

## Situation Analysis of Yellow Fever in Nigeria

Fifteen years since the last outbreak of Yellow Fever, Nigeria has recently confirmed multiple cases of the disease. Because of the dangerous potential for the disease to spread quickly, a health response plan and a way to communicate that plan must be created. In order to formulate a communication plan, a situation analysis is first required. In her book, Health Communication: From Theory to Practice, Renata Schiavo says that “the situation analysis is a fundamental building block in the communication tower. A well-executed situation analysis informs and guides all the other steps of health communication planning” (Schiavo, 2007, p. 238). She goes on to outline key steps in this analysis, which are used below to analyze the current Yellow Fever situation in Nigeria.

### **Define and understand the health problem**

According to the World Health Organization (WHO), Yellow Fever is an “acute viral hemorrhagic disease transmitted by infected mosquitoes” (WHO, Yellow Fever, 2016). The symptoms of Yellow Fever include fever, headache, jaundice, muscle pain, nausea, vomiting and fatigue. The term “yellow” comes from the jaundice that some patients experience (WHO, Yellow Fever, 2016). Most patients experience symptoms for 3 to 4 days and then recover, but a small percentage then enter what it referred to as the “toxic stage,” where the symptoms worsen and, within 7-10 days, half of the patients who enter this stage die (WHO, Yellow Fever,

2016). WHO notes that “large epidemics of yellow fever 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” (WHO, Yellow Fever, 2016).

There is no cure for yellow fever, and the only treatment is to treat the symptoms (WHO, Yellow Fever, 2016). However, there are three forms of prevention that the WHO identifies (WHO, Yellow Fever, 2016).. The first is a vaccine which is “a single dose (that) provides life-long immunization.” The second form of prevention is mosquito control, which comprises of eliminating mosquito breeding sites. The third form of prevention is epidemic preparedness and response, which stresses the early and prompt detection of the disease.

Before the most recent outbreak, the last outbreak of yellow fever in Nigeria was in 2002 with 20 cases and 9 deaths (WHO, WHO supports..., 2017). In 2017, 358 suspected cases were reported in 16 different Nigerian states and of the 230 samples collected, 63 tested positive for yellow fever (NCDC, Situation Report, 2018). The total number of deaths in all cases is 45 and there have been 9 deaths among the confirmed cases, which is a 27.3% fatality rate for confirmed cases (NCDC, Situation Report, 2018).

### **Key Audiences**

The downstream audiences, or the primary audiences as Schiavo refers to them, are the “people who are at risk for a certain medical condition or are suffering from it” (Schiavo, 2007, p. 243). In the case of yellow fever in Nigeria, these audiences are the entire unvaccinated

population of Nigeria, both in rural and urban settings, but especially those who are in areas where there have already been documented cases.

The upstream audiences, or the secondary audiences, are “all individuals, groups, communities, and organizations that have an influence on the decisions and behaviors of the primary audiences” (Schiavo, 2007, p. 243). Regarding yellow fever in Nigeria, these audiences are the WHO, the Nigerian government, especially the Federal Ministry of Health and the Nigeria Centre for Disease Control (NCDC), local community leaders, religious leaders, and local health clinics and health professionals.

### **Social, Political, and other External Influences**

Not much information could be found on Nigeria’s cultural or social views of yellow fever. There does not seem to be any stigma attached to the disease. There does seem to be a lack of information being made available to the general public though, especially in hard-to-reach areas. It might be important to note here that the focus on other prevalent diseases in the country, such as HIV/AIDS and Malaria, might have lowered the priority put on yellow fever public awareness and initiatives.

### **Audience Profile and Segmentation**

The WHO identified the following populations to be at risk for yellow fever: “humans travelling or working in the forest” and “humans who live in highly populated areas with high mosquito density and where most people have little or no immunity, due to lack of vaccination” (WHO, Yellow Fever, 2016). The NCDC also identified “cross-border travelers, migrant workers,

host communities, forest workers/dwellers and people in hard-to-reach areas” as specific populations that needed targeting (NCDC, Community Mobilization..., 2017).

The CIA World Factbook notes that 70% of the labor force in Nigeria is in the agriculture industry (The CIA, n.d.). This is important to note because, due to their probable work environments, these laborers are at a higher risk to mosquito bites.

### **Existing Programs, Initiatives, and Resources**

In 2017, the WHO developed the Eliminate Yellow fever Epidemics (EYE) strategy, a global action plan to eliminate YF epidemics by 2026. The strategic objectives are 1) to protect at-risk populations, to prevent international spread of the disease, and 3) to contain outbreaks rapidly (WHO, Weekly epidemiological record, 2017). The strategy notes five keys to success: 1) access to affordable vaccines and a sustained vaccine market; 2) strong political commitment at global, regional, and country level; 3) robust governance and long-term partnerships; 4) synergies with other programs and sectors; and 5) research and development for better tools and practices (WHO, Weekly epidemiological record, 2017).

Nigeria’s Federal Ministry of Health has only one recent article concerning yellow fever on its website, which briefly states that there was a confirmed case in Kwara State and that WHO and the NCDC are working together to respond to the issue (Federal Ministry of Health, n.d.). The article goes on to communicate the importance of remaining calm and to report to the nearest health facility if experiencing any symptoms. Most of Nigeria’s information concerning yellow fever is on their NCDC website, including a monthly situation report and weekly epidemiological reports.

In response to the recent outbreak, the WHO and the NCDC are working together to increase immunization coverage in affected areas, conduct training courses on how to better identify yellow fever, and implement public information campaigns (WHO, Emergencies preparedness, 2017) (WHO, WHO supports..., 2017)(NCDC, Case Management..., 2017). The NCDC also communicated the need for each state in the country to do their part in stopping the spread of the disease: “A letter of alert has been issued to all states of the country. States are enjoined to commence awareness campaigns and community mobilization activities for yellow fever, emphasizing the importance of vaccination against the disease, and proper sanitation to prevent breeding of the Aedes mosquito” (NCDC, Strengthening Surveillance..., 2017).

### **Unmet Communication Needs**

As previously stated, there still exists a problem with getting hard-to-reach communities vaccinated. Developing a plan to reach these communities and begin regular vaccinations is of utmost importance to stopping the spread of yellow fever. Mobilization of each state’s community leaders to assist in this plan is essential, as mass media campaigns will not be effective due to the lack of infrastructure in these communities.

There are concerns that not enough vaccines are stockpiled to prevent outbreaks, delaying the process of vaccinating certain populations (WHO, Weekly epidemiological record, 2017). Vaccination is essential to stopping the spread of the disease and communicating the need for enough vaccines is extremely important.

## **Overall Barriers to Program Implementation and Proposed Change**

Identified barriers to the eradication of yellow fever are poverty, the limited amount of vaccine, hard to reach areas and populations, exposure to mosquitoes, the difficulty of detecting the disease, and other diseases in the country that could detract from yellow fever awareness.

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