Which age groups should be targeted for mass vaccination campaigns?

Dr Caroline Trotter

clt56@cam.ac.uk

Considerations

Conjugate vaccines work due to a combination of direct and indirect (herd) protection

Mass campaigns provide both, **if** the age groups driving transmission are included

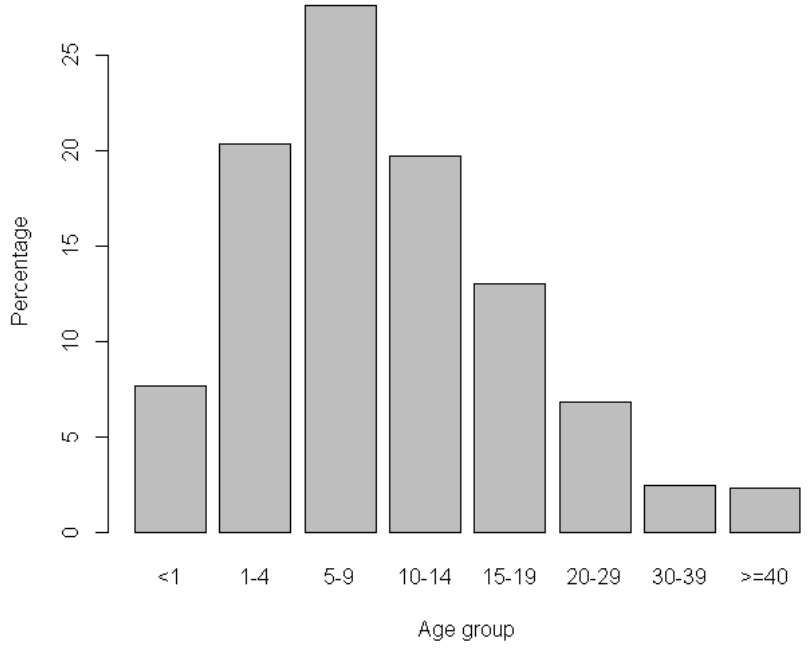
-MenC campaigns in UK and Netherlands

-MenAfriVac implementation across the meningitis belt

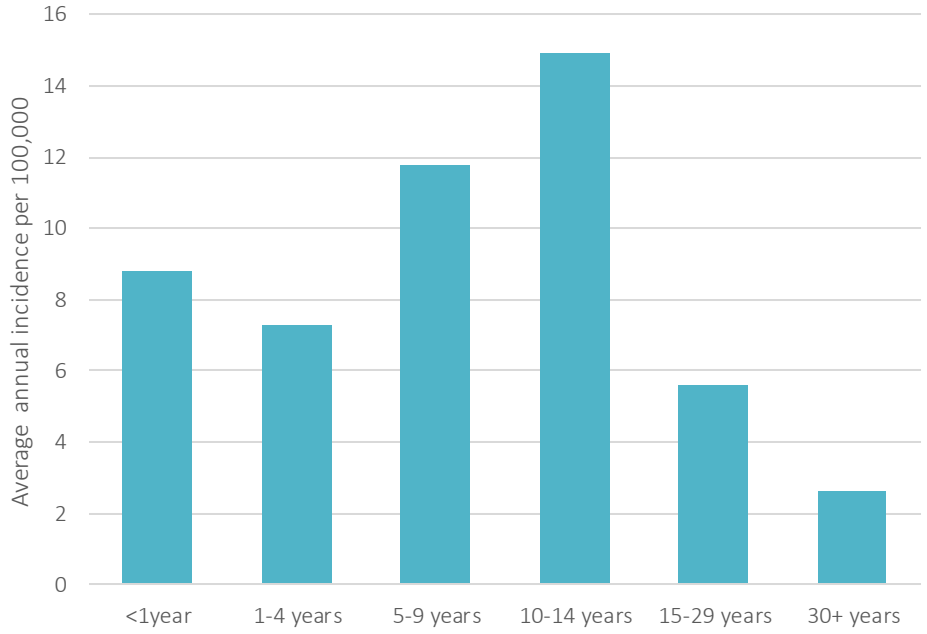
Models can be useful in simulating a wide range of options to investigate e.g.

