

# Move Over Zika, It's Yellow Fever's Turn



By Julianna LeMieux — June 23, 2016



There has been a lot of talk about the *Aedes* mosquito since

Zika first became widely known. Rarely does a day go by when something about Zika doesn't make the news. But the same mosquitoes also spread another infection, one that we hear almost nothing about, and it can be far worse than Zika.

The World Health Organization released a [situation report](#) <sup>[1]</sup> last week regarding a yellow fever outbreak in West Africa. This has all of the markings of the next global health emergency, and it may happen very quickly.

Like other mosquito transmitted viral infections, most people who are bitten and contract the virus do not have symptoms. When they do, the symptoms are similar to those of flu: fever, headache, nausea/vomiting, and backache. As you can imagine, yellow fever is frequently mistaken for malaria or any other infection that includes a fever and headache. In most people, yellow fever subsides within three to four days.

However, in a small percentage of patients, there is a second, much more severe wave of the infection that hits a day after the initial set of symptoms passes. In this second wave, the high fever returns, and with it, a wallop to several different organs of the body, most frequently the liver and kidneys. Patients develop jaundice, which gives the skin and eyes a yellow hue — this is where the disease gets its name — dark colored urine, and black vomit. In some, bleeding occurs from the mouth, nose, eyes or stomach. People who enter this second phase of the disease have a 50 percent chance of surviving.

Yellow fever is an infection with a long history. In fact, the infection got its name around 1741. Despite the centuries that we've known about it, most of us remain unaware that it is at the forefront of a burgeoning global health threat.

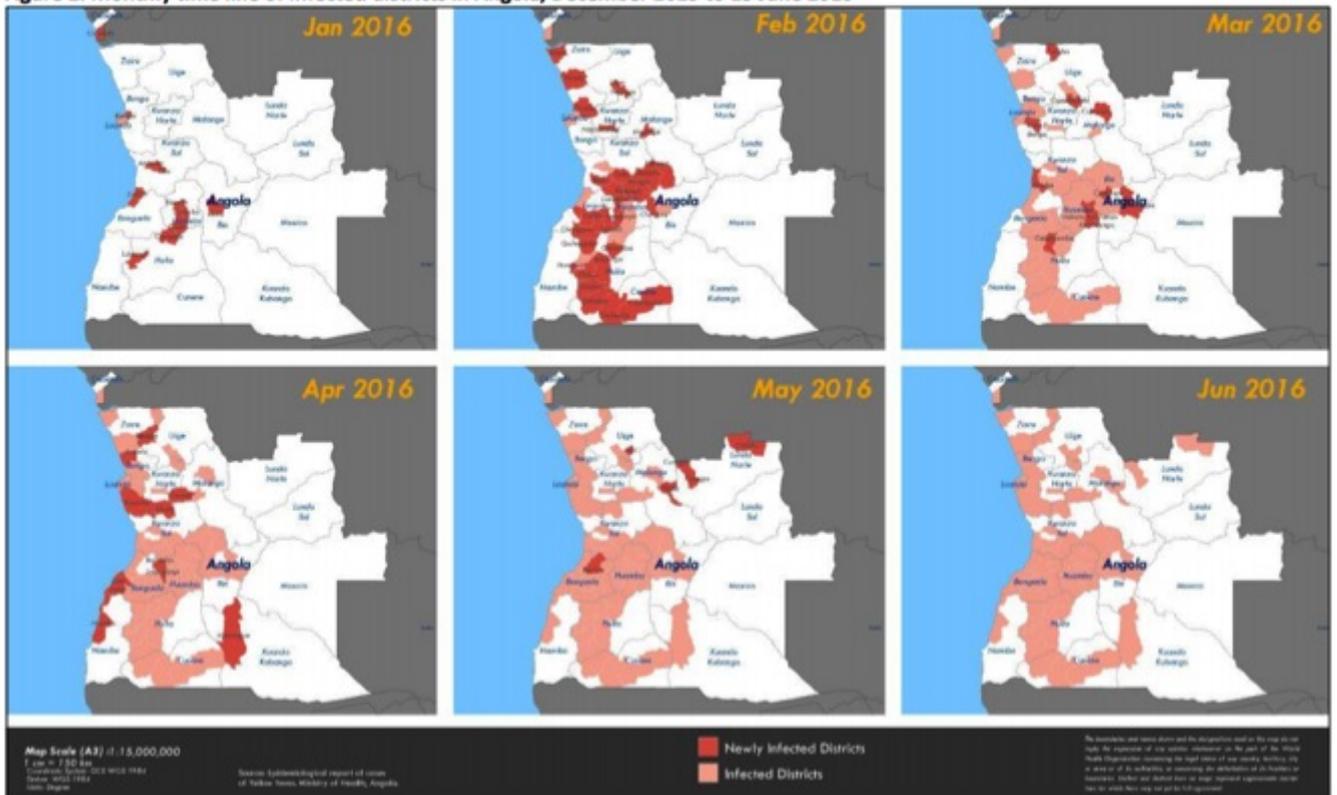
Yellow fever was first reported in the American colonies as early as 1699, when Charleston and Philadelphia — cities that were frequent destinations of ships from the Caribbean — reported outbreaks. Outbreaks would occur regularly in the more urban areas in the early 1700s. During one outbreak in Charleston, there were so many fatalities every day that the practice of ringing a bell to indicate a death had to be stopped. In 1901 mosquito control efforts began, and by 1905 the

last Yellow Fever epidemic was seen in North America. (1)

