



**I. Key Highlights**

- ◆ Two million four hundred thousand (2.4 million) doses of yellow fever vaccine received in Angola on the 12 May 2016
- ◆ Angola will be vaccinating additional 2.6 million people in 16 districts from 5 provinces starting Sunday 15 May 2016
- ◆ Four new districts reported confirmed cases, making a total of 72 districts in 14 provinces
- ◆ Preliminary analysis conducted by the IPD (Pasteur Institute Dakar) on yellow fever samples collected during the current epidemic revealed that the circulating virus strain is closely related to the virus strain identified in the 1971 outbreak in Angola
- ◆ Vaccination is now been carried out in the Provinces (and districts) of : Cuanza Sul (Ebo, Cassonge, Seles, Libolo, Amboim), Benguela (Baia Farta, Balombo, Benguela, Cubal), Huila (Quipungo, Caconda), Uíge (Negage, Uíge), Huambo ( (Bailundo, Ekunha e Ukuma).

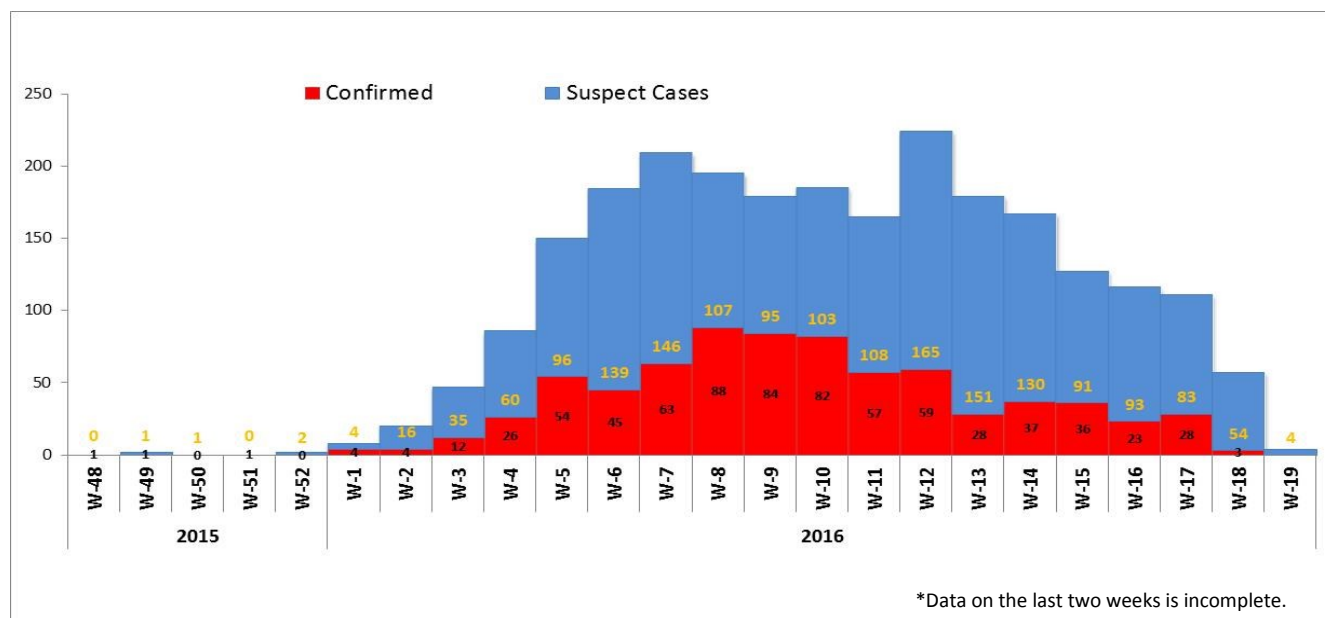
**II. Epidemiological Situation as of 15 May 2016**

- ◆ A cumulative total of **2,420** suspected cases with **298** deaths have been reported, of which **736** were confirmed cases including **96** confirmed deaths.
- ◆ Of the **736** confirmed cases, **459 (62.4%)** were from Luanda province, while the remaining **277 (37.6%)** were from other provinces. Seventy two (**72**) districts have laboratory confirmed cases in **14** provinces out of the **18** provinces in the country.
- ◆ A total of **47** confirmed cases of local transmission have been identified from **20** districts in **6** provinces, not including Luanda (see Table 3).
- ◆ The majority of the cases are among age group 15-29 yrs. Seventy percent (70%) of the reported cases are male.

