Reviewer's report

Title: Do Pediatric Emergency Departments Pose a Risk of Infection?

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Reviewer: Susan E Coffin

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Little is known about the mechanism(s) and frequency of healthcare-associated infections (HAI) after non-inpatient encounters. Such knowledge is clearly needed to establish priorities and design effective interventions. In this report, Quach et al describe their efforts to "determine the risk of infection attributable to a pediatric Emergency Department visit". Although there are significant methodologic limitations to this study, it does provide some feasibility data and helps define some of the methodologic issues which should be addressed when designing future studies.

COMMENTS:

1) The methods describe the study population as being assembled by convenience sampling, and describes the study as a pilot. I recommend that the authors mention that they consider this to be a pilot study in their abstract.

2) The question of how to best select controls for this study is difficult. To examine whether an ED visit was associated with an increased risk of new-onset infection, it would be best to compare children who had an ED visit to those who did not (not to children who had an ED visit in the more distant past). Although inefficient, random digit dialing might be a strategy to consider in the future to help minimize the various biases that are introduced by the current scheme to select controls.

3) I am concerned about the outcome definitions. Are these validated definitions or definitions that have been used by prior investigators?

4) Interestingly, many of the "new infections" reported in the exposed group (recent ED visit) seem to have occurred in patients who had an ED visit for an infection. This raises the possibility that the "new infection" was actually either progression of the infection that led to the original ED visit or a complication of a treatment given.

5) It is unclear what variables the authors put into their multivariable model (where presumably the outcome was any new infection). Consider adding these variables to table 1 (esp. intra-familial infectious contact).

6) The discussion should be more concise. The paragraph on the similarities between this study and studies performed in day care settings should be shortened. A more clearly organized paragraph on limitations would be helpful.
Level of interest: An article of insufficient interest to warrant publication in a scientific/medical journal

Quality of written English: Not suitable for publication unless extensively edited

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.