Reviewer's report

Title: Aetiology, antimicrobial therapy and outcome of patients with community acquired severe sepsis: A prospective study in a Norwegian university hospital

Version: 1 Date: 22 September 2013

Reviewer: Shravan Kethireddy

Reviewer's report:

I commend Nygard and colleagues for conducting this one year prospective study to assess key clinical aspects of community acquired severe sepsis in order to better serve their patients. This type of quality related translational research is necessary to identify how best to serve all of our patients and address gaps in care. The findings suggested by this study are not surprising and, as the authors correctly cite, is supported by extensive prior data.

Major revisions:

1) While the intent of the study was laudable the paper requires substantive content revision. The paper was difficult to read due to poor flow and organization. For example, the Background section was a meandering unfocused review of the literature without clear concise outline. Why mention adjunctive therapies when it has no relevance to your research question? A typical background summary should be focused to a brief few sentences defining the problem and then describe why and what the objectives of the study are.

2) Conclusions regarding outcome are not supported since severity stratification was not conducted. Multivariate logistic regression cannot make up for absence of severity stratification. If severity stratified the number of patients may be too small to arrive at the same conclusion. I am not clear as to why a prospective observational study was conducted. It appears that much work went into this study though I think in the absence of an intervention to compare to, a retrospective study would have likely been a convenient method to obtain patient data. This data in addition to your current data would increase the number of patients considerably.

3) Appropriateness of clinical decision making in the ER and physician compliance to guidelines is a different entity than what was described in the title and objectives. It is an associated topic that is different than the current objectives. It offers little insight into what the actual causes for appropriate vs inappropriate therapy were. It is excellent that drug resistance is nowhere near as prevalent as many other places in the world. However looking at the suggested antimicrobials for routine infections it seems hard to understand how one can choose inappropriate antiinfective therapy when Penicillin G is recommended for many infections....a situation not common most places.
Level of interest: An article whose findings are important to those with closely related research interests

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