Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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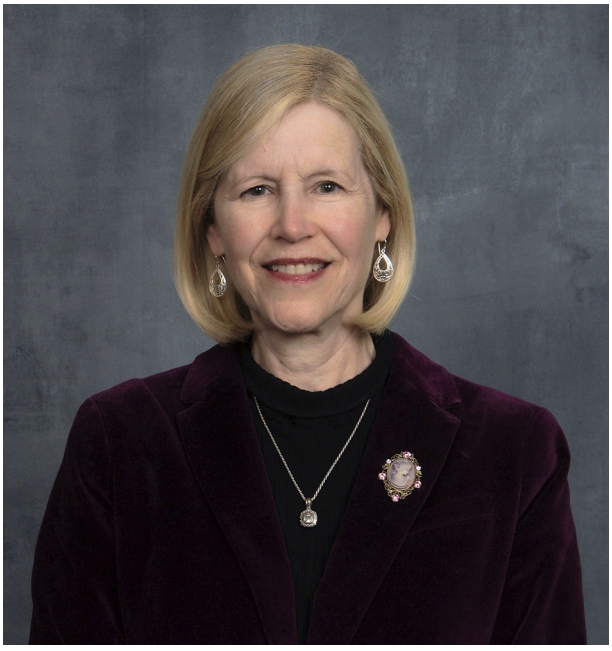
Editorial from the new editor-in-chief



It is a great honor and pleasure to serve as the new Editor-in-Chief of *Contemporary Clinical Trials*. I'd like to acknowledge and thank my predecessor, Dr. Zheng Su at Columbia University. During his 9-year tenure as Editor-in-Chief, *Contemporary Clinical Trials* grew from 6 to 12 issues per year, saw an increase in its impact factor, and expanded its global readership. I applaud Dr. Su for the outstanding job he has done with the journal.

Although *Contemporary Clinical Trials* is already one of the top peer-reviewed journals focusing on clinical trials, I aim for the journal to have even greater relevance. My goal is for *CCT* to become the premier forum for discussion and debate regarding the key issues and challenges in the design, conduct, and analysis of clinical trials.

The importance of randomized clinical trials (RCTs) to medical advances is irrefutable. Data from ecologic and observational studies, no matter how carefully designed, are susceptible to confounding, reverse causation bias, and other threats to validity that impede their use for establishing causality. Data from laboratory experiments on cells or animals, though tightly controlled, may not generalize to human beings. Well-designed clinical trials, which overcome the inherent limitations of other study types, are essential to determine effective prevention and treatment strategies. RCTs—the gold standard of clinical research—provide the foundation for evidence-based clinical practice and public health policies.

Despite these strengths, traditional clinical trials are at a crossroads. Such trials are becoming more costly and complex to carry out, and navigating regulatory requirements and securing funding is increasingly challenging. Working collaboratively with our esteemed Editorial Board members, I plan to solicit articles that explore ways to make trials more responsive to the needs of patients, researchers, clinicians, public and private sponsors, policymakers, and other stakeholders. Articles that address methods for, and issues related to, conducting cost-efficient, pragmatic, and adaptive trials are a priority. Indeed, the current Covid-19 pandemic highlights the urgent need for an infrastructure to enable quickly deployable and efficient trials in order to achieve timely and relevant results. I would argue that such studies are critical for expeditious testing of treatments and prophylactic interventions to slow the devastation wrought not only by infectious disease pandemics but also by chronic diseases.

