have been determined or guided by Aboriginal and Torres Strait Islander people, communities or organisations themselves?

Sustainability and transferability

- Does the proposal:
  - Provide a convincing argument that the outcomes will have a positive impact on the health of Aboriginal and Torres Strait Islander peoples, which can be maintained after the study has been completed?
  - Have relevance to other Indigenous communities?
  - Clearly plan for and articulate a clear approach to knowledge translation and exchange?
  - Demonstrate that the findings are likely to be taken up in health services and/or policy?
- Will the outcomes from the study make a lasting contribution to Aboriginal and Torres Strait Islander communities and their wellbeing?

Building capability

- Does the proposal outline how Aboriginal and Torres Strait Islander people and/or communities will benefit from capability development?
- Does the proposal outline how researchers and individuals/groups associated with the research project will develop capabilities that allow them to have a greater understanding/engagement of Aboriginal and Torres Strait Islander peoples?

Appendix G. Guidance for assessing applications against the Synergy Grants assessment criteria

Synergy Grants support outstanding multidisciplinary teams of investigators to work together to answer major questions that cannot be answered by a single investigator. The assessment criteria for Synergy Grant applications are:

- Knowledge Gain (30%)
- Synergy (30%)
- Track Record, relative to opportunity (40%):
  - Publications (20%)
  - Research Impact (15%)
  - Leadership (5%).

The following advice should be taken into consideration when assessing applications.

Knowledge Gain (30%)

NHMRC defines Knowledge Gain for the Synergy Grant scheme as the quality of the proposed research and significance of the knowledge gained. It incorporates theoretical concepts, hypotheses, research design, robustness and the extent to which the research findings will contribute to the research area and health outcomes (by advancing knowledge, practice or policy).

For the assessment of Knowledge Gain peer reviewers are to consider:

- the clarity and justification of the of the research hypothesis/hypotheses/rationale
- the strengths and weaknesses of the scientific framework, study design, methods and analyses
- whether the proposal tackles a major question addressing an issue of critical importance to advance the research or health area (not prevalence or magnitude of issue)
- the access to the technical resources, infrastructure, equipment and facilities, and if required, access to additional expertise necessary to achieve the proposed outcomes
- access to the technical resources required to achieve project outcomes
- the potential for significant and transformative changes/outcomes in the scientific knowledge, practice or policy underpinning human health issues
- the potential research outputs including:
  - intellectual property
  - publications
  - policy advice
  - products
  - services
  - teaching aids
  - consulting

  - contract research
  - spin-offs
  - licensing etc.
- the significance of the study is not a measure of the prevalence/incidence of the health issue (for example, cancer versus sudden infant death syndrome) but the extent to which the study will address the health issue.

Synergy (30%)

NHMRC defines 'Synergy' for the Synergy Grant scheme as the quality of a diverse team's multidisciplinary and collaborative approach to solve a major health and medical research question, while building workforce capability.

The Synergy criterion will consider the quality of the diverse team's multidisciplinary and collaborative approach to solving a major health and medical research question, as well as the capability building/workforce development outcomes.

This criterion will also assess whether the specific research team named in the application has the appropriate mix of research skills and collaborative experience to answer the research question.

Successful Synergy Grant proposals will be outcomes focused, demonstrating the skills essential to solve the research question, and provide evidence of a discernible benefit over homogenous research teams.

It is essential when considering the Synergy criterion against the score descriptors that all the descriptors relating to a particular score are met.

For the assessment of Synergy peer reviewers are to consider whether the application demonstrates

- the diverse composition of the team (gender, career stage and/or researchers from different cultures) that will:
  - provide expertise
  - build capability (aligned to the research question)
  - provide vital skills and perspectives, without which the research question cannot be addressed.
- a multidisciplinary approach that will:
  - ensure the research is integrated and cohesive and that relevant outcomes of different
  - disciplines are integrated
  - integrate researchers with complementary expertise, skills, and perspectives across disciplines necessary to address the major research question, producing transformative outcomes which would not be possible by the CIs pursuing the components as separate projects, or with different CIs.
- collaborative gain that:
  - is supported by comprehensive and suitable plan(s) for the research team to work

- synergistically which includes milestones, evaluation measures and strategies for intellectual exchange, governance, grant sharing and resources
- establishes sustainable collaborations likely to extend beyond the life of the project
- that shows each investigator's previous experience and success in collaborative research
- incorporates strategies in its proposal to integrate, provide mentoring and development opportunities and increase capabilities of under-represented groups/researchers (for example, health professionals, consumers, community groups, policy makers and people from different cultures).

