Reviewer's report

Title: Drug related problems in Neonatal Intensive Care Unit: incidence, characterization and clinical relevance

Version: 0 Date: 03 Aug 2018

Reviewer: Reviewer 2

Reviewer's report:

PEER REVIEWER COMMENTS: To view the full report from the academic peer reviewer, please see the attached file.

REVIEWER COMMENTS FROM REPORT: I have carefully read the paper on drug related problems in a single neonatal intensive care unit. Although I fully agree that the topic is of relevance, I still struggle with the methodological approach, related to the methods applied.

REQUESTED REVISIONS:

The lack of data on DRP in neonates may also relate to the high off label practices, and therefore the lack of guidance on how to qualify for DRP, likely due to the extensive variability in PK within the neonatal population.

The authors have selected the Lewinski tool, and subsequently used Neofax 2011, Micromedex and Uptodate, but the Lewinski tool is not validated for this population Neofax has not been updated since 2001 and even dosing suggestions differ between the different sources. How have authors handled these differences (eg meropenem in the top 3 of your list)? Similar, the probability and degrees of severity read as very arbitrary, not validated. How to assess gentamicin or vancomycin problems? based on TDM or dosing guidelines, but if so, how valid are these dosing guidelines (cfr Wilbaux reference in the list)?

The conversion from adverse (drug) reaction to DRP suggest causality assessment, and how has this been done?

The assessment does not consider wrong drug, like aminophylline instead of caffeine. Perhaps this decision is based on local rational decisions, but this is not supported by the available evidence on efficacy and tolerance.

Based on the study design (single unit, methods) I agree that this analysis may provide information as an audit, but that the relevance is very limited for other settings.
ADDITIONAL REQUESTS/SUGGESTIONS:

Minor:

supplements were excluded, but iron was kept in the analysis, any rationale?

how to discriminate between advice to doctors or to nurses?

was there any association between DRP and mortality?

treatment costs appear in the table, but are not discussed in the methods section, nor elsewhere, so how has this concept been handled?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

No

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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