**Table 1: National summary of Yellow fever outbreak from 5 Dec 2015— 15 May 2016**

Indicator	Number
Total suspected cases	2,420
Total confirmed cases	736
Total deaths	298
Total deaths from confirmed cases	96
Total districts with suspected cases	104
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	20
Total provinces with local transmission out of Luanda	6
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)	7,949,976
SIAs administrative coverage	92.6%

**Fig. 1: National Epi Weekly trend of yellow fever suspected and confirmed cases in Angola, 5 Dec 2015 — 15 May 2016**



**YELLOW FEVER OUTBREAK DAILY SITUATION REPORT, INCIDENT MANAGEMENT TEAM ANGOLA**

**Table 2: Distribution of confirmed yellow fever cases and vaccination coverage in Angola, as of 16 May 2016**

PROVÍNCIA	MUNICÍPIOS/ DISTRITOS	Epidemiológica			Campanha de Vacinação			
		Casos confirmados	Data de início de sintomas	Data de início de sintomas	Pop. Alvo	Data de início da	Doses Administradas	% Cob.
LUANDA	Cazenga	103	18-01-2016	30-04-2016	867,659	29-Feb-16	806,016	93%
	Viana	93	05-12-2015	5/3/2016	1,535,102	2-Feb-16	2,117,757	138%
	Cacuaco	75	28-01-2016	5/3/2016	887,829	29-Feb-16	767,241	86%
	K. Kiaxi	59	06-12-2015	18-04-2016	640,006	10-Mar-16	209,356	33%
	Belas	50	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	133,146	31%
	Maianga	26	08-02-2016	29-04-2016	660,884	14-Mar-16	478,869	72%
	Rangel	14	29-01-2016	17-04-2016	136,031	28-Mar-16	40,156	30%
	Ingombota	4	01-02-2016	15-03-2016	89,556	24-Mar-16	60,103	67%
	Samba	4	10-02-2016	20-03-2016	160,174	24-Mar-16	49,345	31%
	Icolo e Bengo	1	08-03-2016	08-03-2016	75,103	28-Mar-16	31,642	42%
Kissama	1	24-04-2016	24-04-2016	25,240	28-Mar-16	13,774	55%	
<b>TOTAL LUANDA</b>		<b>459</b>			<b>6,583,216</b>		<b>5,995,020</b>	<b>91%</b>
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			
CUNENE	Nharea	1	22-02-2016	22-02-2016	114,351			
	Ombadja	5	01-02-2016	17-04-2016	291,861			
	Cuanhama	1	24-02-2016	24-02-2016	362,710			
BENGUELA	Cahama	4	28-02-2016	12-03-2016	69,519			
	Baia Farta	7	08-04-2016	30-04-2016	103,623			
	Balombo	4	25-04-2016	27-04-2016	99,932			
	Benguela	27	15-02-2016	29-04-2016	531,744	12-Apr-16	375,732	71%
	Caimbambo	1	26-02-2016	26-02-2016	81,212			
	Catumbela	2	15-04-2016	19-04-2016	173,601	13-Apr-16	188,440	109%
	Chongoroi	4	26-02-2016	07-04-2016	81,977			
	Cubal	3	05-02-2016	10-03-2016	289,703			
	Ganda	3	10-02-2016	28-02-2016	226,051			
	Lobito	13	22-01-2016	30-04-2016	335,601	13-Apr-16	355,367	106%
HUAMBO	Bailundo	11	05-02-2016	25-03-2016	283,887			
	Caala	24	28-01-2016	22-04-2016	268,734	13-Apr-16	222,811	83%
	Catchiungo	2	18-03-2016	29-04-2016	116,334			
	Ekunha	17	17-01-2016	17-04-2016	79,334			
	Huambo	39	20-01-2016	25-04-2016	689,301	13-Apr-16	558,150	81%
	Londuimbali	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			
Kuanza Norte	Ukuma	4	22-02-2016	19-04-2016	42,950			
	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			
	Cassongue	2	02-02-2016	02-02-2016	141,452			
	Cela	1	04-02-2016	04-02-2016	219,850			
	Ebo	4	17-01-2016	16-04-2016	159,024			
	Libolo	1	05-04-2016	05-04-2016	85,630			
	Seles	3	05-02-2016	24-03-2016	176,058			
CABINDA	Sumbe	1	02-03-2016	02-03-2016	269,341			
	Cabinda	1	25-01-2016	25-01-2016	601,892			
HUILA	Caconda	10	05-01-2016	20-03-2016	160,892			
	Cacula	2	23-02-2016	23-02-2016	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			
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			
	Nzeto	1	05-02-2016	05-02-2016	44,714			
ZAIRE	Soyo	1	10-02-2016	10-02-2016	219,536			
	Cuimba	1	24-03-2016	24-03-2016	65,011			
	Bembe	1	25-04-2016	25-04-2016	32,337			
UIGE	Negage	2	03-02-2016	10-04-2016	136,323			
	Uige	4	02-02-2016	16-04-2016	496,567			
<b>TOTAL FORA LUANDA</b>		<b>277</b>			<b>11,796,022</b>		<b>1,700,500</b>	
<b>TOTAL</b>		<b>736</b>			<b>18,379,238</b>		<b>7,695,520</b>	
			Novos Municípios afectados					Casos com início de sintomas no mês de Maio

