

A Malaria Vaccine – What If?

Samantha Smith

Vaccination has been one of the great success stories in health care. Six core vaccines save about 3 million children a year, at a total cost of less than \$20 per child. Global coverage rates for measles, tetanus, diphtheria, whooping cough, polio and tuberculosis approach 70% (although there are substantial variations in coverage rates across regions). Smallpox has been, and polio is on the verge of being eradicated. It is not surprising that immunisation is a central element in a country's primary health care programme. Nor is the scope for success limited to these six vaccines. New vaccines, for yellow fever, hepatitis B (HBV) and pneumonia/meningitis (Hib) are already available and others are likely to come on stream in the near future for diarrhoea (rotavirus) and maybe even malaria. Malaria is one of the three biggest killer diseases in the world, killing over one million people per year. A vaccine for malaria would be a big deal.

Behind many countries' success in delivering immunisations to children has been the hardworking national immunisation programme, commonly known as the Expanded Programme on Immunisation (EPI). There are however, some worrying factors that hint at the possible exhaustion of this programme in its present form. The relationship between the EPI and the rest of the health sector, both in terms of planning and budgeting, needs to be seriously assessed if something as valuable as a malaria vaccine is to be the success we all want it to be.

EPI – Expanded or Exhausted?

First, the EPI is a potentially ever-expanding programme. In the last five years, many countries have been encouraged to add yellow fever, HBV and Hib vaccines to their routine EPI systems with the support of funding from the Global Alliance for Vaccines and Immunisation (GAVI). The increase in cost imposed by the addition of these newer vaccines has been considerable. While the total cost of the six routine vaccines is less than US\$1 per child, the new vaccines cost several multiples of that figure (e.g. Hib price is approximately US\$2.60 per dose).

In Uganda, adding HBV and Hib to the EPI caused the total cost per fully immunised child (including overheads,

syringes etc.) to increase from US\$17.36 to US\$38.24, mainly due to the increased vaccine cost. In Mozambique, an annual rise in vaccine costs from US\$1.9m in 2000 to US\$3.8m in 2004 was projected following the introduction of HBV and similar increases were projected in Tanzania. Although the costs of the new vaccines are currently covered by GAVI support, funding is limited to 5–7 years. The recipient countries are expected to develop a credible plan for meeting the costs once GAVI funding ends. While the price of the new vaccines may be expected to fall over time as demand increases and economies of scale in production are achieved, it will take some time for the prices of these new vaccines to reach the low levels of the six routine ones.

Second, it is notable that in this the era of sector-wide approaches (SWAPs) and the shift in donor funding from project to budget support, the EPI continues to portray the characteristics of a traditional vertical programme, supported to a large extent by separate, external donor funding. This gives cause for concern in terms of sustainability, financial and otherwise. In many countries, the EPI relies on a number of autonomous sources of funding, separate to the national budget process or health SWAP. In Ghana, a large majority of the costs of the national immunisation programme is funded by donors (circa 70%), of which a substantial proportion is funded by donors outside of the SWAP pooled funding. Similarly in Uganda, the degree to which the EPI relies on funding external to SWAP resources is considerable.

Nor is this a temporary situation. In Uganda, the intention is to continue to *'seek additional external resources from donors and incoming projects to supplement what it receives through the government budget [inclusive of donor budget support]'*. Thus it can be seen that even in countries where there is a well-established SWAP and a definite shift in donor funding towards budget support, there is a tendency for the EPI to continue to think in terms of additional donor funding sources, external to the normal budgeting system. Opinions of Ministry of Health officials in other countries also reflect this view, relying on the fundamental importance of immunisation to attract exogenous donor support. To some extent there is the naïve belief that the money will

ODI OPINIONS are signed opinion pieces by ODI researchers on current development and humanitarian topics.

The views expressed are those of the author and do not commit the Institute.

ODI OPINIONS may be cited or reproduced with due acknowledgement.

For further information contact ODI Public Affairs office on +44 (0)20 7922 0394 – opinions@odi.org.uk

be found, given the significance of immunisations for saving children's lives.

