

Forecasting TB vaccine demand to support supply and procurement planning

Gabriela B Gomez¹, **Jessy Joseph**², Eliana Pombo Osechas³, Shelly Malhotra⁴

¹Global Access, IAVI, Amsterdam, Netherlands, ²Global Access Research, IAVI, Gurugram, Haryana, India; ³Biofabri, Porrino, Spain; ⁴Global Access and External Affairs, IAVI, New York, USA

Background: TB vaccine candidates are entering late-stage development and delivery to adolescents and adults is expected to have a maximal impact in burden reduction. Yet before vaccines are available in country, supply, procurement, and financing should be in place. Currently, TB vaccine markets are not well defined, with uncertain demand and a variety of implementation strategies put forward across epidemiological contexts, limiting visibility to manufacturers, and global, regional, and national procurement and financing stakeholders.

Methods: We present insights from two workshops with global health funders, academics, and in-country TB and vaccine decision-makers and estimates of potential global demand for TB vaccines using a bottom-up, constrained demand forecasting model. The model was informed by the workshops, publicly available target product profile, landscape assessment of vaccines in development, information from proxy vaccines sourced from the WHO databases and peer-reviewed literature, and interviews with TB and vaccine experts.

Results: There is a significant variation in quantity of demand [140Millions (90-250Millions front loaded)]. This variation is related to key assumptions such as country timing of introduction, implementation strategy, and coverage with implications for both short-term supply needs and long-term market sustainability. As countries start planning for introduction and vaccine candidates advance towards registration, future refinement of the model will include less uncertain implementation strategies and product-specific characteristics.

Discussion/Conclusion: While there is still substantial uncertainty around implementation assumptions, insights are emerging from ongoing consultations. Iterative demand forecasting helps estimate the maximum capacity needed for manufacturers to ensure adequate supply in the first few years of roll out, providing a valuable tool to guide future supply and procurement discussions.

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Conflicts of Interest

None