Fortunately, a variety of innovative approaches have been proposed to make trials cost-efficient and pragmatic and thus more likely to reach definitive conclusions regarding an intervention's effectiveness in a timely fashion. One such approach is use of a hybrid design that combines (a) remote intervention(s) in a study population of sufficient size to allow a powered assessment of clinical events for primary and/or secondary prevention, with (b) in-depth phenotyping of a subcohort, accomplished via in-person clinic-based assessments, thus enabling mechanistic and mediation studies. Use of a factorial or a fractional factorial design allows concurrent independent and/or joint testing of two or more interventions, at minimal incremental cost. Examples of large-scale hybrid RCTs with a 2×2 factorial design include the recently completed VITamin D and OmegA-3 Trial (VITAL) [1–3] and the ongoing COcoa Supplement and Multivitamin Outcomes Study (COSMOS) [4]. Embedded recruitment strategies leverage existing resources such as ongoing large cohorts, patient registries, clinical trial research networks, and electronic health records to facilitate identification of potentially eligible trial participants and/or study sites as well as collection of study data. Research networks also offer opportunities to perform collaborative large-scale RCTs across multiple institutions. Such coordination is crucial to avoid unnecessary duplicative efforts ("reinventing the wheel") and to ensure rapid and rigorous conduct of trials. Several networked researchers have launched adaptive platform trials, which not only provide for concurrent testing of multiple interventions against a common control group but also for the addition and/or deletion of treatment arms over time, based on interim analyses and evolving medical knowledge. Regarding COVID-19, adaptive platform trials have rapidly produced critical information. The Adaptive COVID-19 Treatment Trial (ACTT) [5] and the Randomised Evaluation of COVid-19 thERapY (RECOVERY) [6] trial recently showed clinical benefits for the antiviral agent remdesivir and the steroid dexamethasone, respectively, in patients hospitalized with severe acute

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respiratory syndrome coronavirus 2 (SARS-CoV-2) infection. The latter trial, designed to test six different treatments, also found that neither hydroxychloroquine nor the antiviral combination of lopinavir and ritonavir offered benefit [7]. Another pragmatic approach is the cluster randomized trial. Again referencing Covid-19, my colleagues and I are launching the Vitamin D for Covid-19 (VIVID) Trial [8], in which individuals newly diagnosed with SARS-CoV-2 infection, together with up to one close household contact, will be randomized to high-dose vitamin D or placebo in a household cluster design. Cluster randomization offers logistic convenience, avoids treatment contamination (because both household members receive the same intervention), and permits assessment of two separate issues—treatment and prophylaxis—in one study. Provided that careful attention is paid to avoiding their potential pitfalls, these and other pragmatic approaches enable clinical trialists to tackle pressing scientific questions feasibly and cost efficiently. Additional strategies for pragmatic and innovative trial designs are needed.

I also hope to continue to expand the international reach and relevance of *Contemporary Clinical Trials*. In addition to assembling a global and diverse Editorial Board, I seek to attract a global and diverse array of authors, reviewers, and readers. In addition, I have a particular interest in considering manuscripts authored by early-career investigators, as well as manuscripts that address issues in the training of the next generation of clinical trialists.

Of course, ensuring the continued success of the journal, and implementing the vision articulated above, is a collaborative effort. I offer thanks to those who are joining me in this endeavor. To the veteran and new members of the Editorial Board, many of whom are renowned thought leaders in fields relevant to the aims and scope of the journal, for helping to shape the journal's direction and to oversee a fair, thorough, and expeditious review process; and to Executive Editor Dr. Sue-Jane Wang, for additionally spearheading a forthcoming theme issue on Covid-19 trials. Thanks also to Dr. Howard Sesso, for serving as the new Editor-in-Chief of our "sister" open journal, *Contemporary Clinical Trials Communications* and to Dr. Shari Bassuk, incoming Managing Editor, for assisting me in efficiently managing the flow of the approximately 1000 new manuscripts submitted to the journal each year. Deep gratitude also to Nicolette van Dijk and the capable team at Elsevier, for providing invaluable support and "scaffolding" for the journal's work. Our success also relies on the authors who submit high-quality work for publication consideration, the peer reviewers who deeply engage with individual submissions to ensure optimal quality and integrity of published articles, and last but not least, to you, the journal's readers, with whom I hope to start an active and fruitful dialogue. If you have suggestions as to how *Contemporary Clinical Trials* can better serve the clinical trials community, please e-mail me at jmanson@rics.bwh.harvard.edu. I look forward to learning from you. Together, we can take *this special journal* to new heights.

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