Reviewer's report


Version: 1

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Referee's comments to the author(s)

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This epidemiologic study focusing in severe sepsis (SS) in Spain provides updated data (2006-2011) nationwide. It does not only consider ICU cases but all cases of SS.

The strengths of the study are the number of included cases and the completeness of the administrative data base but the weaknesses are inherent to this type of study:

- Contribution of ICUs to the total number of admission for SS?
- Separate analysis of hospital stays with or without ICU admission.
- No information related to centers: n, number of beds, numbers of ICU, presence of intermediate care unit, number of ICU beds, teaching status,....
- No detailed information regarding the case-mix even if some informations are provided. For example, the percentage of patients with documented infection or positive blood culture is low compared to published studies raising concern on coding accuracy and completeness.
- No scores of severity: SAPS, SOFA?.. and no assessment of workload.
- The incidence of SS increased over time but it could be related to several factors besides coding such as changes in case-mix with more patients with cancer, immunosuppressive treatments, steroids, aplasia,....
- No distinction between hospital-acquired infection and community-acquired infection.
- No detailed information regarding the treatment received: organ supports, antibiotics, other procedures
- No definition of ICD-9 codes and organ failure
- Among surgical patients, it is important to separate planed surgery and urgent surgery.