Malaria Vaccines: Commercial Prospects and Landscape Analysis

Description:
Malaria vaccines have reached the late-phase clinical trials stage. The analyst has undertaken a robustly independent and realistic assessment of the market landscape and commercial prospects of these vaccines. The analyst is not linked to or affiliated with any organisation with any interest in promoting malaria vaccines, whether commercial or not-for-profit; there were no conflicts of interest which could have affected our findings.

The report includes:
- an examination of the clinical need for a vaccine (nature of disease, independent estimation of global incidence, identification and quantification of at-risk populations worldwide); an outline of the scientific / technological background (including key issues in malaria vaccine development);
- an assessment of the competitive environment, including the competitive positioning of clinical-stage vaccine candidates, and brief notes on commercial and non-commercial bodies linked to malaria vaccine development;
- quantification and 2020 projections of total potential end-users of a malaria vaccine (namely, travellers from less than 20 developed economies to regions of malaria transmission);
- private sector users in malaria transmission regions;
- public sector users in malaria transmission regions; and a provisional outline analysis of the military market);
- likely prices for a malaria vaccine in different markets;
- and 2020 revenue projections for a malaria vaccine, broken down by private sector sales in the developed world, private sector sales in the developing world, and public sector sales in the developing world.

This report provides an independent assessment of the market landscape and market size for a hypothetical malaria vaccine applicable to all age groups (paediatric and adult), in both endemic countries and the developed world.

We first assessed and summarised the state of knowledge regarding malaria disease transmission, pathophysiology and prevention, by reference to peer-reviewed publications. We then collected publicly available data on reported malaria cases worldwide, and used this to assess the global incidence from 2004-2008, and to derive an estimate of clinical cases worldwide. These data also permitted us to categorise the geographical distribution of falciparum malaria. The above exercise allowed us to gain a clear idea of the clinical need associated with malaria.

We then reviewed the technical challenges and types of technical approach relevant to malaria vaccine development. This enabled us to provide background detail which is helpful in discussing the various different candidate malaria vaccines that have reached the clinic. Similarly, we examined broad features of the malaria vaccine market, particularly in terms of significant stakeholders, and their influence on the procurement and pricing of some vaccines. This provides useful background to later chapters presenting detailed revenue projections for malaria vaccines.

Next, we identified the main candidate malaria vaccines, focusing on those in clinical development, and summarised the publicly disclosed clinical trials for each vaccine. We also identified and outlined the commercial and non-commercial organisations linked to clinical-stage malaria vaccines. In addition, we analysed the different clinical-stage malaria vaccine candidates, facilitated by positioning them on a competitive landscape matrix.

Importantly, we undertook a major exercise to quantify the different populations that might be appropriate for malaria immunisation, namely total populations in endemic countries (subsegmented by infants, women of child-bearing age, and girls reaching child-bearing age), urban populations in endemic countries
(subsegmented by infants, WOCBA, and GRCBA), and traveller populations visiting endemic countries. For traveller populations, we exploited our model of international travel which we constructed using numerous manipulations, corrections and adjustments of raw travel data to provide defensible estimates of actual traveller numbers from each of 21 different developed countries to each of over 100 developing countries. In our opinion, this is the most comprehensive and accurate model of international travel available.

In addition, we provide a provisional outline assessment of the potential market for malaria vaccines among the military. We also projected relevant population numbers to 2020, to provide a base for revenue projections.

We then identified key data which allowed us to make defensible assumptions in order to derive malaria vaccine revenue projections. These assumptions (e.g. price, maximum market penetration, rate of market penetration, roll-out per country, etc.) enabled an estimation of the market for:

(i) a private sector vaccine in the developed world (i.e. a travel vaccine);
(ii) a private sector vaccine in the developing world; and
(iii) a public sector vaccine in the developing world.

We also provide a provisional outline rage of values for the military malaria vaccine market. Finally, we interviewed key experts in the field to obtain third-party views on aspects of the market for malaria vaccines. The report is lengthy, but contains, in addition to the Executive Summary, an extended Summary at the end of each Section. The busy reader may identify all key points by reference to the Summaries, and supplement this as necessary by reference to the text in the main body of each Section. Additional background information is contained in the Appendices.

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