

OPINION

Improving the quality of clinical practice guidelines in China: A call to action for editors of medical journals

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High-quality clinical practice guidelines (CPGs) have the potential to standardize medical practice and improve patient outcomes. However, in China, the quality of CPGs is generally lower than the global average, particularly in terms of methodological and reporting quality. This hinders the dissemination and implementation of CPGs in healthcare practice. To enhance the scientific rigor and authority of CPGs, their development should adhere to reporting guidelines. As medical journals serve as the platform for CPG publication, editors of medical journals have a significant responsibility for the quality control of publishing CPGs. We call on editors of medical journals to be equipped with the CPG reporting guidelines, implement them in their journal practice, and actively participate in the development of CPGs. Additionally, editors of medical journals can also promote CPG quality awareness among medical professionals and journal editors. These efforts will contribute to the high-quality development of CPGs in China.

Key words: clinical practice guidelines, reporting guideline, medical journal editor, quality

INTRODUCTION

Clinical practice guidelines (CPGs) are considered the primary basis for medical decision-making, and they are among the most important guiding documents in the field of medical care. In China, where the quality of medical and healthcare service differs across the country and the primary medical service capacity remains weak, CPGs have proven effectiveness in improving medical quality, optimizing resource allocation, and reducing


medical disparities.^[1] Studies have shown that standardized diagnosis and treatment in clinical practice based on high-quality CPGs can prevent unnecessary deaths in up to one-third of patients and reduce medical expenses by about one-third.^[2] Additionally, high-quality CPGs are an important basis for the government to formulate healthcare policies and provide evidence-based financial support for extensive clinical research.^[3] Producing high-quality CPGs requires the joint efforts of clinical researchers (mainly physicians), guideline methodologists, and medical editors. However, there has been a lack of involvement of methodologists and medical editors in CPGs development processes for many years in China, which significantly affects the quality of Chinese CPGs. In recent years, with the efforts of Professor Yaolong Chen's team at Lanzhou University, more and more methodologists have participated in the development of CPGs. Contrastingly, the role of journal editors in CPGs has been still ignored. This article briefly analyzes the current situation of CPGs in China and elaborates on the responsibilities and obligations editors should have in improving the

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quality of CPGs.

OVERVIEW OF CPG DEVELOPMENT AND CLINICAL APPLICATION IN CHINA

With the improvement of healthcare levels in China, the number of CPGs is also increasing. As of 2021, the total number of published CPGs led by Chinese scholars has exceeded 1000, of which 352 were published in the year 2021 alone.^[4,5] However, research has shown that the quality of these CPGs is significantly lower than the global level.^[6] Fortunately, Chinese experts in guideline development have fully recognized the importance of improving the quality of CPGs. As early as 2016, Professor Chen's team, together with international experts in the field of CPG development, developed the Reporting Items for Practice Guidelines in Healthcare (RIGHT) checklist. The RIGHT checklist mainly includes 7 areas and 22 items, involving 10 aspects including CPGs registration, protocol, funding, guideline working group, conflict of interest, clinical questions, evidence, consensus methods, recommendations, and accessibility.^[7] This checklist is currently the only reporting guideline worldwide that is applicable to health policies and clinical guidelines making in the fields of public health and clinical medicine. In 2018, Professor Ji-yao Wang's team from Fudan University in Shanghai developed the Appraisal of Guidelines for Research & Evaluation (AGREE)-China evaluation system for CPGs based on AGREE II, a CPG research and evaluation tool. The evaluation system includes 15 items in 5 domains and has more concise evaluation criteria that are more suitable for evaluating and standardizing Chinese CPGs.^[8] However, a newly published study show that, the methodological quality and reporting quality of CPGs published in 2019 in Chinese journals were both low, with an average score of only 50% of international guidelines.^[9] A survey study by Huang *et al.*^[10] on 931 Chinese medical professionals showed that nearly half of the respondents had a certain skepticism about "CPGs can improve patient outcomes and reduce medical costs", and the main obstacles were CPG-related factors such as multiple versions, diverse quality, and unclear recommendations. It can be seen that normalized methodology in guideline development and reporting has not yet been widely recognized and implemented in China. There is still a long way to improve the quality of CPGs in China.

