Response to the Article “Palliative Care Interventions for Patients with Heart Failure: A Systematic Review and Meta-Analysis”

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Dear Editor:

While we enthusiastically support Diop et al.’s recent effort to synthesize data in the nascent field of palliative care interventions for patients with heart failure (HF),¹ we note methodological issues in their study limiting reproducibility, comprehensiveness, and critical appraisal of bias—three key features of a high-quality systematic review.^{2,3}

First, we have concerns regarding the review’s reproducibility given that important methodological decisions are not clearly described. A protocol published before execution of a systematic review is often useful in allowing investigators to establish study parameters, thereby promoting transparency and reproducibility.^{2,3} Although having clear and consistent definitions of key constructs underlies the rigor of a systematic review, operationalizing a definition of “palliative care” is challenging.^{4,5} Nevertheless, Diop et al. do not define what they consider to be an eligible palliative care intervention. A reproducible definition of “palliative care intervention” could, for example, lean on consensus statements or clinical guidelines.^{4,6} Additionally, the authors describe their population as patients “with a primary diagnosis of HF who underwent a palliative care or hospice intervention,” yet it would be helpful to elucidate this definition using structured criteria (e.g., NYHA class, ICD-10 codes) to ensure comparability between studies. Furthermore, it is unclear why studies that reported readmission data, including trials by Rabow et al. and Sidebottom et al. (references 30 and 40 in the original article, respectively), were excluded from meta-analysis. While general rules for study eligibility could have been provided in a study protocol, the final review should include specific reasons why individual studies were excluded from analysis.^{2,3}

Second, the authors’ search is more reflective of a narrative review than a systematic review.^{2,3} Accepted standards for high-quality systematic reviews require harvesting studies from multiple databases; using a single database (e.g., PubMed), as in their review, reduces the search’s sensitivity and comprehensiveness.^{2,3} Furthermore, it is

highly suggested that investigators collaborate with a search expert or medical librarian in designing and executing a bibliographic search strategy for systematic review^{2,3}; yet, the report does not recognize whether this expertise was represented on their team.

Third, the review lacks a formal risk of bias assessment, which limits readers’ ability to draw conclusions about the significance of findings. As seen in a recent systematic review of palliative care interventions, only 16% of studies reporting subjective (e.g., patient reported) outcomes and 7% of studies reporting objective outcomes (e.g., survival, utilization) were deemed to be at low risk of bias.⁴ It is clear that our discipline’s evidence base includes studies of vastly variable methodological quality. The findings of Diop et al. are therefore of unclear significance, and their claim that palliative care interventions for HF patients may “improve patient outcomes while decreasing cost and utilization” is not substantiated via a critical analysis of methods.¹ For example, all three studies in their meta-analysis of re-hospitalization outcomes were recently deemed to be at high risk of bias.⁴

We agree that palliative care for those with HF may allow for improved outcomes, yet we also recognize the need for critical appraisal of research as this field advances.

References

1. Diop MS, Rudolph JL, Zimmerman KM, et al.: Palliative care interventions for patients with heart failure: A systematic review and meta-analysis. *J Palliat Med* 2017;20:84–92.
2. Institute of Medicine (US) Committee on Standards for Systematic Reviews of Comparative Effectiveness Research. *Finding What Works in Health Care: Standards for Systematic Reviews*. National Academies Press, Washington, DC, 2011.
3. Higgins JPT, Green S, eds. *Cochrane Handbook for Systematic Reviews of Interventions, Version 5.1.0 ed*. The Cochrane Collaboration, London, England, 2011.
4. Kavalieratos D, Corbelli J, Zhang D, et al.: Association between palliative care and patient and caregiver outcomes:

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A systematic review and meta-analysis. *JAMA* 2016;316:2104–2114.

5. Gaertner J, Siemens W, Daveson BA, et al.: Of apples and oranges: Lessons learned from the preparation of research protocols for systematic reviews exploring the effectiveness of Specialist Palliative Care. *BMC Palliat Care* 2016;15:43.
6. Dahlin C; National Consensus Project for Quality Palliative Care. *Clinical Practice Guidelines for Quality Palliative Care*. National Consensus Project for Quality Palliative Care, Pittsburgh, PA, 2013.

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