

Briefing Note – 23 June 2016



DRC

Yellow fever epidemic

Need for international assistance	Not required	Low	Moderate	Significant	Major
Expected impact	Very low	Low	Moderate	Significant	Major

Crisis overview

As of 19 June, 1,106 suspected and 68 confirmed cases of yellow fever have been reported in Democratic Republic of Congo (DRC), and 75 people have died. The case fatality rate (CFR) is 6.8%. On 20 June, the DRC Ministry of Health declared a yellow fever epidemic. Cases have been reported in 22 health zones in five provinces: Kinshasa, Kongo-Central, Kwango, Tshuapa, and Bas-Uele. Four confirmed urban-transmitted cases have been reported in Kinshasa, one in Kongo-Central, and two in Kwango.

This briefing note focuses only on Kinshasa, Kongo-Central, and Kwango, where cases are related to the epidemic in Angola.

Affected areas	Population	No. suspected cases	No. confirmed cases	Deaths/CFR
Kinshasa	11,500,000	-	17	NA
Kongo-Central	5,600,000	-	41	NA
Kwango	3,500,000	115	8	NA
TOTAL	20,600,000	1,106	66	75/6.8%

Sources: Le Kwango 2008; Kongo-Central Provincial Profile 12/2015; INS RDC 2014, WHO 20/06/2016; Radio Okapi 20/06/2016.

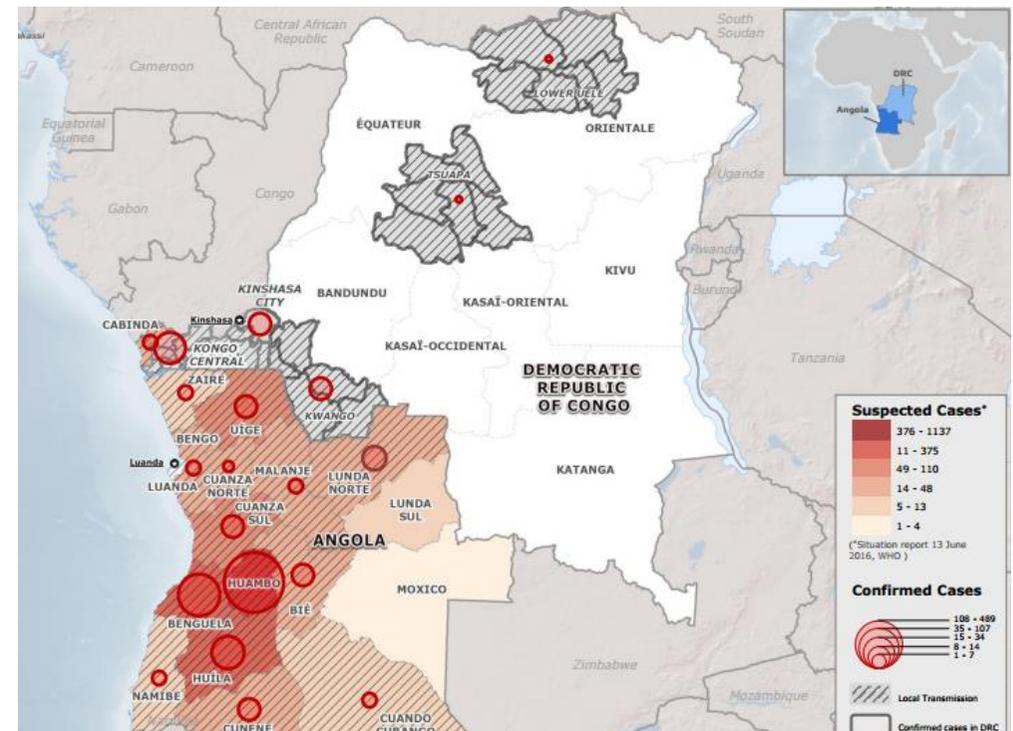
Limitations

Apart from health needs, no other needs have been reported. The breakdown of suspected cases and deaths per province is not available.

Key findings

Anticipated scope and scale	There is a high risk that the outbreak will spread into other provinces that share a border with Angola: Kasai, Kasai-Central (previously part of Kasai-Occidental), and Lualaba (previously part of Katanga).
Priorities for humanitarian intervention	<ul style="list-style-type: none"> • Mass vaccination in the three affected provinces. • Case management • Epidemiological surveillance
Humanitarian constraints	The porous border between Angola and DRC and uncontrollable movement of people and mosquitoes across the border hamper the response.

Yellow fever cases in Angola and DRC



Source: ECHO 17/06/2016

Crisis impact

The outbreak of yellow fever started in December 2015 in Angola and was transmitted to DRC. The first cases in DRC were reported in late March in Kongo-Central (WHO 09/06/2016, WHO 11/04/2016). On 20 June, the DRC Ministry of Health declared a yellow fever epidemic (WHO 20/06/2016).