QUALITY ISSUES IN CHINESE-DEVELOPED AND PUBLISHED CPGS

The quality of a guideline can be reflected by its clarity, ease of use for clinicians, and sufficient details for readers to assess its reliability.^[4] CPGs with poor quality can affect their scientificity and authority, leading to

biases in clinical decision-making and unfavorable outcomes for patients.

Studies have shown that published CPGs authored by Chinese scholars or groups often lack important information, such as development methods or specific recommendations, have indistinct evidence quality grading and recommendation strength, with inadequate disclosure of conflicts of interest and author contributions.^[6,9,11,12] A study analyzing 573 CPGs published in Chinese journals from 2014 to 2018 found that 62.3% did not use any evidence-quality grading and recommendation strength methods. For CPGs that did use grading methods, there were issues of inconsistency and non-standard grading.^[11] Regarding disclosure of conflicts of interest and financial support in CPGs published in China, over 70% of CPGs published in 2018 did not report funding and conflicts of interest.^[13,14] In 2017, only 34.8% of CPGs published in Chinese journals used the RIGHT report checklist.^[15] The quality of CPGs for primary care is even less optimistic, with an average RIGHT reporting rate of only 23.6%.^[16] A comprehensive evaluation of 291 Chinese scholar-led guidelines published in medical journals in 2021 using the Scientific, Transparent, and Applicable Rankings (STAR) rating tool found that the average score was only 31.9 points (out of 100), with only 4.1% (12 guidelines) achieving a 5-star rating (score \geq 81.0 points).^[17]

THE ROLE AND TASKS OF MEDICAL JOURNAL EDITORS IN IMPROVING THE QUALITY OF CPGS

Medical journals are important platforms for medical research findings archive and communication, serving as a bridge between scientific research and clinical practice. Therefore, medical journals have a responsibility to publish CPGs that are developed and reported with proper quality standards. On the other hand, improving the quality of CPGs published in medical journals is also essential for strengthening the quality of the journals, which is paramount for building the journals' influence and reputation. Therefore, editors of medical journals should take the initiative to play an active role in enhancing the quality of CPGs.

Current status of medical editors' perception on CPG-related reporting guidelines

In 2022, our team conducted a survey on the awareness of CPG and the reporting guidelines among 362 editors of medical journals from 25 provinces and cities in China. The results showed that 89.78% respondent editors were not familiar with CPG-related reporting guidelines. Further investigation found that 76.4% editors who processed CPG manuscript did not follow the relevant reporting guidelines. In addition, 89.23% of

editorial offices had not introduced the reporting guidelines or associated publishing criteria for CPG-related manuscripts.^[18] These results indicate the lack of knowledge of CPGs reporting guidelines among medical editors and the lack of editorial policy regarding CPGs publication in medical journals in China. It is important for medical editors to actively expand their breadth and depth of CPG-related knowledge through variable ways, such as literature learning, taking training courses, or attending seminars, *etc.* By cultivating the awareness of CPGs quality and the report standards/tools, editors of medical journals would voluntarily involve themselves in improving the quality of CPGs.

Responsibilities for editors in CPGs review and publication

In 2022, the Transparency Ecosystem for Research and Journals in Medicine (TERM) working group established and published an article in the *Journal of Evidence-Based Medicine*, summarizing basic recommendations for reviewing and publishing high-quality CPGs. These recommendations cover ten aspects of guideline protocols, stakeholders, conflicts of interest, clinical questions, systematic review, consensus and recommendations, guideline reporting, and external reviews.^[19] Additionally, the STAR tool was developed by 106 experts from 42 specialties in China. The tool contains 39 items, each with a corresponding score ranging from 0.9 to 6.4 points, totaling 100 points, and sets the guideline quality level based on the score.^[20] These tools provide a detailed basis for guideline developers, journal editors, and peer reviewers to develop, report, and review CPGs in China.

We urge medical editors to take proactive responsibility to improve the quality of publishing CPGs. Apart from the routine job task of editors to ensure accuracy, completeness, readability, and consistency of reporting content, it is important to use CPGs reporting checklist and quality evaluation tools to examine the content of CPGs and provide comments to authors on revision and optimization. This will help CPGs publications reach higher quality in terms of normativity, transparency, and accuracy. In addition, journal publishers are recommended to clearly state the publishing standards for CPGs articles in their author instructions, and formulate an editorial scheme specifically for the review and editing of CPGs manuscripts.

