

The specter of malaria that resists treatment

Great progress has been made against malaria, but signs of resistance are becoming a rising concern

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The fight against malaria continues to advance in Southeast Asia and Sub-Saharan Africa, led by the hard work of countless people like Agnes Akoth and Dismus Mwalukwanda, who head out every day to their communities with a firm belief that they can make a difference.

And their work is making a difference. Significant progress has been made against malaria over the last 15 years, with the number of people dying from malaria dropping by nearly two-thirds¹.

Yet signs of resistance to existing antimalarial drugs are becoming a rising concern, putting at risk the progress made against the disease.

The scale of the malaria burden remains immense. Nearly half of the world's population is exposed to malaria, and the disease kills approximately half a million people each year, most of them children. This is still far too many for a disease that is preventable, treatable and curable.

Further progress against malaria will require continued work on multiple fronts: Increasing prevention efforts, ensuring access to existing treatments, as well as researching and developing the next generation of antimalarial medicines.



Resistance to artemisinin, the key compound in the current gold-standard treatment against malaria, has now been detected in several locations in Southeast Asia – such as here, on the border between Thailand and Burma. Resistance has been seen in Southeast Asia, and there are concerns that it could spread farther.



This Burmese mother and her child, who has symptoms of malaria, are waiting to be seen at the Wang Pha clinic. Such border clinics offer free healthcare to people from ethnic minorities seeking refuge from a 25-year-long conflict in their Burmese homelands.



This healthcare worker is drawing a blood sample to verify the child's symptoms are due to malaria. The Clinic is also doing research in malaria. Over the years, the malaria parasite has evolved, posing a threat to prevention and treatment efforts. Novartis launched the first fixed-dose artemisinin-based combination therapy (ACT) to counter the loss of effectiveness of previous generations of treatments.



A large majority of malaria cases and deaths occur in sub-Saharan Africa. While ACTs are standard treatment for malaria (2), they are not widely available in many resource-constrained countries, due to supply-chain or access challenges (3). People need improved access to testing and effective treatments, while researchers race to develop new treatments before resistance eventually spreads to this region.



Kisumu, in southwestern Kenya, is on the front line in the fight against malaria. Kisumu borders Lake Victoria, and with its warm, wet climate, it is a breeding ground for mosquitoes – and malaria. Malaria takes an especially hard toll on the young. Every two minutes, a family somewhere is grieving the loss of a child to a disease that can be treated and cured with existing medicines.



In Kenya, there are wards of patients in small clinics and hospitals, with young infants fighting for their lives. Prompt access to effective treatments is vital. Novartis worked with the Medicines for Malaria Venture to make the first child-friendly formulation of an ACT, the current standard of care to treat malaria. More than 300 million of these treatments have been delivered since launch.



Healthcare workers also play a key role in small, remote villages where they attend to sick children. In these rural settings, even ensuring there is medicine available to treat malaria is a challenge. Digital tools can help. Novartis worked with partners on SMS for Life, a program which uses mobile phone technology to help ensure these remote health facilities have a malaria medicine in stock when it is needed.



Teaching children about malaria is a key part of fighting the disease in Kenya. Nurse Agnes Akoth regularly visits schools to help them better understand how to minimize the risks they face. She is a 35-year veteran of the quest to eradicate a deadly disease. And she knows that, while malaria is a global threat, the only way to beat it is by going out to villages every day to diagnose, treat and educate people.



Like Agnes Akoth, Dismus Mwalukwanda is on the front line of the battle against malaria. Saving lives is his priority. He's a community healthcare worker responsible for testing and treating patients in a remote part of rural Zambia, as well as teaching people how to combat the illness. He uses his cycle ambulance to take patients to a malaria clinic in rural Zambia.



Since 2001, working with a range of organizations and people on the ground like Agnes or Dismus, we have provided more than 850 million antimalarial treatments for adults and children.

Beating malaria will take a concerted and coordinated effort between governments, NGOs and the private sector. Only by working together can we make progress toward eliminating malaria for good.

Learn more about the [Novartis Malaria Initiative](#), and our efforts to improve access to treatment, help communities in malaria-endemic countries deliver better healthcare and research and develop the next generation of antimalarials.

Community healthcare workers are key in the fight to #endmalaria. Here's a collection of scenes on the ground

Helping combat malaria

We are proud of the passion of our own people and their dedication to the fight against this dreaded disease.

[Meet with the Novartis Malaria Initiative team](#)

1. WHO World Malaria Report 2016. Available at: <http://www.who.int/malaria/publications/world-malaria-report-2016/report/en/>
2. WHO overview of malaria treatment. Available at <http://www.who.int/malaria/areas/treatment/overview/en/>
3. [http://thelancet.com/journals/langlo/article/PIIS2214-109X\(17\)30076-1/fulltext?rss=yes](http://thelancet.com/journals/langlo/article/PIIS2214-109X(17)30076-1/fulltext?rss=yes) with the quote from the abstract “but even in 2015, only 19.7% (95% CI 15.6–24.8) of children younger than 5 years with a fever and P falciparum infection received an ACT. “

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List of links present in page

1. <https://prod1.novartis.com/stories/specter-malaria-resists-treatment>
2. <https://prod1.novartis.com/tags/category/discovery>
3. <https://prod1.novartis.com/stories/life-dedicated-fighting-malaria>
4. https://www.youtube.com/watch?time_continue=647&v=LEFUb46t844

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7. <http://www.who.int/malaria/publications/world-malaria-report-2016/report/en/>
8. <http://www.who.int/malaria/areas/treatment/overview/en/>
9. [http://thelancet.com/journals/langlo/article/PIIS2214-109X\(17\)30076-1/fulltext?rss=yes](http://thelancet.com/journals/langlo/article/PIIS2214-109X(17)30076-1/fulltext?rss=yes)