



**YELLOW FEVER
OUTBREAK IN ANGOLA**
INCIDENT MANAGEMENT
SITUATION REPORT 23 May 2016

Vol: 5-03

I. Key Highlights

- ◆ On 19 May the Emergency Committee (EC) of the (IHR 2005), declared that yellow fever outbreak in Angola and DRC is a serious public health event, but does **not** constitutes a Public Health Emergency of International Concern (PHEIC).
- ◆ Since 16 May 2016, 16 districts in 5 provinces are implementing mass vaccination campaigns., namely (Benguela, Cuanza Sul, Huambo, Huila and Uige)
- ◆ The Angola Ministry of Health prepared a circular letter regulating control of Yellow Fever vaccination at entry and exit from the country and for some domestic travel.
- ◆ New cases of local transmission were documented in Uige, Menongue, while Sumbe, Humpata, Coango and Cacuso districts are under investigation

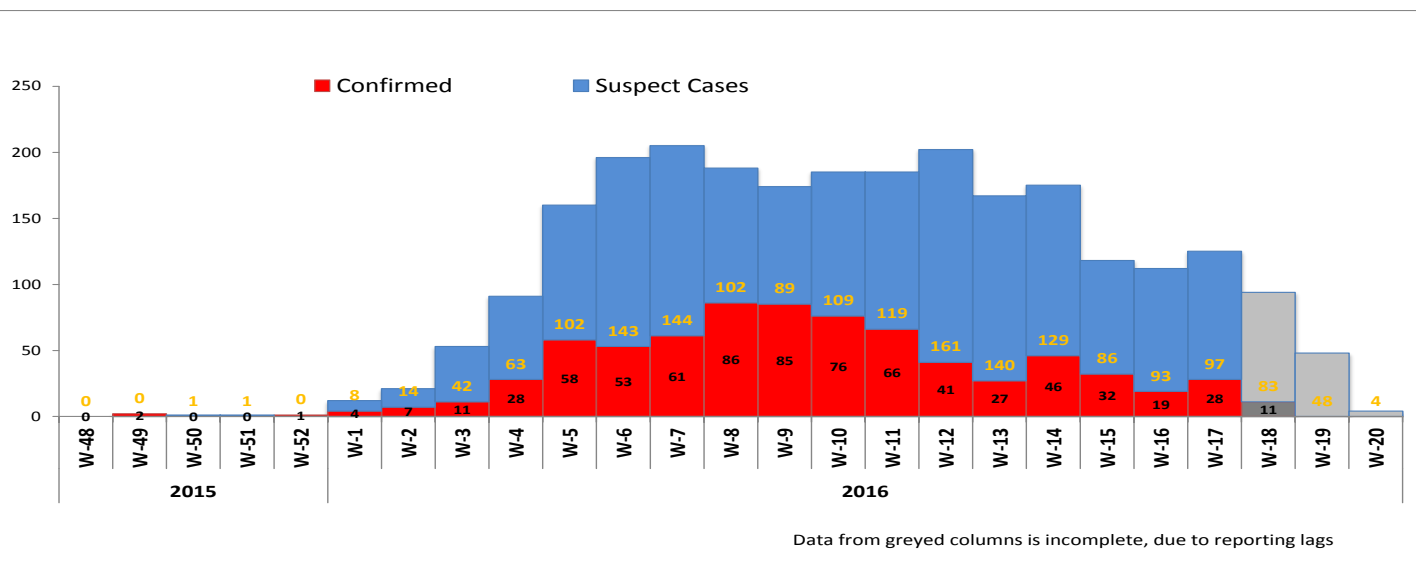
II. Epidemiological Situation as of 22 May 2016

- ◆ **Cumulatively**, a total of **2,536** suspected cases with **301** deaths have been reported, of which **747** were confirmed cases including **96** deaths among confirmed cases.
- ◆ Luanda province represented **62.4% (466)** of confirmed cases (Table 2).
- ◆ Laboratory confirmation was reported for **14** provinces out of **18** included **72** districts out of **166** in the country.
- ◆ **5 provinces** out of Luanda have been reported as local transmission, including **47 documented** cases.
- ◆ The majority of the confirmed cases were among age groups of **20-29 yrs**; **70%** of cases are male.

