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Trustworthiness and Quality in Research for Clinical Application

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In the last issue of *Rehabilitation Oncology*, I presented an updated journal policy requiring that systematic reviews build recommendations using high quality studies, understanding that basing decisions on flawed research can, at the very least, result in ineffective outcomes, but at the worst, result in harm. The Editorial Board of *Rehabilitation Oncology* continues to evaluate our policies and procedures, seeking to support publishing the best evidence for rehabilitation clinicians who work with individuals diagnosed with cancer. Part of ensuring that the evidence that we disseminate is useful to clinicians includes important efforts to ensure the trustworthiness and quality of that research.

Like the systematic review proliferation seen in recent years, the overall publication rate for biomedical research has sharply increased. In the rehabilitation research realm, clinical trials are being published at a two-fold rate compared to other healthcare research;¹ another study reports a three-fold increase in rehabilitation research published over a 15-year period from 1998 to 2013.² This increase is also substantiated in a bibliographic analysis of all rehabilitation research appearing in PubMed since inception. The authors of that study concluded that “rehabilitation” and “physical therapy modality” research grew by 3.89% and 3.97% annually.³ To our benefit, all these scoping review studies cite “high quality” evidence is increasing at a greater rate than “low quality” evidence, however quality is defined by the types of studies (randomized control trials versus case reports) rather than the actual quality (or bias) of the individual study.

As the rehabilitation science field continues to mature, the expectations regarding requirements for high quality research have evolved over time. If anyone reads physical therapy scientific articles from the 1980s, they will see sub-par reporting of research studies. These reports would not make it through peer-review today. We expect more today, and there are two simple ways to ensure the research is both trustworthy and high quality: conducting research following standardized methods to minimize bias, and reporting research with clarity and transparency. Minimizing bias requires that researchers attend to sound study design including randomization when appropriate, blinding, adequate power, use of valid and reliable outcome measures, and appropriate statistical analysis and interpretation, and is generally on what peer reviewers evaluate studies. Reporting guidelines address clarity and transparency in reporting studies.

The Equator Network (Enhancing the **QUAL**ity and **T**ransparency **O**f health **R**esearch [www.equator-network.org/about-us]) is an international cooperative that seeks to improve scientific research through transparency in reporting.⁴ This cooperative of researchers, medical journal editors, peer reviewers, developers of reporting guidelines, and research funding bodies has as its mission to “achieve accurate, complete, and transparent reporting of health research studies to support research reproducibility and usefulness.” This lofty goal is essential to creating a trustworthy evidence database that correctly reports study findings which healthcare providers can use in clinical decision-making. Reporting guidelines provide direction in study design and manuscript writing to ensure that research reports are understandable, replicable, and are useful in clinical decision-making. These are often presented as checklists for researchers to complete as they draft a manuscript, and is specific to each type of research study conducted. A randomized control trial has a very different reporting checklist than a case report.

In 2014, *Rehabilitation Oncology* reprinted an editorial simultaneously published in 28 rehabilitation journals which calls for the use mandatory reporting guidelines to elevate the quality of research.

The Co-Editors-in-Chief, of the *Archives of Physical Medicine and Rehabilitation*, together with other rehabilitation journal Editors-in-Chief, collectively addressed the need to ensure that research manuscripts are written so that the reader can understand them, researchers can replicate the study, and are useful in clinical decision-making, with the intended goal of elevating the quality of the research disseminated.⁵ Use of reporting guidelines is a long-standing policy at *Rehabilitation Oncology*; what is new is that our editorial board has evaluated our current policies and procedures related to this practice and found areas to improve. Authors submitting to our journal will find an updated Information for Authors page available at our website (www.rehabonc.com) which clearly identifies the parameters for each type of manuscript and the required reporting guideline. The appropriate reporting guideline is a mandatory file within our submission portal. Manuscripts with incomplete reporting guidelines will be returned to the author for correction prior to assignment for peer review.

Our goal is to publish high-quality relevant research for use by clinicians treating the individual with cancer. We seek to add *trustworthy* and *correct* findings to the evidence database for cancer rehabilitation.

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