Reviewer's report

Title: Global Epidemiology of Invasive Meningococcal Disease

Version: 1 Date: 15 January 2013

Reviewer: James Stuart

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This paper describes a twenty year global review of surveillance data on invasive meningococcal disease, with the aim of informing priorities for vaccine intervention. The tables summarising the data by country represent a considerable body of work.

Major Compulsory Revisions

1. The search methodology is very broad but difficult to accomplish effectively given the number of papers to review. The criteria for inclusion should be stated. Some criteria for exclusion are specified. Exclusion of non-English publications is acknowledged as a limitation but is an important deficiency in a global review of meningococcal disease.

2. The review was conducted up to the end of 2010. It might be reasonable to update for publication two years later. Even if not, it would be useful to refer to significant relevant publications since the review e.g. an epidemiological review of meningococcal disease in Asia by Vyse A et al (published 2011).

3. The table should be checked and revised. It is clearly stated that countries are not listed in the table if they have insufficient data to permit classification. Yet this is inconsistently applied. Sudan is included without data, and the Cote d'Ivoire is included in the high incidence countries without data to support this.

4. The referencing needs a complete and thorough review. To take two examples: (i) The pre-vaccine incidence in Ireland is given as 14.8 (ref 25-27). Ref 25 refers to Canadian epidemiology, ref 26 is not identifiable, and although I could not locate ref 27 on PubMed it only refers to six months data. (ii) The age distribution is stated as having two peaks (refs 48-50). Ref 48 refers to a paper on managing outbreaks in Ireland, Ref 49 contains one year’s data from Australia and Ref 50 is from the US (authors missing). Do they have evidence that the two peaks in age distribution apply to the African meningitis belt? Fig 4 from Niger shows proportions by age not incidence, but the incidence data in this paper shows high incidence throughout childhood.

Minor Essential Revisions

5. Permission to reproduce figures is advisable. Figs 2 and 3 are the same as those in the Harrison review paper (ref 5) and Fig 4 comes from the Niamey paper referenced. Fig 4 does not make the relevant point (see above).
Discretionary Revisions

6. Although in the abstract they give criteria to identify priority countries for vaccination (high/moderate incidence due to vaccine preventable serogroups), it would be helpful if these were identified in the table.

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