Reviewer's report

Title: A unified approach to molecular epidemiology investigations: tools and patterns in California as a case study for endemic shigellosis

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Reviewer: Thandavarayan Ramamurthy

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This manuscript by Al-Nimri et al describes about the molecular epidemiology and antimicrobial resistance of Shigella isolates from endemic cases in California. Following are the comments for the author’s consideration.

1. What is the rational for using Selenite-F broth to revive the obtained cultures from County Health Departments? This enrichment medium is being used for the selective isolation Salmonella rather than Shigella.

2. Lines 93-94. The serogrouping data was provided by the Health Departments. Is their any variation in the results generated by the authors compared to the one obtained from the Health Departments.

3. PFGE analysis: It seems the authors seems not followed the PulseNet protocol for PFGE of Shigella spp. They used Lambda ladder instead of recommended Salmonella Braenderup H9812. Moreover, the DNA bands are not sharp as they might have used disposable plug models instead of recommended one.

4. In this manuscript it is not clear which serotype is prevalent among S. flexneri isolates. In developing countries S. flexneri Type 2a and 3a are common.

5. Lines 208-210. These values were statistically insignificant to support the statement.

6. Line 212. Which species?

7. In this study, it is apparent that apart from blaTEM gene other bla allele(s) might be present in S. fleneri.

8. In some places serotypes are referred as species (e.g line 234)

9. Lines 265-266. This is an important statement provided the authors could furnish the exact serotype (Type 2a?).

10. Figs 4 and 5 are giving the same information provided in the text and can be removed.

Level of interest An article whose findings are important to those with closely related research interests
Quality of written English Needs some language corrections before being published
Statistical review Yes, but I do not feel adequately qualified to assess the statistics.
Declaration of competing interests 'I declare that I have no competing interests'