However, in other parts of the world, the story is quite different. Yellow Fever remains endemic in 47 countries in Africa, Central and South America, causing an estimated 84,000-170,000 severe cases and 29,000-60,000 deaths annually [2].

But this year, something different is happening. There is a big outbreak in Angola, a country which has not had a case of yellow fever in 30 years, and health experts are worried. As of June 16, there were 3,137 cases with 345 deaths.

Figure 2. Monthly time line of infected districts in Angola, December 2015 to 15 June 2016



Infected districts of Angola from Jan. 2016 - June 2016. WHO Situation Report (June 16, 2016). There are now cases in three other countries that are linked directly to the Angolan outbreak — Democratic Republic of The Congo (DRC), Kenya and, perhaps the most concerning, the People's Republic of China.

"The current scenario of a YF outbreak in Angola, where there is a large Chinese workforce, most of whom are unvaccinated, coupled with high volumes of air travel to an environment conducive to transmission in Asia, is unprecedented in history," warns Sean Wasserman, MBChB, of the University of Cape Town, Cape Town, South Africa. "These conditions raise the alarming possibility of a YF epidemic, with a case fatality of up to 50%, [for people who get the second phase of the disease] in a region with a susceptible population of two billion people and where there is extremely limited infrastructure to respond effectively."

The outbreak is especially troubling because, unlike Zika and Dengue, it could have been avoided; a vaccine was developed in 1936. This same vaccine is the one in use today and it is about as good as vaccines get: safe and affordable, and a single dose is sufficient to give life-long immunity (no need for a booster shot)! In fact, the vaccine is so effective, that even as little as one-fifth of the recommended dose can provide immunity.

So, if we have a great vaccine ... why are people dying of yellow fever in Africa?



To start, please don't tell me it's the money. Not when the Mayor of New York City

is spending \$21 million on a useless anti-Zika campaign, instructing people how to avoid mosquito bites with information that virtually everyone knows already. Worse still, all of the 618 cases of Zika infection in the U.S. are classified by the CDC as "travel associated," meaning that the Zika was obtained outside of the U.S.

So, why are people in Africa not being protected? There is simply not enough vaccine available. As recently reported by [Reuters](#) [3], people are waiting on line in the DRC, but they're being turned away.

There are band-aid approaches that can limit the damage, for example splitting up the remaining vaccine doses into fifths to stretch it out (this is called "fractional dosing"). But, only the WHO has the authority to make that decision, and the agency is not moving quickly enough.

But the virus is now in China, where it's entering into a perfect storm:

- 1) there are many *Aedes* mosquitoes
- 2) people live in high density areas
- 3) no one has immunity

So, the number of vaccines needed is simply not even going to be close to adequate, which is why it's important to stop this outbreak where it is. If someone doesn't start directing some of the money toward Angola now, the world will have much more to worry about than Zika next summer.

#### **NOTE:**

(1) The building of the Panama Canal was halted when 85 percent of the workforce fell ill and were

hospitalized due to yellow fever and malaria. The project was all but stopped until 1905, when Dr. William Gorgas implemented the first organized effort to kill mosquitoes. Fumigators visited each home individually, multiple times, to clean, lay down insecticide, and put in wire screens in order to wipe out areas where the mosquitoes could lay their eggs. This effort was successful, the workers returned and construction of the Panama Canal continued, free of both yellow fever and malaria.

---

COPYRIGHT © 1978-2016 BY THE AMERICAN COUNCIL ON SCIENCE AND HEALTH

---

**Source URL:** <https://www.acsh.org/news/2016/06/23/move-over-zika-its-yellow-fevers-turn>

**Links**

[1] <http://apps.who.int/iris/bitstream/10665/242438/1/yellowfeversitrep-16Jun2016-eng.pdf?ua=1>

[2] [http://www.who.int/csr/disease/yellowfev/YellowFeverBurdenEstimation\\_Summary2013.pdf](http://www.who.int/csr/disease/yellowfev/YellowFeverBurdenEstimation_Summary2013.pdf)

[3] <http://www.reuters.com/article/us-congodemocratic-yellowfever-idUSKCN0Z81FI>