World Health Organization

SITUATION REPORT

YELLOW FEVER
12 AUGUST 2016

SUMMARY

- In Angola, no confirmed cases have been reported in July or August. As of 4 August 2016, a total of 3867 suspected cases have been reported, of which 879 are laboratory confirmed. The total number of reported deaths is 369, of which 119 were reported among confirmed cases. Confirmed cases have been reported in 16 of 18 provinces.
- The priorities for the response in Angola are to complete the pre-emptive vaccination campaigns in bordering areas and at-risk districts, to maintain a strong surveillance and case-finding system, and to continue vector control activities.
- Mass reactive vaccination campaigns have covered most of the affected parts of Angola (Fig 6). The pre-emptive vaccination phase targeting three million people in 18 districts is expected to start on 15 August. Four additional districts which border Namibia will be vaccinated in early August.
- As of 8 August, the Democratic Republic of The Congo (DRC) has reported a total of 2269 suspected cases.
- As of 8 August, out of 1943 samples analysed in DRC 74[1] cases have been confirmed including 16 deaths (CFR: 21.6%) (Table 1). Confirmed cases have been reported in seven of 26 provinces. Of the 74 confirmed cases, 56 are reported as imported from Angola, three are sylvatic[2] (not related to the outbreak), 12 are autochthonous[3] and three are under final investigation.
- Preventive vaccination campaigns are scheduled to begin on 17 August in 32 Health Zones in Kinshasa province and 16 Health Zones in border areas with Angola. Fractional dosing, also known as emergency vaccines, will be implemented in the vaccination campaigns in Kinshasa.

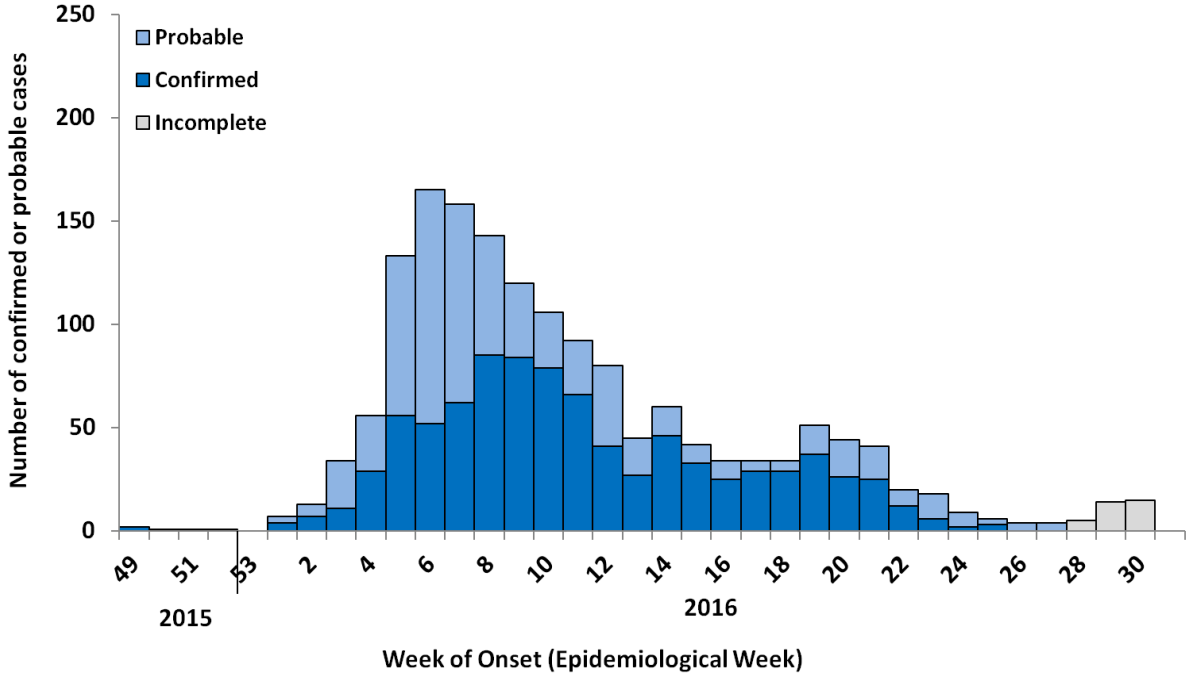
[1] A review of the laboratory results in DRC was conducted and several cases previously reported as laboratory confirmed yellow fever cases have been discarded based on reported history of vaccination.
[2] http://www.who.int/mediacentre/factsheets/fs100/en/
[3] Autochthonous infection is considered to be an infection acquired in-country, i.e. among patients with no history of travel during the incubation period.

