

# Factors Associated with Length of Intensive Care Unit Stay Following Cardiac Surgery [Response to Letter]

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## Dear editor

This is to respond to a letter presented by Abdul Moeed, MBBS on our recently published article, titled “Factors Associated with Length of Intensive Care Unit Stay Following Cardiac Surgery in Cardiac Center Ethiopia, Addis Ababa, Ethiopia: Institution Based Cross-Sectional Study” published in *Research Reports in Clinical Cardiology*.

We are pleased Mr. Abdul Moeed MBBS for his feedback.

1. Mr. Abdul Moeed complained on the results of the study citing different literatures. “Numerous studies have reported increased patient age correlated with prolonged LOS; however, this study failed to establish age as a predictive factor. Similarly, Habeeb-Allah et al highlighted advanced age as an essential risk factor associated with post-cardiac surgery delirium, leading to a prolonged hospital stay. (2) Techane et al included only 19 patients (7.7%) in the age bracket 48–67 years and 229 patients (92.3%) between the ages 18 and 48 years, thereby failing to identify the aforementioned relationship.”

Response: as you can read from our paper most of the patients were aged 18–48. And the age as a determinant factor for length of ICU stay was disproved in this study. Generally, age has not the main determinant factor for length of ICU in the single study area. For your information Cardiac Center Ethiopia is the only hospital where cardiac care services are given to a country of more than 110 million people. Besides surgeries were conducted by campaign programs. Even though different studies would result different output, we are at a good step forward to conduct a prospective study “why age is not a determinant factor in the study area.” The other premises we had is patients can be discharged from ICU not because of their age, but because of the other factors, including the hospital regulation, and number of patients at waiting list. But in this study no difference was observed in the aged and younger cardiac patients to leave or stay long in the ICU following surgery.

2. “Additionally, the study only identified pulmonary hypertension, respiratory diseases, heart failure, myocardial infarction, diabetes mellitus, and renal failure as the associated comorbidities, whereas numerous studies have documented low left ventricular ejection fraction (LVEF) as a predictor of extended hospital stays. Even though Techane et al classified patients according to LVEF, no correlation was drawn. Bootsma et al reported a striking association between low LVEF and complications like elevated creatinine, ultimately resulting in longer LOS following cardiac surgery.”

Response: even though we have considered the variables you mentioned as a potential factor to be associated with Length of ICU stay. The reverse happened. Our premise was disproved by the analysis. We would love if our result

showed this association. However, it did not show the association and we reported as it happened. So we will consider these and other factors why they did not associate or correlate with ICU stay soon enough in our new research.

3. “Lastly, Techane et al lacks in identifying and reporting any patients who died during the hospital stay, and if they died, how were they adjusted in the calculation of LOS. Studies have favored identifying mortality as a competing risk over classifying death as the worst possible outcome (longest LOS), (4) however, Techane et al fails to report the handling of in-hospital mortality.”

Response: the main objective of our study was to assess factors associated with ICU stay following cardiac surgery. Afraid to tell that we did not study outcome, or survival status. We retrospectively retrieved patient’s charts. Patients chart with no date of entry and discharge to and from ICU were considered as incomplete and were excluded from the study. We have not studied outcome at this study, but we are doing another study that could reveal outcome.

## Conclusion

We are happy that you wrote this letter, to us. And we appreciate that. However, we would like to suggest that all researches done all over the world are not similar, and are not expected to have similar results and findings.

Your comments are welcome as a critique. We have used the maximum number of patients charts but cross-sectional. We still agree further studies are imperative, we gladly accept that, prospective or controlled trials can prove or disprove such claims. And we have already started doing a research on the topic extensively and prospectively.

## Disclosure

The author reports no conflicts of interest in this communication.

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