- changes to UK MenC schedule
- long term strategies for MenAfriVac
- age targets for multivalent meningococcal vaccines

Direct protection: Age-specific risk of meningitis

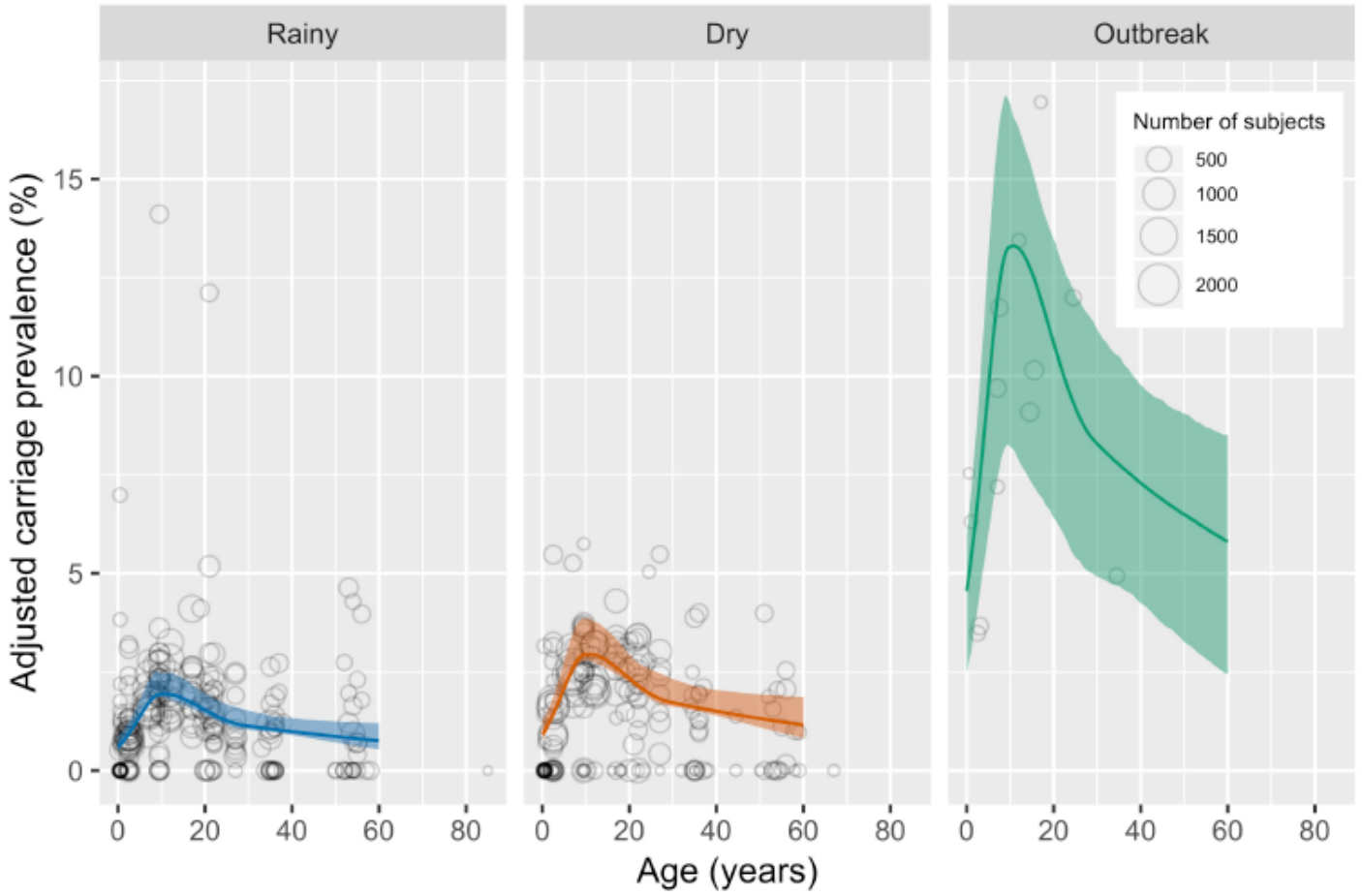


Age distribution of Nm disease in Niger, Campagne et al, Bull WHO 1999



Age-specific incidence of Nm disease in Burkina Faso, Chad, Mali, Niger, Togo reported to MenAfriNet. Soeters et al JID 2019

Indirect protection: Age-specific prevalence of carriage



Systematic review and meta-analysis of meningococcal carriage prevalence in Africa shows peak around 10-12 years of age.