Further information on how NHMRC defines the concept of 'Synergy' is at Appendix H.

Score descriptors for Knowledge Gain and Synergy are at Table 1 and 2 of Appendix D.

Track Record (40%)

NHMRC defines 'Track Record' for the Synergy Grant scheme as the value of an individual Chief Investigator's past research achievement, relative to opportunity, not prospective achievements, using evidence-based components. Assessment of Track Record comprises peer reviewers' consideration of:

- Publications (20%)
- Research Impact (15%)
- Leadership (5%)

Publications (20%)

Chief Investigators have been asked to nominate up to 10 of their best publications from the past 10 years (taking into account any career disruptions). Each nominated publication has an accompanying explanation field which the individual Chief Investigator uses to provide their reasons for nominating the publication. Peer reviewers are to assess nominated publications on their quality and contribution to science, including the individual Chief Investigator's contribution to each.

Chief investigators have been advised that they may include field weighted metrics and citation metrics within the explanation field for the 10 best publications from the last 10 years. However, the explanation field is not to be used by the individual Chief Investigator to provide additional track record information (for example, conference participation, awards, patents, publications not already nominated in the individual Chief Investigator's Top 10). Peer reviewers must not take into consideration for their assessment, any additional track record information provided in the publication explanation field.

Any publication type can be included that best illustrates the Chief Investigator's involvement, the quality of the research and its contribution to science.

A preprint is a complete and public draft of a scientific document, yet to be certified by a journal through peer review.

To be considered in this score, a preprint:

- must be available in a recognised scientific public archive or repository such as arXiv, bioRxiv, Peer J Preprints, F1000 Research, etc.
- should be searchable via a digital object identifier (DOI). For preprints that are incrementally updated as work progresses, each version should have a unique DOI and only the latest version of the work should be included in the grant application.

Assessment of publications will use a 7-point scoring system, supported by score descriptors (see Table 3 of Appendix D). Peer reviewers will be required to form a judgement based on up to 10 of the individual Chief Investigator's nominated publications from the past 10 years (taking into account career disruptions), including the individual Chief Investigator's explanation for each nominated publication.

The focus on up to 10 nominated publications, rather than each individual Chief Investigator's total list of publications from the past 10 years, is to ensure emphasis of the publications track record assessment is on the quality and contribution to science, rather than quantity of publications.

Publications score descriptors are at Table 3 of Appendix D.

Research Impact (15%)

Assessment of each individual Chief Investigator's research impact will be based on:

- the reach and significance of their claimed research impact (5%)
- the contribution of their research program to the research impact (5%)
- the contribution of the individual Chief Investigator's to the research program (5%).

The 3 components of research impact are assessed separately using a 7-point scoring system supported by 3 corresponding tables with score descriptors (Table 4, 5 and 6 of Appendix D).

For the assessment of 'reach and significance', the 7-point scoring system is further divided into *less than 10 years post-PhD (taking into account career disruptions)* and *more than 10 years post-PhD* (Table 4 of Appendix D). This is to recognise that early and mid-career researchers will have had less time to accumulate research impact.

NHMRC defines the impact of research as the verifiable outcomes that research makes to knowledge, health, the economy and/or society. Impact is the effect of the research after it has been adopted, adapted for use, or used to inform further research.

Research impact is verifiable outcomes from research and *not the prospective or anticipated effects of the research*. For example, a prospective publication linked to the individual Chief Investigator's research program is not demonstrated or corroborated impact.

Research impact also includes research that leads to a decision not to use a particular diagnostic, treatment or health policy.

Key definitions for the assessment of Research Impact

Research Impact

The verifiable outcomes that research makes to knowledge, health, the economy and/or society. Impact is the effect of the research after it has been adopted, adapted for use, or used to inform further research

Research Program

A cohesive body of research by the individual Chief Investigator, not limited to an individual case study (as used in a clinical context) or a single publication. It may be recent or in the past.