As of 19 June, 1,106 suspected cases, 68 confirmed cases, and 75 deaths have been reported. The case fatality rate is 6.8% (WHO 20/06/2016). Yellow fever cases have been reported in 22 health zones in five provinces: Kinshasa, Kongo-Central, Kwango, Tshuapa, and Bas-Uele (WHO 20/06/2016). Four confirmed urban-transmitted cases have been reported in Kinshasa, one in Kongo-Central, and two in Kwango (WHO 20/06/2016). The outbreak is largely concentrated in big cities, such as Kinshasa and Matadi (WHO 09/06/2016). Two confirmed cases in Tshuapa and Bas-Uele reported in January are sylvatic (acquired in the forest) and not related to the current epidemic transmitted from Angola (WHO 20/06/2016). Therefore, this briefing note focuses only on Kinshasa, Kongo-Central, and Kwango.

The majority of the infected are male, mainly aged between 20 and 34. Young men are most likely to travel to Angola to work (WHO 23/06/2016).

There is a high risk that the outbreak will spread into other provinces that share the border with Angola: Kasai, Kasai-Central (both previously part of Kasai-Occidental), and Lualaba (previously part of Katanga). The border is porous and population movement between the two countries is high (WHO 09/06/2016). Transboundary population movements are most reported in Kwango (WHO 20/06/2016).

Health: One of the main causes of the disease's spread is a lack of cross-border health interventions and control of movements in border regions between Angola and DRC (WHO 20/06/2016; WHO 15/06/2016; WHO 08/06/2016). Coordination among hospitals in DRC is insufficient and many confirmed cases are treated in health centres, which lack medicines and personnel for treating yellow fever (WHO 20/06/2016). Epidemiologists are reportedly lacking in Kinshasa (WHO 15/06/2016). In early June, vaccination sites in Kinshasa were overcrowded and lacked vaccines. People from non-affected health zones are scared and trying to get vaccinated, which impacts the availability of vaccines in the affected health zones (Radio Okapi 03/06/2016).

Factors affecting efforts to control outbreak

The border between Angola and DRC is porous and population movement between the two countries is high and very challenging to control (WHO 09/06/2016).

Aggravating factors

Yellow fever outbreak in Angola

Nearly 3,300 suspected cases of yellow fever, including 861 confirmed cases, have been reported in Angola since December 2015. More than half of the cases have been reported in Luanda. The number of cases increased in late May after a slight decrease in April. Data for June is not complete (WHO 20/06/2016).

Cholera outbreak in Kinshasa

Kinshasa has been affected by cholera outbreak since mid-May. As of 16 May, 14 cases, including two deaths had been reported. CFR was particularly high: 17.6%. No updates have been provided since then (UNICEF 16/05/2016).

Important upcoming events

The ruling coalition is attempting to prolong President Kabila's time in office beyond November 2016, when his constitutional two-term limit is due to end. Since the beginning of 2016, protests related to the presidential elections have taken place in Kinshasa and eastern DRC (ICG 02/05/2016; The Guardian 26/05/2016). In May, the Constitutional Court ruled that Kabila can stay in power if elections are not held this year (Radio Okapi 11/05/2016). Key opposition parties united in early June under a new platform called 'Rally', and called on Kabila to step down by the end of 2016 (IPIS 15/06/2016). Further protests, political tensions and potential pre-electoral violence are likely to hinder yellow fever response, especially in Kinshasa.

The rainy season will start in September, which will increase the number of mosquito-breeding sites and could exacerbate the outbreak. On the other hand, bad road conditions caused by heavy rains can slow down transboundary populations' movements (ACAPS Country Profile 02/2016).

Population density

Population density ranges from 39 people/km² in Kwango; to 100 people/km² in Kongo-Central and 1,109 people/km² in Kinshasa (Le Kwango 2008; INS RDC 2014).

Political stability and security

Armed groups' activity is concentrated in the eastern part of the country. Kwango, Kinshasa, and Kongo-Central are not affected by the conflict.

Contextual information

Cause and symptoms

Yellow fever is an acute viral haemorrhagic disease transmitted by mosquitoes. The virus has three transmission cycles: jungle (sylvatic), intermediate (savannah), and urban. In the sylvatic cycle, the virus is transmitted by mosquitoes from monkeys to humans when humans are visiting the jungle. In the intermediate cycle, the virus is transmitted from monkey to human or from human to human via mosquitoes. In the urban cycle, the virus is transmitted between humans and urban mosquitoes (CDC 13/08/2015; WHO 05/2016).

Most people infected with yellow fever virus do not develop any illness or if they do it is mild. Incubation period is 3–6 days. For those who develop symptoms, the most common are fever, muscle pain, backache, headache, loss of appetite, and nausea or vomiting. Symptoms last 3–4 days. Around 15% of cases progress to a more severe form of the disease within 24 hours of first symptoms appearing. The severe form is characterised by high fever, jaundice, bleeding, and eventually the failure of several organs. The case fatality rate for those who develop the severe form of the disease is 20%–50% (CDC 13/08/2015; WHO 05/2016).

