Improving the quality of manuscripts is crucial to improving journal impact.

With this in mind, Medical Physics:

- Has implemented a structured template review form
- Has implemented a comprehensive scientific category taxonomy to identify reviewers who are best suited to an article
- Fostering outreach in important areas that are currently underrepresented in Medical Physics

WHY INSTITUTE A TEMPLATE FOR REVIEWS?

- Reviewer inexperience
- Even experienced reviewers miss important points
- Standardization of review elements
Journal of International Business Studies: Best reviews offer specific and constructive feedback to address problems, have a collegial tone (no harsh criticism).
Annals of Behavioral Medicine: Advocates that good reviews should be “respectful” and “offer corrective feedback” if the manuscript is eventually publishable.
Molecular Biology of the Cell: Be critical, but also provide constructive feedback. Be judicious about requiring extra work that is tangential to the manuscript’s objective.
The Academy of Management Journal: Bad reviews are characterized by reviewers focusing on uncovering flaws and aggressively highlighting them (very little positive or constructive feedback).
AJR: Looked at reviewer quality scores based on level of sophistication, quality of feedback for improvement, amount of detail, and punctuality. Younger reviewers from academic institutions scored highest.

BACKGROUND: WHAT QUALITIES DISTINGUISH GOOD REVIEWS?

In general:
- Collegial reviews that do not aggressively highlight flaws
- Positive and constructive feedback for improvement
- Judicious requirement of additional work
- Attention to detail

Dilemma:
- Incremental work: technically sound and hence may not be rejected by reviewers/associate editor.
- Promising but premature work: rejected from a technical perspective, but potentially high impact if given feedback for improvement.

Several journals use an importance scale with some acceptance threshold.
Designed by WG1.
Entered limiting testing approximately a year back. Rolled out several months back.
Divided into 2 major sections:
1. Overall assessment (mandatory): free form review, suggestions for improving manuscript, importance scale.
2. Section-specific feedback (optional): alerts reviewer to key elements in each section of the manuscript.

Show html review file

A more refined taxonomy for identifying appropriate AEs and reviewers.
Rationale:
- Reviewers assigned to broad categories may not have specific subtopic experience under these broad categories.
- Identifying better AEs/reviewers -> better final article.
Designed by WG1.
However, we are in the process of revising the taxonomy because our field consists of interaction between different areas, i.e., difficult to be captured by a “linear” taxonomy model.

OUTREACH TO RELATED COMMUNITIES

- WG4: Publicize journal to research communities (of interest to Medical Physics) who are not aware of the journal, with the intent of attracting either individual submissions or group conference submissions.

OUTREACH TO RELATED COMMUNITIES

- Future special issue: Big data, consisting of papers with consensus recommendations arrived at during the Practical Big Data Workshop hosted in Ann Arbor, Michigan (May 2017), sponsored by AAPM Science Council. Four to five papers with consensus recommendations expected on: Key Data Element Standardizations and Nomenclatures; Templates in Radiation Oncology Information Systems and Electronic Health Records; Optimized Clinical Practices for Aggregation and Curation.
THANK YOU!

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