Table 1: National Summary of Yellow Fever Outbreak

Total suspected cases	2,536
Total confirmed cases	747
Total deaths	301
Total deaths from confirmed cases	96
Total districts with suspected cases	107
Total districts with confirmed cases	72
Total provinces with suspected cases	18
Total provinces with confirmed cases	14
Total districts with local transmission out of Luanda	21
Total provinces with local transmission out of Luanda	5
Total number of districts in Angola	166
Total number of provinces in Angola	18
Target population for vaccination (Luanda, Huambo & Benguela)	8,582,197
Total population vaccinated (Luanda, Huambo & Benguela)	7,815,176
SIAs administrative coverage	91.1%

Fig. 1: National Epi Weekly trend of yellow fever suspected and confirmed cases in Angola, 5 Dec 2015— 22 May 2016



Source: MOH, Angola

YELLOW FEVER OUTBREAK WEEKLY SITUATION REPORT, INCIDENT MANAGEMENT TEAM ANGOLA

Table 2: Distribution of confirmed yellow fever cases and vaccination coverage in Angola, as of 22 May 2016

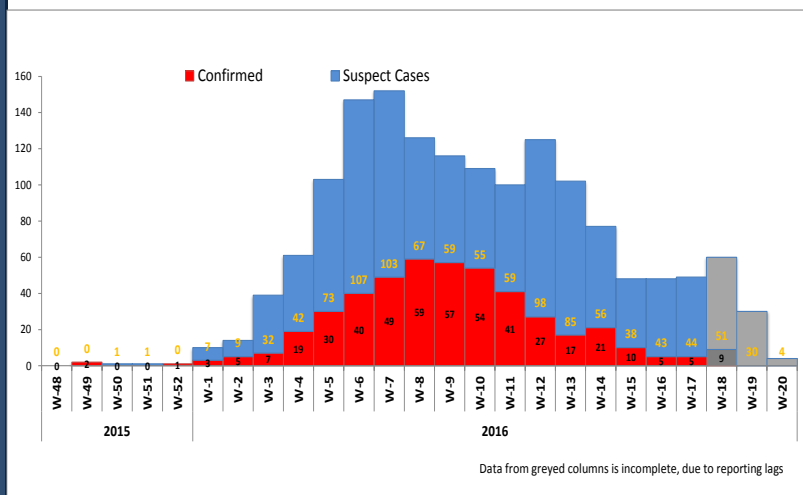
Provinces	Districts	Epidemiology			SIAs			
		Confirmed cases	Date of onset first case	Date of onset of last case	Target Population	Launching date	Population vaccinated	%
LUANDA	Cazenga	104	18-01-2016	5/6/2016	867,659	29-Feb-16	807,566	93%
	Viana	93	05-12-2015	5/3/2016	1,535,102	2-Feb-16	2,120,187	138%
	Cacuaco	77	28-01-2016	5/6/2016	887,829	29-Feb-16	767,241	86%
	K. Kiaxi	61	06-12-2015	5/2/2016	640,006	10-Mar-16	211,021	33%
	Belas	51	15-01-2016	28-04-2016	1,071,662	19-Feb-16	1,287,615	120%
	Sambizanga	29	23-01-2016	5/2/2016	433,970	20-Mar-16	134,643	31%
	Maianga	26	08-02-2016	29-04-2016	660,884	14-Mar-16	480,024	73%
	Rangel	15	29-01-2016	17-04-2016	136,031	28-Mar-16	40,429	30%
	Ingombota	4	01-02-2016	15-03-2016	89,556	24-Mar-16	60,876	68%
	Samba	4	10-02-2016	20-03-2016	160,174	24-Mar-16	50,843	32%
Icolo e Bengo	1	08-03-2016	08-03-2016	75,103	28-Mar-16	35,471	47%	
Kissama	1	24-04-2016	24-04-2016	25,240	28-Mar-16	13,774	55%	
TOTAL OF LUANDA		466			6,583,216		6,009,690	91%
BIE	Andulo	6	14-02-2016	17-03-2016	236,236			
	Camacupa	1	19-03-2016	19-03-2016	142,633			
	Chinguar	2	02-02-2016	23-03-2016	118,593			
	Cuito	4	30-01-2016	18-04-2016	426,780			
	Cunhinga	1	01-03-2016	01-03-2016	69,664			
Nharea	1	22-02-2016	22-02-2016	114,351				
CUNENE	Ombadja	5	01-02-2016	17-04-2016	291,861			
	Cuanhama	1	24-02-2016	24-02-2016	362,710			
	Cahama	4	28-02-2016	12-03-2016	69,519			
BENGUELA	Baia Farta	7	08-04-2016	30-04-2016	103,623	16-May-16	45,172	44%
	Balombo	4	25-04-2016	27-04-2016	99,932	16-May-16	59,436	58%
	Benguela	29	15-02-2016	29-04-2016	531,744	16-May-16	43,661	65%
	Caimbambo	1	26-02-2016	26-02-2016	81,212			