But this peak is much less marked than in the analysis of studies in high income countries

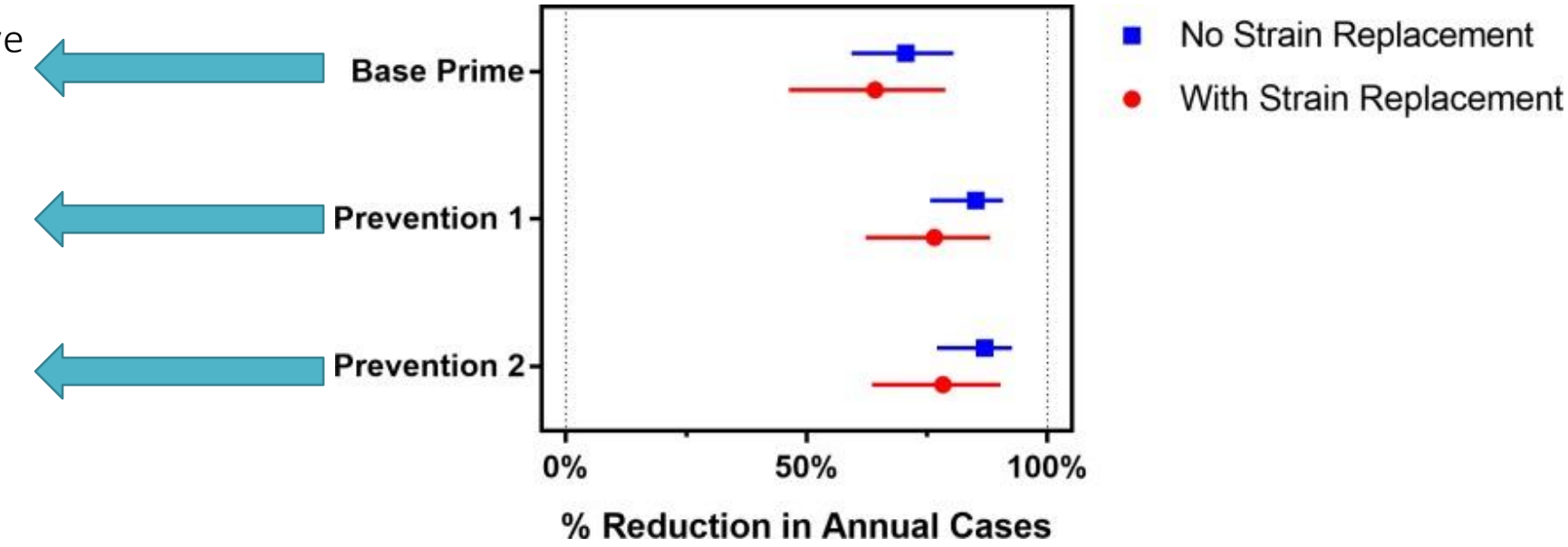
Cooper et al, Epi & Infect 2019

Campaigns 1-29 years vs 1-18 years

Routine EPI plus reactive vaccination (1-29)

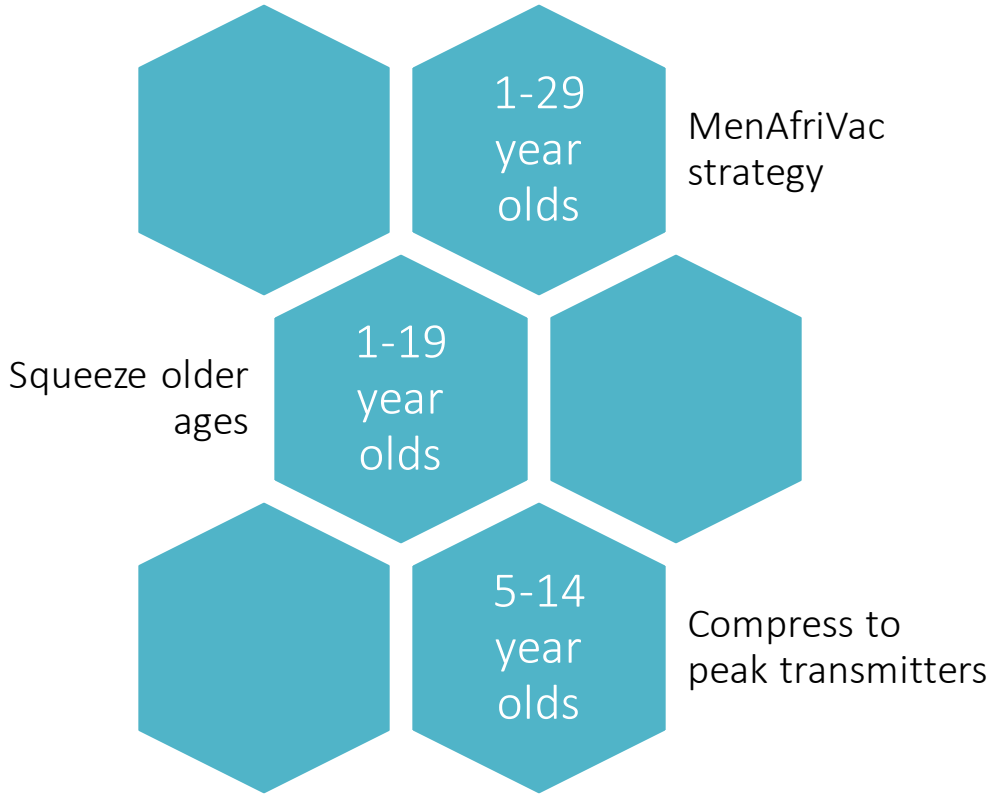
*Routine EPI plus 1-18 year old campaign

