



Celebrating 10 years of the *Journal of Comparative Effectiveness Research*

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Journal of **Comparative
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Regular readers of the journal will know that the first issue of the year always features a look back over the highly read articles and hot topics of the previous year. However, this issue of the journal is particularly special, as it marks the 10-year anniversary of the launch of the *Journal of Comparative Effectiveness Research (JCER)*! Having worked on the journal as the in-house editor throughout that time, I am thrilled that the journal has grown as it has over the years, both in terms of its reputation in the field and corresponding number of submissions received, as well as the community of Editorial Board members, authors and reviewers who have been so vital in making the journal what it is.

So in this special Foreword, I will not only be looking back over the past year, I will also be looking at some of the most popular articles we have published over the last decade, alongside some comments from the authors of these articles themselves.

I hope readers will continue to find the articles we publish timely and useful, and I look forward to continuing to work with you all in the years to come.

A decade of *JCER*

When *JCER* launched in January 2012, the term ‘comparative effectiveness research’ (CER) was a relatively new one. As stated in the Foreword to the launch issue [1], written by founding Senior Editors Sheldon Greenfield and Eugene Rich, “Around the globe, healthcare decision-makers are facing an intense need for new and different types of evidence to guide them.” Research in both CER and the wider field of health economics and outcomes research (HEOR) has progressed rapidly in the intervening years, and more than ever, decision makers require robust, trustworthy and nuanced information to guide treatment approvals and health policy.

Greenfield and Rich also highlighted the demand for more patient-centered care in their article, and of course the Patient-Centered Outcomes Research Institute (PCORI) was established by Congress in 2010. PCORI’s remit is to “work with . . . healthcare stakeholders to identify critical research questions and answer them through comparative clinical effectiveness research, or CER, focusing on outcomes important to patients,” and *JCER* has been delighted to publish many studies that have received funding from PCORI.

Although the field of CER and HEOR has progressed tremendously over the years, certain topics have been, and continue to be, of great interest to researchers in the field. [Table 1](#) highlights the top 10 articles published in the journal since launch (based on download numbers), and many of these articles continue to be read and cited years after first being published.

The most read article published to date in *JCER* is a white paper from Hampson *et al.* [2]. Perhaps unsurprising, as this article discusses the challenges involved in applying traditional drug approval and funding policies to innovative treatments like gene therapy, a crucial and continuing area of work and debate. The paper, which brings together

Table 1. Top *Journal of Comparative Effectiveness Research* articles by readership of all time[†].

Rank	Full-text downloads	Article type	Title	Authors	Volume (issue)	Altmetric score	Dimensions score	Ref.
1	19,496	White Paper	Gene therapy: evidence, value and affordability in the US health care system	Hampson G, Towse A, Pearson SD, Dreitlein WB, Henshall C	7(1)	35	47	[2]
2	16,172	Perspective	Evaluating patient and stakeholder engagement in research: moving from theory to practice	Esmail L, Moore E, Rein A	4(2)	28	200	[3]
3	13,680	Review	Propensity score matching and inverse probability of treatment weighting to address confounding by indication in comparative effectiveness research of oral anticoagulants	Allan V, Ramagopalan SV, Mardekian J et al.	9(9)	9	15	[4]
4	12,237	Review	Comparison of weighting methods used in multicriteria decision analysis frameworks in healthcare with focus on low- and middle-income countries	Németh B, Molnár A, Bozóki S et al.	8(4)	3	23	[5]
5	11,192	Research Article	Comparative effectiveness from a single-arm trial and real-world data: alectinib versus ceritinib	Davies J, Martinec M, Delmar P et al.	7(9)	11	25	[6]
6	9651	Systematic Review	Treatment of tardive dyskinesia with tetrabenazine or valbenazine: a systematic review	Caroff SN, Aggarwal S, Yonan C	7(2)	21	22	[7]
7	9521	Editorial	Sensory interventions for children with autism	Schaaf RC, Case-Smith J	3(3)	2	12	[8]
8	8289	Editorial	Developing an integrated strategy for evidence generation	Olson M	7(1)	1	3	[9]
9	7051	Perspective	Transitioning from learning healthcare systems to learning health care communities	Mullins CD, Wingate LT, Edwards HA, Tofade T, Wutoh A	7(6)	3	24	[10]
10	6720	Review	Corticosteroid use in viral pneumonia: experience so far and the dexamethasone breakthrough in coronavirus disease-2019	Rafiullah M, Siddiqui K	9(18)	2	6	[11]

[†] As on 14 October 2021.

authors from the Office of Health Economics (UK) and the Institute for Clinical & Economic Review (MA, USA), goes on to discuss potential solutions, and present policy recommendations.

