

Peer Review File

Article information: <https://dx.doi.org/10.21037/apm-23-551>

Reviewer A

Comment 1:

good job

very needed

Reply 1: The authors thank the Reviewer for their support.

Reviewer B

Thank you to the authors for this interesting compilation and summary view of role of palliative care across the spectrum of the LVAD journey. I appreciate the broad nature of this review's attempt to capture such a broad journey. It is clear notable time was placed in the relatively comprehensive review of the literature and I do believe that this is appropriately targeted to palliative care physicians with an interest in working with patients requiring LVAD. Below I present a few opportunities for clarification or elaboration that may be helpful.

Comment 1: In the introduction paragraph two, the authors helpfully provide definitions and various potential indications for LVAD. It may be helpful to transpose this into a small table for clarity of comparison.

Reply 1: The Reviewer's suggestion is adopted. Please see Table 1.

Changes in Text: We added "Table 1" to the relevant section of paragraph 2 (page 3, line 21)

Comment 2. In pre-VAD Implantation section paragraph two, the authors refer to the risks of LVAD as "rare"; however the incidence of complications as well outlined in HAN et al 2018 are relatively high eg GI bleed, driveline infection. Furthermore, the risks of rehospitalization in the initiation 6 month post-VAD period is up to 60% per the 8th annual INTERMACS report. While the risks of LVAD are not the focus of this paper, these complications do heavily guide discussion in preparedness planning. Consider rephrasing the language to more specifically mention the known incidence of these complications, or please better qualify the use of the word "rare".

Reply 2: The Reviewer's point is noted. The authors intended the qualifier "rare" to refer to the following complications: stroke, infection, gastrointestinal bleeding, and device malfunction. Though some of these complications may be seen as "rare," others, such as infection, are not. Therefore, the qualifier "rare" has been removed. A more detailed discussion of the incidence of various complications can be found in the first

paragraph of the “Living with an LVAD” section.

Changes in Text: We have removed “rare but” from Page 6, Line 3.

Comment 3. Pre-VAD Implantation section, general comment: A note is made that the LVAD preparedness literature shows a lack of standardization. While a compilation of the various preparedness planning models is beyond the scope of this paper, a brief reference to some models will help to solidify this point. eg OConnor et al 2016 scripted nurse visits, Allen et al 2018, etc

Reply 3: The paper by Allen et al., was cited on Page 6, Line 8. The authors were unable to locate the second reference proposed by the Reviewer.

Comment 4. Living with an LVAD, final paragraph - AHA recommends ACP discussion annually which may be worth explicitly mentioning that this recommendation continues to apply with LVAD

Reply 4: The Reviewer’s suggestion is adopted.

Changes in Text: The following text was added: “An “annual heart failure review” incorporating palliative care specialists can normalize advance care planning and increase the frequency of these discussions (31).”

Comment 5. End-of-life section, 2nd paragraph - Important point noted that the topic of LVAD deactivation cannot be avoided - Nakagawa et al 2017 do bring this point up in the prevad discussion, as I'm sure others do.

Reply 5: The article by Nakagawa et al., has been cited at the relevant sentence.

Changes in Text: We added citation 18 to Page 11, Line 17.

Comment 6. End of life section, paragraph 4 - various checklists exist - are there common features amongst them all?

Reply 6: Two additional citations to previously published checklists have been added, as well as a comment regarding common areas of emphasis.

Changes in Text: We have added the following text to Page 12, Line 7-9: “These checklists emphasize effective communication between the family and the interdisciplinary team and coordination between clinical specialists to assure a seamless deactivation.”

Comment 7. Same section and paragraph - I do not believe I have seen this average duration of survival so decisively stated previously - in fact in my own experience and in published literature I have seen more variation, which can sometimes lead to caregiver confusion and distress. Reports range from seconds to hours - consider Singh et al 2021

Reply 7: The authors thank the Reviewer for this clarification. Additional language has been added to emphasize the variability in prognosis following deactivation. The average duration of survival of 60 minutes following deactivation was published in Singh et al, 2021.

Changes in Text: We have added the following text to Page 12, Line 15-17: “though

with significant patient-to-patient variability resulting in a survival range of minutes in some cases to days in others.”

Comment 8. Same section, paragraph 6 - Similar points in the Singh et al 2021 interviews with bereaved family. Would consider mentioning for comprehensive review sake.

Reply 8: The authors request further clarification of this comment. A paragraph on caregiver bereavement can be found on Page 13.

Comment 9. End of life section - Please consider mentioning the low rates of ICD deactivation in this population as mentioned by Dunlay et al 2016

Reply 9: The Reviewer’s suggestion is adopted.

Changes in Text: We have added the following text to Page 12, Lines 9-12: “Defibrillator deactivation is also discussed as part of the process of preparing for LVAD deactivation (36). In a cohort of patients who died with DT-LVAD, one-third did not have their defibrillator deactivated prior to death, potentially exposing patients to the risk of defibrillator discharges at the end-of-life (32).”

10. In regards to the figure - The graph displayed bears uncanny resemblance to the Dunlay et al 2016 publication. Firstly, please cite the original source. Secondly, please clarify the justification for gradation of the palliative care and hospice bars as drawn - while the text mentions embedded PC in LVAD clinics and routine ACP discussion, I worry the present gradation as shown implies that PC stops being involved entirely as it is presently displayed. I find it difficult to interpret how to apply the gradation as shown to four highly different outcomes.

Reply 10: The authors thank the Reviewer for these comments. The Dunlay citation has been added, as advised. Though it is difficult for any schema or figure to capture all the nuances of clinical practice, we have attempted to revise the figure to better reflect some of variation in prognosis and clinical course of the varying trajectories.

Changes in Text: We have added the following text to Page 16, Line 3, in the figure legend: “Post-LVAD trajectories were described by Dunlay and colleagues (32).”