Peer review is not one thing, and it cannot be assumed

Don’t ASS-U-ME

- The number of varied approaches to peer review is increasing, yet readers often assume it is a uniform practice.

- Journals with high standards have no clear way of routinely showing these standards at the article level.

- Trends toward “light” peer review are dominating the discussion, while quality has a harder time finding a voice.

This leads to confusion and questions about trust . . .
Why do we need PRE-Score?

Publishers withdraw more than 120 gibberish papers

‘CRAP’ paper accepted for publication

Elsevier published 6 fake journals
Everyone Else is Doing it

Standards & Filters To Assist With Evaluation Are Everywhere
From the Moment We’re Born

We Even Rate Babies

<table>
<thead>
<tr>
<th>Sign</th>
<th>Score = 0</th>
<th>Score = 1</th>
<th>Score = 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Rate</td>
<td>Absent</td>
<td>Below 100 Per Minute</td>
<td>Above 100 Per Minute</td>
</tr>
<tr>
<td>Respiratory Effort</td>
<td>Absent</td>
<td>Weak Irregular Or Gasping</td>
<td>Good, Crying</td>
</tr>
<tr>
<td>Muscle Tone</td>
<td>Flaccid</td>
<td>Some Flexion Of Arms And Legs</td>
<td>Well Flexed Or Active Movements Of Extremities</td>
</tr>
<tr>
<td>Reflex / Irritability</td>
<td>No Response</td>
<td>Grimace Or Weak Cry</td>
<td>Good Cry</td>
</tr>
<tr>
<td>Color</td>
<td>Blue All Over Pale</td>
<td>Body Pink Hands And Feet Blue</td>
<td>Pink All Over</td>
</tr>
</tbody>
</table>

Future Managing Director

Because... Smiling Baby
What is PRE-score?

**PRE-score** is a product designed to assist members of the scholarly publishing community who are committed to preserving an ethical, rigorous peer review process.

At the heart of PRE-Score is our algorithm:

\[
S = \frac{[(R_{e1} \times A) + (R_{a1} \times B) + (R_{r1} \times C) + (R_{r2} \times C)]}{\sqrt{V}}
\]

**PRE-score supports quality peer review.**
A Lesson From The Car Industry

Metrics/Filters = Knowledge = Power

Looking for a new car?
• MPG
• Size
• Speed
• Features
• Safety
• Cost

Evaluating a journal?
• Impact Factor
• Audience
• Speed
• Altmetrics
• Peer Review (PRE)
• Cost
A growing journals market

Total Peer Reviewed Journals

Year

Journals

2006 2007 2008 2009 2010 2011 2012 2013

*B.-C. Björk, R. Annikki, and M. Lauri. Global annual volume of peer reviewed scholarly articles and the share available via different Open Access options

*The National Science Board estimates the average annual growth of the indexes within the Web of Science to be 2.5% (See: Science and Engineering Indicators 2010, chapter 5, page 29)

*The stm report: An overview of scientific and scholarly journal publishing
A growing articles market

- Approximately two million peer-reviewed papers published in 2013
- NSF estimates annual growth of 2.5%
The Silent Majority

Surveys show peer review is valued by researchers & authors

- Most (69%) researchers are satisfied with the current system of peer review but only a 3rd think that the current system is the best we can do
- Most (84%) believe that without peer review there would be no control in scientific communication
- Almost all researchers (91%) believe that their last paper was improved as a result of peer review
- 78% of OA authors prefer traditional, rigorous peer review
- Only 20% want basic check followed by post-publication review
- While many want a faster process with fewer rounds, the overwhelming majority (approx. 70%) prefer to wait for more thoroughness

“The qualitative data also points to the fact that peer review is the central pillar of trust.”
University of Tennessee and CIBER Research Ltd, December 2013

Source: Sense About Science; Taylor & Francis; CIBER Research
PRE-score creates incentives to use best practices in peer review

• We recognize journals that have an editor-in-chief or an “overseeing editor”

• We believe journals should use experienced and knowledgeable reviewers

• We take into account that multiple iterations, may indicate more thorough review

• There are best practices, which are markers of commitment to better peer review approaches
PRE-score is different

PRE-score is unlike any other filter or metric

• The only filter pertaining to quality measures available upon publication. It’s a leading indicator, not lagging.

• The only tool that reflects the intellectual contributions of the reviewers and editors of the literature

• It’s unique in that it can be tied to other metrics measuring activity after publication (e.g., citations, impact factor)
PRE-score for everyone

Who Benefits?

Readers

Authors

Librarians

Publishers/Journals

Editors/Reviewers
Initial product suite

Phase 1

Phase 2
Technical flow

How it works.

Brief Overview of Process

- Export tagged metadata from peer review system
- Pull in reviewer h-index (we can then calculate m-index)
- Metadata and h-index analyzed by PRE system, and calculations run
- PRE info passed as needed via API and made available on journal page displays, within article metrics, and so on
Rehabilitation Following Arthroscopic Rotator Cuff Repair: A Prospective Randomized Trial of Immobilization Compared with Early Motion


Jay D. Keener, MD; Leesa M. Galatz, MD; Georgia Stobbs-Cucchi, RN; Rebecca Patton, MA; Ken Yamaguchi, MD

Has this been peer reviewed? Why yes, it has!
Details Available

Info about peer review process:
• COPE member?
• Rounds of review
• Plagiarism screening?
• Roles who participated

Additional Info:
• Reviewer comments
• Reviewer names
Time’s Up!

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- Social Media: @adametkin & @prescore1