Reviewer’s report

**Title:** Prognostic Factors Related to Sequelae in Childhood Bacterial Meningitis: Data from the Meningitis Registry

**Version:** 1 **Date:** 16 August 2010

**Reviewer:** Allan Tunkel

**Reviewer’s report:**

This is a revision of the article by Vasilopoulou et al on "Prognostic factors related to sequelae in childhood bacterial meningitis: data from the meningitis registry." The authors have made significant improvement to their manuscript, based on the comments of all of the reviewers, but I continue to have some concerns and comments as follows:

1. In the results section of the abstract, the authors need to add some additional specific information. When discussing rate of acute complications, they need to include the complications being assessed. The same is true for the sequelae. The reason to add it here is that someone just reading the abstract would not have those specifics.

2. In the background section on page 2, line 5, I don't understand what they mean by the statement that the impact of the vaccines could be 'enlightened' further.

3. In the methods section of pages 4 and 5, they discuss the definitions of probable and confirmed bacterial meningitis. They reference an article by Chavez-Bueno and McCracken as including the WHO definitions. However, I pulled the article and cannot find those definitions. For the confirmed cases, did patients have to have evidence of meningitis by CSF examination as that is not included? What is Fadebact?

4. On page 5 for the definition of acute complications, I find it limiting that only arthritis and subdural effusion were included. Why were other items, such as seizure and hypotension, not included?

5. On page 8, line 3, they mean "confirmed" not "documented" cases. Should stick to the terms in the definition. On the bottom of the same page, they found significant differences with a decrease in the duration of symptoms of the time periods. What is being compared to get this significant difference? Comparing A to B, or A to C, or B to C?

6. On page 9 under clinical data, the authors do explain in the tables why they don’t have data for all the clinical parameters, but how can they say that 93.2% of patients had fever when an initial temperature was only measured in half of their patients? The same is true for some of the other parameters with low denominators. I then find it even more difficult to make comparisons in clinical
findings between age groups (Table 2) when the numbers of patients assessed may not be complete. I certainly understand it is based on data in the registry, but if the data are incomplete, perhaps these parameters should not be assessed or compared?

7. On page 10 in the paragraph comparing the time periods, I have the same concern that I have elucidated above. The authors are giving percentages of patients with a clinical presentation, but the registry may not have the complete data.

8. On page 11 in the paragraph on the rate of acute complications, were arthritis and subdural effusions the only ones and did no patients have both of these complications?

9. Tables 3, 4, and 6 are the most important and perhaps this is the data that should be the primary focus of their paper.

10. I continue to be unclear about the significance of Figure 1. It is not an algorithm but simply shows that the more negative factors you put together increases the risk.

11. For comparison of the times periods A, B, and C, I think it would have been more interesting to see the decrease in incidence of various pathogens, particularly Hib, rather than extrapolate that Hib must have gone down because symptoms usually attributable to that organism have decreased.

12. On page 12, line 6 from bottom, I am not sure what is meant by have 'appointed'.

13. Table 1a. Not sure of the validity of percentages when denominators are low in many categories.

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

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I have no competing interests.