	Catumbela	2	15-04-2016	19-04-2016	173,601	13-Apr-16	188,421	
	Chongoroi	4	26-02-2016	07-04-2016	81,977			
	Cubal	3	05-02-2016	10-03-2016	289,703	16-May-16	89,728	31%
	Ganda	3	10-02-2016	28-02-2016	226,051			
	Lobito	13	22-01-2016	30-04-2016	335,601	13-Apr-16	29,867	
HUAMBO	Bailundo	11	05-02-2016	25-03-2016	283,887	16-May-16	142,560	50%
	Caala	24	28-01-2016	22-04-2016	268,734	13-Apr-16	222,811	
	Catchiungo	2	18-03-2016	29-04-2016	116,334			
	Ecunha	18	17-01-2016	17-04-2016	79,334	16-May-16	46,060	58%
	Huambo	39	20-01-2016	25-04-2016	689,301	13-Apr-16	558,150	
	Londuibali	7	17-02-2016	27-04-2016	125,214			
	Longonjo	10	09-02-2016	15-04-2016	87,329			
	Mungo	2	06-02-2016	01-03-2016	111,109			
	Tchikala	3	17-03-2016	07-04-2016	102,541			
	Tchindjendje	1	01-04-2016	01-04-2016	28,371			
Ukuma	4	22-02-2016	19-04-2016	42,802	16-May-16	42,802	100%	
Kuanza Norte	Ambaca	1	21-03-2016	21-03-2016	61,209			
	Cazengo	2	23-02-2016	27-02-2016	166,860			
KUANZA SUL	Amboim	2	23-01-2016	05-04-2016	236,339	16-May-16	112,979	48%
	Cassongue	2	02-02-2016	02-02-2016	145,579	16-May-16	26,833	19%
	Cela	1	04-02-2016	04-02-2016	219,850			
	Ebo	4	17-01-2016	16-04-2016	159,024	16-May-16	33,361	21%
	Libolo	1	05-04-2016	05-04-2016	85,630	16-May-16	29,867	35%
	Seles	3	05-02-2016	24-03-2016	176,058	16-May-16	70,432	40%
	Sumbe	1	02-03-2016	02-03-2016	269,341			
CABINDA	Cabinda	1	25-01-2016	25-01-2016	601,892			
HUILA	Caconda	10	05-01-2016	20-03-2016	160,892	16-May-16	110,068	68%
	Caçula	3	23-02-2016	29-04-2016	129,201			
	Caluquembe	2	04-03-2016	21-03-2016	170,463			
	Chibia	1	08-02-2016	08-02-2016	182,548			
	Chicomba	1	02-02-2016	02-02-2016	128,056			
	Gambos	1	24-02-2016	24-02-2016	76,456			
	Humpata	3	09-02-2016	28-04-2016	83,267			
	Lubango	4	30-01-2016	05-02-2016	736,077			
	Quilengues	4	21-02-2016	10-03-2016	69,105			
	Quipungo	3	02-02-2016	05-02-2016	147,818	16-May-16	143,410	97%
BENGO	Ambriz	1	04-04-2016	04-04-2016	21,940			
	Dande	4	05-02-2016	10-04-2016	219,270			
MALANGE	Malange	1	21-02-2016	21-02-2016	489,867			
	Cacuso	1	21-04-2016	21-04-2016	71,981			
	Cahombo	1	20-03-2016	20-03-2016	22,251			
NAMIBE	Namibe	1	17-04-2016	17-04-2016	283,792			
ZAIRE	Nzeto	1	05-02-2016	05-02-2016	44,714			
	Soyo	1	10-02-2016	10-02-2016	219,536			
	Cuímba	1	24-03-2016	24-03-2016	65,011			
UIGE	Negage	2	03-02-2016	10-04-2016	136,323	16-May-16	86,892	64%
	Uíge	5	02-02-2016	16-04-2016	496,567	16-May-16	385,757	78%
TOTAL FOR THE PROVINCES OUT OF LUANDA		281					1,469,018	
TOTAL		747					7,478,708	
New province and new districts affected			Confirmed cases and dates as of 22 May 2016					
ONLY Total number and percentage of the vaccinated population per provinces in the period of (16 – 22 May, 2016)								

