Reviewer’s report

Title: Air pollution exposure is associated with MRSA acquisition in young U.S. children with cystic fibrosis

Version: 0 Date: 14 Feb 2017

Reviewer: Sylvia Costa Lima Farhat

Reviewer's report:

Thank you for the possibility to review the manuscript by Psoter et al.

This is an interesting study, and contributes to the discussion about exposure to pollutants and the increasing susceptibility to respiratory infection in children with cystic fibrosis.

The authors reported in a recent original article a similar association between PM2.5 exposure and risk of Pseudomonas aeruginosa acquisition in the same cohort.

However, I had some concerns as follows:

My minor comments

The authors evaluated the mean annual concentration of PM2.5 in the year prior to birth. This period encompasses the gestational period.

1- There is an association between prenatal exposure to air pollution and prematurity and low birth weight. Also, premature birth and/or low birth weight are considered as risk factors for a worse respiratory outcome later in life in children. Could these aspects influence on acquisition of CF pathogens?

2- Would the factors related to pregnancy and perinatal (maternal occupational exposure, maternal education, household incomes, preterm birth …) be associated with CF respiratory infection? Would they be a limitation of the study?

3- table 1: age at diagnosis ..month?

4- table 3: line 40. Change "are" to "were"

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

Yes
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.

Yes

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.

I am able to assess the statistics

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

Acceptable

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