



SUMMARY

- A yellow fever outbreak was detected in Angola late in December 2015 and confirmed by the Institut Pasteur Dakar (IP-D) on 20 January 2016. Subsequently, a rapid increase in the number of cases has been observed.
- As of 11 May 2016, Angola has reported 2267 suspected cases of yellow fever with 293 deaths. Among those cases, 696 have been laboratory confirmed. Despite vaccination campaigns in Luanda, Huambo and Benguela provinces circulation of the virus in some districts persists.
- Three countries have reported confirmed yellow fever cases imported from Angola: Democratic Republic of The Congo (DRC) (39 cases), Kenya (two cases) and People's Republic of China (11 cases). This highlights the risk of international spread through non-immunised travellers.
- On 22 March 2016, the Ministry of Health of DRC confirmed cases of yellow fever in connection with Angola. The government officially declared the yellow fever outbreak on 23 April. As of 11 May, DRC has reported three probable cases and 41 laboratory confirmed cases: 39 imported from Angola, reported in Kongo central province and Kinshasa and two autochthonous cases in Ndjili, Kinshasa and in Matadi, Kongo Central province. The possibility of locally acquired infections is under investigation for at least 10 non-classified cases in both Kinshasa and Kongo central provinces.
- In Uganda, the Ministry of Health notified yellow fever cases in Masaka district on 9 April 2016. As of 11 May, 51 suspect cases and seven laboratory confirmed cases have been reported from three districts: Masaka, Rukungiri and Kalangala. According to sequencing results, those clusters are not epidemiologically linked to Angola.
- The virus in Angola and DRC is largely concentrated in main cities. The risk of spread and local transmission to other provinces in the three countries remains a serious concern. The risk is high also for potential spread to bordering countries especially those classified as low risks for yellow fever disease (i.e. Namibia, Zambia) where the population, travellers and foreign workers are not vaccinated against yellow fever.

SURVEILLANCE

Angola

- From 5 December 2015 to 11 May 2016, the Ministry of Health has reported a total of 2267 suspected cases with 293 deaths and 696 laboratory confirmed cases. There are confirmed cases in 14 of the 18 provinces (Fig. 1) and suspect cases are present in all provinces. Local transmission is present in seven provinces, in 21 districts. Seventy percent of these cases are reported in Luanda province (Fig. 2). Namibe province, bordering Namibia, recently reported confirmed cases and local transmission.
- Despite a decreasing trend (Fig. 3), the outbreak in Angola remains of high concern due to persistent local transmission in Luanda. Although vaccination efforts have reached more than seven million people, local transmission has been reported in six provinces (urban areas and main ports) and there is a high risk of spread to neighbouring countries.
- The risk of establishment of local transmission in other provinces where no autochthonous cases are reported is high. DRC has reported cases imported from two provinces in Angola where no local transmission is currently reported (Cabinda and Zaire). Cabinda is an enclave and province of Angola and is separated from the rest of Angola by a narrow strip of territory belonging to the DRC and bounded on the north by the Republic of the Congo. This poses also a further risk of transmission in DRC and Republic of the Congo.

Figure 1. Monthly timeline of infected districts in Angola, December 2015 to May 2016

