Systematic Review and its Role in Clinical Decision Making

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ystematic reviews as secondary research studies are used as the gold standard to help healthcare professionals and healthcare policy makers in decision making.1 Clinical decisions need to be based on high quality, up-to-date research evidence. Systematic reviews start with well-defined research questions and explicit and reproducible search strategies in order to critically appraise and integrate results of primary research studies.2,3

To perform a systematic review, 6 key steps should be performed successively: (1) clarifying the aims and methods in a protocol, (2) finding relevant research, 3) collecting data, (4) assessing the study’s quality, (5) synthesizing the evidence, and (6) interpreting the findings. The systematic review process also includes 4 phases: (1) planning a systematic review, (2) writing and publishing protocol, (3) completing the review, and (4) publishing, disseminating, and updating the review.4

For publication, a systematic review or meta-analysis should comply with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist,1,2,4 which includes 27 items. These items are categorized in 7 sections: title (1 item), abstract (1 item), introduction (2 items), methods (12 items), results (7 items), discussion (3 items), and funding (1 item).3 An updated version of PRISMA has been developed, i.e. PRISMA-P, that has 17 items to improve the quality of systematic reviews with fewer items.5,6 A positive correlation has been shown to exist between PRISMA score and average citations per year; in other words, systematic reviews with high PRISMA scores are more likely to be cited by other researchers.3

Unfortunately, it has been reported that different methods for systematic review reporting have recently led to a number of publications demonstrating a lack of compliance with PRISMA.4,5,7,8

Systematic reviews and meta-analyses play an important role in evidence-based medicine (EBM),9,9 and a large increase in systematic review studies has occurred.1 However, to prevent impaired clinical decision-making, it is highly recommended that the 6 steps of systematic review completion be followed with accuracy, the 4 phases of a systematic review be accomplished rigorously, and finally, a greater adherence to PRISMA standards be maintained.

Conflict of Interest Disclosures
The author declares that he has no conflicts of interest.

Ethical Approval
Not applicable.

References
