Reviewer's report

Title: Feasibility and impact of an intensified antibiotic stewardship programme targeting cephalosporin and fluoroquinolone use in a tertiary care university medical center

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Reviewer: Vincent CC Cheng

Reviewer's report:

This is a nicely conducted study to demonstrate a reduction of overall antibiotic consumption after an intensified antibiotic stewardship program. The major limitation has been addressed by the authors that the changes of prevalence on multiple drug resistant bacteria were not assessed.

Although the authors focused on (or discouraged) cephalosporin and fluoroquinolone use, the overall consumption of carbapenems, tetracyclines, and macrolides were also reduced significantly during the intervention period. In addition, the trend of monthly antibiotic usage density was decreasing. The result is very promising.

Major Compulsory Revisions:

It is important for the author to describe the detail of the control program. Although the authors described the provision of lectures, and short term briefings, as a part of the control program, it is well-known that staff education alone is least effective. The authors should describe the detail on the audit such as any use of immediate concurrent feedback? As for the bedside infectious disease consultation, can the ID physician change the antibiotic prescription at the bedside? or the ID physician only make recommendation to the primary care team? If so, what is the compliance of the primary care team to the recommendation by ID physician?

Is there any reason to explain the reduction of carbapenems during intervention despite increasing rates of EBSL-producing organisms since 2010?

Is there any reason to explain the reduction of tetracyclines, and macrolides?

Is there any reason to explain the non-significant reduction of overall antibiotic usage density in the control departments?

In general, antibiotic stewardship program often faced a challenge of “squeezing a balloon”. The authors can achieve an overall reduction of antibiotics without change in the patient outcomes in terms of hospital deaths and DGR case-mix index. Does it imply that there was a high level of inappropriate antibiotic usage in the baseline period? Therefore, a simple intervention (by means of staff education, audit, and bedside consultation) can make a significant reduction?
Minor Essential Revisions:

Please specify the commonly used drug items under the category of penicillin, cephalosporin, and fluoroquinolones in the method.

Add footnote in Table 1 for BLI.

Please specific RDD/100 as RDD per 100 patient-day in the method

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

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