Dear Editor(s) and reviewers,

October 09, 2024

Please find herewith our new manuscript entitled ‘Estimating nosocomial transmission of micro-organisms in hospital settings using patient records and culture data' submitted for publication consideration in *Epidemics.*

In the file answer.docx, we provide answers to all reviewers' comments. Our findings are in line with the ones presented in the first submission. We extended the investigation of the identifiability of the model on lower importation rates for simulated data. We additionally showed that the parameter estimates for the 7 microbial pathogens remain stable on a broader range than the one we found in the literature. Lastly, we investigate the possibility that the COVID-19 dynamics changed our parameter estimates. Our finding remain unchanged, we find both nosocomial transmission rate and the effective sensitivity for all pathogens but *E. coli* span a similar range. For *E. coli* we find it's nosocomial transmission is negligible.

**Keywords:** epidemiology | pathogenic bacteria | agent based model | Bayesian inference

Sincerely yours,

Jaime Cascante Vega

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Jeffrey Shaman