Enhancing Peer Review at NIH

Improve the Quality & Transparency of Review

Peer review must consistently identify an application’s relative merit, potential for scientific and/or public health impact, and feasibility. This can be accomplished through achievement of the following:

- **Enhancing and Reordering the Review Criteria.** To increase the emphasis on overall impact, the review criteria have been enhanced and reordered. A [Side-by-Side Comparison](http://enhancing-peer-review.nih.gov/improve.html#score) (PDF – 62 KB) of the former and enhanced criteria for Research Project Grants is available for more details.

- **Improving Scoring Transparency & Scale.** Beginning with the summer 2009 review cycle/September Council, all applications were scored with a new 9-point scoring scale, which was selected based on the desire for a scale with sufficient range to allow reviewers to make reliable distinctions among applications.

- **Providing Criterion Scores for All Applications.** Beginning with the summer 2009, review cycle/September Council, each scored review criterion received a score from all assigned reviewers. The scores are visible in the summary statement of all applications, even those that are not discussed during the review meeting.

- **Improving Scoring Transparency & Scale.** Beginning with the summer 2009 review cycle, all applications were scored with a 9-point scoring scale, which was selected based on the desire for a scale with sufficient range to allow reviewers to make reliable distinctions among applications.

- **Providing Reviewers with Templates to Compose Constructive Critiques.** Beginning with the summer 2009 review meetings, reviewers will use structured critique templates to provide their comments in the form of bulleted strengths and weaknesses for each review criterion and consideration.

- **Shortening and Restructuring Applications.** Applications will be shortened and restructured for due dates on or after January 25, 2010.

**New Scoring System**

Beginning with the summer 2009 review cycle, assigned reviewers have been instructed to score each of five review criteria, and the overall impact/priority of each application, on a 9-point rating scale according to the following descriptions and additional guidance:

<table>
<thead>
<tr>
<th>Impact</th>
<th>Score</th>
<th>Descriptor</th>
<th>Additional Guidance on Strengths/Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>1</td>
<td>Exceptional</td>
<td>Exceptionally strong with essentially no weaknesses</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Outstanding</td>
<td>Extremely strong with negligible weaknesses</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Excellent</td>
<td>Very strong with only some minor weaknesses</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Very Good</td>
<td>Strong but with numerous minor weaknesses</td>
</tr>
<tr>
<td>Medium</td>
<td>5</td>
<td>Good</td>
<td>Strong but with at least one moderate weakness</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Satisfactory</td>
<td>Some strengths but also some moderate weaknesses</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>Fair</td>
<td>Some strengths but with at least one major weakness</td>
</tr>
<tr>
<td>Low</td>
<td>8</td>
<td>Marginal</td>
<td>A few strengths and a few major weaknesses</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Poor</td>
<td>Very few strengths and numerous major weaknesses</td>
</tr>
</tbody>
</table>

**Non-numeric score options:** NR = Not Recommended for Further Consideration, DF = Deferred, AB = Abstention, CF = Conflict, NP = Not Present, ND = Not Discussed

**Minor Weakness:** An easily addressable weakness that does not substantially lessen impact

**Moderate Weakness:** A weakness that lessens impact

**Major Weakness:** A weakness that severely limits impact

Applications that are not discussed at the meeting will not be given an overall impact/priority score, but the applicant, as well as NIH staff, will see the preliminary scores for each of the review criteria as additional feedback on their summary statement. The [Scoring System and Procedure document](http://enhancing-peer-review.nih.gov/improve.html#score) was provided as guidance to all reviewers.

**Rationale for the New NIH Grant Application Scoring System**

The prior scoring system of 1.0 to 5.0 in 0.1 increments served NIH well for many years, but its weaknesses became increasingly evident as the quality and quantity of applications increased and NIH budgets to fund grant applications tightened. The new scoring system is being implemented to address the following issues:

- For even the most experienced reviewers, it is difficult to make 41 reliable discriminations of application merit. Based on measurement science, prior experience, and feedback from various constituencies, a 9-point rating scale with descriptors associated with each rating option was adopted.

- Reviewer ratings became increasingly positive, compressing the score range, and effectively reducing the usefulness of scores for NIH funding decisions. In the new scoring system, the descriptors associated with each rating were designed to encourage use of the full scoring range.

- To provide additional feedback to applicants, program staff, and other consumers of the summary statement, assigned reviewers also provide rating of the specific review criteria using the same 9-point scale.

**Restructured Applications**

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[http://enhancing-peer-review.nih.gov/improve.html#score](http://enhancing-peer-review.nih.gov/improve.html#score)
Shortened and restructured applications will be required for applications submitted for due dates on or after January 25, 2010. A detailed guide to the revised application forms and instructions is available for applicants who are preparing applications before the new application packages have been posted.

All applications, including those that are resubmitted as an A1 or A2 application, must use the new page limits and structure.

Related Resources

- NIH Guide Notice NOT-OA-09-148 (09/16/2009) - Upcoming Revised Application Forms and Instructions for Applications Received for Potential FY2011 Funding
- NIH Guide Notice NOT-OA-09-024 (12/02/2008) - The NIH Announces New Scoring Procedures for Evaluation of Research Applications Received for Potential FY2010 Funding
- NIH Guide Notice NOT-OA-09-025 (12/02/2008) - The NIH Announces Enhanced Review Criteria for Evaluation of Research Applications Received for Potential FY2010 Funding