

# YELLOW FEVER OUTBREAK IN ANGOLA INCIDENT MANAGEMENT

SITUATION REPORT W26, 04<sup>th</sup> July 2016

# Vol: 7-01

# I. Key Highlights

- Eleven reactive and pre-emptive mass vaccination campaigns are ongoing in Capenda Camulemba, Caungula, Cuilo (Lunda Norte), Maquela do Zombo (Uige), Gambos, Humpata (Huila), Cazengo (Cuanza Norte), Bocoio, Chongoroi (Benguela), Londuimbale, Longonjo (Huambo) and Sumbe (Cuanza Sul). Six other mass vaccination campaigns are in the process of being completed and implementing mop-up campaigns in Chitato, Cuango (Lunda Norte), Soyo (Zaire), Cahama, Cuanhama (Cunene) and Puri (Uige)
- Scaled up province support is ongoing in Benguela, Lunda Norte, Uige, Malange, Cuanza Norte provinces, will follow next in Cunene, and Cuanza Sul
- The negativity rate of laboratory tests is up to 90% (77/86), from 70% earlier in the outbreak. The number of positive cases has decreased country wide. Delays in reporting are still important in Benguela
- ◆ A Process Review Mission is scheduled for Luanda on 4<sup>th</sup>—15<sup>th</sup> July, to conduct an operational review of the YF response measures.
- The Angola Health Minister called a **National Meeting on Yellow Fever** to review the status of the outbreak response, on 7<sup>th</sup> and 8<sup>th</sup> of July. Participants will include provincial and districts health authorities, MoH staff involved in the response and national and international partners
- Laboratory has stock out of IgM ELISA for YF. This week, only PCR testing will be performed

### II. Epidemiological Situation as of 01 July 2016

World Health Organization

 $\Rightarrow$  Week 26 statistics (25 June to 1 July):

- Out of **88** reported cases, **83** samples were tested by the laboratory and **2** were found positive to yellow fever
- 2 deaths were reported among suspected cases, **none** were among the confirmed cases
- Cases were reported from **27** districts in **11** provinces; **Marimba** district (Malange) is the only district reporting its first suspect case (lab negative)
- No new districts with local transmission were reported this week

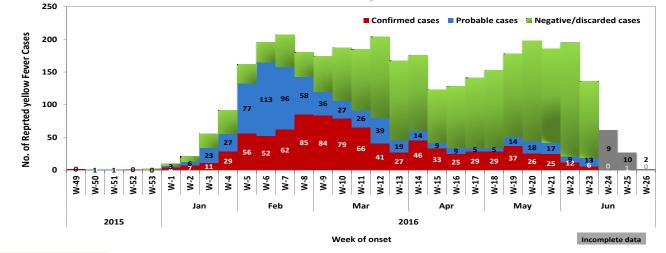
### $\Rightarrow$ Cumulative statistics since 05 December:

- A total of **3,552** suspected cases have been reported of which **875** are laboratory confirmed cases. Overall, **355 (CFR 10.0%)** deaths are reported among suspected cases and **117 (CFR 13.4%)** reported deaths among confirmed cases
- Laboratory confirmed cases were reported for **16** out of **18** provinces and for **80** out of **125** reporting districts. Luanda province reported the majority of the confirmed cases **487** (**55.7%**), followed by Huambo **127** (**14.6%**) and Benguela **115** (**13.1%**),
- Local transmission has been documented in **44** districts in **11** provinces
- The majority of the confirmed cases are in males. The most prevalent age groups are 09—14 years (214, 21.1%), and 15—19 years (171, 16.5%).

### **Table 1: National Summary of Yellow Fever Outbreak**

Yellow Fever Outbreak Summary 25 June — 01 July 20	10, (1020)
Reported cases	88
Samples tested	83
Confirmed cases	2
Total Deaths	2
Total provinces that reported cases	11
New provinces with confirmed cases	0
Total districts with reported cases	27
New districts with confirmed cases	0
New districts with documented local transmission	0
Yellow Fever Outbreak Summary from 5 Dec 2015-1	July 2016
Total cases reported to central level	3,552
Total Samples Tested	3,045
Total confirmed cases	875
Total deaths	355
Total deaths among confirmed cases	117
Total provinces that have reported cases	18
Total provinces with confirmed cases	16
Total districts that have reported cases	125
Total districts with confirmed cases	80
Total provinces with documented local transmission	11
Total districts with documented local transmission	44
Total number of provinces in Angola	18
Total number of districts in Angola	166





