

Conversation with Sally Ethelston, Director, Communications & Advocacy,
PATH Malaria Vaccine Initiative (MVI), April 14, 2011.

GiveWell: We'd like to better understand your "room for more funding." What are your projected revenues and expenses and how would things change with higher/lower than expected revenues?

MVI: For background, we have a portfolio of vaccine projects which includes more than 20 projects. We have one where we're supporting the clinical development of a vaccine candidate which has already demonstrated some effectiveness in previous studies. This vaccine, RTS,S, is in late-stage Phase 3 trials in Sub-Saharan Africa. We expect these trials, which began in mid-2009, to run through end-2013.

We also have a robust portfolio of earlier stage projects. These are typically smaller scale, of shorter duration and lower cost.

Something on the scale of RTS,S is a project that the Gates Foundation, through its funding of MVI, will have put in an excess of \$200 million by the time the Phase III trial is completed. The bulk of these resources will have been spent on the Phase III trial because that's the most expensive stage of vaccine development. Our partner in the development of RTS,S – GSK Biologicals – indicates that they have invested about \$300 million since their efforts began in the late 1980s.

We also have a small number of translational projects, meaning projects that are either in the preclinical stage or in early testing in humans.

In terms of funding, we're fortunate because we have a core grant from the Gates Foundation that supports our translational and feasibility activities. We also have a grant supporting RTS,S thru Phase 3. In addition, we have a cooperative agreement with USAID and a grant from the ExxonMobil Foundation that provides funding for several supporting activities. We feel very fortunate that for the next couple of years our overall funding needs are largely met.

There are a couple areas, however, where we see shortfalls. Specifically, one smaller gap in the near term and a potential larger gap in the longer term.

The near term-endeavor that requires more resources to conclude is a project that supports development for RTS,S but isn't an RTS,S project specifically. It is research on malaria transmission intensity (MTI). It looks at the rate of malaria transmission in a particular area.

This MTI project was designed to address a challenge: we don't have up-to-date data on how much malaria there is in particular areas.

We want to run this project in the same places where the Phase 3 RTS,S trial is underway to draw some conclusions about where the vaccine might or might not be appropriate to use. The other use of these data is to inform the development of future vaccines.

We're now facing a shortfall of slightly more than \$1 million in 2012 and 2013 to complete the MTI research at the RTS,S trial sites.. It's a specific, modest resource need. We think this is important and people involved in reviewing the vaccine say it's needed.

GiveWell: Given Gates Foundation support, why wouldn't the Foundation just fund this?

MVI: Gates is very supportive of the work we do. I can't speak on their behalf, but we see this as an opportunity to leverage funds and bring in other donors. We have the resources available to take us through mid-2012, so we're looking to close the gap after that point.

GiveWell: Can you elaborate on why this project is so important? Isn't it apparent where malaria exists?

MVI: There's tremendous variation across Africa and even within a single country. Data on malaria transmission can help inform decision-makers about where to deploy a malaria vaccine in the future.

There are some data on malaria transmission but a lot of it is quite old. And, there's the impact of other interventions like bednets and indoor residual spraying, which could be having an effect on what's happening to transmission in an area; therefore, it's critical that we have up-to-date information.

GiveWell: What are other potential gaps?

MVI: We want to accelerate development of malaria vaccines which means failing less promising projects quickly and advancing the most promising projects as quickly as possible. We have ambitious plans in terms of where we hope to be by 2025.

If all goes well with RTS,S, we hope it will be available for use within the next 5 years. We're already working on next-generation vaccines, although the first one of those would likely not be available until after 2020.

Thus, MVI will have significant resource needs in the future.

GiveWell: Do you know when money would make a practical difference to your ability to move on those future priorities?

MVI: We expect to start needing some fairly significant inputs of resources in 2014 which means we'd hope to have commitments in 2012-2013.

However, with more resources, one can take more risks. If you had a few extra million dollars, you could set up a more ambitious trial and think about it being somewhat bigger, get more answers, and you could potentially speed things up.

GiveWell: How would additional resources impact your work?

MVI: I'll follow up with other team members and get back to you on this.

GiveWell: How does MVI as an organization relate to PATH the overall organization?

MVI: MVI is a program of PATH. PATH is the 501c3 entity. Anyone that gives a grant to MVI is actually giving to PATH. With any 501c3, people can dedicate the funds they provide to a specific project or program.

GiveWell: Does PATH ever give MVI funds that PATH received as unrestricted donations?

MVI: Someone at PATH could better answer this question.

GiveWell: Do you have a rough estimate of the likely public health impact of the RTS-S vaccine?

MVI: We have supported work on modeling for potential public health impact of malaria vaccine. Since we're still waiting for Phase 3 trial data, we can't make a definitive estimate at this point.

Broadly speaking, the work we've done to-date in collaboration with our partners shows that RTS,S—if successful—could be the only malaria vaccine available for a number of years. The latest Phase II study shows that it reduced the number of episodes of malaria by half over a period of 19 months .

GiveWell: How many doses does RTS,S require?

MVI: RTS,S is administered in 3 doses at point 0, 1-month, and 2-months. One of the key things the partners have focused on in developing this vaccine candidate is that it is possible to co-administer with other childhood immunizations.