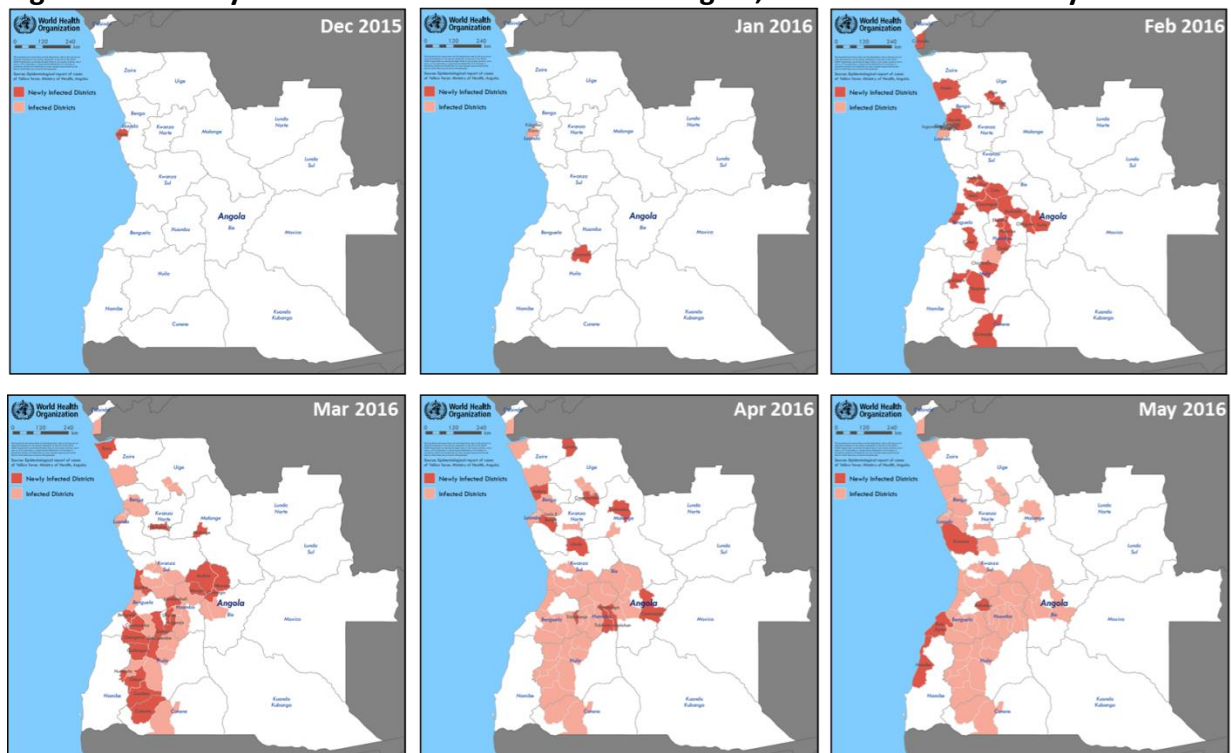


Figure 2. Distribution of yellow fever confirmed cases in Angola and DRC as of 11 May 2016