Patient and stakeholder engagement has been a key topic for the journal over the past decade, and Esmail *et al.*'s perspective article discusses the all-important topic of moving theory into practice, highlighting the need to continually assess the success and impact of engagement activities [3].

Of course, as well as overarching themes relating to CER policies and methodology, the journal has also prided itself on focusing on disease-specific research, and how CER can complement randomized clinical trial data. In their review article, Allan *et al.* discussed four recently approved direct oral anticoagulants, and the use of propensity score matching and inverse probability of treatment weighting to look at the differences between them, to help understanding of their use in the treatment of atrial fibrillation [4].

"The high interest in our paper reflects shifting attitudes around real-world evidence from a *nice to have* to an important pillar of healthcare decision making and recognition of the value of propensity score-based methods in robustly addressing patient selection biases when estimating and comparing treatment effects. Propensity score-based methods have been pivotal in the field of atrial fibrillation research comparing real-world effectiveness and safety of direct oral anticoagulants. An emerging novel use of such methods is in external control arm designs which leverage real-world data to act as comparators to single-arm clinical trials. This approach may prove to be particularly useful for comparative effectiveness research in rare diseases." Victoria Allan (Bristol-Myers Squibb, UK).

A similar theme is addressed in the next article on the list, a review article from Németh *et al.* [5] that discusses the use of multicriteria decision analysis (MCDA), with a focus on the advantages and disadvantages of various weighting methods and the implications of this for decision making in low- and middle-income countries.

"MCDA methodology has been gaining popularity over the course of the last few years. Decision makers and researchers have sought out new ways for decision support even before the COVID-19 pandemic. While the

literature on the theoretical background of this topic has already been quite extensive, we wished to include some practical considerations in our paper as well. In addition to this, we gave a special focus to lower income countries, as these are the nations where making erroneous policy decisions generally have more severe consequences compared to more affluent countries.” Bertalan Németh (Syreon Research Institute, Hungary).

Comparing different drug treatments in specific indications is a cornerstone of CER, and the next two articles to feature in the top ten do exactly that. In their research article, Davies *et al.* describe their work using single-arm trial and real-world data to compare alectinib versus ceritinib in non-small-cell lung cancer patients [6]. And in their systematic review, Caroff *et al.* examine 11 studies to compare the use of tetrabenazine or valbenazine for the treatment of tardive dyskinesia [7].

Editorial articles give authors a chance to share their thoughts on a particular hot topic of the moment; in their piece from 2014, Schaaf and Case-Smith discussed sensory interventions for children with autism spectrum disorders, explaining the different interventions practiced and evidence of their efficacy [8], and in a further editorial piece, Olson discusses the importance of pharmaceutical companies developing an integrated, cross-department approach to evidence generation [9].

“My article on integrated evidence generation has been so well read because it puts a tangible framework around a topic that readers have come to realize is invaluable. Since writing the article, integrated evidence has moved from being a ‘nice to have’ idea, to a fundamental way of working to better address the holistic evidence needs of key healthcare stakeholders.” Melvin ‘Skip’ Olson (Novartis, Switzerland).

According to the National Academy of Medicine, a learning healthcare system is one that “generates and applies the best evidence for the collaborative healthcare choices of each patient and provider; drives the process of discovery as a natural outgrowth of patient care; and ensures innovation, quality, safety and value in healthcare”. In their perspective article, Mullins *et al.* discuss the challenges of implementing this, along with a vision for a learning healthcare community [10].

“I am thrilled to hear that our 2018 article is one of the journal’s most-read articles. I believe its popularity highlights a priority area for health services researchers worldwide: active and continuous stakeholder engagement to improve the quality and value of health care within a community. Our work at the University of Maryland Baltimore was originally funded through the US Agency for Healthcare Research and Quality’s (AHRQ) Infrastructure Development Program in Patient-Centered Outcomes Research (PCOR). With over 7000 downloads of the article, it is clear that AHRQ’s investment in PCOR a decade ago has helped to facilitate exponential gains in digital infrastructure, clinical decision support and patient-centered care. It is our hope that healthcare administrators and health services researchers continue to thoughtfully consider assessment, planning and implementation frameworks for sustainable community-academic partnerships, sustainability that requires collaboration, communication, resource sharing and trustworthiness between partners.” Hillary A Edwards (University of Maryland School of Pharmacy, MD, USA).

The final article in the top ten is also the most recently published; and unsurprisingly discusses the most important healthcare emergency of modern times, the COVID-19 pandemic. In their review article published in November 2020, Rafiullah and Siddiqui discuss the use of corticosteroids in the treatment of patients [11].