*Routine EPI plus 1-29 year old campaign

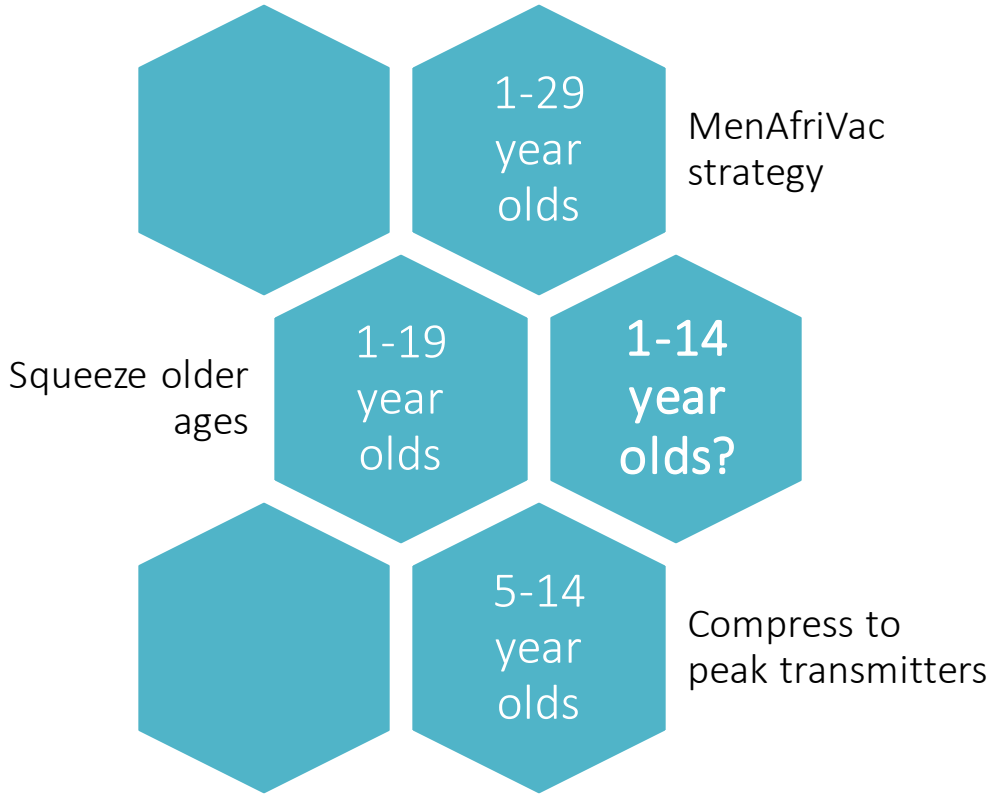


Yaesoubi et al, PLOS Med 2018

A range of options



A range of options

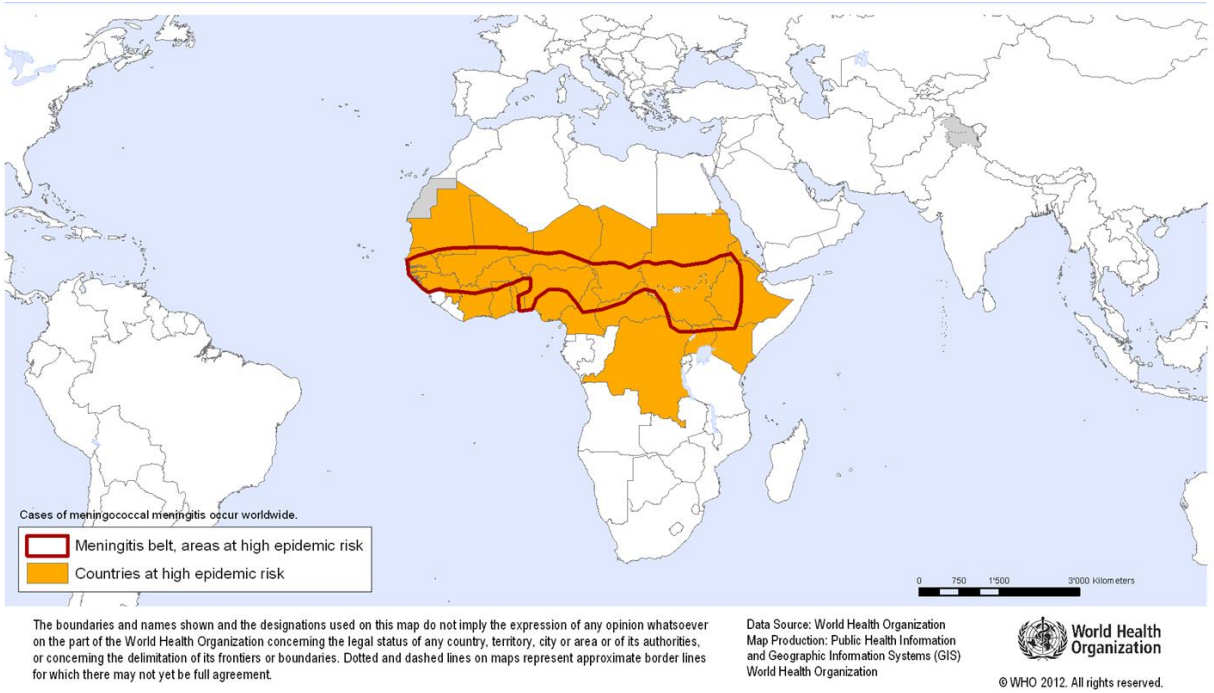


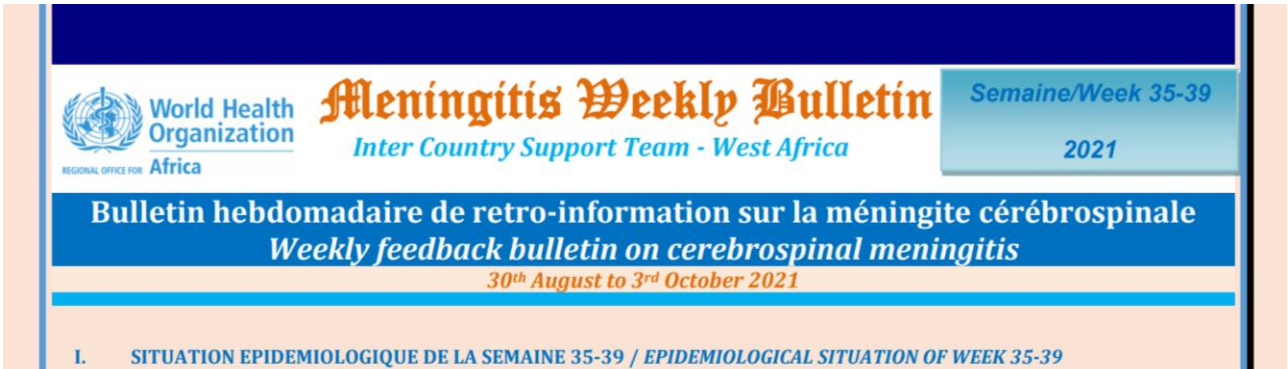
To be modelled…

Geographical risk

Expand the existing meningococcal programme to support a **targeted approach** that includes ACW-containing multivalent meningococcal conjugate vaccines, contingent on WHO SAGE recommendation and a licensed, prequalified product that meets the financial assumptions of this investment case

Gavi 2018





Thank you