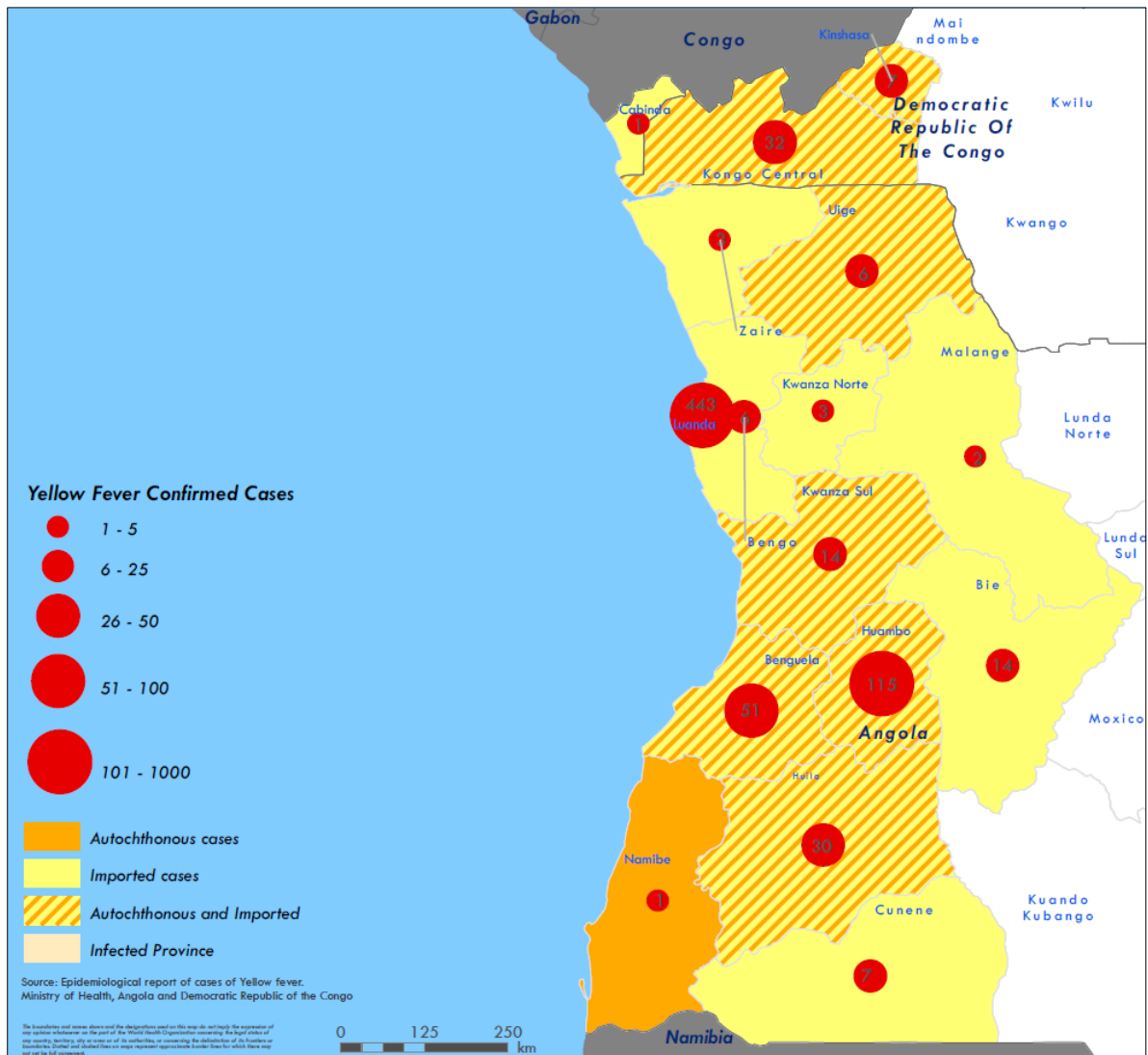
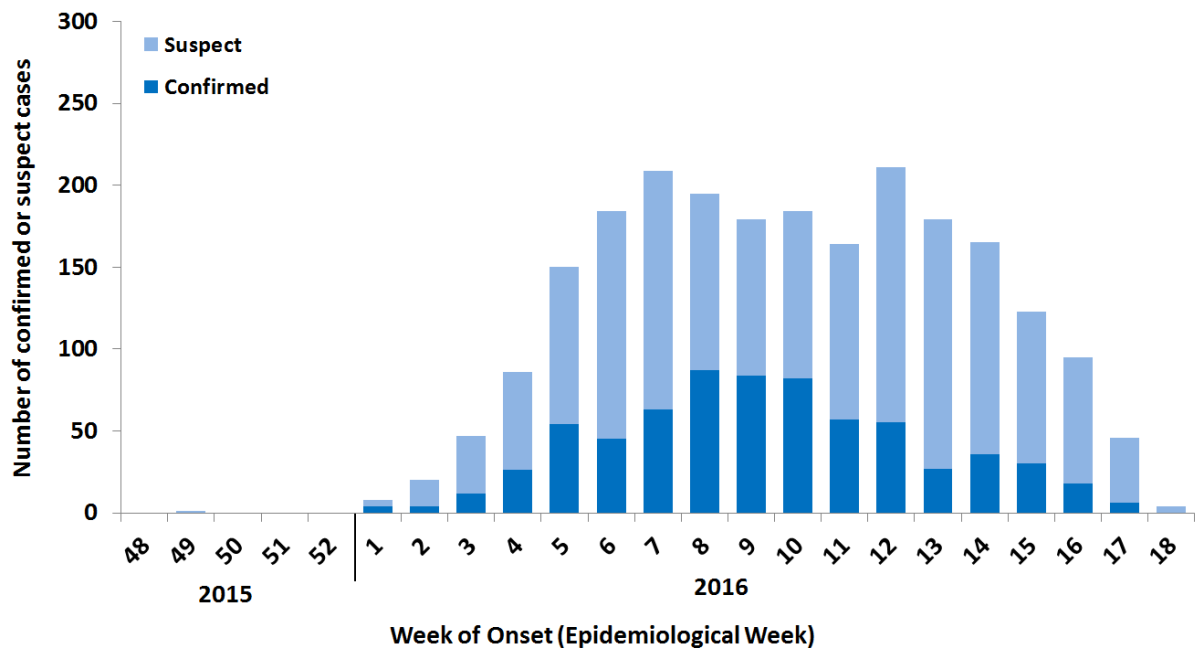


Figure 3. Weekly number of suspected and confirmed yellow fever cases in Angola, 5 December 2015 – 8 May 2016



All data provided by Angola yellow fever situation report as of 8 May 2016.¹ Data for the last two weeks is incomplete due to lags between onset of symptoms and reporting.

