Several months ago I received a copy of the evaluation report of the global Roll Back Malaria initiative. Among the many distressing conclusions reached, there was this alarming one:

If malaria control is left to governments to plan and execute, malaria will not be controlled.¹

If true, and I have no reason to question it, we need to ask ourselves how, after a century of international activity, malaria remains the problem that it is. With that question in mind, I started preparing different lists of reasons or factors that have contributed to this state of affairs. These came first to mind:

- Malaria is a complex problem whose manifestation varies from place to place
- Division within the ranks of malariologists concerning how best to approach its control
- ‘Dissidents’ kept out of important policy discussions

This list brings together several factors which were already present in the early 1920s when the word malariology first officially entered the English language and the League of Nations Malaria Commission was established.

By that time the earlier and very successful efforts to control malaria in the Panama Canal and various commercial enterprises around the world had been dismissed as suitable models to follow, as their costs were prohibitive for any country to afford. Each country had to determine for itself what would work that could be afforded under varying local conditions. It was in that context that various schools of malariology grew.

Different experiences led to differing opinions on how best to proceed. When Lewis Hackett, one of the senior Rockefeller Foundation malariologists and leaders of the American school of malariology, arrived in

¹ Prepared by Socrates Litsios for the conference, “Philanthropic Foundations and the Globalization of Scientific Medicine,” held at Quinnipiac University, November 6-18, 2003
Italy in 1924, he wrote: “there are so many outstanding malariologists with widely differing theories and mutual jealousies, that they cannot be gotten together on any one plan.”

These divisions reached a crisis level by the late 1920s (see Box 1) when the Rockefeller Foundation malaria experts were at logger heads with the malaria experts of the League of Nations over the issue of the utility of anti-mosquito measures, with the Americans favoring them and the League questioning their value.

The League attempted to control the issue by not inviting individuals such as Ronald Ross, the arch advocate of mosquito control, to participate in its work. But the Foundation was too important an agency to be boycotted since they were funding much of the health work of the league.

Associated with the notion that anti-mosquito measures alone were almost useless was the belief that malaria had to be tackled as part of a wider rural development effort. I’ve highlighted this particular issue as many believe this to be important today and it was an issue that for various reasons fell by the wayside once WWII started. DDT represented such an advance that it alone might have been sufficient to push it aside.

In any case, so great was DDT’s power that the idea of eradicating malaria soon gained the upper hand and so confident were the eradicationists of success that Paul Russell challenged the World Health Assembly in 1955 with, “Whatever WHO decided to do, a campaign for world-wide malaria eradication was already under way.”

Not only did WHO decide to join the global campaign, it soon took charge using its Expert Committee to control matters, including stifling opposing voices by not inviting them to participate in its work. Not surprisingly the issue of malaria and rural development did not surface in this context either. This period lasted into the 1970s by which time the goal of eradication had been dropped.

The post-eradication era was characterized by other factors that have not helped the cause of malaria control. It is important to keep in mind that none of the earlier factors that I’ve mentioned have completely disappeared. These new factors were:

- Malaria never part of mainstream public health
Malaria and main-stream public health have existed in their own, largely distinct, universes since the beginning of the 20th century. Modern public health emerged from countries where malaria was not a major problem. Malaria control emerged in the context of tropical colonialism.

Public health specialists were ignorant of the divisions that split the malaria community, including those divisions that had to do with the meaning of malaria control. For many malariologists the diagnosis and treating of malaria cases was not considered part of a control strategy. Only efforts that aimed at reducing malaria transmission warranted to be included under the heading ‘control’.

Being poorly versed in the ins and outs of malaria control, public health specialists fell into a trap in the 1960s and 70s when they accepted the idea that whatever had been achieved by eradication campaigns should be maintained by post-eradication strategies. Maintaining gains required a case detection system that was not geared to improving diagnosis and treatment.

The 1970s were characterized by reduced budgets and very often the return of malaria in epidemic form. With hindsight one can see that at least a decade was lost before it was accepted that diagnosis and treatment were essential components in all malaria control programs. It is during that decade that the promise of a malaria vaccine took hold. It is hard to imagine that this did not influence governments, eager not to invest in a disease whose demise is imminent.

A different variation of this question is why invest in strengthening national capacities to control malaria if the need for new tools is so great as to suggest that little worth while could be achieved with the tools then available. One response is that it is difficult to imagine a health system that can successfully integrate any new tool if it has never had prior experience, even a failed one, in controlling malaria.

