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# The Place to Head Off Malaria

By FRANK SMITHUIS and NICK WHITE

YANGON, MYANMAR — Throughout history malaria has been a major killer, particularly in tropical countries. Over the past half century several highly effective anti-malarial drugs have been introduced and these have contributed to substantial reductions in mortality. The best of these was chloroquine, which was affordable, simple to take and well tolerated. But widespread use, and abuse, of chloroquine allowed malaria parasites to develop resistance and mortality rose as a consequence.

In the 1970s a remarkably effective plant-derived medicine — qinghaosu, or artemisinin — was developed in China. Artemisinin combination treatments, or ACTs, have now become accepted as the most rapidly and reliably effective anti-malarial drugs.

Supported by international funds (notably the Global Fund to Fight AIDS, Tuberculosis and Malaria), widespread deployment of ACTs in tropical countries has contributed to a significant global reduction in malaria.

The World Health Organization estimates that there are approximately 2,000 deaths a day from malaria (most of these preventable deaths are in African children), whereas before the ACTs were deployed there were well over 3,000. There is even renewed hope that malaria could be eradicated from the world.

All this is now threatened by the emergence of malaria parasites that are resistant to artemisinin on the Cambodia-Thailand border. This is the same place where chloroquine resistance emerged 50 years ago and spread across Asia and Africa to claim millions of lives.

The spread of artemisinin resistance is a very serious threat to health in the tropics. There are currently no drugs that can satisfactorily replace artemisinins. The costs of widespread artemisinin resistance in terms of lives lost and resources used, in Asia and Africa, would be immense.

Myanmar, which has the largest malaria burden in the region, is the next frontier in the spread of artemisinin resistance, and the likely conduit for its spread west. Lying between the Andaman Sea and the Himalayas, it is in a unique position to halt the spread of resistance to India and Africa.

The Myanmar government, in cooperation with WHO and other partners, has developed a plan to contain artemisinin resistance. But there is little external financial support for this.

Myanmar is undergoing dramatic change. A chorus of international approval has yet to translate into aid, which is still a small fraction of that received by other countries in the region with comparable levels of development. Over the past two decades, Myanmar has been left out of large-scale humanitarian and development aid for political reasons. Aid to contain this emergency is needed, and it is needed urgently.

Delayed intervention risks extension of the epidemic across the tropical world and the threat that even more serious levels of resistance could develop. At that point, the epidemic will be much more difficult and much more expensive to contain.

It is estimated that spread of artemisinin resistance to Africa could cost 100,000 to 200,000 children's lives per year.

The world cannot afford to lose this battle. Immediate and large scale action in Myanmar is needed to prevent further spread of these artemisinin-resistant malaria parasites. Myanmar needs substantial financial support to prevent a looming malaria catastrophe. The tropical world will be the beneficiary.

**Frank Smithuis** is director of Medical Action Myanmar, in Yangon. **Nick White** is professor of tropical medicine at the Mahidol Oxford Tropical Medicine Research Unit, in Bangkok.