Participation CPGs development for fairness, representativeness, and scientificity

There has been less involvement of medical editors in the development of CPGs in China, despite evidence that CPGs developed with the participation of medical editors have higher quality. Methodologists have suggested that CPG development should involve

medical editors in addition to multidisciplinary teams.^[19,21] Editors of medical journals may help CPGs developers with quality control and process management, such as the management of conflict of interest disclosure, involving multiple stakeholders for representativeness, and external reviews for quality improvement of CPGs.^[22–24] This will ensure that recommendations in CPG are fair, reasonable, and unbiased, reflect the latest evidence and advances in the healthcare field, meet the needs of extended users, and consequently, gain broad recognition and better implementation.

Education on proper methodology in developing and reporting CPGs

As early as 1983, Professor Zelen from Harvard University pointed out that editors have not only the responsibility ensuring the quality of research papers and reports, but also the responsibility of educating and directing authors.^[25] Previous surveys have shown that medical professionals have a low knowledge level of methodology and reporting and even misunderstandings about CPGs.^[4,26] Chinese CPG developers need to be more familiar with and fully understand the scientific methods of CPG development. As medical journals have their readership and influence among medical professionals, medical editors can play a role in promoting the proper methodology for developing and reporting CPGs in the Chinese medical community by using their journals as knowledge platforms.

Since 2018, the *Medical Journal of Peking Union Medical College Hospital* has required that all CPG articles published follow the RIGHT checklist. Editors provide specific revision suggestions when processing such articles. In May 2019, the *Medical Journal of Peking Union Medical College Hospital* launched the column “Clinical Practice Guidelines”, in which a series of articles focusing on hot topics in the field of guideline methodology have been published. These articles propose constructive opinions and strategies for the high-quality development of CPGs in China. The journal also invited methodological experts in CPGs to give live lectures on various multimedia platforms, such as WeChat official accounts and WeChat channels. These approaches have helped CPG developers, guideline users, and journal editors better understand the proper methods for developing and reporting CPGs and have achieved good social influence.

CONCLUSION

Clear, transparent, and normalized CPGs can effectively promote their dissemination and implementation, while the relatively low quality of CPGs published has damaged their scientific and authoritative nature, making

their implementation more difficult. Although CPGs have been recognized as one of the most important guiding documents in the medical and health fields, most medical staff and journal editors in China still lack sufficient understanding of the methodology and reporting standards of CPGs. The application of CPG reporting standards started relatively late in China and has not yet been widely accepted.

As CPGs bear the historical mission of providing high-quality evidence for decision-making in healthcare, editors of medical journals have the responsibility to publish high-quality CPGs. We call on all medical editors to take action in implementing and promoting CPG reporting guidelines in editorial practices and, when possible, participate in CPG development to contribute to the high-quality development of CPGs in China.

DECLARATION

Author Contributions

Li N: Writing—Original draft, Writing—Review and Editing. Li J: Writing—Review and Editing. Li YL: Writing—Review and Editing.

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Conflict of Interest

The authors have no conflicts of interest to declare.

Data Availability Statement

Not applicable.

