WORLD MALARIA DAY

Ready to Beat Malaria APRIL 25

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📌 Theme

'Reaching the zero malaria target'

Country leaders, frontline health workers and global partners are ma
reach the target of zero malaria.

📌 Incidence

India accounts for 4% of the world's total malaria cases, with a serious malaria burden. In 2018, 399,134 malaria cases were reported in the country, according to data from the National Vector Borne Disease Control Program.
Over the past two decades, India has made impressive progress in malaria control.
The malaria burden has declined by over 80% and malaria deaths by over 90%

📌 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.Children aged under 5 years are the most vulnerable group.

Malaria is caused by Plasmodium parasites. The parasites are spread to people through the bites of infected female Anopheles mosquitoes, called "malaria vectors." There are 5 parasite species that cause malaria in humans, and 2 of these species – P. falciparum and P. vivax – pose the greatest threat.

📌 Symptoms

Malaria is an acute febrile illness. In a non-immune individual, symptoms usually appear 10–15 days after the infective mosquito bite. The first symptoms – fever, headache, and chills – may be mild and difficult to recognize as malaria. If not treated within 24 hours, P. falciparum malaria can progress to severe illness, often leading to death.

Children with severe malaria frequently develop one or more of the following symptoms: severe anaemia, respiratory distress in relation to metabolic acidosis, or cerebral malaria. In adults, multi-organ failure is also frequent. In malaria endemic areas, people may develop partial immunity, allowing asymptomatic infections to occur.

📌 Who is at risk?

Some population groups are at considerably higher risk of contracting malaria, and developing severe disease, than others. These include infants, children under 5 years of age, pregnant women and patients with HIV/AIDS, as well as non-immune migrants, mobile populations and travellers.

National malaria control programmes need to take special measures to protect these population groups from malaria infection, taking into consideration their specific

circumstances.

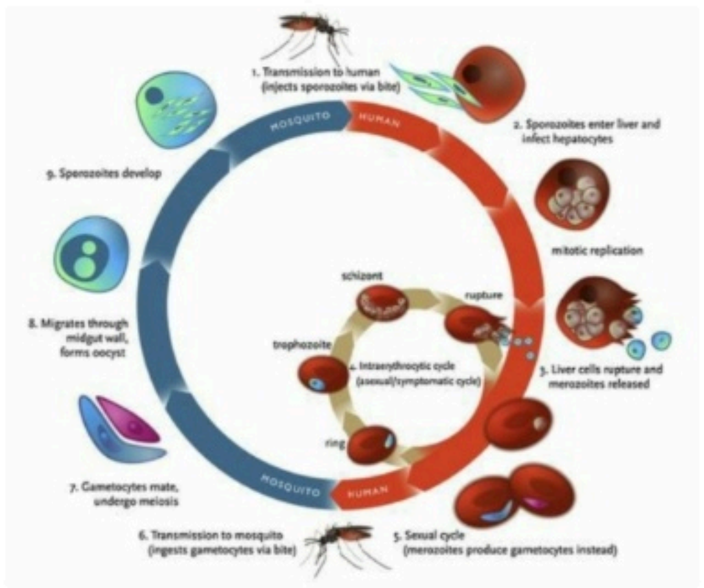
📌 Disease burden
*High in Tropical Counties like Africa,India.
*Children under 5 years of age are the most vulnerable group .

11 countries carry a high burden of the disease (Burkina Faso, Cameroon, Democratic Republic of the Congo, Ghana, India, Mali, Mozambique, Niger, Nigeria, Uganda and United Republic of Tanzania).

📌 Transmission
In most cases, malaria is transmitted through the bites of female Anopheles mosquitoes. There are more than 400 different species of Anopheles mosquito; around 30 are malaria vectors of major importance. All of the important vector species bite between dusk and dawn. The intensity of transmission depends on factors related to the parasite, the vector, the human host, and the environment.

Anopheles mosquitoes lay their eggs in water, which hatch into larvae, eventually emerging as adult mosquitoes. The female mosquitoes seek a blood meal to nurture their eggs. Each species of Anopheles mosquito has its own preferred aquatic habitat; for example, some prefer small, shallow collections of fresh water, such as puddles and hoof prints, which are abundant during the rainy season in tropical countries.