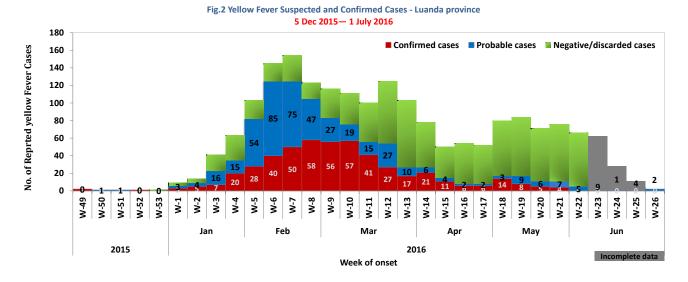
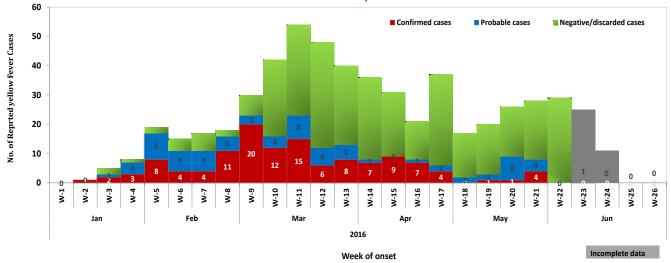


Fig.3 Yellow Fever Suspected and Confirmed Cases - Huambo province 5 Dec 2015— 1 July 2016



#### Fig 4. Yellow Fever Suspected and Confirmed Cases - Benguela province 5 Dec 2015— 1 July 2016

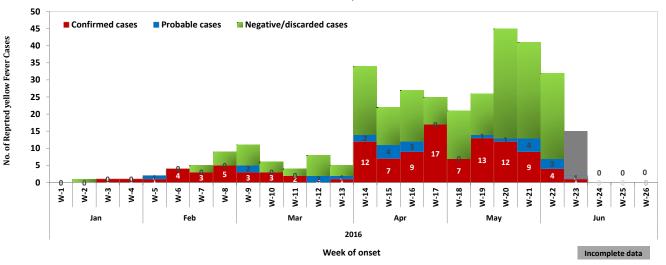


Table 2. Provinces with Yellow Fever Laboratory Confirmation up to 1 July, 2016									
		Discarded, Lab							
Province	Notified	Tes	ted	Confi	rmed	with Vacc. History			
	Cases	No %		No	%				
Luanda	1927	1576	82	487	25	122			
Bengo	23	23	100	6	26	0			
Benguela	345	328	95	115	33	19			
Bie	35	33	94	16	46	0			
Cabinda	42	36	86	1	2	0			
Cuando Cubango	7	6	86	1	14	0			
Cuanza Norte	62	52	84	9	15	1			
Cuanza Sul	116	112	97	16	14	1			
Cunene	54	54	100	14	26	0			
Huambo	578	522	90	127	22	24			
Huila	141	93	66	33	23	0			
Lunda Norte	67	66	99	26	39	1			
Lunda Sul	10	9	90	0	0	1			
Malange	25	25	100	7	28	0			
Moxico	5	5	100	0	0	0			
Namibe	13	13	100	2	15	0			
Uige	68	66	97	9	13	0			
Zaire	34	26	76	6	18	0			
TOTAL	3552	3045	86	875	25	169			

Table 2.1. Number and Percentage of Confirmed Cases with Date of Onset in June, 2016 (late reports pending)

Province	District	Confirmed	Percentage
	Baia farta	1	7.10%
Benguela	Benguela	1	7.10%
	Cubal	1	7.10%
Cuanza norte	Ambaca	1	7.10%
Huila	Lubango	1	7.10%
Lunda norte	Cuango	6	42.90%
Malange	Cacuso	1	7.10%
Zaire	Soyo	2	14.30%
тот	AL	14	100.00%

700 600 No. of Reprted Yellow Fever Cases 374 500

Fig.5: Yellow Fever Cases with Local Transmission and Vaccination Provinces & Districts in Angola, 5 Dec 2015-01 July 2016