Source: MOH, Angola

Coverage data from Ebo, Cassongue, Seles, Libolo, Amboim, Baia Farta, Balombo, Benguela, Cubal, Quipungo, Caconda, Negage, Uíge, Bailundo, Ekunha e Ukuma after 6 days of vaccination. All are administrative coverage figures.

Fig 2: Weekly trend of yellow fever suspected and confirmed cases in Luanda, 5 Dec 2015— 22 May 2016

Table 3: Local transmission YF confirmed cases per provinces as of 22 May 2016



Provinces	Districts	Pop	Confirmed cases with local
Benguela	Baia Farta	103.623	5
	Benguela	531.744	6
	Chongoroi	81.977	1
	Balombo	99.932	1
	Cubal	289.703	1
Cuanza Sul	Lobito	335.601	3
	Amboim	236.34	1
	Cassongue	141.452	1
	Ebo	159.024	3
	Seles	176.058	1
Huambo	Libolo	85.63	1
	Caala	268.734	2
	Ukuma	42.95	1
	Bailundo	283.887	1
	Ekunha	79.333	1
Huila	Huambo	689.301	11
	Caconda	160.892	1
Luanda	Quipungo	147.818	2
	Kissama	25.24	1
Uige	Negage	136.323	3
	Uige	496.567	1
TOTAL		4,572,129	48

III. Response Interventions

Coordination

- ◆ The EU delegation formed by E-CDC, ECHO and European Medical Corps completed its 10 days mission in Angola to assess the risk of YF spread to Europe and the response in Angola to date. A report is expected this week
- ◆ An additional logistician and two epidemiologists from GOARN joined the IMS structure this week. A vector control expert is expected this week, to lead an assessment of the current strategy. Two additional field epidemiologists are expected by Monday
- ◆ Key members of the IMS supported the MoH on the preparation of the briefing, presentation and data analysis for the delegates to the teleconference meeting of the Emergency Committee on YF of the IHR.
- ◆ Performance indicators were developed in collaboration with all team leaders and will start being used this week

Surveillance, Laboratory and Data management

- ◆ Surveillance strengthening missions addressing border provinces was agreed with MoH. It will be conducted in two phases:
 - Phase I: From 24—27 May to the provinces of Cunene, Cabinda, Cuando Cubango, Namibe and Moxico
 - Phases II: From My 30— June 03 to the provinces of Malanje, Lunda Norte, Lunda Sul and Zaire
- ◆ A tracking system for investigations of local transmission cases was implemented
- ◆ Routine surveillance in Luanda and other districts already vaccinated will incorporate case investigations of all PCR+ cases reported, to understand the profile of cases and factors affecting persistent transmission of YF
- ◆ A surveillance evaluation form was developed and will be used to assess surveillance in provinces and districts this week
- ◆ The new version of the case investigation form for local transmission will start being piloted in the field this week
- ◆ The final classification committee is now using the new classification algorithm regularly

Vaccination

- ◆ The MOH with partners support started yellow fever response/vaccination campaigns in 16 districts within 5 provinces, including one mop-up campaign in Benguela district. The first week of this campaigns run without major logistics problems. Number vaccinated and other statistics were sent daily and compiled by MoH and the IMS
- ◆ Total number of the vaccinated population in the new districts is 1,495,801 out of 2.7 million targeted population with an overall coverage percentage of 55% after 6 days of vaccination.
- ◆ MoH and WHO provided guidance on district level vaccination strategies, emphasizing in initial focus of campaign in urban centers, followed by rural areas in coordination with local leaders

Logistics

- ◆ Vaccination campaign in 16 districts was supported by the logistics team. No major problems were reported in the first days of vaccination
- ◆ On 19 May, 2016 the remaining syringes were transported from central to provinces level
- ◆ One million yellow fever vaccination cards are available at the stock of central level.

