

Key facts

- **Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female *Anopheles* mosquitoes. It is preventable and curable.**
- **In 2021, there were an estimated 247 million cases of malaria worldwide.**
- **The estimated number of malaria deaths stood at 619 000 in 2021.**
- **The WHO African Region carries a disproportionately high share of the global malaria burden. In 2021, the region was home to 95% of malaria cases and 96% of malaria deaths. Children under 5 accounted for about 80% of all malaria deaths in the Region.**

Overview

Malaria is an acute febrile illness caused by *Plasmodium* parasites, which are spread to people through the bites of infected female *Anopheles* mosquitoes. There are 5 parasite species that cause malaria in humans, and 2 of these species – *P. falciparum* and *P. vivax* – pose the greatest threat. *P. falciparum* is the deadliest malaria parasite and the most prevalent on the African continent. *P. vivax* is the dominant malaria parasite in most countries outside of sub-Saharan Africa.

The first symptoms – fever, headache and chills – usually appear 10–15 days after the infective mosquito bite and may be mild and difficult to recognize as malaria. Left untreated, *P. falciparum* malaria can progress to severe illness and death within a period of 24 hours.

In 2022, nearly half of the world's population was at risk of malaria. Some population groups are at considerably higher risk of contracting malaria and developing severe disease: infants, children under 5 years of age, pregnant women and patients with HIV/AIDS, as well as people with low immunity moving to areas with intense malaria transmission such as migrant workers, mobile populations and travellers.

Disease burden

According to this year's *World malaria report*, there were an estimated 619 000 malaria deaths globally in 2021 compared to 625 000 in the first year of the pandemic. In 2019, before the pandemic struck, the number of deaths stood at 568 000.

Malaria cases continued to rise between 2020 and 2021, but at a slower rate than in the period 2019 to 2020. The global tally of malaria cases reached 247 million in 2021, compared with 245 million in 2020 and 232 million in 2019.

“Following a marked increase in malaria cases and deaths in the first year of the COVID-19 pandemic, malaria-affected countries redoubled their efforts and were able to mitigate the worst impacts of Covid-related disruptions to malaria services,” said Dr Tedros Adhanom Ghebreyesus, WHO Director-General. “We face many challenges, but there are many reasons for hope. By strengthening the response, understanding and mitigating the risks, building resilience and accelerating research, there is every reason to dream of a malaria-free future.”

Strong national-level commitment key to success

Insecticide treated bed nets (ITNs) are the primary vector control tool used in most malaria-endemic countries and, in 2020, countries distributed more ITNs than in any year on record. In 2021, ITN distributions were strong overall and at similar levels to pre-pandemic years: of the 171 million ITNs planned for distribution, 128 million (75%) were distributed.

However, eight countries (Benin, Eritrea, Indonesia, Nigeria, Solomon Islands, Thailand, Uganda and Vanuatu) distributed less than 60% of their ITNs, and seven countries (Botswana, Central African Republic, Chad, Haiti, India, Pakistan and Sierra Leone) did not distribute any ITNs.

Seasonal malaria chemoprevention (SMC) is recommended to prevent the disease among children living in areas with highly seasonal malaria transmission in Africa. In 2021, further expansion of this intervention reached nearly 45 million children per SMC cycle in 15 African countries, a major increase from 33.4 million in 2020 and 22.1 million in 2019.

At the same time, most countries succeeded in maintaining malaria testing and treatment during the pandemic. Despite supply chain and logistical challenges during the pandemic, malaria-endemic countries distributed a record number of rapid diagnostic tests (RDTs) to health facilities in 2020. In 2021, countries distributed 223 million RDTs, a similar level reported before the pandemic.

Artemisinin-based combination therapies (ACTs) are the most effective treatment for *P. falciparum* malaria. Malaria-endemic countries delivered an estimated 242 million ACTs worldwide in 2021 compared with 239 million ACTs in 2019.

A convergence of threats undermining efforts

Despite successes, our efforts face many challenges, particularly in the African Region, which shouldered about 95% of cases and 96% of deaths globally in 2021.

Disruptions during the pandemic and converging humanitarian crises, health system challenges, restricted funding, rising biological threats and a decline in the effectiveness of core disease-cutting tools threaten the global response to malaria.

“Despite progress, the African region continues to be hardest hit by this deadly disease,” said Dr Matshidiso Moeti, WHO Regional Director for Africa. “New tools—and the funding to deploy these—are urgently needed to help us defeat malaria.”

Total funding for malaria in 2021 was US\$ 3.5 billion, an increase from the two previous years but well below the estimated US\$ 7.3 billion required globally to stay on track to defeat malaria.

At the same time, a decline in the effectiveness of core malaria control tools, most crucially ITNs, is impeding further progress against malaria. Threats to this key prevention tool include insecticide resistance; insufficient access; loss of ITNs due to the stresses of day-to-day use outpacing replacement; and changing behaviour of

mosquitoes, which appear to be biting early before people go to bed, and resting outdoors, thereby evading exposure to insecticides.

Other risks are also rising, including parasite mutations affecting the performance of rapid diagnostic tests; growing parasite resistance to the drugs used to treat malaria; and the invasion in Africa of an urban-adapted mosquito that is resistant to many of the insecticides used today.

Key opportunities to accelerate progress

WHO recently launched 2 strategies to support countries in the African continent as they work to build a more resilient response to malaria: a strategy to [curb antimalarial drug resistance](#) and an initiative to [stop the spread of the *Anopheles stephensi*](#) malaria vector. Additionally, a [new global framework](#) to respond to malaria in urban areas, developed jointly by WHO and UN-Habitat, provides guidance for city leaders and malaria stakeholders.

Meanwhile, a robust research and development pipeline is set to bring a new generation of malaria control tools that could help accelerate progress towards global targets.

Key opportunities include long-lasting bed nets with new insecticide combinations and other innovations in vector control, including targeted baits that attract mosquitoes, spatial repellents and genetic engineering of mosquitoes. New diagnostic tests are also under development, as are next-generation life-saving medicines to respond to antimalarial drug resistance.

From late 2023 onwards, millions of children living in areas of highest risk of illness and death from malaria are also expected to benefit from the life-saving impact of the world's first malaria vaccine, RTS,S. Since October 2021, WHO recommends broad use of the RTS,S/AS01 malaria vaccine among children living in regions with moderate to high *P. falciparum* malaria transmission. The vaccine has been shown to significantly reduce malaria, and deadly severe malaria, among young children. Other malaria vaccines are in the product development pipeline.

According to the report, these opportunities cannot be fully exploited without intensified efforts to ensure that nobody is left behind. Malaria-endemic countries should continue to strengthen their health systems, using a primary health care approach, to ensure access to quality services and interventions for all in need.

Note to editors

WHO's work on malaria is guided by the [Global technical strategy for malaria 2016-2030 \(GTS\)](#), approved by the World Health Assembly in May 2015, and updated in 2021 to reflect the lessons learned in the global malaria response during the period 2016 to 2020.

References: 1. World Health Organisation (WHO) Fact Sheet accessed in December 2022 from <http://www.who.int/news-room/fact-sheets/detail/malaria>

2. WHO News release (on the 8th December) sourced on the above link. Click on RELATED → News

If you are wishing to see the complete WHO 2022 Malaria Report click on:

<https://www.who.int/teams/global-malaria-programme/reports/world-malaria-report-2022>