## WORLD MALARIA DAY

**NEWS:** World Malaria Day recognized by WHO on **April 25 (previously African Malaria Day)** to highlight investment and innovation.

- It was established by WHO Member States during the 2007 World Health Assembly.
- Theme for 2025: "Malaria Ends With Us: Reinvest, Reimagine, Reignite"

### WHAT'S IN THE NEWS?

#### About Malaria Disease

- Type of disease: Malaria is an infectious disease transmitted by female Anopheles mosquitoes and caused by plasmodium protozoa.
- Prevalence: It poses a life-threatening risk, primarily affecting tropical and subtropical regions in Africa, South America, and Asia.
- Cause:
  - This disease is caused by plasmodium parasites, which spread through the bites of infected female Anopheles mosquitoes.
  - These parasites multiply initially in liver cells and then attack Red
- Transmission: Not contagious; Cannot spread from one person to another
- Man does not develop immunity to malaria during natural infection.
- Yaounde Declaration
  - Species and Threat: Five parasite species cause malaria in humans, with Plasmodium falciparum and Plasmodium vivax posing the most significant threat.

#### **About Malaria Disease**

- 1. Nature and Classification of Disease
  - Malaria is a **life-threatening infectious disease** caused by **protozoan parasites of the** *Plasmodium* **genus**.
  - It is vector-borne, transmitted exclusively through the bites of infected female *Anopheles* mosquitoes.

## 2. Causative Parasites

- Five *Plasmodium* species infect humans: *P. falciparum*, *P. vivax*, *P. malariae*, *P. ovale*, and *P. knowlesi*.
- Among these, *P. falciparum* (most severe, often fatal) and *P. vivax* (widely distributed, causes relapsing infections) pose the greatest global health threats.

## 3. Infection Mechanism

• After entering the bloodstream, parasites **initially multiply in the liver**, and later attack **red blood cells**, causing symptoms like fever, chills, and anemia.

## 4. Transmission Characteristics

- Malaria cannot spread directly from one person to another (i.e., it is not contagious).
- **Immunity is not naturally acquired**, meaning repeated infections can occur throughout a person's life.

## 5. Geographical Prevalence

• It primarily affects populations in **tropical and subtropical regions**—notably **Africa, South Asia, and South America**—due to favorable climates for mosquito breeding.

# World Malaria Day

- 1. Observed On:
  - Celebrated **annually on April 25th** to raise awareness, mobilize action, and recognize progress in malaria control and elimination.

### 2. Purpose and Significance:

- Encourages **global solidarity and innovation** in reducing the malaria burden, especially in high-risk regions.
- Reinforces the global commitment to end malaria in line with **Sustainable Development Goal 3** (Good Health and Well-being).



### **India's Performance**

• India successfully exited the HBHI initiative in 2024. Between 2017 and 2023, malaria cases in India dropped by 69% (from 6.4 million to 2 million), and deaths fell by 68% (from 11,100 to 3,500).

# **Emerging Threats**

- Drug Resistance: Partial resistance to artemisinin, a key malaria treatment, has been confirmed in Eritrea, Rwanda, Uganda, and Tanzania, with suspected cases in Ethiopia and Sudan.
- Insecticide Resistance: Pyrethroid resistance has been reported in 55 of 64 monitored countries, prompting WHO to recommend next-generation insecticide-treated nets.
- **Invasive Species:** The **Anopheles stephensi mosquito**, known for thriving in urban areas, has expanded to eight African countries, complicating malaria control efforts.
- Zoonotic Malaria: Cases of P. knowlesi, a zoonotic malaria parasite, rose by 19% in 2023, with 3,290 reported cases in Southeast Asia.

### Indian Initiatives to Control and Eliminate Malaria

1. National Framework for Malaria Elimination (2016–2030)

- Provides a long-term strategy with the **goal to eliminate malaria in India by 2027**, and maintain zero transmission by 2030.
- 2. National Strategic Plan for Malaria Elimination (2017–2022)
  - Marked a **paradigm shift from control to elimination**, targeting malaria-free status in **571 out of 678 districts** by 2022.
  - Focused on early diagnosis, prompt treatment, vector control, and surveillance.

# 3. MERA-India (Malaria Elimination Research Alliance-India)

- Launched by the **Indian Council of Medical Research (ICMR)** to bring together stakeholders, researchers, and partners.
- Promotes evidence-based research and collaborative efforts to advance malaria elimination.

# 4. India's Progress

- Between 2000 and 2020, India reduced malaria morbidity by over 83% and malaria mortality by 92%.
- From 2017 to 2023, cases dropped from **6.4 million to 2 million (69%)** and deaths from **11,100 to 3,500 (68%)**.
- In 2024, India successfully exited the WHO's High Burden to High Impact (HBHI) initiative, showing substantial improvement.

# **Global Initiatives and Frameworks**

- 1. WHO Global Technical Strategy for Malaria (2016–2030)
  - Offers a global **technical framework for malaria-endemic countries**, updated in 2021.
  - Sets global targets: 90% reduction in malaria incidence and mortality by 2030, elimination in at least 35 countries.

# 2. Yaoundé Declaration on Malaria Eradication (2024)

- A significant political commitment made by 11 African nations' health ministers in March 2024.
- Aims to equitably and sustainably tackle malaria, as Africa accounts for over 94–95% of global malaria deaths.

• Reaffirms the pledge to **prevent all malaria-related deaths** and intensify regional cooperation.

## **Current Global Status of Malaria**

- 1. Disease Burden (WHO World Malaria Report 2024)
  - An estimated **263 million people are affected by malaria annually**, with approximately **600,000 deaths each year**.
  - Africa remains the epicenter, bearing over 94% of global malaria fatalities.

## 2. Trends Post-COVID-19

- Malaria-related mortality **spiked during the COVID-19 pandemic** due to disruption in services.
- However, mortality has been **declining again since 2021**, showing signs of recovery in control efforts.

### Advancements in Malaria Prevention and Treatment

- 1. Drug Development Timeline
  - Historic antimalarial drugs include **Quinine**, followed by **Chloroquine**, and now **Artemisinin-based Combination Therapies (ACTs)** as first-line treatments.
- 2. Vector Control Measures
  - Use of insecticide-treated bed nets (ITNs), indoor residual spraying (IRS), and larval source management remain primary tools for prevention.

### 3. Vaccine Development

- Introduction of the world's first malaria vaccines such as:
  - RTS,S (Mosquirix): First WHO-recommended vaccine.
  - **R21/Matrix-M**: Newer and potentially more effective, approved in some countries with broader rollout underway.

Modern Challenges to Malaria Elimination

### 1. Environmental Factors

• Climate change, deforestation, and increased stagnant water bodies are contributing to wider and prolonged mosquito breeding seasons.

# 2. Urbanization and Migration

• Increased **urban migration** and **unplanned settlements** lead to mosquito proliferation in densely populated areas.

## 3. Need for Integrated Approaches

• Malaria control is now **integrated into Environmental Impact Assessments** (EIAs) to ensure preventive planning in developmental projects.

Source: <u>https://www.newsonair.gov.in/world-malaria-day-2025-who-calls-for-renewed-global-action-under-theme-malaria-ends-with-us/</u>