Is this the sort of financial 'planning' on which to base possibly the most important element of a primary health care programme in a developing country? This question is especially pertinent in the context of the introduction of a malaria vaccine, highlighting the dangers of adding more and more vaccines, and hence more and more aspects of health care, to what is essentially a vertical preventive health care programme that is not fully integrated into the health system. Unless EPI funding is firmly embedded within SWAP (where they exist) and government (including donor budget support) budgetary resource plans, there is a risk that the EPI will be left out in the cold as donor interests turn elsewhere. As an illustration of this possibility, one only has to point to the new donor initiatives which are focusing attention on other issues, notably the recent surge in interest in the Global Fund to Fight AIDS, TB and Malaria and the US President's Emergency Plan for AIDS Relief, programmes which both have a strong curative focus. The current international focus on anti-retroviral therapy is already worrying in terms of the attention that it might divert from other programmes such as EPI in the future.

What needs to happen?

In light of these concerns, how should we respond to a new vaccine, say for malaria? There are three possible options.

The first is to say that new vaccines are too expensive, the EPI is full and donors and pharmaceutical companies should desist from any attempts at persuasion. This is of course ludicrous to suggest – no-one would want to see a valuable vaccine for such a critical disease sit on the shelf un-used.

The second, is to say, yes, let's use the vaccine but it will require significant boosting of the donor funding channelled through GAVI and this will need to be extended to all malaria-endemic developing countries ad infinitum. This is appealing but relies excessively on donor funding to a vertical programme and remains largely outside routine planning and budgeting processes.

The third option is to say, yes, new vaccines are very much welcomed, and let's make them a lasting and integral contribution to the health sector. Donor funding (e.g. GAVI) is valuable where it is part of a country-led process. Here, a malaria vaccine is regarded as a vital addition to an existing health system and needs to be incorporated within the context of how current health systems and national budgeting processes are evolving. A number of guidelines for following this strategy can be suggested:

Consultation with all stakeholders, including the Ministries of Health, Finance and Planning, donor partners, and civil society is essential. The Ministry of Health leads discussions on health priorities for the country. Through advance preparation, future developments in immunisations and other aspects of health care can be integrated into health sector priorities and plans, and built into future budgeting projections. Exciting developments such as a malaria vaccine, if deemed to be a priority, can thus be introduced without any major unexpected reshuffling of priorities or unplanned, potentially disruptive re-allocations of expenditures away from other health activities. Donors should follow the government's lead, helping by providing information (e.g. realistic funding pledges, likely timing and prices of new vaccines). Constant contact with the Ministry of Finance is important to ensure that the latter is aware of the sector's priorities, costs and donor support projections. These factors can be taken into account in the annual budgeting process and medium term expenditure planning.

The funding hurdle cannot be ignored. Direct donor funding to the EPI is import-intensive (i.e. vaccines and syringes) and thus has little or no impact on the macroeconomy. This is a positive and should not be lost when integrating the EPI more fully into national planning and budgeting processes. There are strong arguments for accepting such in-kind support given its minimal macroeconomic implications and through consultations with the Ministry of Finance, stakeholders can agree on mechanisms for allowing such support to the EPI to continue. Rather, the emphasis should be on ensuring that all other EPI costs (e.g. training, salaries, cold-chain) are fully integrated into government expenditure plans. Moreover, this process of integration would make current donor support to the EPI more visible. The greater visibility would heighten donors' awareness of the required level of continued EPI funding thereby lessening potential disruptions to donor support (e.g. diversions to higher profile activities). It could also help focus stakeholders' minds on tackling head-on the task of how to fund new vaccines into the future, in the context of the health sector as a whole with its many competing demands on available funding.

In short, the vertical standing of the EPI vis-à-vis the rest of the health sector and its implications for the delivery of new vaccines has been ignored for too long. It is time for a critical appraisal of the national immunisation programme in developing countries in the current context of horizontal health care packages, SWAPs, budget support, donor interest in disease-specific funds and the potential for new vaccines for big killers such as malaria.

© Overseas Development Institute 2004