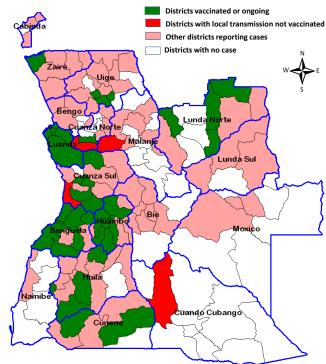
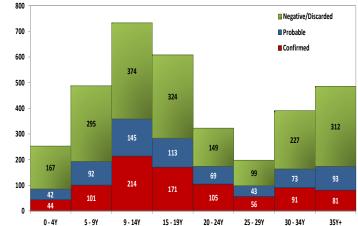
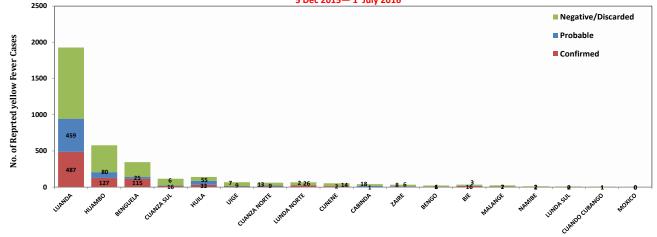


Fig. 6. Age group distribution of Yellow Fever cases in Angola







# Table 3.1: Yellow Fever Reported and Confirmed Cases per Angola Provinces and Districts, 2016 5 Dec 2015—01 July 2016

Province	Cases notified during the period (25 June — 1 July 2016)			Cumulative Cases (5 Dec 2015— 1 July 2016)			Documented Local first	first	t Date of onset of <mark>last</mark>	report cases	Average days of	Days since last case reported to	Days since last
		Confirmed	Deaths	Reported	Confirmed	Deaths	Transmission*	confirmed case*	confirmed case	at central level	reporting delay	central level	confirmed case
Belas	7	0	0	206	54	25	Y	15-01-16	26-05-16	28-06-16	3	3	35
Cacuaco	2	0	0	229	78	22	Y	28-01-16	12-05-16	01-07-16	2	0	50
Cazenga	10	0	0	428	109	33	Y	18-01-16	27-05-16	01-07-16	2	0	35
Icolo e bengo	0	0	0	7	1	0	Y	08-03-16	08-03-16	21-06-16	3	10	115
Ingombota	1	0	0	17	4	0	Y	01-02-16	15-03-16	30-06-16	1	1	108
Kilamba kiaxi	4	0	0	253	68	18	Y	06-12-15	18-05-16	28-06-16	3	3	44
Maianga	2	0	0	121	28	11	Y	08-02-16	26-05-16	28-06-16	2	3	36
Quissama	0	0	0	1	1	0	N	24-04-16	24-04-16	27-04-16	1	65	68
Rangel	0	0	0	45	14	2	Y	29-01-16	02-05-16	21-06-16	3	10	60
Samba	0	0	0	24	5	2	Y	10-02-16	11-05-16	10-06-16	2	21	51
Sambizanga	0	0	0	93	30	13	Y	23-01-16	21-05-16	23-06-16	3	8	41
Viana	5	0	0	503	95 487	85 211	Y	05-12-15	14-05-16	30-06-16	2	1	48
LUANDA	31 1	0	0	<b>1927</b> 4	487	0	N	05-12-15	27-05-16	01-07-16	4	1	35 88
Ambriz Bula Atumba	0	0	0	4	0	0	N	04-04-16	04-04-16	30-06-16 14-03-16	3	109	88
Dande	0	0	0	12	5	1	N	05-02-16	19-05-16	21-06-16	6	109	43
Nambuangongo	0	0	0	6	0	0	N	05-02-10	15-05-10	31-05-16	6	31	
BENGO	1	0	0	23	6	1	N	05-02-16	19-05-16	<b>30-06-16</b>	5	1	43
Baia Farta	0	0	0	15	10	4	Y	08-04-16	01-06-16	24-06-16	7	7	30
Balombo	0	0	0	30	8	2	Y	22-04-16	30-05-16	10-06-16	10	21	32
Benguela	0	0	0	158	61	16	Y	15-02-16	06-06-16	24-06-16	8	7	25
Восоіо	0	0	0	5	1	0	N	02-05-16	02-05-16	21-05-16	8	41	60
Caimbambo	0	0	0	5	1	0	N	26-02-16	26-02-16	09-05-16	4	53	126
Catumbela	0	0	0	37	8	1	Y	15-04-16	26-05-16	21-06-16	10	10	36
Chongoroi	0	0	0	6	5	1	Y	26-02-16	25-05-16	05-06-16	6	26	37
Cubal	0	0	0	9	4	1	Y	05-02-16	03-06-16	21-06-16	6	10	28
