CIHR Grant Review: Evaluation Criteria

For the 2014-15 Transitional Operating Grant competition, the information on evaluation processes on the ResearchNet website re-directs to the following links:

CIHR Peer Review Manual for Grant Applications

Revised Grants Evaluation Criteria – Criteria and Factors

Revised Grants Evaluation Criteria – Guidelines for the interpretation of the individual criteria

Information on each criterion has been summarized from the above for the purposes of the workshop.
**Criterion #1: Research Approach**

- Clarity of the research question.
- Completeness of the literature review and relevance to study design/research plan.
- Clarity of rationale for the research approach and methodology.
- Appropriateness of the research design.
- Appropriateness of the research methods.
- Feasibility of the research approach (including recruitment of subjects, project timeline, preliminary data where appropriate, etc.).
- Anticipation of difficulties that may be encountered in the research and plans for management.

**Interpretation:**

This criterion concerns the description of the research plan and can encompass whether the writing style facilitates understanding of the plan (*clarity of the research question*) and whether the proposed research can be successfully concluded as described (*feasibility of the research approach and anticipation of difficulties*). *Clarity of rationale for the research approach and methodology* refers to whether the reasoning behind the overall strategy is clearly presented. *Appropriateness of the research design* refers to whether the best strategy was chosen to yield the desired knowledge and whether alternative approaches to the research question(s) were considered. *Appropriateness of the research methods* refer to whether the methods chosen were consistent with the research design and the best for achieving the desired research outcomes.

**Top tips:**

- Clear statement of hypothesis, objectives, rationale are essential!
- Make sure hypothesis matches your objective
- Make sure you have a power calculation
- Pilot data is important
- Tell a story… how does each objective and experiment link together to test your hypothesis.
Criterion #2: Originality of the Proposal

- Potential for the creation of new knowledge.
- Originality of the proposed research, in terms of the hypotheses/research questions addressed, novel technology/methodology, and/or novel applications of current technology/methodology.

Interpretation

For this criterion, original research is defined as research that will yield new knowledge. Typically, this refers to research that has not been carried out previously. However, there are times where replicative studies will yield new knowledge that may be crucial to progress within a field, for example by conclusively verifying or refuting a central or novel hypothesis. In these cases, applicants should not be penalized for a perceived lack of originality. In addition, originality as defined here should not be equated with innovation. While CIHR encourages innovative research, many important research questions can still be addressed with existing technologies and methodologies. It is the originality in how these technologies and methodologies are applied that is important. Note that specific funding opportunities may have innovation as a program objective, in which case additional factors will be included under this criterion in the funding opportunity description to support the evaluation of innovation.

Top tips:

- Provide sufficient rationale to understand the significance of your research. Clearly identify the research GAP/opportunity will help the reader appreciate the significance of your research.
- This is your opportunity to sell the grant. How will this advance your field? Incremental research is not exciting. How is your grant innovative? Is your proposal backed up by pilot data?
Criterion #3: Applicant(s)

- Qualifications of the applicant(s), including training, experience and independence (relative to career stage).
- Experience of the applicant(s) in the proposed area of research and with the proposed methodology.
- Expertise of the applicant(s), as demonstrated by scientific productivity over the past five years (publications, books, grants held, etc.). Productivity should be considered in the context of the norms for the research area, applicant experience and total research funding of the applicant.
- Ability to successfully and appropriately disseminate research findings, as demonstrated by knowledge translation activities (publications, conference presentations, briefings, media engagements, etc.).
- Appropriateness of the team of applicants (if more than one applicant) to carry out the proposed research, in terms of complementarity of expertise and synergistic potential.

Interpretation

This criterion evaluates the ability of the applicant or the assembled team to accomplish the proposed research. The track record of the applicants (productivity, experience, etc.) must be viewed in context. For example, new investigators should be judged more on their training and demonstrated potential rather than their track record. Productivity can be demonstrated in many ways and should be judged against the applicants' peers and the norms for the field. The quality of individual publications and other forms of research dissemination should be considered, rather than simply the number of peer reviewed publications and/or the impact factors of the journals in which they are published.

Top tips:

- Important to have a track-record demonstrating appropriate expertise
- Track record of securing funding
- Track record of publication – make sure you CV is up to date; lack of productivity may negate even a novel grant
- If needed, include a statistician as a team member
- Justify the role of each member
Criterion #4: Environment for the Research

- Availability and accessibility of personnel, facilities and infrastructure required to conduct the research.
- Suitability of the environment to conduct the proposed research.
- Suitability of the environment (milieu, project and mentors) for the training of personnel (if applicable).

Interpretation

The research environment should be evaluated in terms of whether the applicant(s) can accomplish the research as proposed, based on their access to needed resources. Care must be taken not to exercise bias against smaller institutions: in today's environment the capacity to communicate, collaborate and access resources is greatly expanded, and as such the research environment often extends well beyond the applicant's research institution. Suitability of the environment (milieu, project and mentors) for the training of personnel (if applicable) is only relevant if the applicant is requesting support for trainees (students and post-doctoral fellows). Typically, this would only be considered as a factor in the evaluation of the budget request for the requested personnel. However, specific funding opportunities may include the training environment as a factor for evaluation of excellence if an element of capacity building is included in the program objectives (for example, an emerging teams grant) and would therefore be considered in the scientific rating of the proposal.

Top tips:

- Identify any unique equipment you need and accessibility
Criterion #5: Impact of the Research

- Research proposal addresses a significant need or gap in health research and/or the health care system.
- Potential for a significant contribution to the improvement of people's health in Canada and the world and/or to the development of more effective health services and products.
- Appropriateness and adequacy of the proposed plan for knowledge dissemination and exchange.

Interpretation

This criterion refers to the ability of successful outcomes of the research to meaningfully impact on the current state of knowledge or the Canadian health care system, especially as related to the CIHR mandate. It also asks the question of whether the proposed research is significant, in terms of the need or gap addressed and the contribution to the body of health research knowledge. To have an impact, research results must be disseminated; thus, an evaluation of the impact must also include an evaluation of the knowledge dissemination plan. Methods for disseminating results can vary greatly according to the field of study. For many fields, an adequate knowledge dissemination plan is simply the publication of the results in high impact peer-reviewed journals. For other fields, dissemination plans with more ambitious goals and comprehensive strategies to reach the relevant knowledge users may be required. Knowledge dissemination does not necessarily imply or require commercialization of the results, unless that is an objective of the funding program, in which case this factor will be elaborated in the evaluation criteria of the funding opportunity. For more information, see More About Knowledge Translation at CIHR.

Top tips:

- Sell your research
- You can write a sound grant, but you need to sell its importance