9th October 2019

Dear Wellcome Open,

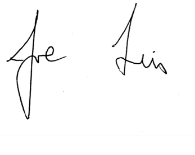
It is our great pleasure to submit our manuscript entitled “*Prevalence of and risk factors for gut mucosal colonisation with extended-spectrum beta lactamase producing Enterobacteriaceae in sub-Saharan Africa: a systematic review and meta-analysis”* for consideration for publication.

The basic epidemiology of ESBL-E colonisation in sub-Saharan Africa (sSA) is poorly described. Using systematic review and meta-analysis of 32 studies, we show that in parts of sSA, the prevalence of colonisation with ESBL-E is among the highest in the world. Hospitalisation, antimicrobial exposure and water hygiene practices are drivers of carriage, highlighting differences with high-income settings and that interventions to interrupt transmission may be different in low-resource settings. To this end, we highlight numerous data gaps that must be filled to design such interventions: long term longitudinal studies are lacking, the role of HIV in driving ESBL-E carriage is poorly defined, many studies introduce bias by selective recruitment of populations, and there is widespread unexplained heterogeneity in time and space across the continent. Our study not only provides estimates of ESBL-E carriage in sSA, but can therefore serve as a first step to informing intervention studies designed to interrupt ESBL-E transmission in sSA, and contributes significantly to the global literature.

All authors have seen and approved the manuscript, contributed significantly to the work, and the manuscript has not been previously published nor is not being considered for publication elsewhere.

Thank you for considering our paper. We look forward to hearing from you.

Yours sincerely,



Dr Joseph Lewis