Border Health

- ◆ The Angola Ministry of Health prepared a circular letter regulating control of Yellow Fever vaccination at entry and exit from the country and for some domestic travel.
- ◆ Surveillance strengthening visits were planned for 9 provinces (see Surveillance section)
- ◆ A fact-finding investigation revealed that the airport of Pointe Noire in the Republic of Congo is not regularly used by travelers to and from Cabinda. Despite this, WHO in the DRC should consider investigating whether vaccination cards are checked or not in that airport

Social Mobilization and Risk Communication

- ◆ A special meeting on Social Mobilization was organized by UNICEF, with MoH, WHO and other partners. The meeting identified needs for financial support and coordination among partners
- ◆ Additional support for mop up activities is taking place in areas with confirmed yellow fever cases in Luanda province (Viana and Sambizanga)
- ◆ Training of 31 trainers of social mobilization in the Municipality of Bailundo, Province of Huambo have been conducted. In addition to training of 41 traditional leaders (Sobas) from Caconda (province of Huíla)
- ◆ Support vaccination campaign and to conduct house to house communication in the province of Uíge
- ◆ Dissemination of IEC messages through local radios (Radio Huambo and Rádio Mais)
- ◆ MSF is supporting door to door sensitization to affected families (with patients in Kapalanga Hospitals) and households around patients in Luanda province
- ◆ UNICEF social mobilization and risk communication activities continued in Luanda and selected provinces

Case Management

- ◆ MSF continues support to Case Management in Huambo Provincial Hospital and Kapalanga Municipal Hospital in Viana Municipality (Luanda). Others activities includes technical support to strengthen data management in Huambo and Luanda province
- ◆ MSF started to support case management in Benguela Provincial hospital. On the first week, MSF saw 17 patients in YF ward, with 2 positive cases of Dengue.
- ◆ MDM conducted training for 250 nurses in health posts and centers in Viana, using the national guideline and a specific guide on case management at community health facilities.
- ◆ MDM will accomplish the training activities for the health workers in Kuanza Norte and Luanda by this week. The pre and post assessment tests for the HWs showed an increase level of knowledge around 15%

Vector Control

- ◆ Cuban Cooperation continue to support vector control activities in the municipalities of Viana and Cacuaco (Luanda)
- ◆ Routine entomological assessment and vector control is ongoing in affected provinces
- ◆ Vector control experts joined each of the vaccination teams, to perform case investigations and assessment of local transmission

Special Studies and Assessments

- ◆ CDC in collaboration with «Grupo Core» conducted an independent monitoring of vaccination coverage in Luanda and Benguela on May 14-15. Initial results are expected this week
- ◆ CDC and MoH implemented evaluation of yellow fever and malaria co-infection; a report is expected this week
- ◆ A proposal for Differential Diagnosis of cases negative to YF or co-infected was prepared by CDC. A Portuguese version was sent to the director of the National Institute of Public Health, for her approval
- ◆ CDC and MoH started assessment of cases with positive PCR and history of vaccination, based on a protocol presented last week. Preliminary results will be presented this week. Systematic investigation of vaccinated cases will be incorporated in surveillance
- ◆ CDC-China conducted an assessment of vaccination among workers in a Chinese enterprises

V. Key challenges

- ◆ Data cleaning and re-analysis issues due to inconsistent reporting criteria. A special meeting will be held this week
- ◆ Under-reporting from all facilities in Luanda, Benguela and Huambo, has been confirmed. Impact in epi-curve interpretation and remedial actions are being discussed
- ◆ Continuous strengthening of case investigations and surveillance in all provinces, particularly in Cabinda
- ◆ Need for coordination of clinical case management activities
- ◆ Need to re-assess the strategy for vector control to focus on gathering places and adult vector

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