EPIDEMIOLOGICAL SITUATION

Angola

- From 5 December 2015 to 4 August 2016, a total of 3867 suspected cases have been reported, of which 879 are laboratory confirmed (Table 1).
- The last confirmed case reported had symptom onset on 23 June (Fig. 3).
- Since the start of the outbreak, suspected cases have been reported in all 18 provinces, and confirmed cases have been reported in 80 districts in 16 provinces (Fig. 2, Fig. 4, Table 2). Local transmission has been documented in 45 districts in 12 provinces.
- The epidemic curve (Fig. 1) shows that the total number of confirmed and probable[4] cases increased from early 2016 and peaked in weeks 8 to 9 (22 February to 6 March). From epidemiological week 23 onwards, the number of suspected and confirmed cases has been declining.
- Luanda and Huambo provinces have reported the highest number of total cases. As of 4 August, 2022 cases (including 487 confirmed, 55.5%) were reported in Luanda and 620 cases (127 confirmed, 14.5%) were reported in Huambo (Fig. 4). Confirmed cases were last reported in these two provinces in May.
- The most affected group is males aged between nine and 19 years.

Figure 1. National weekly number of probable and confirmed yellow fever cases in Angola, 5 December 2015 to 4 August 2016



Data provided by Angola yellow fever situation report published on 5 August 2016. Data for the last four weeks are incomplete due to ongoing investigations.

[4] Case definitions for yellow fever: http://www.who.int/csr/disease/yellowfev/case-definition/en/

Figure 2. Monthly timeline of infected districts in Angola, March 2016 to 4 August 2016