The push for vaccines and new drugs contributed to other unfortunate developments – greatly diminished investments in field epidemiological and entomological research, and an increased separation of research from day-to-day control problems. While the WHO malaria control program pushed for
health system research which would allow national control programs to experiment with old as well as new tools, nearly all new money went to the search for new tools and the strengthening of national research capacities to participate in these developments. Little was left to invest in control programs.

Training of researchers has developed steadily over the last 20 years or so, while training of nationals responsible for malaria control has not. An unhealthy balance was created where malaria research gained far more prestige than malaria control. Despite recent efforts to support control programs this imbalance still reigns.

Corruption of course saps all efforts, not only those in the field of malaria and public health. Corruption remains very poorly documented but there is no doubt that it is of critical importance. There is a lot of money to be made through the misuse of drugs and insecticides. Combine that with a bit of greed and poor administrative controls and dire consequences are inevitable. Also to be looked at is how donor monies are being misused by some governments who prefer to use these funds to simply create jobs which are often filled by political appointments who totally lack any competence or interest in malaria.

My last list of factors are not really new but they are of growing importance; I am particularly concerned with the bigness of the international machinery that has been put in place over recent years in support of national malaria programs:

- Malaria no longer ‘king of diseases’ in the tropics and hardly any threat to the industrialized countries of the North
- Malariologists no longer in charge - new breed of ‘managers’ have taken command
- Basic research dominates and the little applied research that is funded has little operational links with control programs
- More complex international infrastructure; countries need to invest heavily to figure out how to seek funds
- Funding biased towards ‘big’ projects rather than towards smaller efforts whose aim is steady, long-term growth from ‘below’
A couple of years ago I had the opportunity to present some ideas concerning a viable strategy for the future control of malaria. At that time I listed these features:

- Active involvement of communities, especially children, in public projects
- Strengthening of local ‘managerial’ capacities
- Use of graduate students to support local efforts
- Making ‘local’ information available to the community
- Strengthening role of international community

Since my topic was the international public health role in the support of such a strategy, I went on to detail what that role might be:

- carry-out demonstration projects aimed at enhancing local capacity to control malaria;
- develop prototype approaches for local capacity building using adaptive management workshop protocols;
- integrate such projects within wider efforts to strengthen national public health functions;
- extrapolate the information needed concerning malaria to other situations of the world and make that information readily and easily available on the web;
- encourage national governments to adopt information policies that are supportive of local public health initiatives;
- encourage and support, technically and financially, national governments in their effort to reform their educational systems to provide needed support to local public health initiatives;
- invite the global applied research community, including historians, to be 'on-call' when specific skills are in short supply, locally and nationally;
- ensure that a representative sample of local initiatives are well evaluated.

Unfortunately, since then I’ve seen little evidence that these ideas have been picked up by anyone.
To summarize. The failure to control malaria has deep historical roots. Simply throwing money at malaria is not likely to yield results that are sustainable. We need to adopt strategies that have very, very long time horizons, if we are to have any hope of success. Such strategies would invest in local communities and an international infrastructure that is geared to supporting local initiatives. In that context it is absolutely essential that malaria is addressed as part of long-term community development strategies.

Acknowledgements:

In preparing this paper I had very useful exchanges with the following specialists: Andy A. Arata, Dilermando Fazito de Rezende, Chev Kidson, Jan Rozendaal, Mike W. Service, Burton H. Singer, and Andy Spielman. Any remaining errors are those of the author and no-one else.
Box 1

DIVISIONS IN THE 1930’S

Malaria control cannot be dealt with as an isolated problem separate from other social, medical and public health affairs… (S. Price James, leading member of League’s malaria committee)

Malaria is a health and social problem; it must be attacked simultaneously from both these angles. (Selskar Gunn, Rockefeller Foundation Vice-President)

* * * * *

… the causes of malaria … are in the main independent of the ignorance and poverty of its victims and can be separately handled. (Lewis Hackett, Rockefeller Foundation malariologist)

In those areas where malaria is the outstanding social and health problem, the resources of the health administration, specially augmented where necessary, should be directed chiefly towards malaria control, even if this should entail the restriction of other public health activities, until malaria is no longer of major importance. (Paul Russell, Rockefeller Foundation malariologist)
REFERENCES


7 Lewis W. Hackett “Malaria in Europe” (Oxford University Press: Oxford, 1937)