Reviewer's report

Title: Survival Status and Predictors of Mortality in Severely Malnourished Children Admitted to Jimma University Specialized Hospital from 2010-2012, Jimma, Ethiopia: A Retrospective Longitudinal Study

Version: 4 Date: 20 September 2014

Reviewer: Michael Tunik

Reviewer's report:

Comments and recommendations on statistical methods and analysis

Comment
The use of Kaplan Meier and Cox regression analyses to determine survival and independent predictors of survival of hospitalized children with malnutrition is a reasonable and appropriate approach.

Comment
The authors did not perform a power analysis re the number of patients needed in their study. Given that this was an exploratory study, the lack of performing a power analysis is reasonable.

There was no analysis of or correction for missing data used. Approximately 10% of the possible patients analyzed had missing data and were dropped from the analysis.

Major Compulsory Revision
Recommendation:
Authors should report what impact this loss may have had on the analysis, and why no analysis of missing data was performed.

How were the 13% of patients who absconded handled – as they may have a different risk of death than those who did not abscond. Survival analysis using KM and Cox regression depends on those patients who are censored (lost to follow up) having the same risk of the primary outcome (death) as those who are not censored. If the absconded patients have a different risk of death the censoring of this group would be informative.

Major Compulsory Revision
Recommendation:
Authors should compare absconded patients with those who were surviving at that time but not absconded and determine if these 2 groups differed in baseline demographics and illness severity, as well as predictors of mortality.

Major Compulsory Revision
Recommendation:
As this was a pilot study, authors should recommend that the findings be confirmed in another setting before widespread acceptance and utilization of the study findings occurs.

Useful references:
1. Statistical Methodology: IX. Survival Analysis
   KELLY D. YOUNG, MD, JAMES J. MENEGAZZI, PHD, ROGER J. LEWIS, MD, PHD ACADEMIC EMERGENCY MEDICINE • March 1999, Volume 6, Number 3

2. Reporting quality of survival analyses in medical journals still needs improvement. A minimal requirements proposal
   Vctor Abraira, et al.
   Journal of Clinical Epidemiology 66 (2013) 1340e1346

**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**
I declare I have no competing interests.