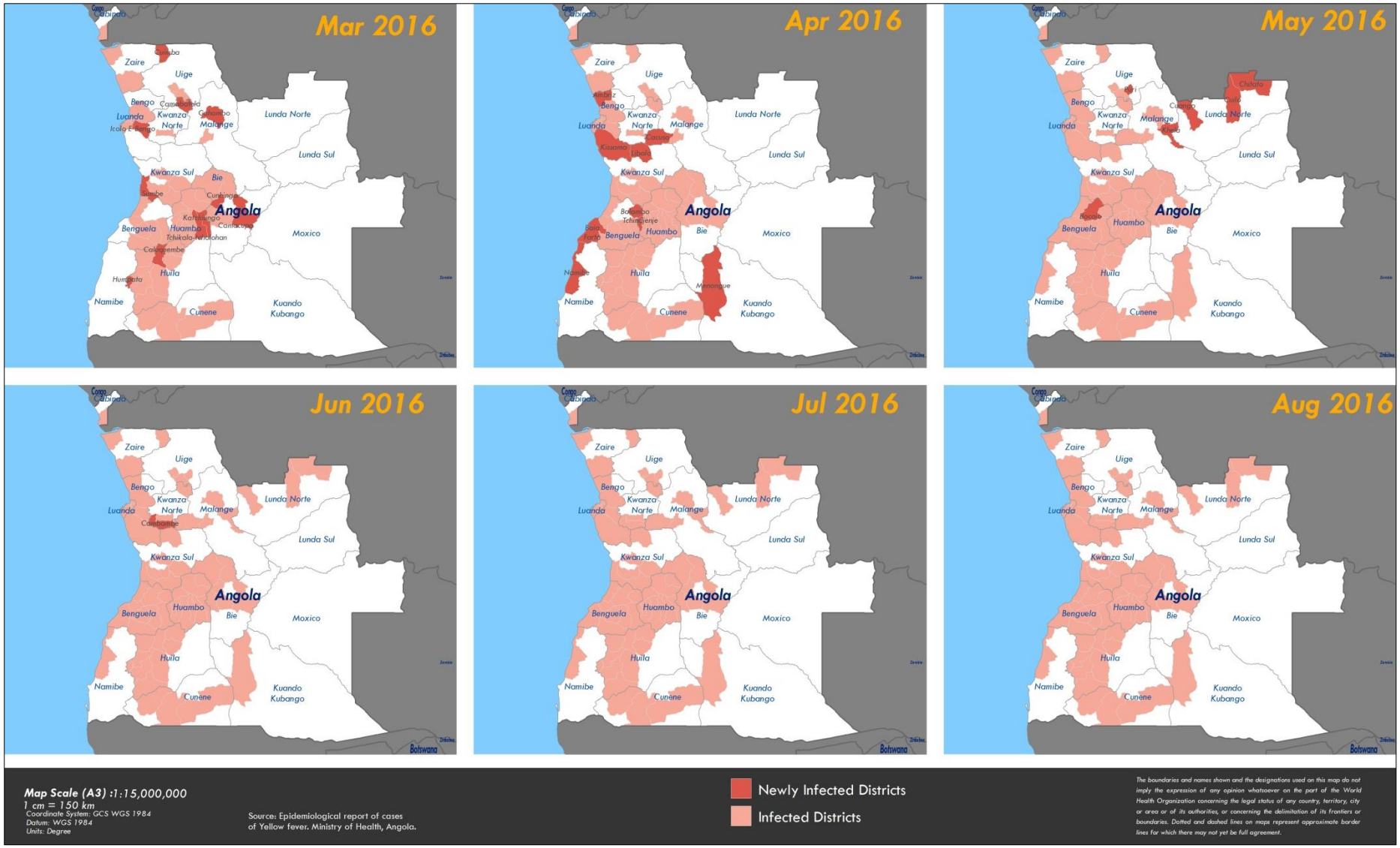


Figure 3. Timeline of confirmed cases by month in Angola, March 2016 to 4 August 2016

