Reviewer's report

Title: Dynamic models of pneumococcal carriage and the impact of the Heptavalent Pneumococcal Conjugate Vaccine on invasive pneumococcal disease.

Version: 1 Date: 29 October 2009

Reviewer: Keith Klugman

Reviewer's report:

This is an interesting model - the prediction of eradication of carriage of VT strains seems to be borne out in the US - the question of the invasiveness of replacement strains is controversial - clearly with the exception of 19A which should have been in the vaccine and is in the 13v - the US replacing strains lack much virulence (if there is complete replacement in carriage - as there is - then if replacement strains have similar invasiveness to VT strains then replacement IPD will be complete - as this has not happened - replacement strains lack invasiveness) - whether the UK situation is different depends on one’s confidence that the replacing strains are truly replacing or simply part of a cycle of epidemic types.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

I have received research funding from Pfizer Vaccines and consulting fees from Pfizer, GSK and Merck