

Review of: "Carriage of oropharyngeal bacteria among children in a vulnerable rural population living in a tropical region in São Paulo, Brazil"

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Potential competing interests: No potential competing interests to declare.

General comment

The present study is entitled "Carriage of oropharyngeal bacteria among children in a vulnerable rural population living in a tropical region in São Paulo, Brazil". The study had as its primary objective to determine the prevalence of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella catarrhalis* in the oropharynx among children of a vulnerable population living in a tropical rural settlement in São Paulo, Brazil. The study had as a secondary objective to identify the risk factors of *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Moraxella catarrhalis* associated with airway infections.

Overall, the findings from this study are of public health significance. This is an indication that the proper implementation and use of vaccines as an intervention can significantly reduce the burden of diseases locally and globally.

Minor comments

1. The manuscript is well written and easy to understand. However, the authors should properly edit the manuscript to address all grammatical errors.
2. There is a need for the authors to review the labelling of figures. This is applicable to figures 1A, 1B, and 1C.
3. *Haemophilus influenzae* should be properly written in the abstract and within the text.

Major comments

Introduction

1. The authors should clearly state the overall global morbidity rate of respiratory infections, with emphasis on bacterial-associated infections.
2. The authors should clearly outline the existence of different aetiologies of respiratory infections.

Materials and methods

Study design and settings

1. The description of the study design should appear before the description of the study setting.

2. The eligibility criteria and data collection procedures should be separated from the study design and settings. The eligibility criteria and data collection procedures should have separate subheadings.

Detection of *S. pneumoniae*, *H. influenzae*, and *M. catarrhalis* by polymerase chain reaction

1. The authors should include the reference of the article from which the primers were obtained.
2. The authors should give the reason for not extracting the bacterial DNA from cultures. This could have been a better choice to minimise false negative rates by PCR.
3. The authors should include the gel pictures with band sizes of the different bacterial isolates and the controls. A legend should be provided to explain the different lanes on the gel picture.

Results

Identification of pathogens by conventional and molecular methods

1. Table 1 should capture the socio-demographic characteristics of the study population.
2. The authors should design a table that clearly shows the conventional and molecular methods used in the identification of the different bacterial species.
3. The authors should include the multivariate analysis of risk factors based on the prevalence of the two bacterial pathogens (*Streptococcus pneumoniae* and *Moraxella catarrhalis*). This is because colour and use of antimicrobials are statistically significant.

Discussion

1. I am not sure if gender was a significant risk factor for having both organisms. The authors have to check their results before making this assertion.