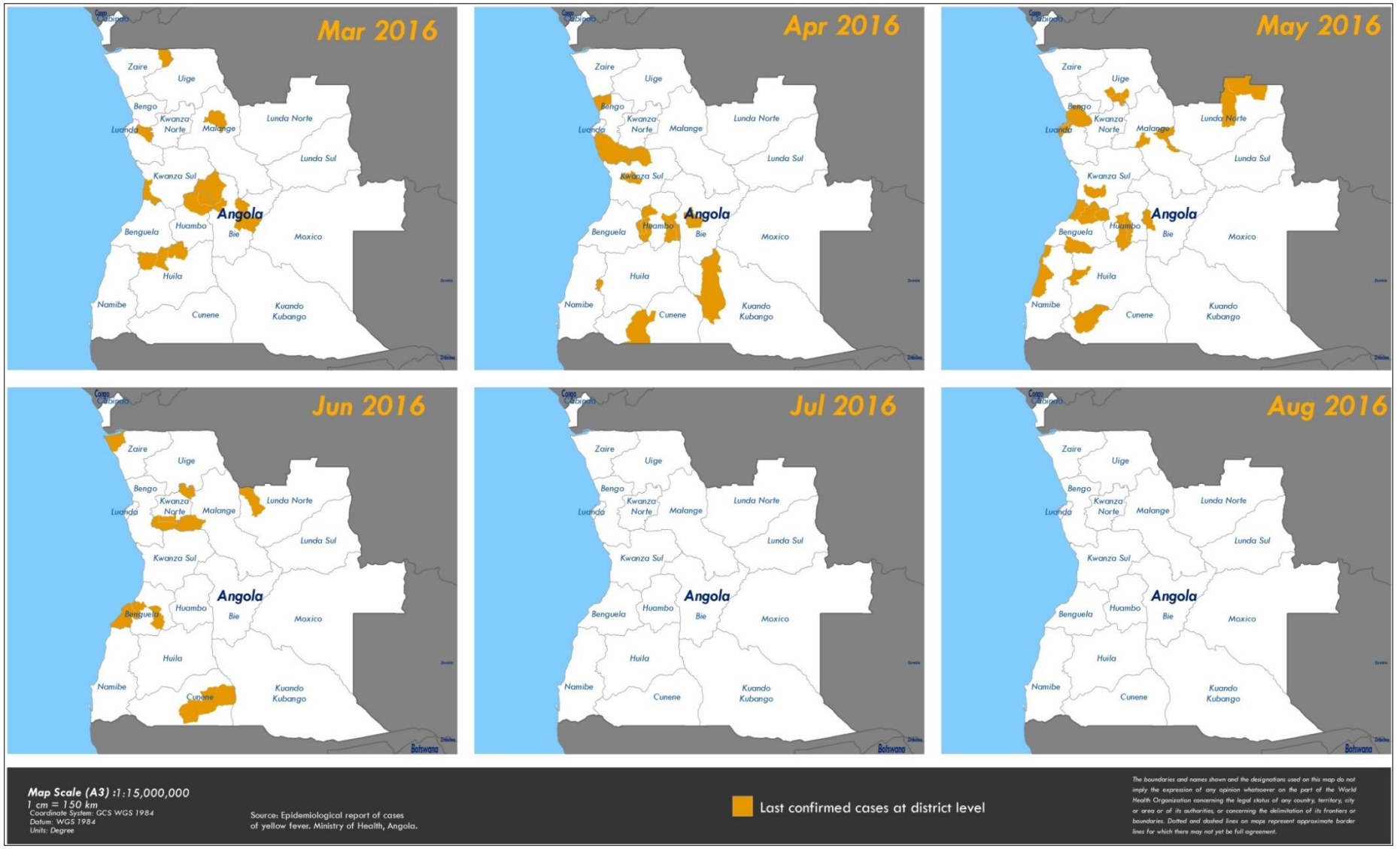
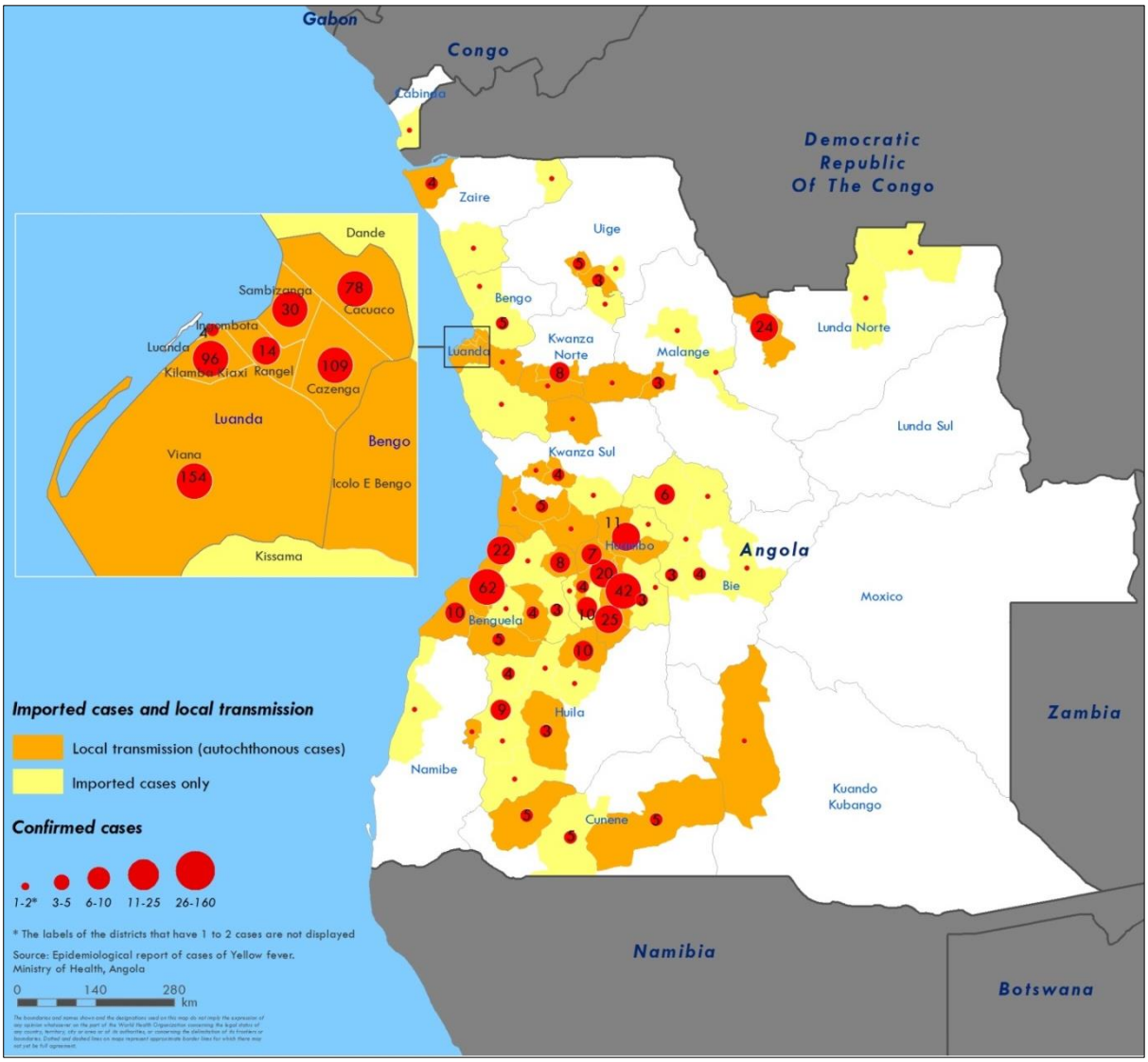


