Reviewer's report

Title: High prevalence of extended-spectrum beta-lactamase-producing Enterobacteriaceae carriage in a pediatric unit in Madagascar

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Reviewer: Pattarachai Kiratisin

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Andriatahina et al. describe the prevalence of extended-spectrum beta-lactamase-producing Enterobacteriaceae (ESBL-PE) in a pediatric unit in Madagascar. Although the authors had mentioned it in the DISCUSSION, the major pitfall of this study is to not using an updated and standardized method to detect and verify ESBL-PE isolates. This would reflect the credibility of the data. It would be more noteworthy to describe patients in groups; a group that remained to have no ESBL-PE for the entire hospital course; a group that had no carriage on admission and turned to have ESBL-PE carriage; a group that already had ESBL-PE carriage on admission and whether these patients remained to have the same organism or if there were changes in organism carriage. This information will help readers understand better about the evolving pattern of carriage and significance of this study.

Major Compulsory Revisions

1. The authors did not rationalize whether increasing carriage of ESBL-PE is correlated to infections among these patients, or just asymptomatic carriage. The clinical correlation of acquiring ESBL-PE during hospitalization and what are potential sources of these isolates would be important to mention.

2. Because the design was similar to a before-and-after (admission) study for patient group, the authors should note when the medical staff were sampling in order to see the correlation with increasing carriage among patients (if the medical staff were a potential source of ESBL-PE spreading or the medical staff also received the organism during the same study period as patients).

3. Since the environmental samples were collected each week, the authors should explain more in the RESULTS whether the positive samples were detected in which week, whether the number of positive samples was increasing during the later weeks, and whether the organisms detected were correlates with data from patients. More details on environmental sampling should make the study more comprehensible.

4. In the RESULTS/subheading risk factors, what the authors said regarding the average number of antibiotics prescribed during hospital was very unclear—it should be rewritten.

5. The discussion should be much more concise and directed to the objectives of this study.
6. Table 2 seems to be less useful because 1) there was no evidence whether the isolates from before and after admission were the same strains and 2) the study period was very short (1 month) to notice the changing resistance pattern. It may be described briefly only in text. Since a large portion of isolates may be acquired during hospitalization, it would be more interesting to instead compare between isolates that were acquired from community versus hospital.

7. Tables 3-4 are very difficult to understand and should be restructured.

Minor Essential Revisions

1. In RESULTS, data from medical staff were “rectal swab cultures” not “stool cultures”, please correct it.

2. There are several misspells throughout the manuscript.

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests