

Optimising pneumococcal vaccination strategies and the use of mathematical models

Flasche Stefan(Stefan.Flasche@lshtm.ac.uk)
London School of Hygiene & Tropical Medicine

Abstract

Pneumococcal disease is among the main causes of under 5 child mortality worldwide. Pneumococcal conjugate vaccines (PCVs) have been key in mitigating this burden in the last decade but have a number of shortcomings including that they target only some of the many pneumococcal serotypes and their high price. However, by preventing onward transmission from a vaccinated individual they have the potential to induce powerful herd protection for the whole community, opening up a range of possibilities to optimise PCV use by focusing on transmission dynamics. This talk will give an overview of mathematical modelling approaches to look at those alternative strategies.

Keywords: *pneumococcus, vaccine, models*

Biography

He has a diploma in mathematics and did his PhD in mathematical modelling of infectious diseases. As of 2018 his research in this area is funded through a Sir Henry Dale Wellcome Trust Fellowship. He currently serves on World Health Organisation's Strategic Advisory Group of Experts on Immunisation's pneumococcal and dengue subgroups, and the UK's Joint Committee on Vaccination and Immunisation's pneumococcal subgroup.