Figure 4. Distribution of confirmed yellow fever cases in Angola as of 4 August 2016



Democratic Republic of The Congo (DRC)

- As of 8 August, DRC has reported a total of 2269 suspected cases.
- Out of 1943 samples analysed 74 cases have been confirmed including 16 deaths (Table 1). A review of the laboratory results in DRC was conducted and several cases previously reported as laboratory confirmed yellow fever cases have been discarded based on reported history of vaccination.
- Confirmed cases have been reported in seven of 26 provinces. Of the 74 confirmed cases, 56 are reported as imported from Angola, three are sylvatic, 12 are autochthonous and three are under final investigation (Fig. 5).
- The 12 autochthonous cases were reported in Kinshasa (six cases), Kongo Central (two case) and Kwango (four cases) provinces and one sylvatic case was reported in each Bas Uele, Kasai and Tshuapa provinces.
- Two provinces have reported confirmed cases for the first time and an increase in number of suspected cases: one sylvatic case in Kasai province with the onset of

symptoms recorded as late May and one imported case in Lualaba province with the onset of symptoms recorded as late June.

- One Health Zones has reported a confirmed, autochthonous case for the first time: Feshi Health Zone in Kwango province.
- The most affected age group among males is 15 to 24 years.
- In DRC, reactive vaccination campaigns finished on 29 July in Kisenso Health Zone in Kinshasa province with vaccination coverage of 104% and in Kahemba, Kajiji and Kisandji Health Zones in Kwango province with vaccination coverage ranging from 70 to 107% (Fig. 7).
- Preventive vaccination campaigns are scheduled to begin on 17 August in 32 Health Zones in Kinshasa province and 16 Health Zones in border areas with Angola. Fractional dosing will be implemented in the vaccination campaigns in Kinshasa.

Figure 5. Distribution of confirmed yellow fever cases in Democratic Republic of The Congo as of 8 August 2016

