Lassa fever death rates in Nigeria higher than expected

By Meera Senthilingam, for CNN
Updated 9:04 AM ET, Thu March 17, 2016

Photos:
The lassa fever is mainly spread by contact with the "multimammate transmission is also possible.

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Story highlights

More than 130 people have now died from a growing outbreak of Lassa fever in Nigeria

(CNN)More than 130 people are suspected to have died from a Lassa fever outbreak in
Outbreaks occur most years, but death rates in this outbreak are higher than expected in Nigeria, according to statistics from the Nigeria Centre for Disease Control (NCDC).

The virus is spreading at unprecedented rates, with 22 states now reporting cases. The disease can cause fever and haemorrhaging of various parts of the body -- including the eyes and nose -- and can be spread through contact with an infected rat. Person to person transmission is also possible, albeit less common.

For people witnessing the symptoms, alarm bells may ring and raise fears of Ebola -- but this is not Ebola.

West Africa as a region is seeing a flare-up of the disease, but Nigeria -- where Lassa fever was first discovered in 1969 -- is experiencing much higher mortality rates than usual.

On average, Lassa fever is deadly in 1% of all individuals infected, with higher rates of 15% morbidity among people hospitalized for the illness, but the current outbreak in Nigeria has seen more than 50% of those affected dying from their infection.

According to NCDC's latest report, dated 14 March 2016, the total number of reported cases is 254 (129 of which confirmed by lab tests) and the total number of deaths (suspected, probable and confirmed) is 137, with a Case Fatality Rate (CFR) of 53.9%.

Increased mortality and spread

A 2012 outbreak of Lassa fever in Nigeria caused more than 1,700 people to become infected, but 112 deaths, according to the Nigerian Center for Disease Control (NCDC). Despite lower case numbers, the death toll in the current outbreak are already higher.

"The deaths among cases are higher than normal, and we are currently establishing the reason for this," says Abdulsalami Nasidi, Director of the NCDC.
A further concern is the geographic spread of the outbreak: "More states are affected (than usual), and we're evaluating possible reasons," says Nasidi.

Beyond what's usual

Lassa fever outbreaks occur most years in West Africa, as the disease is endemic to Sierra Leone, Liberia, Guinea and Nigeria.

Each year, the virus infects an estimated 100,000 to 300,000 and is responsible for 5,000 deaths in the region as a whole.

Lassa virus is in the same family of viruses as Ebola and Marburg virus, which also cause fever and sometimes haemorrhage. The virus is named after the Nigerian town of Lassa where it was first discovered.

Outbreaks generally occur during the region's dry season -- typically between November to February -- but this time it's persisting.

Officials are speculating reasons for the increased mortality and spread, but the truth remains unknown.

"Viruses change over time," says Nasidi.

One theory officials are suggesting for the spread of the virus into new states, is that there may be better awareness of symptoms after the 2014 Ebola outbreak in West Africa, which has infected more than 28,000 people. Previously, infections often went unreported as the disease mainly affects rural areas where populations can be highly infected, but don't notify the authorities.

Read: Lassa fever diagnosis confirmed for Emory patient, CDC says

How does Lassa fever spread?
The main culprit behind the transmission of Lassa fever is the "multimammate rat" -- a reservoir for the virus with the ability to spread it to humans. Touching, consuming, or inhaling, the urine or feces of a rat carrying the virus is the prime route of infection in humans. This generally happens through contaminated food and surfaces within people's homes -- particularly during the dry season.

"When the rains are over, the rats then come closer to humans to steal grains," says David Heymann, Professor of Infectious Disease Epidemiology at the London School of Hygiene and Tropical Medicine. In rural areas, communities often store grains in their homes after the harvest to get them through the dry season.

"They urinate and defecate on the rice, which makes the uncooked rice a source of human infection," says Heymann.

The meat of rodents is often eaten in the region, further increasing the likelihood of transmission.

Contact with the bodily fluids, or tissues, of another human carrying the virus is also a mode of transmission, but more rare.

Varying symptoms and diagnosis

The symptoms of the disease are wide-ranging and vary from mild to severe in different cases, making diagnosis a challenge.

One in five of those infected will experience symptoms including haemorrhage, respiratory problems and facial swelling, especially if diagnosed late with the disease, according to the Centers for Disease Control and Prevention (CDC). The remaining 80% experience much milder symptoms such as fever and weakness, which can often go undiagnosed.
Up to one third of people infected also risk losing their hearing.

Treatment is available with the antiviral drug Ribavirin, but this has its greatest effect if used early.

Taking control, through prevention

The NCDC and Ministry of Health have increased resources to handle the outbreak, such as mapping those at most risk, improving access to diagnostics and engaging with communities to recognize the signs and symptoms.

"Every life counts and every case must be investigated," says Nasidi.

Given the increased mortality, the priority is prevention. This includes reducing the chances of contact between humans and rat colonies.

Sales of rat poison in Nigeria have boomed since the outbreak was announced, according to reports by the news service AFP.

As with Ebola, awareness and increased use of personal protective equipment when handling patients is also crucial to prevent human to human transmission, particularly in health clinics.

"The government has made the right recommendations about infection control in health facilities...the virus is passed from person to person by poor infection control," says Heymann.

As outbreaks are somewhat regular, health officials are still hopeful the current spike in infections will come to a natural end.
"From past experiences we expect numbers to start decreasing in March/April," says Nasidi.