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Editorial

Malaria in the South-East Asia Region: Myth & the reality

Malaria continues to remain a major public health problem worldwide. Much emphasis in the past has been on sub-Saharan Africa due to its heavy burden. However, concerned with the persisting situation of malaria in Africa as well as other regions, the 60th World Health Assembly passed a resolution in 2007 calling for intensified prevention and control efforts globally, and elimination of malaria in areas where this was feasible and sustainable[1]. Parasite resistance to antimalarials, rapidly changing human lifestyles, as well as ecological and environmental changes have also helped focus on a disease long neglected by the international community.

The Roll Back Malaria (RBM) programme of the World Health Organization (WHO) in 1998 focused firmly on Africa[2] for several years until 2006, when the new WHO Global Malaria Programme (GMP) was launched[3]. The focus on Africa was understandable due to the burden it suffers; nearly 90 per cent of the estimated one million preventable malaria deaths occur in Africa[4]. It is however a myth that malaria is a problem of Africa only. Clearly, malaria and other vector-borne diseases pose a huge problem in Asia, particularly the 11 member countries of the South-East Asia (SEA) Region and deserve due attention both at the national and international levels.

The disease burden in the South-East Asia Region: the reality

Malaria is an enormous health and developmental problem in the SEA Region as a staggering 687 million people are at high risk for malaria, with an estimated 90-160 million infections and more than 120, 000 deaths occurring each year[5]. The social, cultural and economic dimensions in terms of disproportionate impact on the poor, the associated loss of wages and productivity both at the micro- and macro-levels are enormous[6,7]. The SEA Region is home to the two predominant types of malaria, caused by *Plasmodium vivax* and *P. falciparum*. *P. falciparum* that often causes cerebral malaria and other life-threatening conditions, is showing a disturbing increasing trend accounting for 50 per cent of all malaria cases[8]. The disease is unstable, with outbreaks occurring frequently, affecting all age groups and taking a heavy toll of life every year, thereby seriously threatening public health.

The malaria situation in the Region remains highly dynamic and evolving, and likely to be further aggravated by climate change. There is an evidence to show that warming of the earth's temperature and increasing precipitation will hasten maturation of the parasite in mosquitoes, increase the biting frequency and create conditions more conducive to mosquito breeding[9]. Climate change is expected to worsen in the future, both in frequency and intensity, as also the health consequences. This will disproportionately affect the poor and marginalized sections of society, particularly those living in remote forest areas such as tribal populations. In India, for example, 65 per cent of all malaria cases are reported from six States - Orissa, Jharkhand, Chhatisgarh, Madhya Pradesh, West Bengal and the States in the North-East. In some of these areas such as Orissa, the situation of malaria is even worse than in sub-Saharan Africa. Malaria is also a severe problem among hill tribes of northern Thailand and Myanmar.

Compounding the problem, resistance to anti-malarials is emerging faster in Southeast Asia than in any other part of the world. Over the past three years, dangerous levels of treatment failure to even newer drugs such as artemisinin-based combination therapy (ACT) have been reported from the Thailand-Cambodia border[10], with great potential to spread across borders, thereby compromising international health security.

This site is historically notorious since resistance to chloroquine, sulphadoxine/pyrimethamine and mefloquine originated and spread from there[11,12]. Due to widespread and high levels of resistance, chloroquine and sulphadoxine/pyrimethamine are presently of no use in most countries.

Malaria has a severe and often disastrous economic impact on households in poor communities, which traditionally face the major brunt of the disease. In the absence of savings, the poor are compelled to either borrow or sell assets such as livestock and farmland to cope with the illness and its complications. The socio-economic dimensions of malaria, besides its health impact, call for priority to be urgently accorded to enhancing access to health services in malaria-vulnerable areas, with equity as the underlying theme.

The need for a paradigm shift

There is a need for a paradigm shift in our approach to malaria for the following reasons:

First, the evidence, both historical and at present, shows that malaria can be controlled or even eliminated. The national malaria eradication programme, which was started in India in the 1950s, led to a drastic reduction in the number of malaria cases over two decades[13]. In 1970, only a few thousand cases were detected in India but soon thereafter, malaria resurged as a result of complacency and inadequate administrative support[14]. In 1977, under the modified plan of operations, the programme approach had to be shifted from malaria eradication to control, with priority given to reducing the number of deaths[15].

Past efforts (such as the enormous reduction in burden during the 1950s and 1960s)[15] and recent success stories in Betul, Karnataka[16] and Gujarat[17] show what can be achieved if such examples are replicated. At the same time, Sri Lanka and Thailand have demonstrated an enormous reduction in malaria morbidity and mortality due to concerted efforts; in particular, effective treatment policy, increased access to treatment facilities and innovative approaches to vector control involving the community.

Second, we have at present even better and more effective tools to control malaria, such as long-lasting insecticidal nets (LLIN), a rapid diagnostic test (RDT) and ACT. However, the availability of these must be scaled up substantially in order to make an epidemiological impact in terms of reduction in morbidity and mortality.

Third, from the malaria programme perspective, what is needed is an impetus and a sense of urgency to put malaria in the SEA Region high on the national and international health and development agenda. Programme development and management must be strengthened at the national level and methods for the collection and quality of surveillance data improved in order to obtain clarity on the disease burden. A system must be set up for tracking progress with the help of a few critical indicators and the data generated used to guide action.

Fourth, after decades of neglect, there are now greater possibilities for collaboration and partnerships both at the national and international levels. Over the past four to five years, the global commitment has increased, as reflected by initiatives such as the Global Fund to fight AIDS, TB and malaria (GFATM), World Bank, European Union, USAID, the Bill and Melinda Gates Foundation, and Centers for Disease Prevention and Control (CDC)[18]. Some of these initiatives, in particular GFATM, World Bank and USAID, have provided support to countries in the SEA Region, encouraged by the fact that investment in malaria control can return handsome dividends in the long run[19] As a result, enormous and unprecedented opportunities are now available, which should be used to substantially scale up interventions against malaria and other vector-borne diseases, and build health systems to ensure sustainability.

The price of neglect

The situation calls for action that must go beyond "business as usual". Otherwise, unnecessary and preventable deaths, and suffering of the poor and vulnerable due to malaria will continue. Poorly performing national malaria programmes will also seriously undermine countries' and the Region's ability to achieve the Millennium Development Goals (MDGs).

WHO accords malaria a very high priority and has been assisting Member countries in mobilizing resources particularly from the Global Fund. In 2006, the WHO Regional Office for South-East Asia published a revised strategy for malaria control[5] which was also an agenda item for discussion at the WHO/SEARO Regional Committee (RC) in Thimphu, Bhutan in September 2007. The RC has recommended that all member countries fully implement the revised strategy. The strategy stresses on the need to focus on local specific measures based on ecological, environmental and behavioural determinants prevalent in the area, and

on the inter-sectoral response to malaria, with full engagement of government ministries, NGOs, civil society and the private sector. Since much of malaria follows developmental activities, it should be part of healthy public policies mandating that before any developmental work is initiated, the public health consequences must be assessed and appropriate steps taken to safeguard these. Finally, given the epidemiological situation in the Region, with huge morbidity and relatively fewer deaths, a balance must be struck between prevention and treatment interventions.

In conclusion, malaria is clearly a huge problem in the SEA Region, requiring an urgent attention from the policy-makers at the national level as well as of the international community. Great opportunities are available at present to not only control and eventually eliminate malaria but also to strengthen health systems and augment efforts to contain other vector-borne diseases. A paradigm shift in our approach from both the policy and programme point of view is required for the containment and elimination of malaria from the SEA Region.

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