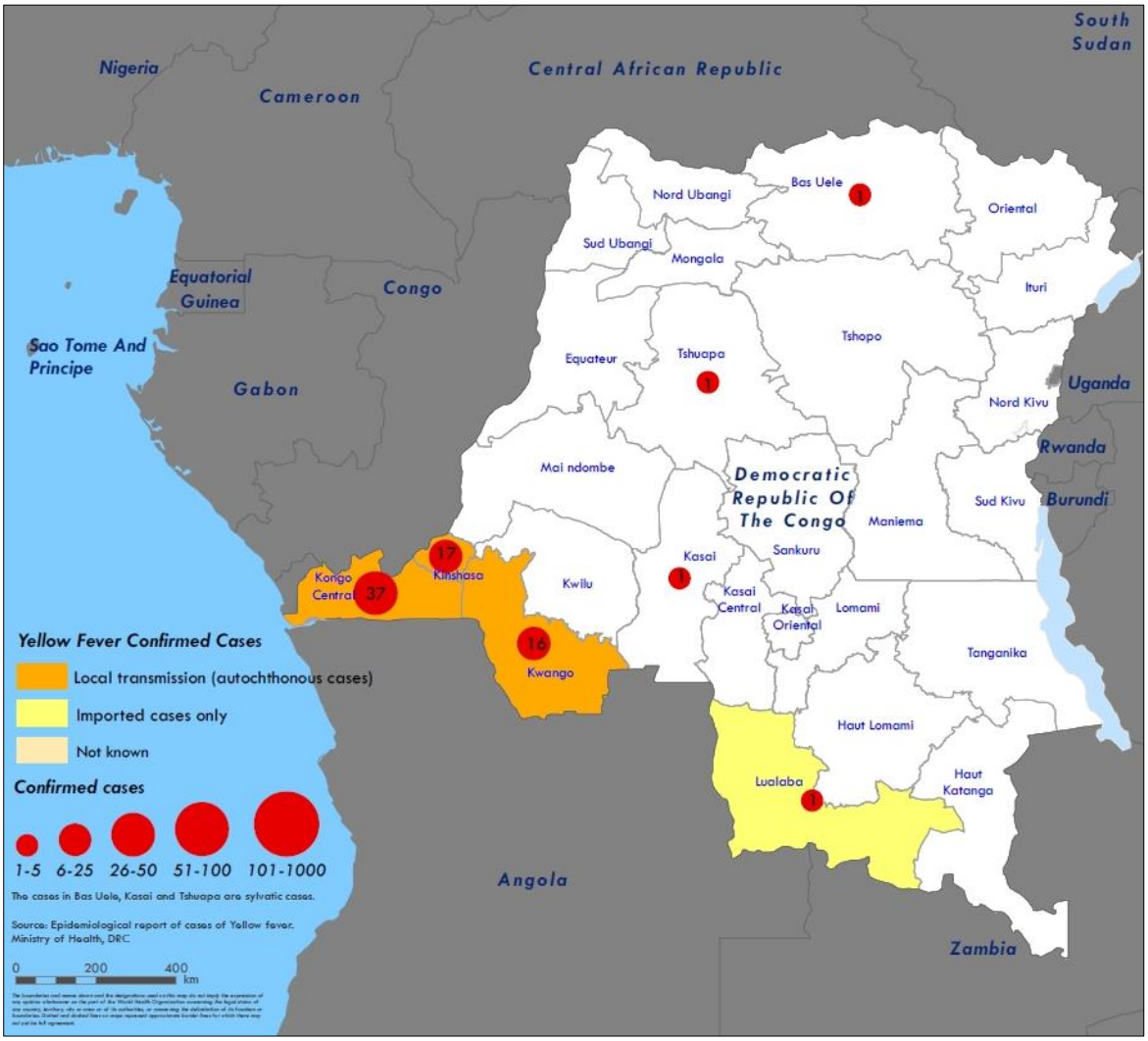


Table 1: Reported yellow fever cases and deaths in Angola and Democratic Republic of The Congo

Cases and deaths	Angola		Democratic Republic of The Congo	
	Recent week (29 Jul – 4 August)	Cumulative (5 Dec – 4 August)	Recent week (1 Aug – 8 Aug)	Cumulative (1 Jan – 8 Aug)
Confirmed cases	0	879	Not available	74*
Confirmed deaths	Not available	119	Not available	16
Reported cases	52	3867	Not available	2269
Reported deaths	0	369	Not available	Not available

*Cases and deaths include both autochthonous and imported cases. Data are as of most recent week for which data are available. These numbers are subject to change due to ongoing reclassification, retrospective investigation and availability of laboratory results. *Three cases are sylvatic yellow fever cases not associated with the outbreak in Angola.*

Table 2: Geographical distribution of yellow fever cases in Angola and Democratic Republic of The Congo

Geographical distribution of cases	Angola		Democratic Republic of The Congo	
	Recent week (29 Jul – 4 August)	Cumulative (5 Dec – 4 August)	Recent week (1 Aug – 8 Aug)	Cumulative (1 Jan – 8Aug)
Districts/ health zones with confirmed cases	0	80	Not available	24
Districts/ health zones with documented local transmission	0	45	Not available	Not available
Provinces with confirmed cases	0	16	Not available	7*
Provinces with documented local transmission	0	12	Not available	6*

*Data are as of most recent week for which data are available. These numbers are subject to change due to ongoing reclassification, retrospective investigation and availability of laboratory results. Data for the most recent week represent newly affected districts/ health zones or provinces. *Includes sylvatic cases.*

Risk assessment

- The outbreak in Angola is receding and no confirmed case has been reported in the country during July and beginning of August (as of 4 August). However, a high level of vigilance needs to be maintained throughout the country, and the pre-emptive mass vaccination campaign will be implemented as planned.
- In DRC, there is a need for heightened vigilance as the outbreak has spread to new provinces and new Health Zones in the three previously affected provinces. Given the presence and activity of the vector *Aedes* in the country and low immunity of the population, the outbreak might continue to extend to other provinces.

RESPONSE

- Information on the current outbreak continues to be updated on the WHO website[5].
- WHO has sent more than 28 million vaccine doses to Angola, DRC and Uganda through the International Coordinating Group (ICG) global stockpile and with additional vaccines from Bio-Manguinhos in Brazil.
- As of 10 August 2016, 21 million vaccine doses have been approved for Angola and 11.5 million doses for DRC (Table 3).

[5] http://www.who.int/features/qa/yellow-fever/en/

- The number of vaccines currently available for the emergency response is 5.7 million through the ICG (Table 4). The amount of doses already allocated to respond to the outbreak is not included in this number.

