Leo Visser - Yellow fever

Climate change, deforestation, urbanization and increased population mobility have made the risk of large outbreaks of yellow fever (YF) more likely than ever. With the growing connectivity through air travel, countries with high densities of non-immune populations and of the urban mosquito vector, *Aedes aegypti*, should ensure that their citizens are properly vaccinated against YF before travelling to a YF endemic country.

Current YF vaccine production barely meets demands. However, the excess of infectious viral particles in routine YF vaccine batches allows for off-label use of fractional dose YF vaccination in response to emergency situations.

Two studies have now confirmed long-term protection after fractional dose YF vaccination. The need for the presence of virus neutralizing antibodies (VNA) to protect an individual against yellow fever depends on the epidemiological setting. In case of sylvatic transmission, population immunity is irrelevant for individual protection, as mosquitoes are transmitting the virus from infected non-human primates to man. In this situation the presence of protective levels of VNA will determine the outcome, and may require revaccination at some point in time.

Learning objectives

After this lecture the participant can

1. Explain the current epidemiology of yellow fever

2. Apply the principles of yellow fever vaccination into practice

3. Understand the controversy about lifelong protection after yellow fever vaccination