Ganda	0	0	0	8	3	0	N	10-02-16	28-02-16	24-06-16	8	7	124
Lobito	0	0	0	72	14	5	Y	22-01-16	19-05-16	24-06-16	7	7	43
BENGUELA	0	0	0	345	115	30	Y	22-01-16	06-06-16	24-06-16	8	7	25
Andulo	0	0	0	16	6	1	N	14-02-16	27-03-16	20-06-16	7	11	96
Camacupa	0	0	0	2	1	0	N	19-03-16	19-03-16	13-06-16	5	18	104
Catabola	0	0	0	2 6	0	0	N	02 02 16	22-05-16	20-06-16 28-05-16	4	11 34	40
Chinguar Cuito	0	0	0	5	4	1	N	02-02-16 30-01-16	18-04-16	09-05-16	5	53	40 74
Cunhinga	0	0	0	3	1	0	N	01-03-16	01-03-16	16-04-16	6	76	122
Nharea	0	0	0	1	1	0	N	22-02-16	22-02-16	04-03-16	11	119	130
BIE	0	0	0	35	16	2	N	30-01-16	22-05-16	20-06-16	6	11	40
Belize	0	0	0	1	0	0	N			10-06-16	4		
Buco Zau	0	0	0	1	0	0	N			30-01-16	0	153	
Cabinda	5	0	0	40	1	1	N	25-01-16	25-01-16	30-06-16	6	1	158
CABINDA	5	0	0	42	1	1	N	25-01-16	25-01-16	30-06-16	6	1	158
Menongue	0	0	0	7	1	1	Y	18-04-16	18-04-16	24-06-16	7	7	74
CUANDO CUBANGO	0	0	0	7	1	1	Y	18-04-16	18-04-16	24-06-16	7	7	74
Ambaca	0	0	0	25	2	0	N	21-03-16	10-06-16	17-06-16	8	14	21
Cambambe	0	0	0	7	0	0	N			14-06-16	4	17	
Cazengo	0	0	0	27	7	8	Y	23-02-16	31-05-16	17-06-16	19	14	31
Lucala	0	0	0	2	0	0	N			23-06-16	32	8	
Samba Caju	0	0	0	1	0	0	N			09-06-16	0	22	
CUANZA NORTE	0	0	0	62	9	8	Y	23-02-16	10-06-16	23-06-16	13	8	21
Amboim	0	0	0	10	2	1	Y	23-01-16	05-04-16	20-06-16	6	11	87
Cassongue	1	0	0	4	2	0	Y	02-02-16	02-02-16	25-06-16	13	6	150
Cela	0	0	0	7	1	0	N	04-02-16	04-02-16	26-04-16	5	66	148
Conda	0	0	0	2	0	0	N			05-06-16	6	26	
Ebo	1	0	0	41	4	1	Y	17-01-16	16-04-16	29-06-16	7	2	76
Libolo	0	0	0	4	1	1	Y	05-04-16	05-04-16	20-05-16	6	42	87
Mussende	0	0	0	2	0	0	N			28-04-16	4	64	
Porto amboim	0	0	0	6	0	2	N			23-06-16	2	8	
Quibala	0	0	0	2	0	0	N			21-06-16	10	10	
Quilenda	0	0	0	7	0	0	N	05.02.45	11.05.15	20-06-16	6	11	<b>F</b> 4
Seles	0	0	0	22	5	2	Y	05-02-16	11-05-16	17-06-16	6	14	51
Sumbe	0	0	0	9	1	2	Y	02-03-16	02-03-16	20-05-16	3	42	121
CHANIZA CHU	2	0	0	116	16	9	Y	17-01-16	11-05-16	29-06-16	6	2	51
CUANZA SUL	0	0	0	16	5	0	Y	28-02-16	13-05-16	07-06-16	8	24	49
Cahama	-		0	21	4	1	Y	24-02-16	15-05-16	30-06-16	15	1	47
Cahama Cuanhama	5	0			0		NI NI			25 05 16	10	27	
Cahama Cuanhama Curoca	0	0	0	3	0	0	N			25-05-16	12	37	
Cahama Cuanhama Curoca Cuvelai	0 0	0 0	0	3 2	0	0	N	01.02.10	17.04.16	25-05-16	7	37	75
Cahama Cuanhama Curoca	0	0	0	3		-		01-02-16 <b>01-02-16</b>	17-04-16 15-05-16				75