Source: MOH, Angola

Fig 2: Weekly trend of yellow fever suspected and confirmed cases in Luanda, 5 Dec 2015— 15 May 2016

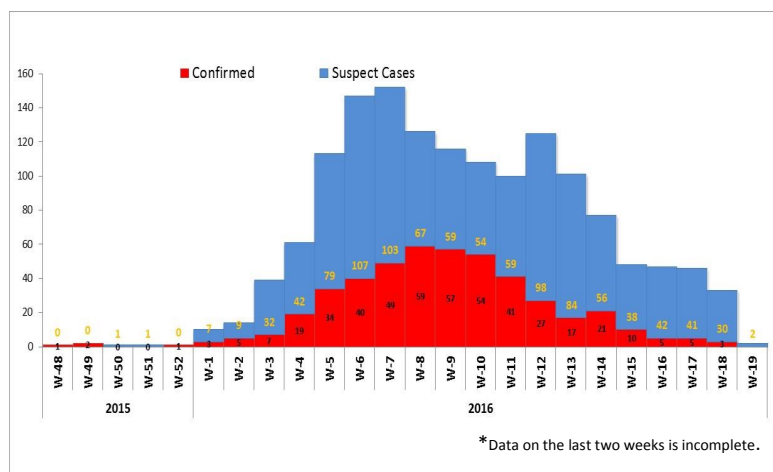


Table 3: Local transmission YF confirmed cases out of Luanda as of 15 May 2016

Provinces	Districts	Target Population	Confirmed cases with local transmission
Huambo	Caala	268,734	2
	Ukuma	42,950	1
	Bailundo	283,887	1
	Huambo	689,301	11
	Ekunha	79,333	1
Cuanza sul	Amboim	236,340	1
	Cassongue	141,452	1
	Libolo	85,630	1
Uige	Ebo	159,024	3
	Seles	176,058	1
	Negage	136,323	3
Benguela	Baia Farta	103,623	5
	Benguela	531,744	6
	Balombo	99,932	1
	Chongoroi	81,977	1
	Cubal	289,703	1
	Lobito	335,601	3
	Luanda	Kissama	25,240
Huila	Quipungo	147,818	2
	Caconda	160,892	1
<b>Total: 6</b>	<b>20</b>	<b>4,075,562</b>	<b>47</b>

### III. Response Interventions

#### Coordination

- ♦ A EU delegation formed by E-CDC, ECHO and European Medical Corps is on a 10 days mission in Angola, meeting with stakeholders to assess the risk of YF spread to Europe and the response in Angola to date. The team will be visiting Huambo and other provinces starting May 16
- ♦ One additional logistician and two epidemiologist from GOARN will join province activities this week. One senior data management expert from AFRO will join this week the Luanda team. Institute Pasteur Dakar (IPD) ensured turn-over of laboratory staff, with the arrival of a new expert.
- ♦ The Incident Management System coordinated the deployment of 36 experts from the MoH, WHO, CDC, UNICEF and the Cuban Cooperation. These deployed personnel include logisticians, epidemiologists, entomologists, social mobilization and vaccination coordinators that will support vaccination activities in 5 provinces as well to the operational and logistic needs.
- ♦ Performance indicators were developed in collaboration with all team leaders and will start being used this week

