Reviewer’s report

Title: The global impact and cost-effectiveness of a melioidosis vaccine

Version: 0 Date: 26 Nov 2018

Reviewer: Robert Hogan

Reviewer's report:

The manuscript by Luangasanatip and colleagues is focused specifically on impact of a vaccine against Burkholderia pseudomallei (Bp) on human health and the economic outcome of preventing melioidosis. Bp is a significant human disease as the bacteria are present in the soil/environment in at least 83 countries across the globe. Additionally, it is inherently resistant to antimicrobials, can infect humans via multiple routes, and diagnosis is extremely difficult. These and other factors contribute to the >50% rate of death. While estimates suggest that ~164,000 people a year are infected with Bp, this is likely a very low estimate given the lack of effective and accurate diagnostic tests that exist for other pathogens. While there has been a slight increase in funding and research for effective vaccines, more needs to be done. Thus, the report by this group is extremely important as only one other similar study, which was focused solely on one country, has been published. The manuscript is very well written, strikes a good balance of including variables (e.g. stating n=4 target populations, n=4 melioidosis endpoints, etc.) versus being too narrow in scope, and the assumptions made to calculate benefits to the world economy and human health are very well explained and logical. In addition, the use of 50% efficacy and protective immunity lasting 5 years seem reasonable as is the use of the HPV vaccine as a foundation. In closing, the only issue I found in this report was a single misspelled word (Conclusions) in the abstract. Hopefully, these results will be useful in garnering both awareness and investment in vaccine development to prevent melioidosis.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

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Yes

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Yes

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I am able to assess the statistics

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