

{ WORLDWIDE }

Man vs. Mosquito

More than half a million people still die from malaria each year, but nets, medical advancement and a little bit of money are taking us a long way in the fight.

By Eric Butterman | Illustration by Francesco Bongiorno



FOR MUCH OF THE WORLD, MALARIA IS A WORD OF THE past. But particularly in Africa and Asia, the disease is still very present. In fact, by the time you've read the first 400 words of this article, another child will have died from it. The good news is that there are ever-expanding ways to avoid the disease, and to treat it. Here's the current outlook on malaria worldwide.

Net Worth | You've likely seen commercials on TV that talk about sponsoring a child for mere small change per day, but how about saving a family with a one-time donation of US\$10? That's the approximate cost of a treated net that can protect as many as three to four sleeping children from malaria-carrying mosquitoes, with the preventative measure being effective for up to three years. Dr. David Bowen, president of Malaria No More, an organisation devoted to eradicating the disease, says sometimes the toughest part is getting families to use the nets. "When you're sleeping in that kind of climate it can be uncomfortable in comparison to having a breeze, but we have to hit home how important it is," he says.

Medicines can help those who have been infected. For US\$1 per treatment, artemisinin used in combination therapy allows a person diagnosed with malaria to take a series of pills and avoid its dire consequences. "But the concern is that eventually resistance can be formed to the medication," Bowen says.

Clinical trials for preventive measures have been encouraging, Bowen adds. "RTS,S [malaria vaccine] protected about half of the kids who received it, but it would be wonderful if we could wave a magic wand and something could be even more effective."

The Business of Saving Lives | One belief leading malaria organisations have in common is that eradicating this disease must be treated with the same focus as running a business. Says Bowen: "Our founders, Ray Chambers and Peter Chernin, are very successful in finance, in media and in communications, and they imparted as a starting gift a strong focus on a business approach. We borrow from our expertise in mass media and marketing, utilising Hollywood stars, musicians—almost as if we were doing a marketing campaign, except on behalf of some of the poorest kids in the world."

This marketing mentality is necessary partly because many people don't even know malaria still exists. In addition, many have never visited areas where the disease is most troublesome,

Is the End in Sight?

Many believe that, with proper education and funding, 2015 should be the goal year for the eradication of malaria.

One threat that needs further communication is that the disease doesn't respect borders delineating where it supposedly has or has not been eradicated.

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so it can be hard to visualise. This is why popular representatives are crucial. “A wonderfully talented singer, Katharine McPhee, went with us to visit research labs and helped to distribute bed nets,” Bowen says. “She has used the gift of fame to tell the story of malaria, and it’s worked.”

Bowen says that there is approximately a US\$3.2 billion gap between current funds and the amount needed to make sure there are adequate supplies to stop malaria. “It may seem like a big number,” he says, “but in global expenditures, it’s a drop in the bucket. It’s in our hands, and it would be a squandered opportunity not to close the gap.”

Beyond Money | Though financial contributions are vital to the goal of malaria eradication, a major necessity in the fight against the disease is education, both in affected regions and elsewhere around the world. Bowen cites the example of a man from Senegal who lost family members to malaria and is now a participant in an effective community-based program. “He brings people’s attention to using bed nets, emptying out standing water and protecting themselves,” Bowen says. “He’s made it a personal mission that they don’t suffer the same tragedy he’s faced. Help like this is critical.”

Bill Shore, author of *The Imaginations of Unreasonable Men: Inspiration, Vision, and Purpose in the Quest to End Malaria*, says social media have also made strides. “We’re beginning to see possibilities, like when a group of graduate students made an iPhone app to diagnose malaria,” he explains. “You’re taking a drop of blood from the victim and sending it to a lab, and you know almost instantly if it’s malaria.

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Malaria Facts

Go to MalariaNoMore.org to learn about eradication and to donate.



- Africa has **91 percent** of all malaria deaths.
- In the last decade, Africa has seen a **33 percent reduction** in malaria deaths.
- **Plasmodium falciparum** is the most deadly malaria.
- **40 percent** of health resources in Africa go to malaria treatment.
- According to the World Health Organization, the Global Plan for Insecticide Resistance Management found that “**resistance to at least one insecticide** has been identified in 64 countries with malaria transmission, up from 41 countries in 2011.”
- Between **300 million and 500 million** people are infected with malaria each year, says author Bill Shore.

supposedly has or has not been eradicated. In his book, Shore recalls Michele Barry, a past president of American Society of Tropical Medicine and Hygiene, indicating that this disease could return to malaria-free nations: “In the medical condition of the world’s poorest people we can see the incubators of political and social pathology as well as medical, and . . . the borders of the advanced industrial countries are permeable to all three. Tropical medicine specialists are a kind of distant-early-warning system of public health. We see problems in their early stages.”

But, if the return of the disease to formerly malaria-free areas is avoided, what about the final act? Is there truly an eradication finish line ahead? Dr. David Brandling-Bennett, Senior Program Officer, Infectious Diseases, Global Health Program at the Bill & Melinda Gates Foundation, says eradication must be the goal, for multiple reasons. “We’ve seen in the past in other areas that when you don’t get rid of it [the disease], then it will come back,” he says. “The malaria parasite can be resistant to drugs and insecticides, and it will continue until we get rid of it.” He also emphasises that in individual countries where eradication worked, it took 10 to 20 years to avoid a re-establishment of the parasite.

Many have pinned their hopes on 2015 as a goal year for eradication, but Shore believes 2025 may be more realistic. Still, he hopes he’s wrong and believes aiming high is vital. In fact, in his book he argues that one of the keys to success against the disease is irrational confidence. “The bar may have been set high, but the money needed is not impossible and the medical community is getting there,” he says. “We just need to get the word out to more people . . . and we will.” **45**

Eric Butterman has been a medical writer for many publications, including *Diabetic Living* and *EyeNet*.