Research program's contribution to the research impact

The degree to which the individual Chief Investigator's research program was necessary to achieve the impact(s) (knowledge, health, economic, and/or social impact).

Chief Investigator's contribution to the research program

The level of the individual Chief Investigator's contribution (for example, leadership, intellectual and/or technical input) to the research program.

Peer reviewers should consider, based on the corroborating evidence provided:

- the reach of the research impact.
- the significance of the research impact to:
  - informing knowledge to advance research
  - improving products, processes, behaviours/prevention, policies, practices
  - improving the nation's economic performance
  - improving the health and well-being of the community.

For the purposes of assessing impact, NHMRC uses 4 specific descriptors:

- **Knowledge impact:** Research that has contributed to discoveries and/or demonstrable benefits emerging from adoption, adaption or use of the discovery to inform further research.
- **Health impact:** Research that has contributed to improvements in health through new therapeutics, diagnostics, or disease prevention; or by contributing to improvements in disease prevention, diagnosis and treatment, health policy, health systems, and quality of life.
- **Economic impact:** Research that has contributed to the nation's economic performance by creating new industries, jobs and valuable products, and reducing health care costs. An economic impact may also contribute to social or health impacts, including human capital gains and the value of life and health.
- **Social impact:** Research that has contributed to improvements in the health of the society, including the wellbeing of the end user and the community. This may include improved ability to access health care services and to participate socially.

Peer reviewers should note that individual Chief Investigators can demonstrate the contribution of their research program within a score of impact (knowledge, health, economic and social) or across multiple categories. If impacts from one research program are claimed across multiple categories, the overall research impact score is determined holistically and on balance across the different categories (it is not additive).

For individual Chief Investigators who have provided impacts for more than one research program, peer reviewers are to determine whether any one of the research programs and their impacts have been sufficiently demonstrated and corroborated, and score accordingly. Chief Investigators are not to be scored in an additive method for multiple research programs.

Reach is the extent, spread, breadth, and/or diversity of the beneficiaries to the impact, relative to the type of research impact.

Significance is the degree to which the impact has enabled, enriched, influenced, informed or changed the performance, policies, practices, products, services, understanding, awareness or well-being of the beneficiaries (not the prevalence or magnitude of the issue).

Chief Investigators were instructed to include one research program to demonstrate research impact(s) across one or more of the 4 types of impact. A research program is a cohesive body of research by the Chief Investigator, as opposed to disparate bodies of research that each have different objectives and impacts. It is not limited to an individual case study (as used in a clinical context) or a single publication. A research program may be recent or in the past.

Chief Investigators need to outline the research program with corroborating evidence that can be independently assessed by peer reviewers. Chief Investigators were required to provide evidence sufficient and strong enough to demonstrate their claims for all 3 impact criteria. Chief Investigators may use the same evidence across the 3 impact criteria if appropriate. Peer reviewers will need to decide whether the impact claims have been sufficiently demonstrated and corroborated. A poorly corroborated or non-corroborated research impact or contribution to impact should receive a score of one, in alignment with the score descriptors.

Peer reviewers will consider the degree to which the Chief Investigator's research program is attributed to the impact(s) (knowledge, health, economic and/or social impact). The relationship between the Chief Investigator's research program and the impact may be foreseen or unforeseen and may be an end product or demonstrated during the research process.

Relative to opportunity and to the Chief Investigator's field of research, peer reviewers should consider the level of the Chief Investigator's contribution (for example, leadership, intellectual and/or technical input, etc.) to the research based on robust and verifiable evidence.

Verification of evidence provided against research impact claims

Peer reviewers can verify evidence provided by Chief Investigators. If a Chief Investigator has not provided evidence of their research impact, they should receive a score of one, in alignment with the score descriptors. Peer reviewers must not seek evidence to support the research impact claims of a Chief Investigator who has not provided evidence.

Peer reviewers should also note that, for corroborating evidence, it is the quality of the evidence provided, not the quantity, that should be considered. Chief Investigators only need to provide evidence sufficient and strong enough to verify the claims, not all evidence that may be on the

public record. A poorly or non-corroborated research contribution, should receive a score of one, in alignment with the score descriptors at Tables 4, 5, and 6 of Appendix D.

