

Facing up to reality? What to do if M72/AS01E doses are limited

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Background: The Ph3 trial for the vaccine candidate M72/AS01E is underway, and, assuming a positive result, could be licensed by 2030. Modelling suggested a large potential impact from introducing M72/AS01E but assumed an unconstrained dose supply. However, at least initially, it is likely that M72/AS01E will be supply-constrained. We estimated the effect of decisions surrounding the allocation of constrained doses on the potential global impact of M72/AS01E.

Methods: Using previously calibrated models for 105 countries, we investigated scenarios of a 50% efficacy prevention of disease vaccine delivered routinely to individuals aged 15 years with 80% coverage. The Basecase scenario assumed vaccines were introduced in a historically-informed country order over 2030–2049 with no supply constraints. We compared Basecase to scenarios assuming constrained vaccine supply (20, 50, 100, or 150 million doses per year) and introduced assuming Basecase scale-up order, or prioritising the seven M72/AS01E Ph3 trial countries first.

Preliminary Results: In the Basecase (unconstrained) scenario, preliminary results estimated that 9.3m (95% uncertainty interval = 7.9–10.8) episodes could be averted by 2050. If supply was constrained, 0.019m (0.016–0.023), 0.5m (0.4–0.7), 5.4m (4.6–6.2), and 7.7m (6.4–9.0) episodes could be averted with 20, 50, 100, or 150 million doses available per year respectively. If supply was constrained, but the seven trial countries were prioritised first, 3.1m (2.6–3.7), 3.1m (2.6–3.8), 5.4m (4.8–6.3), and 7.3m (6.5–8.4) episodes could be averted with 20, 50, 100, or 150 million doses available per year respectively.

Discussion: Our preliminary results demonstrate the importance of how limited doses are allocated in the early years of vaccine licensure and introduction. It will also be important to boost manufacturing and anticipate and address supply issues now to minimise supply constraints and increase the potential impact of M72/AS01E.

Funding Sources

Not applicable

Conflicts of Interest

None



Tuberculosis episodes averted by 2050