Table 3. Vaccination coverage in Angola and the Democratic Republic of The Congo (DRC) as of 10 August 2016

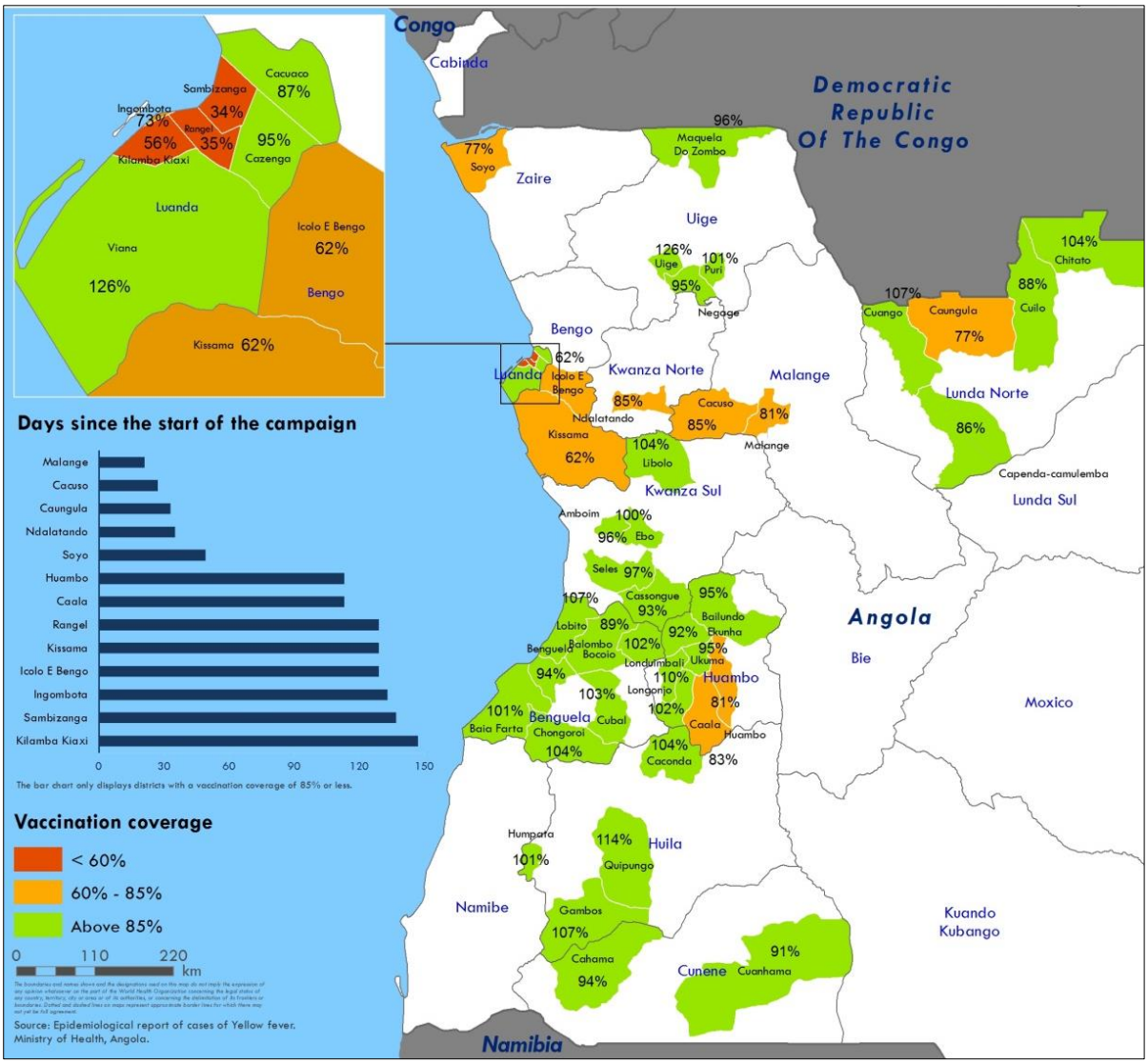
Country	Target areas: Province/Region (District/Health zone)	Doses approved (in millions)
Angola	Luanda (Viana)	1.8
	Luanda (all 8 districts)	5.6
	Benguela, Bie, Huambo, Kwanza Sul	4.3
	Benguela, Bie, Cunene, Huila, Kuando Kubango, Kwanza Norte, Kwanza Sul, Namibe, Uige	6.4
	Preventive vaccination campaigns in areas which border DRC	3.1
DRC	Kinshasa, Kongo Central	4.7
	Kwango province (3 health zones), Kinshasa (Kisenso)	1.1
	Preventive vaccination campaigns in Kinshasa and areas which border Angola	5.7

Table 4. Cumulative number of vaccine doses (millions) available and projected for emergency stockpile

Date (as of)	Number of vaccine doses available*
10 August	5.7
	Cumulative number of vaccine doses projected°
28 August	11.7
30 September	20.1
31 October	21.2
30 November	28.1
31 December	25.6