REFERENCES

- Institute of Medicine (US) Committee on Standards for Developing Trustworthy Clinical Practice Guidelines. *Clinical practice guidelines we can trust*. National Academies Press; 2011.
- Pronovost PJ. Enhancing physicians' use of clinical guidelines. *JAMA*. 2013;310(23):2501–2502.
- Brouwers MC, Florez ID, McNair SA, Vella ET, Yao X. Clinical practice guidelines: tools to support high quality patient care. *Semin Nucl Med*. 2019;49(2):145–152.
- Chen Y, Wang C, Shang H, Yang K, Norris SL. Clinical practice guidelines in China. *BMJ*. 2018;360:j5158.
- Sun YJ, Shi QL, Yang N, et al. [Rethinking and exploring the comprehensive evaluation of clinical practice guidelines]. *Med J PUMCH*. 2023;14(1):22–30.
- Chen YL, Yao L, Xiao XJ, et al. Quality assessment of clinical guidelines in China: 1993–2010. *Chin Med J*. 2012;125(20):3660–3664.
- Chen Y, Yang K, Marušić A, et al. A reporting tool for practice guidelines in health care: the RIGHT statement. *Ann Intern Med*. 2017;166(2):128–132.
- Wang JY, Wang Q, Wang XQ, et al. Development and preliminary verification of the evaluation system for clinical practice guidelines in China. *Chronic Dis Transl Med*. 2019;6(2):134–139.
- Liu YL, Zhang JY, Shi QL, et al. [Investigation and Evaluation of Chinese Clinical Practice Guidelines Published in Medical Journals in 2019: Methodological and Reporting Quality]. *Med J PUMCH*. 2022;13(2):324–331.
- Huang C, Du L, Chen YL, et al. [Usage and demand for clinical practice guidelines among Chinese health practitioners]. *Chin J Evid Based Med*. 2019;19(6):635–638.
- Zhou Q, Wang Z, Shi Q, et al. Clinical Epidemiology in China series. Paper 4: the reporting and methodological quality of Chinese clinical practice guidelines published between 2014 and 2018: a systematic review. *J Clin Epidemiol*. 2021;140:189–199.
- Wu D, Jiang W, Yu L, et al. Quality assessment of clinical practice guidelines for infectious diseases in China. *J Evid Based Med*. 2018;11(2):95–100.
- Wang YB, Wang Q, Zhao MJ, et al. [Conflict of interest and economic evidence in Chinese clinical practice guidelines published in 2018: A survey]. *New Med*. 2020;30(2):139–158.
- Wang YB, Wang Q, Zhao MJ, et al. [Conflict of interest and economic evidence in Chinese clinical practice guidelines published in 2021: a survey]. *New Med*. 2023;33(1):8–49.
- Yang QB, Zhou Q, Huang TX, et al. [Reporting quality of clinical practice guidelines published in journals of mainland China in 2017]. *Chin J Evid Based Med*. 2019;19(11):1325–1332.
- Wang P, Wu SY, Sun YJ, et al. [Current situation analysis and quality evaluation of Chinese clinical practice guidelines in general practice]. *Chin Gener Prac*. 2023;26(13):1551–1558.
- Journal Guidelines and Standards Research Center of Chinese Medical Association, Research Unit of Evidence-based Evaluation and Guidelines, Chinese Academy of Medical Sciences, WHO Collaborating center for Guideline Implementation and Knowledge Translation. [The scientific, transparent, and applicable ratings of Chinese guidelines and consensus published in medical journals in 2021]. *Chin Med J*. 2022;102(30):2319–2328.
- Li YL, Li N, Lin L, et al. [Cognition of editorial staff of medical scientific journals on clinical practice guidelines/expert consensus in China]. *Chin J Sci Tech Period*. 2023;34(3):297–304.
- Yang N, Zhao W, Qi WA, et al. Publishing clinical practice Guidelines (PAGE): recommendations from editors and reviewers. *Chin J Traumatol*. 2022;25(6):312–316.
- Yang N, Liu H, Zhao W, et al. Development of the Scientific, Transparent and Applicable Rankings (STAR) tool for clinical practice guidelines. *Chin Med J*. 2023;136(12):1430–1438.
- Wang H, Wang HP, Ke LX, et al. [Investigation of magazines or journal editors' participation in the development of clinical practice guidelines in China]. *Chin J Evid Based Med*. 2019;19(1):54–61.
- Irwig MS, Kyinn M, Shefa MC. Financial conflicts of interest among authors of endocrine society clinical practice guidelines. *J Clin Endocrinol Metab*. 2018;103(12):4333–4338.
- Saleh RR, Majeed H, Tibau A, Booth CM, Amir E. Undisclosed financial conflicts of interest among authors of American Society of Clinical Oncology clinical practice guidelines. *Cancer*. 2019;125(22):4069–4075.
- Yao L, Chen Y, Wang X, et al. Appraising the quality of clinical practice guidelines in traditional Chinese medicine using AGREE II instrument: a systematic review. *Int J Clin Pract*. 2017;71(5):e12931.
- Zelen M. Guidelines for publishing papers on cancer clinical trials: responsibilities of editors and authors. *J Clin Oncol*. 1983;1(2):164–169.
- Chen YL, Yao L, Wang Q, et al. [Survey on Knowledge, Attitude and Behaviour regarding Clinical Practice Guidelines of Primary Healthcare Workers in Gaolan County of Gansu Province]. *Chin J Evid Based Med*. 2014;14(6):674–677.