Reviewer’s report

Title: Forecasting ESKAPE infections through a time-varying auto-adaptive algorithm using laboratory-based surveillance data

Version: 2 Date: 10 September 2014

Reviewer: Nicola Petrosillo

Reviewer’s report:

This is a well written manuscript on the use of a TVA algorithm to allow a fast self-adapting learning of the time series of isolated ESKAPE infecting pathogen. The aim of this approach is to provide regularly physicians with forecasted bacterial infection rates, that can be useful for monitoring the spread of MDR organisms, and also for a clinical approach.

Concerns:

1. The authors should give more details on the utility of this approach in modifying the infection control policies, including antimicrobial stewardship programs, when needed, and every single antimicrobial empirical approach in the healthcare settings.

2. The authors mention the work of a team for IC and antimicrobial stewardship (AS). Is this approach capable to monitor the effectiveness of their IC and AS programmes?

3. Ethics committee unneeded is written twice, at page 5 and 6.

4. It is not clear the source of the isolates and how many of them were colonizing. Can the authors provide with this information?

Level of interest: An article of importance in its field

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

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