Reviewer's report

Title: Resource use by patients hospitalized with community-acquired pneumonia in Europe: analysis of the REACH study

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Reviewer: Maddalena Giannella

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Ostermann et al. performed the analysis of resource use in the management of hospitalized patients with CAP recruited in the REACH study. Resource use was higher for patients with HCAP or immunosuppression than for CAP patients, and for patients in which antibiotic escalation was necessary, those with comorbidities, patients who experienced recurrences and those who presented septic shock. By the median days of hospital stay, the cost of hospitalization per each participating country was estimated.

Major comments

1. The purpose of the study is clear, but some variables considered for analyzing the resource use in CAP patients, such as parenteral nutrition and renal failure, may be due to the underlying conditions of patients rather than pneumonia. On the other hand, septic shock is a definition of infection severity and not a marker of resource use.

2. In material and methods definitions of "initial antimicrobial treatment modification", "comorbidities", "recurrences", "septic shock", "immunosuppressed/immunocompromised" and "isolation required" should be provided. The definition used for HCAP is very different from that used by most authors, in my opinion authors should explain why they have used such a definition.

3. In the results, the paragraph "Hospital stay and resource use" is too long and it repeats the data shown in the tables.

4. The lack of data about antimicrobial costs is a limitation of the study and, in my opinion, it should be addressed in the discussion.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I declare that I have no competing interests