Examples of evidence are listed in Table 1 below. Evidence examples may be relevant to more than one research impact type.

Table 1. Types of Research Impact and examples of evidence of Research Impact

Type of impact	Description of research impact	Examples of evidence (not exhaustive)
Knowledge impact	• New knowledge, demonstrating the benefits emerging from adoption, adaption or use of new knowledge to inform further research, and/or understanding of what is effective.	• recognition of research publications (for example, citation metrics, particularly field weighted) • data sharing • contribution to registries or biobanks • prizes and conference presentations • uptake of research tools and techniques • evidence of uptake of the research by other disciplines
Health impact	• Improvements in health through new therapeutics, diagnostics, disease prevention or changes in behaviour; or improvements in disease prevention, diagnosis and treatment, management of health problems, health policy, health systems, and quality of life.	• policy or program adopted • a clinical guideline adopted • international or national practice standards adopted • improved service effectiveness • Phase I, Phase II and Phase III clinical trials underway or completed • improved productivity due to research innovations (for example, reduced illness, injury) • Quality-Adjusted Life Years, Disability-Adjusted Life Years, Potential Years of Life Lost, Patient Reported Outcome Measure and other relevant indicators • relative stay index for multi-day stay patients, hospital standardised mortality ratio, cost per weighted separation and total case weighted separation • reports (including community and government)
Economic impact	• Improvements in the nation's economic performance through creation of new industries, jobs or valuable products, or reducing health care costs, improving efficiency in resource use, or improving the welfare/well-being of the population within current health system resources. An economic impact may also contribute to social or health impacts, including human capital gains and the value of life and health.	**Health care system savings** • relative stay index for multi-day-stay patients, hospital standardised mortality ratio, cost per weighted separation and total case weighted separation • reduction in Medicare Benefits Schedule/ Pharmaceutical Benefits Scheme costs • improved productivity due to research innovations (for example, reduced illness, injury) • improved service effectiveness **Product development** • a research contract with an industry partner and an active collaboration • granting of a patent • execution of a licensing agreement with an established company

Type of impact	Description of research impact	Examples of evidence (not exhaustive)
		• income from intellectual property • raising funding from venture capital or other commercial sources or from government schemes that required industry co-participation • successful exit from start-up company (public market flotation, merger or acquisition) • development of pre-good manufacturing practice prototype • successful generation or submission of: • a regulatory standard data set • applications for pre-market approval of a medical device • a new drug or device for registration (for example, by Food and Drug Administration, European Medicines Agency, Therapeutic Goods Administration) • product sales
Social impact	• Improvements in the health of society, including the well-being of the end user and the community. This may include improved ability to access health care services, to participate socially (including empowerment and participation in decision making) and to quantify improvements in the health of society.	• uptake or demonstrated use of evidence by decision makers/policy makers • qualitative measures demonstrating changes in behaviours, attitudes, improved social equity, inclusion or cohesion • improved environmental determinants of health • improved social determinants of health • changes to health risk factors

Leadership (5%)

For the assessment of Leadership, peer reviewers are required to review individual Chief Investigator outputs over the past 10 years (taking into account career disruptions) across each of the 4 Leadership elements:

- Research mentoring
  - formal and informal stewardship of the next generation of researchers
  - identifying, training and nurturing talent
  - fostering collaboration among junior researchers.
- Research policy and professional leadership
  - improving research quality standards
  - driving innovation and multi-dimensionality in research
  - improving academic reporting standards.

- Institutional leadership
  - driving behavioural and cultural change
  - identifying and mitigating risks.
- Research programs and team leadership
  - creating diverse, inclusive, and collaborative learning environments
  - engagement with the broader community and public advocacy
  - providing opportunities for appropriate research and non-research training.

NHMRC recognises that a broad range of leadership contributions are necessary to create an environment that enables research excellence and stewardship, and that based on a researcher's working environment, work history and level of seniority, examples of leadership will vary. The examples listed under each Leadership element above are illustrative only, Chief Investigator are encouraged to demonstrate their strongest examples of leadership.

