Reviewer's report

Title: A systematic review of clinical guidelines on the management of acute, community-acquired CNS infections

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Reviewer: Matthijs Brouwer

Reviewer's report:

The authors have performed a systemic review of clinical guidelines on the management of community acquired CNS infections. Both bacterial and viral CNS infections are considered.

The CMGs have been developed for different audiences in different countries in different time frames, which each may have a different population at risk. That the CMG's vary in diagnostic and therapeutic guidelines is therefore not surprising. The added value of the comparisons presented in this review is limited in my view. The review does not aim to extract some sort of consensus of guidelines or common view on treatment of the diseases but identify the differences. These are relatively minor in my view.

The introduction is unclear. The authors selected bacterial meningitis and viral encaphalitis, while there are many other CNS infections. It is stated the rationale for performing this review is that CMGs are important tools identifying emerging infectious diseases but few of the guidelines focus on diagnostics. Most guidelines do not aim to provide case definitions, which is more important for instance for clinical trials than it is for treatment guidelines. It is unclear how "harmonization of diagnostic and clinical management practices" can inform public health outbreak responses. The authors state the review is part of PREPARE's mission to provide clinical data to inform clinical and public health care responses, but I fail to see how this review facilitates this goal.

The boxes providing some of the used definitions of encephalitis are not very helpful as they only reflect a minor part of the guidelines. The case definition in box 4 is also unhelpful as it provides no cut-offs for e.g. CSF white cell differential - but just mention "consistent with bacterial meningitis". What is consistent with bacterial meningitis? We know 10% of cases have less then 100 leukocytes/mm3 in their CSF. The clinical criteria also very vague.

Table 2 is quite unclear, is the purpose to show the number of guidelines that mention these common signs and symptoms or a very small set of patients in which the symptoms are described (8,10 and 10). if is the latter, the numbers are too small to be informative. Describing how many guidelines mention a symptom as 'common' is also not useful.
Table 3, 4 and 5 are not very clear and again not very helpful.

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Yes

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Not applicable

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