CDC issues advisory alert after several cases of "locally acquired mosquito-borne" malaria found in Florida and Texas

Benjamin Mateus 29 June 2023

On Monday, the Centers for Disease Control and Prevention (CDC) issued a health advisory via their Health Alert Network (HAN) on five cases of locally acquired malaria in Florida (four) and Texas (one) over the last two months. The public health agency said that there is no evidence that the cases in the two states are related. They are currently working with the state health departments in Florida and Texas to implement "active surveillance for additional cases."

According to the CDC, the infected patients are all being treated at local health facilities and should make a complete recovery. They also assured the public that "despite these cases, the risk of locally acquired malaria remains extremely low in the United States."

The last such outbreak of "locally acquired mosquitoborne" malaria in the US occurred two decades ago in Palm Beach County, Florida, when eight cases were reported.

Although malaria was eliminated in the US in the early 1950s through the implementation of sanitation, widespread use of insecticides and technological advances, *Anopheles* mosquitoes, known vectors for the transmission of the disease, which are found throughout many parts of the country, can feed on a person with malarial infection and cause larger outbreaks.

The fatality rate associated with severe malaria has also been dramatically reduced from a multitude of treatments that include quinine, chloroquine, proguanil, and mefloquine, although if left untreated the infection can be lethal in a significant number of cases. Artemether-lumefantrine is the preferred option, if available, for the initial uncomplicated treatment of malaria caused by the *Plasmodium falciparum* parasite, its most deadly form. However, the specific parasite species causing malaria should be diagnosed so that appropriate treatment

can be administered. There are also concerns of rising drug-resistant forms of the parasite.

Once a person is infected with the parasite, typical symptoms include intense cyclic bouts of high fevers and chills, severe fatigue, vomiting and headaches. However, symptoms only begin about two weeks after being bitten by an infected mosquito. It is critically important for people traveling into regions where the infection is endemic to have prophylactic treatment with the combination medication sulfadoxine/pyrimethamine ahead of time.

The parasite passes from the mosquito saliva into a person's blood. If not treated, disease recurrence can occur, although usually in a milder form months later. Mosquito nets, insect repellents and control measures such as draining standing water can mitigate the risks.

Severe forms of the disease can lead to respiratory failure, critical anemia from the damage to the blood cells, kidney failure, and encephalopathy or brain inflammation. Patients may develop spontaneous bleeding and a failure of their own blood to coagulate, leading to shock and death. In pregnant women, malaria can cause stillbirths, miscarriages and low birth weights.

As the CDC wrote, "The risk is higher in areas where local climatic conditions allow the Anopheles mosquito to survive during most of or the entire year and where travelers from malaria-endemic areas are found," which include sub-Saharan Africa and South Asia. The CDC has cautioned clinicians to stay abreast of advisories from their local health departments and entertain a malarial diagnosis in anyone with a fever of unknown origin, because a prompt diagnosis and treatment can prevent the progression of the disease to a more severe form or even death.

One can't help reading between these lines that such a

vital public health concern may assume political and social dimensions, as the blame for any large scale outbreak will fall on the backs of immigrants. Sadly, such are the times we live in where reaction and xenophobia have come to dominate the official public discourse. Nonetheless, given climate change, globalization and decay in the public health system, malaria and other disease previously eliminated may once more become endemic in the US.

The term malaria literally means "bad air," first used in a medical book by English physician J. Macculoch, which was borrowed from the condition known as Roman fever that was linked to swamps that inspired the name. Indeed, world history, including the wars of the last several centuries, included the history of repeated outbreaks of the deadly disease, and efforts to understand how it spread and evolve measures to prevent the disease.

French army physician Charles Louis Alphonse Laveran (1845-1922) was the first to hypothesize that not miasmas (evil vapors) but microbes caused the disease, in line with current scientific findings that "germs" caused these illnesses. He made the first microscopic discovery of the parasite that caused malaria in 1880 in a blood specimen from a soldier with fever. He went on to record distinct forms of the parasite which reflected the pathogen's life cycle. In 1907, he was awarded the Nobel Prize for his discoveries.

In World War I, malaria affected at least 1.5 million soldiers and had a case fatality ratio of 0.2 to 5 percent affecting all sides in the war equally. With more countries entering hostilities, several major epidemics took place in Macedonia, Palestine, Mesopotamia (modern-day Iraq) and Italy. During World War II, more than a half-million American soldiers were affected during the North African and South Pacific campaigns, with the disease killing 60,000.

The postwar efforts to eliminate malaria were remarkably effective. Arguably, globalization only became possible when malarial control measures were widely and fully implemented. The World Health Organization's Global Malaria Eradication Program, 1955-1969, led to the elimination of the parasite in many countries. In the US, the National Malaria Eradication Program was launched in July 1947 and in four years, endemic malaria was ended. From 1957 to 2003, the CDC reported only a total of 63 malarial outbreaks in the country, all associated with infected individuals who had traveled to the US from malaria-endemic regions.

However, in the last decade, in the US, the number of

reported cases has been steadily climbing. In the last decade there were an average of 1,773 malaria cases, and more recently, around 2,000 annually. In 2020 alone, at the height of the COVID pandemic, the global burden of the disease was estimated at 241 million cases with 627,000 deaths.

The transmission of *Plasmodium*, the parasite that causes malaria, requires favorable conditions—80 degrees Fahrenheit and 80 percent humidity—which are common in many regions of the US for many months of the year. And combined with the millions of cross-country and international flights that take place every year, it is inevitable that the number of such outbreaks will continue to rise.

According to a 2021 report, the top 10 states with the highest number of malaria cases were New York, Maryland, California, Texas, New Jersey, Georgia, Virginia, Florida, Massachusetts and Pennsylvania. Either they all host millions of travelers in their airports or are located near international airports. And with the exception of California, these states have all reported the presence of at least three species of Anopheles mosquitoes that can transmit malaria.

Additionally, six of these states—Georgia, Maryland, Pennsylvania, New Jersey, New York and Virginia—have received low ranking for vector-borne disease outbreak preparedness from the National Association of County and City Health Officials (NACCHO), which increases "their vulnerability for locally acquired malaria outbreaks."

Indeed, even though there are only a handful of cases of locally acquired mosquito-borne malaria, their presence is but one measure in every social aspect of capitalist decay. In other words, every means—scientific, technological and economic—is available to prevent disease and fashion a world where the resources of the working class can be used to better life on this planet. However, such important measures are deemed superfluous and unnecessary. The return of once vanquished diseases is but one manifestation of the decay of the profit system.



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