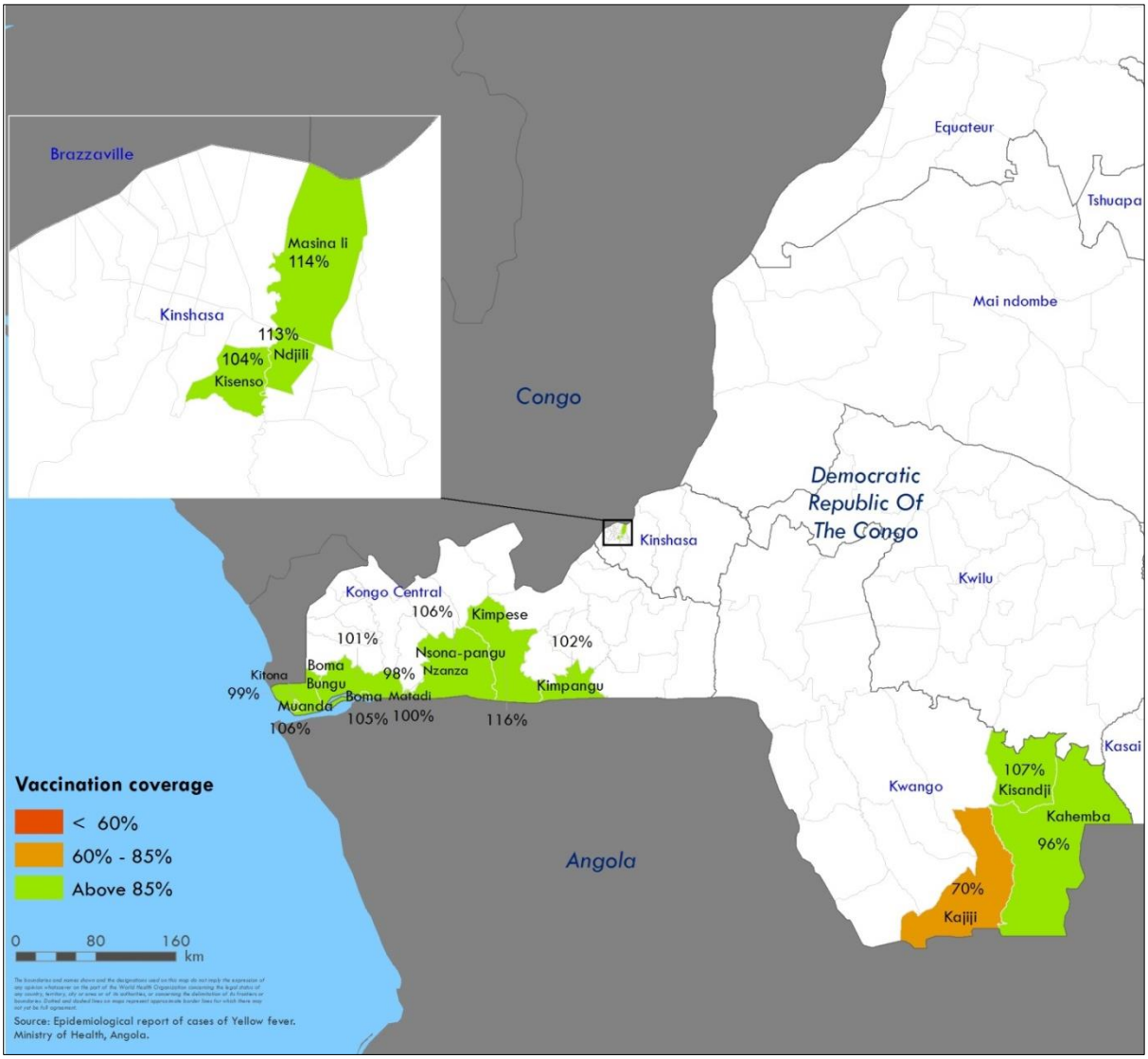
**Number of doses available is the current stock minus number of vaccine doses planned to be distributed for emergency response. °Numbers are projections and are subject to change.*

Figure 6. Vaccination administrative* coverage in Angola as of 4 August 2016



**These coverage figures represent number of doses administered, divided by estimated population. As such, figures may not reflect true vaccination coverage due to inaccurate population estimates.*

Figure 7. Vaccination administrative* coverage in Democratic Republic of The Congo as of 3 August 2016



**These coverage figures represent number of doses administered, divided by estimated population. As such, figures may not reflect true vaccination coverage due to inaccurate population estimates.*