#### Surveillance, Laboratory and Data management

- ♦ WHO provincial surveillance officers and Cuban cooperation are supporting the MoH surveillance officers to investigate the YF cases in Cabinda, Kuango Kubango and Namibe
- ♦ The case investigation form was updated after discussion between the MoH, WHO and CDC. A plan to roll out the new form is under way
- ♦ The final classification committee tested an updated classification algorithm and case definition proposed by CDC and WHO with encouraging results
- ♦ The data team responded promptly to information requests from the Malaria assessment delegation lead by Dr. Pedro Alonso and by EU delegation. A biweekly update of statistics (power point presentation) is planned for this week
- ♦ A surveillance evaluation form was developed and will be sent to the provinces this week to be utilized

#### Vaccination

- ♦ The MOH with partners support will start yellow fever response campaign in 15 districts in 5 provinces this week
- ♦ Orientation was conducted for national support teams, including supervisors, vaccine logisticians, epidemiologists, entomologists and social mobilization coordinators based on updated TORs
- ♦ Vaccination campaign micro-plans from all districts were reviewed and updated by WHO and MoH
- ♦ All districts starting vaccination campaigns this week received preparedness check-lists, and three already provided preparedness assessments. The same check lists will be used during the campaigns to identify needs for support
- ♦ 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

- ♦ On the 12th of May Angola received 2.4 million doses of vaccine from Sanofi-France and Institute Pasteur-Dakar. The distribution of this vaccine was done to 16 districts to ensure the vaccination campaigns. Additional dry stock arrived on 15 May (syringes, safety box, vaccine carrier, vaccination cards and others supporting material)
- ♦ UNICEF will be providing extra cold boxes that will be placed at field level to fill gaps during YF vaccination campaign.
- ♦ UNDP funded the printing 600,000 yellow fever vaccination cards and 11,000 vaccination registration forms for the provincial vaccination campaigns

### **Border Health**

- ◆ The National Public Health Directorate (DNSP) of the MOH conducted a sensitization meeting for all transporters (air, land and sea). The main focus of the meeting was to inform and discuss ways of strengthen border screening. They are expected to produce a normative guidance on control of vaccination status on domestic and international travellers this week

### **Social Mobilization and Risk Communication**

- ◆ An advocacy meeting was held with the Luanda province Municipal Health Department and partners to address the issues of low coverage and continued yellow fever transmission
- ◆ Social mobilization teams started the preparation of the final vaccination campaign in Luanda province from 16 - 26 May
- ◆ Community mobilization for vaccination is ongoing in all provinces starting vaccination this week.
- ◆ Training for 35 social mobilizers was conducted in the Municipality of Ukuma, Huambo province.
- ◆ 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

### **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.
- ◆ MDM conducted training for health worker in primary health facilities in Kuanza Norte and plans extending similar activities to Luanda

### **Vector Control**

- ◆ Cuban Cooperation continue to support vector control activities in the municipalities of Viana and Cacuaco (Luanda)
- ◆ Routine entomological assessment and vector control still ongoing in affected provinces

### **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 on May 17
- ◆ CDC and MoH started evaluation of yellow fever and malaria co-infection
- ◆ A proposal for Differential Diagnosis of cases negative to YF or co-infected was prepared by CDC. The implementation is pending approval and arrival of tests
- ◆ A proposal for surveillance and assessment of severe adverse effects to vaccine is under development by CDC
- ◆ CDC-China conducted an assessment of vaccination among workers in a Chinese enterprise (rail-road construction). They found low vaccination levels and proposed remedial action. Additional companies are planned for this week

## **V. Key challenges**

- ◆ Data cleaning and re-analysis issues due to inconsistent reporting criteria
- ◆ Suspected under-reporting from all facilities in Luanda, Benguela and Huambo, possibly others
- ◆ Continuous strengthening of case investigations and surveillance in all provinces, particularly in Cabinda
- ◆ Need for coordination of clinical case management activities
- ◆ Lack of vector control focal point to coordinate vector control activities. Need to re-assess the strategy for vector control to focus on gathering places and adult vector
- ◆ Changing plans for arrival of vaccines and dry materials imposed additional strain on planning, logistics and human resources—but was solved satisfactorily
- ◆ Assessment of laboratory confirmed cases with history of recent vaccination and cases from Luanda

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