Democratic Republic of The Congo

- On 22 March 2016, the Ministry of Health of DRC, notified human cases of yellow fever in connection with Angola. The yellow fever outbreak was officially declared on 23 April.
- As of 11 May, DRC has reported 44 Yellow Fever cases linked to Angola, 41 of those are laboratory confirmed cases with 39 imported from Angola, reported in Kongo central and Kinshasa provinces, and two autochthonous cases in Ndjili, Kinshasa and Matadi, Kongo central province.
- The possibility of locally acquired infections is under investigation for at least 10 non-classified cases in both Kinshasa and Kongo central provinces. For a further three probable cases results are still pending at IP-D.
- Given the large Angolan community in Kinshasa, combined with the presence and activity of the Aedes mosquito, the potential risk of local transmission in DRC in general and in the whole of Kinshasa in particular, is high. The situation needs to be closely monitored.

Uganda

- On 9 April 2016, Uganda notified WHO of yellow fever cases in the south-western district of Masaka. As of 11 May, 51 suspected cases of yellow fever have been reported in seven districts and seven cases have been laboratory confirmed (five in Masaka, one in Rukungiri and one in Kalangala).

¹ http://www.afro.who.int/media/k2/items/cache/4d6881eb0439c683caeb127ff312c2b5_XL.jpg?ua=1

- Uganda is experiencing local transmission of yellow fever outbreak. According to sequencing results, the outbreak is not linked to Angola and indicates high similarities with the virus which caused the outbreak in 2010.

Other countries bordering Angola

- On 28 April, the Ministry of Health of Namibia reported one suspected case of yellow fever, imported from Benguela, Angola: the suspected case was hospitalized first in Benguela, Angola and then in Uganda, at the Engela district hospital in the Ohangwena region (near the border with Angola). Based on subsequent laboratory tests, this case was reported to be negative for yellow fever on 6 May.
- No suspected cases of yellow fever have been reported in the Republic of the Congo or Zambia. However, Namibia and Zambia share a long and porous border with Angola and controlling population movements between the three countries will be challenging.
- Three countries have reported confirmed yellow fever cases exported from Angola: DRC (39 cases), Kenya (two cases) and People's Republic of China (11 cases). This highlights the risk of international spread through non-immunised travellers.

Risk assessment

- The outbreak in Angola remains of high concern due to:
 - Persistent local transmission in Luanda despite the fact that more than seven million people have been vaccinated.
 - Local transmission reported in seven highly populated provinces including Luanda.
 - The continued extension of the outbreak to new provinces and new districts.
 - High risk of spread to neighbouring countries. Confirmed cases have already travelled from Angola to People's Republic of China, DRC and Kenya. As the borders are porous with substantial crossborder social and economic activities, further transmission cannot be excluded. Viraemic patients travelling pose a risk for the establishment of local transmission especially in countries where adequate vectors and susceptible human populations are present.
 - Inadequate surveillance system capable of identifying new foci or areas of cases emerging. High index of suspicion of ongoing transmission in areas hard to reach like Cabinda.
- For DRC, a field investigation conducted in April concluded that there is a high risk of local transmission of yellow fever in the country. Given the limited availability of vaccines, the large Angolan community in Kinshasa, the porous border between Angola and DRC and the presence and the activity of the vector *Aedes* in the country, the situation needs to be closely monitored.
- The virus in Angola and DRC is largely concentrated in main cities. The risk of spread and local transmission in other provinces in the three countries remains a serious concern. The risk is high also for potential spread to bordering countries especially those classified as low risk (i.e. Namibia, Zambia) and where the population, travelers and foreign workers are not vaccinated for yellow fever.

RESPONSE

- Vaccinations campaigns started first in Luanda province at the beginning of February and mid-April in Benguela and Huambo (Fig. 4).
- As of 10 May, 11.7 million doses were shipped to Angola.
- DRC and Uganda are GAVI Alliance eligible countries thus the vaccination campaigns in these countries will be covered by GAVI Alliance.
- 2.2 million vaccines and ancillaries are to arrive in DRC by mid-May for conducting an emergency vaccination campaign targeting seven health zones (*zones de santé*) in Kongo central province and N'djili health zones in Kinshasa province.
- 700 000 yellow fever vaccines arrived in Uganda and the vaccination campaign will start on 19 May.
- Namibia requested 450 000 doses (10 dose vials) for yellow fever vaccine for travellers and refugees.
- International media attention to yellow fever has been minimal. However, Angola has issued press information related to control measures in place in country. Other coverage has focussed on ensuring vaccination related to travel and prevention of spread of disease.
- A Q&A on the current yellow fever outbreak has been posted on the WHO website.²
- WHO briefed communication leadership across the UN related to communications issues and resources for joint coordinated response to inquiries about the outbreak.

² <http://www.who.int/features/ga/yellow-fever/en/>

Figure 4. Vaccination population coverage in Angola as of 11 May 2016

