



FACTS

» **67%**

of the world's
population at risk

» **100–400
million**

estimated infections
each year

» **100
countries**

around the world

● DISEASE FACTSHEET

DENGUE

Developing urgently needed treatments for a rapidly spreading climate-sensitive disease

Dengue has entered a new phase of global public health urgency. Over 2024 and 2025, record-breaking outbreaks were driven by climate change, rapid urbanization, and increased population mobility. Despite promising innovation in vaccines and vector control, dengue incidence continues to rise across endemic regions, and new areas are increasingly threatened, exposing a major and persistent gap in patient care: the absence of approved, effective treatments that can stop dengue progression and prevent severe illness.

Caused by a virus that is spread by the bite of the *Aedes* mosquito, dengue symptoms can include fever, nausea, vomiting, rashes, fatigue, and intense eye, muscle, joint, and bone pain. For some, dengue infection can become severe, with complications such as bleeding and plasma leakage that can lead to shock, organ dysfunction, and death. Pregnant women, children, older adults, and people with comorbidities are most at risk. Patient care – even for serious cases – remains purely supportive, placing burdens on health systems that can become rapidly overwhelmed during outbreaks. **Effective treatments that can prevent mild cases from becoming severe are urgently needed.**

» THE PUSH FOR PROGRESS

We established the Dengue Alliance, a global partnership of leading public health institutes in key endemic countries, to discover and develop new treatments that are effective against the disease. Together, we are actively searching for new treatments and have advanced two candidates to Phase II and III clinical trials. Our teams and partners are also carrying out much-needed research on the under-reported burden of dengue in Africa.

OUR GOAL IS NOW to complete development of at least one affordable and accessible dengue treatment solution, advance the pre-clinical development of both host-directed therapies (HDTs) and antiviral candidates, evaluate promising biomarkers that can predict development of severe dengue, and help close the epidemiological data gap on the burden of dengue in Africa.

ADVANCING INNOVATION WITH ENDEMIC COUNTRIES

A global partnership led by institutions from dengue-endemic countries, the Dengue Alliance provides scientific leadership, governance, and operational coordination across drug discovery, clinical development, epidemiology, and access planning – ensuring that research priorities are shaped by the realities of those most affected.

Current members include the Translational Health Science and Technology Institute, India; Faculty of Medicine, Siriraj Hospital, Mahidol University, Thailand; Ministry of Health, Malaysia; Oswaldo Cruz Foundation (Fiocruz), Brazil; Federal University of Minas Gerais, Brazil; and DNDi. The Alliance is expected to expand further in 2026, with institutions from additional dengue-endemic countries joining to strengthen regional leadership in research, development, and access.



I didn't know it was dengue fever until I was taken to the hospital. The signs and symptoms were like malaria, but more severe. I could barely walk.

RACHAEL runs a small business in Mombasa County, Kenya, which she had to close for two weeks when she was ill with dengue. She spent five days in the hospital, and the fees for her care exacerbated the financial loss that her family had to face.

Photo credit: Lameck Ododo-DNDi

In 2025, DNDi teams and Alliance partners made significant progress towards the late-stage development of a monoclonal antibody treatment for dengue.

The treatment's safety and antiviral activity were demonstrated in pre-clinical studies and Phase I and II trials conducted by Serum Institute of India (SII) – the world's largest vaccine manufacturer. With a pivotal Phase III trial of the treatment led by SII currently underway in India, DNDi will lead additional Phase III trials at sites in Brazil, Malaysia, and Thailand in close collaboration with Dengue Alliance partners – providing trial leadership, sponsorship, and implementation.

Dengue severity results from a complex interaction between viral replication and host-mediated pathological responses. Addressing both may prove critical to achieving meaningful results and improving patient outcomes. **In line with this risk-balanced approach, DNDi and Hyundai Bioscience Co., Ltd. continued discussions on advancing clinical trials of the small-molecule antiviral compound Xafty,** currently undergoing Phase II proof-of-concept evaluation in Vietnam. If proven safe and effective, Xafty could expand future treatment options in outpatient settings as an affordable, oral treatment for early dengue infection.

DNDi teams and Alliance partners also continued work to strengthen the dengue therapeutics pipeline through advanced pre-clinical studies on three HDTs

and two antiviral candidates, moving promising compounds closer to clinical trials. Work to identify and validate prognostic and pharmacodynamic biomarkers that could help predict progression to severe disease is ongoing.

CLOSING KNOWLEDGE GAPS TO INFORM THE GLOBAL RESPONSE

Cases of dengue have been documented on the African continent for over 200 years, and the infection has been reported in 34 countries – but the current burden of disease remains unclear. **Accurate, up-to-date epidemiological data are critical for informing decision-making on the deployment of prevention tools such as vaccines and vector control strategies, as well as future treatments.**

DNDi teams continued working with partners Imperial College London; Institut Pasteur de Dakar, Senegal; Kumasi Centre for Collaborative Research in Tropical Medicine (KCCR), Kwame Nkrumah University of Science and Technology (KNUST), Ghana; and National Biomedical Research Institute (INRB), DRC to complete a retrospective study on the prevalence of dengue in Senegal, Ghana, and the DRC. Interim results were presented at several scientific conferences and meetings, and a manuscript detailing the study's results is expected in 2026.