Reviewer's report

Title: A prospective observational study of the prevalence and risk factors for colonization by antibiotic resistant bacteria in patients at admission to hospital in Singapore

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Reviewer: Meng Xiao

Reviewer's report:

The aim of the study by Young et al. was to investigate the prevalence of MDRO colonization and potential contributed risk factors. However, in my opinion, this study did not presented much interesting results, and failed to achieve sufficient informative data to support.

- Major Compulsory Revisions

As described in Introduction section, the authors’ team intended to enroll three major MDRO species (MRSA, ESBL-E and VRE) for analysis. However, only 18 MRSA isolates/1006 patients were obtained, and no VRE isolate detected at all. As the prevalence of MRSA and VRE is low, increasing sample size is essential. Otherwise, case-control study is recommended.

In the meantime, molecular typing approaches is recommended to support the hypnosis that subsequent infection was caused by MDRO previous colonized on the same patient. Otherwise, nosocomial horizontal transmission cannot be excluded as cause of MDRO infection.

- Minor Essential Revisions

1. Abstract: it is not appropriate to conclude “High rates of colonization with ESBL-E among patients at admission are significant challenges to infection control and empirical antimicrobial therapy.” based on evidence from the present study.

2. Background, paragraph 3: need solid supports for “As many infections derive from host flora, colonization by multi-drug resistant organisms (MDROs) is a risk for multi-drug resistant infections.”

3. Methods, “Participants and setting”, paragraph 1: how many ED visits average per month?

4. Methods, “Participants and setting”, paragraph 3: the author mentioned that “Positive culture results within the 12 months following admission for each participant were extracted from the hospital microbiology database.” However, some useful data, e.g. patients' length of stay in hospital and final outcomes (died or not) was not given. Therefore, it is hard to judge if there’re any potential bias in sampling.
Level of interest: An article of limited interest

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