Transmission also depends on



Climatic conditions like rainfall patterns, temperature and humidity. Peak is during and just after the rainy season.

Human immunity - Partial immunity is developed over years of exposure, and while it never provides complete protection, it does reduce the risk that malaria infection will cause severe disease.

📌 Prevention
Vector control is the main way to prevent and reduce malaria transmission. If coverage of vector control interventions within a specific area is high enough, then a measure of protection will be conferred across the community.

Two forms of vector control – insecticide-treated mosquito nets and indoor residual spraying – are effective in a wide range of circumstances.

1.Insecticide-treated mosquito nets (ITN)
Sleeping under these can reduce contact between mosquitoes and humans by providing both a physical barrier and an insecticidal effect.

2.Indoor residual spraying (IRS) with insecticides is another powerful way to rapidly reduce malaria transmission. It involves spraying the inside of housing structures with an insecticide, typically once or twice per year. To confer significant community protection, IRS should be implemented at a high level of coverage.

📌 Antimalarial drugs
Antimalarial medicines can also be used to prevent malaria. For travellers, malaria can be prevented through chemoprophylaxis, which suppresses the blood stage of malaria infections, thereby preventing malaria disease.

There is emerging resistance to insecticides like pyrethroids.Critical need for all countries with ongoing malaria transmission is to develop and apply effective insecticide resistance management strategies.

📌 Diagnosis and treatment
Early diagnosis and treatment of malaria reduces disease and prevents deaths. It also contributes to reducing malaria transmission. The best available treatment, particularly for P. falciparum malaria, is artemisinin-based combination therapy (ACT).

WHO recommends that all cases of suspected malaria be confirmed using parasite-based diagnostic testing (either microscopy or rapid diagnostic test) before administering treatment. Results of parasitological confirmation can be available in 30 minutes or less. Treatment, solely on the basis of symptoms should only be considered when a parasitological diagnosis is not possible.

📌 Antimalarial drug resistance
Resistance to antimalarial medicines such as chloroquine and
sulfadoxine-pyrimethamine (SP),
is a recurring problem. India is now using artemisinin-based combination therapy

With technical guidance from WHO, all affected countries have developed national malaria elimination plans.

📌 Surveillance
Effective and stronger malaria surveillance systems are urgently needed to enable a timely and effective malaria response in endemic regions, to prevent outbreaks and resurgences, to track progress, and to hold governments and the global malaria community accountable.

📌 Elimination
Malaria elimination is defined as the interruption of local transmission of a specified malaria parasite species in a defined geographical area as a result of deliberate activities.
Globally, the elimination net is widening, with more countries moving towards the goal of

zero malaria.

📌 Malaria eradication
It is defined as the permanent reduction to zero of the incidence of malaria infection caused by human malaria parasites as a result of deliberate activities.
Interventions are no longer required once eradication has been achieved.

📌 Vaccination against malaria?
On World Malaria Day, Malawi ,Afriica became the first country in the world to begin immunizing children against malaria under a landmark pilot program.The new vaccine RTS,S/AS01 acts against P. falciparum & has brought a ray of hope to many patients in India.

International Center for Genetic Engineering and Biotechnology, New Delhi, along with its translational research partner 'Multi Vaccines Development Program' has made significant progress in the development of vaccines for P. falciparum and P. vivax malaria.

JAIVAC-1/2/ PvDBPII are under research & clinical trial in India.

📌 The WHO Global technical strategy for malaria 2016-2030 .
Adopted by the World Health Assembly in May 2015 – provides a technical framework for all malaria-endemic countries.
It is intended to guide and support regional and country programmes as they wo malaria control and elimination.

📌 Global targets:

*Reducing malaria case incidence &
mortality rates by at least 90% by 2030.
*Eliminating malaria in at least 35 countries by 2030;
*Preventing a resurgence of malaria in all countries that are malaria-free.

Key elements include:
Political will to reduce the toll of malaria;
India moves to eliminate malaria by 2030

📌 MERA India
Malaria Elimination Research Alliance India Program has been put into gear on April 24 by ICMR to identify and prioritize research work needed to meet the target to eliminate the disease by 2030