Treatment

Treatment is symptomatic and supportive care, focused on rest, hydration, reducing fever and pain relief (CDC 13/08/2015; WHO 05/2016).

Previous outbreaks

DRC reported up to 200 suspected cases of yellow fever in 2010, 2013, and 2014. Mass vaccination has always been launched and large-scale outbreaks were prevented (WHO 24/04/2014; WHO 14/06/2013; WHO 19/07/2010).

Risk factors

Yellow fever outbreaks in densely populated areas are unusual, but when they occur they are large and difficult to control due to insufficient vaccination coverage in urban settings and high vector density (WHO 02/06/2016; WHO 05/2016; WHO 2001). Matadi, the capital of Kongo-Central, is the country's main seaport and is well connected to international trade routes – increasing the risk of spreading the disease to other countries (WHO 15/06/2016).

Vaccines

An effective vaccine against yellow fever exists. It offers life-long protection and begins to be effective 30 days after vaccination. In outbreaks, more than 80% of the population

in affected areas must be vaccinated in order to prevent further transmission (CDC 13/08/2015; WHO 05/2016).

Response capacity

Local and national response capacity

The government of DRC has officially requested an intervention from WHO and other international organisations (WHO 20/06/2016). A national coordination committee was activated with the aim to better coordinate surveillance and response (WHO 02/06/2016).

International response capacity

The Gavi alliance conducted a mass vaccination campaign between 26 May and 4 June in 11 health zones, delivering over 2.2 million vaccines (WHO 09/06/2016). An additional 1 million vaccines should be delivered in the coming days or weeks by the International Coordinating Group (ICG, including WHO, UNICEF, IFRC, and MSF) (WHO 20/06/2016; Reuters 22/06/2016). As of 20 June, a vaccination campaign has been launched in all affected health zones in Kongo-Central except one, Masa, and in Masina II and Ndjili health zones in Kinshasa (WHO 20/06/2016; Radio Okapi 31/05/2016).

MSF have vaccinated the entire population of Matadi, capital of Kongo-Central (350,000). MSF has also launched vector control measures in Kinshasa and Kongo-Central. They include spraying and fumigation of houses, schools, hospitals and markets (MSF 31/05/2016).

WHO has deployed a multidisciplinary team in Kongo-Central and Kinshasa (WHO 02/06/2016). WHO will launch a vaccination campaign in July covering a 75–100km belt spanning the border between Angola and DR Congo (WHO 22/06/2016).

Information gaps and needs

- Apart from health needs, no further needs have been reported. However, additional needs, including food or livelihoods, could emerge if the outbreak continues.
- The breakdown of the number of suspected cases and deaths per province is not available.

Lessons learned

- Vector-borne diseases have a significant economic, ecological and public health impact on affected communities. Outbreaks can affect trade, agricultural productivity and ecosystem dynamics (NCBI 2008).
- Pesticides remain the primary means to prevent or mitigate vector-borne diseases, but resistance has limited their effectiveness (NCBI 2008).
- Effective vector control includes chemical, biological, genetic and community-based control methods (Asia-Pacific Journal of Molecular Biology and Biotechnology 11/12/2015).

Key characteristics in Kinshasa, Kwango, Kongo-Central

Key indicators	Kinshasa	Kwango	Kongo-Central	DRC
Total population	11,500,000	3,500,000	5,600,000	79,300,000
% population in rural areas	0%	-	-	42%
Gender and age distribution of population	5,600,000 men 5,500,000 women	No data	2,500,000 men 3,100,000 women	38,700,000 men 40,600,000 women
State capital	Kinshasa	Kenge	Matadi	Kinshasa
Cooking	52% use charcoal 40% use electricity	87% use wood 10% use charcoal	61% use wood 30% use charcoal	66% use wood 27% use charcoal
WASH				
Population with access to drinking tap water	66%	2.4%	8%	12%
Health (country-wide)				
Under-five mortality	-	-	-	98.3/1,000 live births
Maternal mortality	-	-	-	540/100,000 live births
Neonatal mortality	-	-	-	44/1,000 live births
Food security	-	-		
Crisis (IPC Phase 3)			53,000	3,400,000
Emergency (IPC Phase 4)			15,000	1,050,000
Nutrition	-	-	11% GAM (2013/2014). 46% children under five are chronically malnourished	8.5% GAM
Literacy rates (country-wide)	-	-	-	61.2%

Le Kwango 2008; Kongo-Central Provincial profile 12/2015; INS RDC 2014, IPC Info 17/11/2015; World Bank 2016; UN Data 2016; UNICEF 2013; INS RDC 2014; CIA Factbook 2015