Chief Investigator are also encouraged to highlight their leadership style and describe how they have identified and contributed to positive change (for example, organisational or behavioural/cultural change). Demonstrated impacts of leadership, such as people development, stewardship, contributions to cultural or paradigm change and fostering equality, diversity and inclusion, will be assessed by peer reviewers against the score descriptors at Table 7 Appendix D.

Chief Investigator have been advised that peer reviewers have been instructed to ignore Leadership track record information that falls outside of the past 10 years (taking into account career disruptions). Where Leadership track record carries across the 10-year timeframe, peer reviewers are instructed to include only that information which falls within the allowable timeframe (for example, instead of a Chief Investigator writing "I have mentored 19 students since 2007", they should write "I have mentored 11 students since 2013").

Chief Investigators are assessed relative to opportunity, taking into consideration any career disruptions, where applicable (see Appendix I).

Appendix H. Concept of ‘Synergy’

Preamble

The Synergy Grant scheme incorporates an assessment criterion on ‘Synergy’ that will assess the merits of an applicant team’s multidisciplinary approach, the diversity of the research team and its ‘collaborative gain’, including whether members of the team have a demonstrated experience and success in collaborative research.

The criterion will consider the quality of the diverse team’s multidisciplinary and collaborative approach to solve a major health and medical research question, as well as the capability-building/workforce development outcomes.

Successful Synergy grant proposals will have an outcomes focus, demonstrating the skills essential to solve the research question, and will provide evidence of a discernible benefit over homogenous research teams (through multidisciplinarity and other dimensions of diversity).

A multiple disciplinary approach to research

Solving major research questions and achieving transformative health outcomes increasingly require new technical and intellectual approaches (new ways to conceptualise, think about and/or address a question) through a convergence of perspectives from different disciplines. Each discipline provides specific intellectual knowledge, experimental approaches, methodological considerations, analytical approaches, and theoretical context.

Together, these elements provide new insights to address major and challenging research questions.

In addition to integration between the broad research areas of basic science, clinical medicine and science, public health and health services research, a multidisciplinary approach may involve single or multiple methods (that is, qualitative, quantitative, multi methods and mix methods) across a range of research disciplines including, for example, social sciences, policy analysis, economics, engineering, mathematics and physical sciences. Such approaches may be critical to address major questions relating to health care delivery, health systems strengthening or population health.

The concept of research involving multiple disciplines is often denoted by terms such as multidisciplinary, interdisciplinary and transdisciplinary. However, the definition of these terms, and even the concept of a ‘discipline’, is constantly evolving and lacks consensus across different areas of health and medical research.

For the purposes of Synergy Grants, ‘multiple disciplinary research’ covers ‘research by teams that integrate information, data, techniques, tools, perspectives, concepts, methodologies and/or theories from 2 or more disciplines or bodies of specialised knowledge to advance fundamental understanding or to solve questions whose solutions are beyond the scope of a single discipline or area of research practice’.

Applicants should identify a major health and medical research related question and justify:

- why it requires the integration of knowledge from multiple disciplines or bodies of specialised knowledge
- how the multiple disciplinary approach can provide novel solutions and insights that would not be achieved with a single discipline or traditional approaches
- how the research question is operationalised and addressed using different disciplines complementarily

- the sustainability of the research collaboration and scope for long term outcomes extending beyond the life of the project, and
- the methods that will keep the multiple disciplinary team focused, integrated and cohesive and that will drive outcomes.

Diversity of research teams

NHMRC recognises the need to foster diversity in health and medical research teams beyond multiple disciplinarity.

Health and medical research, from basic science to clinical and translational research, to policy formation, requires creativity and a diverse range of skillsets and viewpoints.

Research[5] has shown that diverse teams outperform homogeneous teams. They provide distinct perspectives, creativity and innovation, increased accountability and individual enterprise to address major research questions. A diverse workforce can provide benefits including:

- global competitiveness
- a balanced and broadened perspective in setting research priorities
- contribution to robust learning environments
- improving the breadth and quality of researchers
- improving capability to address health disparities enhancing public trust, and
- increased opportunities for under-represented groups/researchers to participate in and benefit from research.

Synergy Grant research teams will foster both collaborative gain and capability building through the recruitment of talented researchers from diverse backgrounds and groups.