Content highlights of 2021

As always in the January Foreword, I also want to mention some of our more recent highly read content (Table 2), as this always provides an interesting snapshot of the field today. Along with exciting research across several fields of clinical research, I particularly wanted to highlight the Clinical Trial Protocol article from Thorndike *et al.*, which describes the aims and study design of the Digital Real-world Evidence trial for Adults with insomnia treated via Mobile (DREAM), looking at a prescription digital therapeutic for the delivery of cognitive behavioral therapy [12]. Telehealth is an important and growing field in healthcare delivery, and studies such as this will be crucial to ensure this is delivered effectively in the future.

The year 2021 also saw the introduction of a new feature to the journal, the Industry Update, which is being written by regular author Sreeram Ramagopalan and his colleague Alex Simpson (F Hoffmann-La Roche, Switzerland). The piece provides a round-up of developments in real-world evidence relating to health technology assessment, and I look forward to further pieces from Ramagopalan and Simpson in 2022 [22–24].

Table 2. Top *Journal of Comparative Effectiveness Research* 2021 articles by readership.

Rank	Full-text downloads	Article type	Title	Authors	Volume (issue)	Altmetric score	Dimensions score	Ref.
1	6182	Preliminary Communication	Matching-adjusted indirect comparison of palbociclib versus ribociclib and abemaciclib in hormone receptor-positive/HER2-negative advanced breast cancer	Rugo HS, Haltner A, Zhan L et al.	10(6)	12	0	[13]
2	2958	Research Article	Efficacy classification of modern therapies in multiple sclerosis	Samjoo IA, Worthington E, Drudge C et al.	10(6)	1	2	[14]
3	2523	Perspective	Organized structure of real-world evidence best practices: moving from fragmented recommendations to comprehensive guidance	Jaksa A, Wu J, Jónsson P, Eichler H-G, Vititoe S, Gatto NM	10(9)	311	1	[15]
4	1932	Systematic Review	Micronized purified flavonoid fraction in the treatment of hemorrhoidal disease	Godeberge P, Sheikh P, Lohsiriwat V, Jalife A, Shelygin Y	10(10)	1	0	[16]
5	1906	Meta-Analysis	Comparative efficacy of dabrafenib + trametinib versus treatment options for metastatic melanoma in first-line settings	Wu J, Das J, Kalra M, Ratto B	10(4)	2	1	[17]
6	1522	Research Article	Cost-effectiveness of an insertable cardiac monitor to detect atrial fibrillation in patients with cryptogenic stroke	Sawyer LM, Witte KK, Reynolds MR et al.	10(2)	25	1	[18]
7	1319	Research Article	Assessing direct costs of treating metastatic triple-negative breast cancer in the USA	Skinner KE, Haiderali A, Huang M, Schwartzberg LS	10(2)	2	1	[19]
8	1158	Clinical Trial Protocol	Protocol for Digital Real-world Evidence trial for Adults with insomnia treated via Mobile (DREAM): an open-label trial of a prescription digital therapeutic for treating patients with chronic insomnia	Thorndike FP, Berry RB, Gerwien R, Braun S, Maricich YA	10(7)	1	0	[12]
9	1146	Meta-Analysis	Network meta-analysis of nivolumab plus ipilimumab in the second-line setting for advanced hepatocellular carcinoma	Parikh ND, Marshall A, Betts KA et al.	10(5)	1	3	[20]
10	1143	Research Article	Do implantable loop recorders impact the survival of patients with recurrent unexplained syncope?	Perings C, Wolff C, Wilk A, Witthohn A, Voss R, Rybak K	10(4)	1	0	[21]

†As on 14 October 2021.

Coming up in 2022: the importance of patient engagement

As mentioned above, patient engagement continues to be a key topic of discussion in *JCER* and the healthcare community as a whole. An important feature of this is working with patients and patient advocates throughout the treatment development pathway, and crucial to this is ensuring the results of published research is accessible to all involved. It is also vital the results of research are integrated effectively into the clinical care of patients. As such, Future Science Group has been delighted to lead the way with the introduction of standalone Plain Language Summary of Publication articles, conveying the results of scientific research in language that is accessible to nonspecialists. The first such article was published in our sister journal *Future Oncology* in 2020 [25], and I look forward to featuring these articles in *JCER* in the future, alongside the lay abstracts many of our articles already include.

As many readers know, *JCER* is proud to partner with website The Evidence Base [26]. The site continues to publish an array of content, freely available to all members, on the topics of CER, HEOR and real-world evidence. And on the theme of patient engagement, the site is currently planning an exciting Ask the Experts feature in which a panel of experts will explore the benefits of patient engagement for RWD/E, the importance of the market and regulators, alongside some key challenges and events affecting patient engagement.

Conclusion

Once again, many thanks to all our Editorial Board members, authors and reviewers who have made publication of *JCER* possible over the last 10 years. I look forward to seeing what comes next for the journal!

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