# MENACE OF YELLOW FEVER: WHY VACCINATION IS IMPERATIVE

Nigeria's Centre for Disease Control (NCDC), reports that a yellow fever outbreak is currently active in Nigeria. Confirmed cases have been recorded in 14 States: Kwara, Kogi, Kano, Zamfara, Kebbi, Nasarawa, Niger, Katsina, Edo, Ekiti, Rivers, Anambra, FCT, and Benue; and all healthcare workers are particularly advised to be cautious and alert in their dealings with individuals, especially those coming from the affected states and presenting with the classical signs and symptoms of yellow fever.

Yellow fever is an acute viral haemorrhagic fever caused by a Flavivirus and transmitted by infected Aedes Aegypti mosquitoes. The 'yellow' in it's name stems from the yellowish colouration of the eyes of infected individuals.

#Causes: Yellow fever is caused by a virus (Flavivirus) which is transmitted to humans by the bites of infected aedes and haemogogus mosquitoes. The mosquitoes either breed around houses (domestic), in forests or jungles (wild), or in both habitats (semi-domestic).

Occasionally, infected travellers from areas where yellow fever occurs have exported cases to countries that are free of yellow fever, but the disease can only spread easily if that country has mosquito species able to transmit it, specific climatic conditions and the animal reservoir needed to maintain it.

#Signs_and_Symptoms: Once contracted, the yellow fever virus incubates in the body for 3 to 6 days. Many people do not experience symptoms, but when these do occur, the most common are fever, muscle pain with prominent backache, headache, loss of appetite, and nausea or vomiting. In most cases, symptoms disappear after 3 to 4 days.

A small percentage of patients, however, enter a second, more toxic phase within 24 hours of recovering from initial symptoms. High fever returns and several body systems are affected, usually the liver and the kidneys. In this phase people are likely to develop jaundice (yellowing of the skin and eyes, hence the name ‘yellow fever’), dark urine and abdominal pain with vomiting.

Bleeding can occur from the mouth, nose, eyes or stomach. Half of the patients who enter the toxic phase die within 7 - 10 days.

#Diagnosis: Yellow fever is difficult to diagnose, especially during the early stages. A more severe case can be confused with severe malaria, leptospirosis, viral hepatitis (especially fulminant forms), other haemorrhagic fevers, infection with other flaviviruses (such as dengue haemorrhagic fever), and poisoning.

Polymerase chain reaction (PCR) testing in blood and urine can sometimes detect the virus in early stages of the disease. In later stages, testing to identify antibodies is needed.

#Transmission: The yellow fever virus is an arbovirus of the flavivirus genus and is transmitted by mosquitoes, belonging to the Aedes and Haemogogus species. The different mosquito species live in different habitats - some breed around houses (domestic), others in the jungle (wild), and some in both habitats (semi-domestic). There are 3 types of transmission cycles:

1. Sylvatic (or jungle) yellow fever: In tropical rainforests, monkeys, which are the primary reservoir of yellow fever, are bitten by wild mosquitoes which pass the virus on to other monkeys. Occasionally humans working or travelling in the forest are bitten by infected mosquitoes and develop yellow fever.

2. Intermediate yellow fever: In this type of transmission, semi-domestic mosquitoes (those that breed both in the wild and around households) infect both monkeys and people. Increased contact between people and infected mosquitoes leads to increased transmission and many separate villages in an area can develop outbreaks at the same time. This is the most common type of outbreak in Africa.

3. Urban yellow fever: Large epidemics occur when infected people introduce the virus into heavily populated areas with high mosquito density and where most people have little or no immunity, due to lack of vaccination. In these conditions, infected mosquitoes transmit the virus from person to person.

#Treatment:. Good and early supportive treatment in hospitals improves survival rates. There is currently no specific anti-viral drug for yellow fever but specific care to treat dehydration, liver and kidney failure, and fever improves outcomes. Associated bacterial infections can be treated with antibiotics.

#Prevention_and_control: Yellow fever can be prevented through vaccination and mosquito control.

The yellow fever vaccine is safe and affordable, and a single dose provides life-long immunity against the disease.

Mosquito control can also help to prevent yellow fever, and is vital in situations where vaccination coverage is low or the vaccine is not immediately available. Mosquito control includes eliminating sites where mosquitoes can breed, and killing adult mosquitoes and larvae by using insecticides in areas with high mosquito density. Community involvement through activities such as cleaning household drains and covering water containers where mosquitoes can breed is a very important and effective way to control mosquitoes.

Source: WHO