Reviewer's report

Title: Sequence analysis of genes mediating extended-spectrum beta-lactamase (ESBL) production in isolates of Enterobacteriaceae in a Lagos Teaching Hospital, Nigeria.

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Reviewer: Antoine Talarmin

Reviewer's report:

Major compulsory revision:

1. The authors do not refer to their previous study "Raji MA, Jamal W, Ojemhen O, Rotimi VO. Point-surveillance of antibioticresistance in Enterobacteriaceae isolates from patients in a Lagos Teaching Hospital, Nigeria. J Infect Public Health. 2013 Dec;6(6):431-7." The design is the same and it seems that the strains described in the present study were isolated during this previous study. I think that they should mention this study as a continuation of the previous one and probably modify the manuscript according to this.

Material and methods.

2. References are given for some of the BLA primers but for others the sequence is given. Could the authors explain how these primers were designed?

Results section.

3. There is inconsistency between the results given in the text and table 2. E. cloacae is described in table 2 but not in the text.

4. Table 2 cannot explain all the BLSE described in the study. Indeed, at least 2 E. coli and 1 Proteus have no CTX-M and no SHV, and TEM-1 cannot be responsible for ESBL. Therefore this should be explained in the text in a sentence explaining that the ESBL gene could not be found for...

5. "As demonstrated in Table 1, inspection of the MICs for piperacillin-tazobactam together with ceftazidime and cefoxitin could predict CTX-M-15 positive isolates as their MIC90s were >256 µg/ml each and 12 µg/ml, respectively." I don't understand the meaning of this sentence. Do you mean that MICs > 256 for ceftazidime and Pipe-tazo and MIC <12 for cefoxitin is typical of CTX-M15? If so, table 1 should also show the results for other ESBL? If not, this sentence should be omitted.

Discussion.

6. I am surprised that when the authors describe the prevalence of CTX-M 15 they only cite studies from Europe, Middle-East or America. Studies from Africa would have been more relevant.

They say "The ESBL-producing E. coli that had been reported from Nigeria [34,
were not characterized making it difficult to compare our findings with others in the country.” However, when I search CTX-M + Nigeria in PubMed, 11 references are found.

I don’t know why the authors chose to ignore these data but it is important that they change the discussion.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**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