Diversity in Synergy Grants could span under-represented groups in health and medical research. This could include career stage, gender and researchers from different cultures (for example, Aboriginal and Torres Strait Islander researchers). Given the broad spectrum of research encompassed in the health and medical research sector, the opportunities to engage a particular group will depend on the type of research being undertaken. It is, however, essential that each of the investigators contributes to the scientific development and execution of the project in a substantive and measurable manner.

In addition to diversity in the research team, NHMRC strongly encourages and values collaborations with stakeholders who have direct experience and knowledge, or who are direct beneficiaries, of the proposed research. This could include consumers, community groups, policy makers and people from different cultures (such as Aboriginal and Torres Strait Islander peoples). The active involvement of these stakeholders will enhance research priority setting, increase the relevance of the research and its translation and provide critical knowledge that increases the quality and direction of the research.

Diversity is a broad concept with different dimensions and approaches across the health and medical research sector. Each of the different dimensions is important and diversity should be embraced in its broadest sense. Rather than mandate a particular approach to achieving diversity or ascribe a hierarchy of importance (for example, gender versus career stage), NHMRC requires applicants to establish and demonstrate diversity in research teams that is aligned to the major research question of the proposal. The inclusion of a particular team member should be considered

[5] Notice of NIH's Interest in Diversity – https://grants.nih.gov/grants/guide/notice-files/NOT-OD-18-210.html

in the context of the research question, by valuing and using diverse personnel to enhance a project's quality and outcomes and advancing workforce development/ capability.

Applicants should justify the diversity within the proposed research team, by outlining both:

- the type(s) of diversity fostered and how it will enhance the outcomes of the project and its scientific quality, including why the research question cannot be addressed without the proposed personnel
- how the team will contribute to the capability building, mentoring, career development and diversification of the research workforce.

Examples of multiple disciplinary research teams are outlined below to illustrate the concepts in the context of Synergy Grants and are not indicative of the potential merit of an application.

Synergy Grant applications will be assessed against published assessment criteria based on the specific details of each proposal. Peer reviewers should refer to the score descriptors (Appendix D), which identify the expectations for each score across a 7-point scale.

Examples

An example is the development of genomics formed from genetics, molecular biology, analytical chemistry, mathematics and informatics. Genomics is now being integrated with public health research for health improvement through guidelines for appropriate use of genetic tests and services, interventions such as newborn screening for conditions and multidisciplinary population sciences to assess value and impact of genetic information in health conditions.

In cancer research, the development of screening tools for cancers may comprise teams including clinicians, research nurses, geneticists, bioinformaticians and biochemists, who identify a suitable patient cohort, obtain clinical samples, identify likely biomarkers that correlate with tumour development using genetics, define the role of that gene/protein in the development of cancer and undertake subsequent development of diagnostic tests for screening in patient cohorts.

In research into the assessment and management of cardiovascular risk, research teams that include public health researchers with qualitative and quantitative skills, clinicians with a range of expertise across the lifecycle and continuum from hospital to community care, geneticists, behavioural, biomedical engineering and informatics scientists, dietitians and exercise scientists and health consumers (especially from vulnerable population groups) are required to develop new approaches to individualised absolute risk assessment and management.

Research to address new approaches to manage antibiotic resistance could incorporate researchers from biology and biochemistry, immunology, biomedicine and pharmacology to develop new antibiotics, working with mathematicians and statisticians, as well as with behavioural scientists and economists to understand how patterns of resistance develop and develop new behavioural strategies to reduce antibiotic use or to provide incentives for appropriate use of new antibiotics.

Appendix I. NHMRC Relative to Opportunity policy

Purpose

NHMRC's goal is to support the highest quality research that will lead to improvements in health over the short or long term. Peer review by independent experts is used to identify well-designed feasible projects that address a significant question and are undertaken by researchers with demonstrated capability to perform high quality research.

In most NHMRC grant schemes, peer reviewers are asked to assess the track record of the applicants as well as the proposed research. However, NHMRC recognises that not all research careers are the same and therefore peer reviewers are asked to assess track records 'relative to opportunity', taking into account circumstances that have affected the applicant's research productivity.

The purpose of this appendix is to outline NHMRC's Relative to Opportunity Policy with respect to peer review of applicant track records.

Policy approach

NHMRC considers 'relative to opportunity' to mean that peer reviewers should assess an applicant's track record of research productivity and professional contribution in the context of their career stage and circumstances, by taking into consideration whether the applicant's productivity and contribution are commensurate with the opportunities available to them.

The policy has 2 components:

- **Career disruption** – a prolonged interruption to the ability to work due to pregnancy, illness/injury and/or carer responsibilities. Career disruptions are taken into account in track record assessment.
- **Other relative to opportunity considerations** – any other personal or professional circumstances affecting research productivity. These circumstances are taken into account in track record assessment.

In addition to *NHMRC's Principles of Peer Review,* particularly fairness and transparency, the following principles support this objective:

- **Research opportunity:** Researchers' outputs and outcomes should reflect their opportunities to advance their career and the research they conduct.
- **Fair access:** Researchers should have access to funding support available through NHMRC's grant program consistent with their experience and career stage.
- **Career diversity:** Researchers with career paths that include time spent outside academia should not be disadvantaged. NHMRC recognises that time spent in sectors such as industry may enhance research outcomes for both individuals and teams.

NHMRC expects that peer reviewers will give clear and explicit attention to these principles to identify the highest quality research and researchers. NHMRC recognises that life circumstances can be varied and therefore it is not possible to implement a formulaic approach to applying relative to opportunity considerations during peer review.

Consideration of career circumstances during peer review of grant applications

Under the *Relative to Opportunity policy*, researchers' career circumstances are considered during track record assessment. This aims to take into account salient research opportunity considerations over the course of a research career and is not intended to address minor changes to life circumstances.

Circumstances considered during peer review include, but are not limited to:

Research

- research role(s) and responsibilities, career stage, and amount of time spent as an active researcher

Resources and facilities

- available resources and facilities, including:
  - the extent to which any additional research personnel and/or collaborators contribute to the applicant's research program
  - situations where research is being conducted in remote or isolated communities

Professional responsibilities

- clinical, administrative and/or teaching workload
- time employed in other sectors
- building relationships of trust with Aboriginal and Torres Strait Islander communities over long periods

Personal circumstances

- disability (including mental health conditions and psychosocial disability) or illness
- caring responsibilities that do not interrupt the applicant's career for an extended period (that would meet the definition of a career disruption) but still affect research productivity
- for Aboriginal and Torres Strait Islander applicants, community obligations including 'sorry business'
- any other personal circumstances

Other circumstances

- relocation of an applicant and their research laboratory or clinical practice setting
- periods of unemployment
- calamities, such as pandemics, bushfires or cyclones

Relative to opportunity considerations do not include:

- minor (or short-term) changes that occur during the normal course of conducting research, for example, broken equipment or delayed ethics approval
- minor (or short-term) medical conditions
- recreational leave or general administrative activities related to research, such as preparation of grant applications and publications or committee-related activities.

Consideration of career disruption during peer review in determining eligibility for Emerging Leadership Investigator Grants

A career disruption is defined as a prolonged interruption to an applicant's capacity to work, due to:

- pregnancy
- major illness/injury
- carer responsibilities.

The period of career disruption may be used:

- to determine an applicant's eligibility for an Emerging Leadership Investigator Grant
- to allow for the inclusion of additional track record information for assessment of an application
- for consideration of track record relative to opportunity by peer reviewers.

A period of career disruption is defined as:

- a continuous absence from work for 90 calendar days or more, and/or
- continuous, long-term, part-time employment (with defined %FTE) due to circumstances classified as career disruption, with the absence amounting to a total of 90 calendar days or more.

In determining eligibility of Emerging Leadership Investigator Grant applicants, the 10-year limit on the number of years post-PhD may be extended commensurate with the period of the career disruption.[6]

Note: For the purposes of peer review, circumstances not meeting the definition of career disruption cannot be used to extend the 10-year timeframe for track record assessment (i.e. Publications and Leadership), they may be considered under the career circumstances provisions above.

[6] For example, an applicant who is employed at 0.8 FTE due to childcare responsibilities would need to continue this for at least 450 calendar days to achieve a Career Disruption of 90 calendar days.

