Dear Editor,

We thank you for considering our improved manuscript for publication in BMC Pulmonary Medicine. We also thank your reviewers for their comments that helped us to improve our work.

We have modified our manuscript in the following ways:

- We have rewritten the final part of the Introduction in order to better define the hypothesis of the study, the outcomes and the rationale.

- We have modified some parts of Methods to respond to reviewers’ comments.

- We have restructured the Results section for a more clear and focused presentation, better emphasize the original part and the relationships between outcomes; we also reduced the text and put numbers mostly in tables.

- We have significantly reduced Discussion and Bibliography sections, with more emphasis on the original part of the results.

All changes (except deletions) are highlighted in the attached new version of the manuscript.

Below are point responses to reviewers’ comments.
We hope that in this new improved form our manuscript can be accepted for publication in your journal.

Best regards,

AS&DB

Fabiano Di Marco (Reviewer 1):

The main limitation is that the results are included and commented in the text in my opinion in scattered, even if the main driver was the statistical analysis instead of a real clinical curiosity.

We have stated in the final part of the introduction our hypothesis and rationale for this study, and we have restructured the Results section for a more clear and focused presentation, with more emphasis on the original part, namely the duration and settings of NIV and their influence on other outcomes. We think that in the present form it fulfills the criterion of real clinical curiosity.

Finally, due to the high number of studies in the same topic, Authors should clarify the main originality of this study which, otherwise, could be red as a mere description of a single center activity.

In order to underline the main originality of our study we have added a paragraph in the introduction section in which we better explain our aims and the novelty of our study. Also, to better present the original results of our study we have restructured the results section.

Abstract

The meaning of "NIV-39 72h (b=0.13, 95%CI: 0.04-0.21)." is not clear.

- NIV 72h is now explained in the methods section of the abstract

The meaning of "NIV failure" should be clarified also in the abstract.

- NIV failure is now explained in the methods section of the abstract

Is the meaning of "The aim of this study…..NIV parameters" is "ventilator setting"?
• The entire phrase has been rewritten and the expression “NIV parameters” has been changed to “ventilator settings and duration.” Also with regard to NIV settings and duration, mIPAP-72h (NIV settings) and NIV-72h (NIV duration) have been added as outcomes in the abstract section and introduction section.

Since "intubation rate" was not an outcome of the study the discussion of this result at the beginning of "result" section is inappropriate (better to include the results of NIV failure, LOS etc", which have been declared as the study outcomes.

• Intubation rate was removed from the results section. NIV failure and LOS were instead included

Methods

To better judge the center were the study has been carried out please clarify how long was the enrollment period (24 months?).

• It is now specified the exact period during which the study took place (i.e. 16 months).

The protocol is described thoroughly: is this a prospective study? If not, Authors should clarify that this is the "usual" approach in the center.

• This is a prospective study, as patients have been enrolled prospectively, and followed-up with a set of predefined criteria. However, this is an observational study, we did not interfere with physician’s decisions, and it is now specified that the management of NIV was done according to our internal protocol.

What about spirometry? It has been performed before (patients usually in follow-up at the center of after?).

• It is now specified that spirometry was undertaken before discharge

The reason why some patients died before/without intubation should be clarified.

• The description was incorrect because intubation rate was measured only in patients that were successfully transferred in the ICU but not in those patients with respiratory arrest
during NIV that died during resuscitation. The paragraph was rewritten. “Intubation rate” was removed and the management of NIV failure better explained.

Result section is quite confusing for the main reason I’ve discussed before. Data presentation should be driven by a clinical question, focusing on the original part of the study (if present). The current version of the paper seems a mere "flat" statistical analysis, with all the variable considered at the same level (sorry for this, but this is my point of view).

• Results section has been restructured for the data to be presented more clearly and more focused. There are now 3 main sections: patients characteristics, predictors of NIV settings and duration (formerly “NIV parameters”) which focuses on variables that influence the duration and settings of NIV (i.e the intermediate outcomes) and lastly NIV outcomes in which variables together with intermediate outcomes are analyzed in relation to the final outcomes (i.e NIV failure, LOS, mortality).

The discussion in too long, such as the number of references is redundant.

• The discussion section has been restructured with emphasis on the original part of the study. These original results are now discussed at the beginning of the discussion section. Also, many comments regarding the predictive factors (i.e. BMI, age, pH, pCO2 etc.) that were not specifically on topic have been removed. Therefore, the discussion section is now more concise. The number of references has been significantly reduced.

Zühal Karakurt (Reviewer 2):

Abstract

Definition of NIV failure is needed (ie: Intubation and or death ?)

• NIV failure is now explained in the methods section of the abstract

In result section: there are very much numbers.

Patients' number= 89, NIV failure: 5% intubation, 11% mortality Please defined in NIV failure % in abstract (in manuscript results section you mentioned NIV successful rate was 87.6%)
If so, 12.4% of 89 patients NIV failure were small number. You can defined only one predictor for NIV failure (each 10 NIV failure patients can show one predictor in multivariable regression test).

- The results section has been restructured for a better presentation of the data with emphasis on the original part of the study. NIV failure is now explained in the abstract. NIV success has been removed. No multivariate regression test was made for NIV failure for the same reason the reviewer has explained (i.e. low number of patients).

Results: p values are if significant please prefer 3 digits p<0.001 instead p<0.0001.
- p values have been modified

Discussion:
First paragraph was revealed the main results and at the end of first paragraph the literatures were nonsense!

- The discussion section has been restructured with emphasis on the original part of the study. The discussion now starts with comments on the intermediate results (i.e. NIV 72h and mIPAP 72h) and the continues with final outcomes (NIV failure, mortality etc.). Because of this, the formerly first paragraph is now the 7th paragraph in the discussion section. The reference of this paragraph has been modified to: Baydar O, Ozyilmaz E. Noninvasive Mechanical Ventilation in Acute Exacerbations of Chronic Obstructive Pulmonary Disease: Key Determinants of Early and Late Failure. In: Esquinas AM, editor. Noninvasive Mechanical Ventilation: Theory, Equipment, and Clinical Applications. Cham: Springer International Publishing; 2016. p. 249–57, in which these mortality figures are specified.