Appendix J. Guide to evaluating industry-relevant experience

Principles

NHMRC is committed to ensuring that knowledge from health and medical research is translated through commercialisation (e.g. by pharmaceutical or medical devices companies), improvements to policy, health service delivery and clinical practice.

Therefore, as a complement to other measures of research excellence (e.g. publication and citation rates), NHMRC considers industry-relevant skills, experience and achievements in its assessment of applicants' track records.

These measures recognise that applicants who have invested their research time on technology transfer, commercialisation or collaborating with industry, may have gained highly valuable expertise or outputs relevant to research translation. However, NHMRC acknowledges that these researchers will necessarily have had fewer opportunities to produce traditional academic research outputs (e.g. peer reviewed publications).

Therefore, peer reviewers should:

- appropriately recognise applicants' industry-relevant experiences and results
- allow for the time applicants have spent in commercialisation/industry for 'relative to opportunity' considerations.

Who might have industry experience or be preparing for industry experience?

Many applicants to NHMRC may have had industry experiences of various kinds.
Examples include, but are not limited to:

1. Researchers who have left academia to pursue a full-time career in industry (e.g. in pharmaceutical, biotechnology or start-up companies). In such instances, outputs must be assessed 'relative to opportunity', as there may have been restrictions in producing traditional research outputs (such as peer reviewed publications), but highly valuable expertise gained or outputs produced relevant to research translation (such as patents or new clinical guidelines).
2. Academic researchers whose work has a possible commercial focus. These researchers might not have yet entered into commercial agreements with industry and have chosen to forego or delay publication in order to protect or extend their intellectual property (IP).
3. Academic researchers who have translated their discovery into a collaborative agreement with industry. The researcher may be collaborating with the company in further research and development; may have a licensing agreement; or may have licensed or assigned their IP to the company. A researcher may ultimately leave the academic institution and become Chief Executive Officer, Chief Scientific Officer, Chief Technology Officer, Scientific Advisory Board Member or consultant for a start-up or other company, based on their experience.
4. Academic researchers who are actively collaborating with companies, for example by providing expert research services for fees. Publications of such work might be precluded or delayed according to contract arrangements. The specialised nature of this research might also restrict publication to specialised journals only, as opposed to generalist journals.

Table 2. Relevant industry outputs

	Advanced	Intermediate	Preliminary
IP	• Patent granted: consider the type of patent and where it is granted. It can be more difficult to be granted a patent in, for example, the US or Europe than in Australia, depending on the patent prosecution and regulatory regime of the intended market • National phase entry and prosecution or specified country application	• Patent Cooperation Treaty (PCT) or 'international application' • Provisional patent	• IP generated • Patent application lodged • Invention lodged with Disclosure/s with Technology Transfer/Commercialisation Office
Collaboration with an industry partner	• Executed a licensing agreement with an established company • Significant research contract with an industry partner • Long term consultancy with an industry partner	• Established a formal arrangement such as a consultancy or research contract and actively collaborating	• Approached and in discussion with an industry partner under a non-disclosure agreement. No other formal contractual arrangements.
Established a start-up company	• Achieved successful exit (public market flotation, merger or acquisition) • Raised significant (>$10m) funding from venture capital or other commercial sources (not grant funding bodies) • Chief Scientific Officer, Executive or non-executive role on company boards	• Incorporated an entity and established a board • Has raised moderate (>$1m) funding from commercial sources or government schemes that required industry co-participation (e.g. ARC Linkage, NHMRC Development Grant	• Negotiated licence to IP from the academic institution
Product to market	• Produce sales • Successful regulator submission to US Food and Drug Administration (FDA), European Medicines Agency, TGA etc. • Medical device premarket submission e.g. FDA 510(k) approved	• Generated regulatory standard data set • Successful regulatory submission to Therapeutic Goods Administration or European Conformity (CE) marking • Medical device: applications for pre-market approval	• Developed pre-good manufacturing practice (GMP) prototype and strong supporting data • Established quality systems
Clinical trials or regulatory activities	• Phase II or Phase III underway or completed	• Phase I underway or completed • Protocol development • Patient recruitment	• Drug candidate selected or Investigative New Drug application filed • Preclinical testing
Industry participation	• Major advisory or consultancy roles with international companies	• Advisory or consultancy role with a national company	