<u>Days since last confirmed case</u>: difference between last day of reporting period (10/06/2016) and date of receipt at national level of report of last suspected case <u>Days since last confirmed case</u>: difference between last day of reporting period (10/06/2016) and date of onset of last confirmed case.

# Table 3.2: Yellow Fever Reported and Confirmed Cases per Angola Provinces and Districts, 2016 5 Dec 2015—01 July 2016

Province		otified duri period ne — 1 July	-		nulative Cas 2015— 1 July		Documented Local Transmission*	Date of onset first confirmed	Date of onset of last confirmed	Date of last report cases at central	Average days of reporting	Days since last case reported to central	Days since last confirmed
	Reported	Confirmed	Deaths	Reported	Confirmed	Deaths	i ransmission -	case*	case	level	delay	level	case
Bailundo	4	0	0	98	11	4	Y	05-02-16	24-03-16	27-06-16	5	4	99
Caala	1	0	0	90	25	7	Y	28-01-16	16-05-16	27-06-16	3	4	46
Catchiungo	1	0	0	32	2	0	N	18-03-16	29-04-16	27-06-16	5	4	63
Ecunha Huambo	0 4	0	0	71 174	20 42	4 12	Y Y	17-01-16 20-01-16	24-05-16 29-05-16	01-06-16 27-06-16	4	30 4	38 33
Londuimbale	4	0	0	38	42	7	Y	17-02-16	29-03-16	27-06-16	5	4	65
Longonjo	0	0	0	24	10	4	N	09-02-16	15-04-16	31-05-16	7	31	77
Mungo	0	0	0	18	2	2	N	06-02-16	01-03-16	20-06-16	5	11	122
Tchikala tcholohang	0	0	0	13	3	0	N	16-03-16	07-04-16	16-06-16	4	15	85
Tchinjenje	0	0	0	3	1	0	N	01-04-16	01-04-16	19-05-16	5	43	91
Ukuma	0	0	0	17	4	4	Y	22-02-16	19-04-16	21-06-16	4	10	73
HUAMBO	14	0	0	578	127	44	Y	17-01-16	29-05-16	27-06-16	4	4	33
Caconda	0	0	0	28 8	10 4	4	Y N	05-01-16	30-03-16	28-05-16	10 6	34 34	93
Cacula Caluquembe	0	0	0	11	2	6	N	23-02-16 04-03-16	15-05-16 21-03-16	28-05-16 11-06-16	3	20	47 102
Chibia	0	0	0	2	1	0	N	08-02-16	08-02-16	19-02-16	0	133	144
Chicomba	0	0	0	11	1	0	N	02-02-16	02-02-16	01-06-16	5	30	150
Chipindo	0	0	0	2	0	1	N			11-06-16	8	20	
Cuvango	0	0	0	2	0	0	N			18-04-16	4	74	
Gambos	0	0	0	5	1	1	N	24-02-16	24-02-16	11-03-16	3	112	128
Humpata	0	0	0	11	2	0	Y	22-03-16	28-04-16	11-05-16	5	51	64
Lubango	0	0	0	18	5	4	N	30-01-16	01-06-16	21-06-16	4	10	30
Matala	0	0	0	2	0	1	N	21.02.16	10.03.16	21-03-16	4	102	112
Quilengues Quipungo	0	0	0	10 31	4	2	N Y	21-02-16 02-02-16	10-03-16 05-02-16	19-03-16 03-06-16	1 4	104 28	113 147
HUILA	0	0	0	141	33	23	Y	05-01-16	01-06-16	21-06-16	5	10	30
Cambulo	0	0	0	2	0	0	N			17-06-16	22	14	
Capenda-Camulemba	2	0	0	7	0	0	N			27-06-16	6		
Chitato	9	0	0	21	1	1	N	08-05-16	08-05-16	28-06-16	9	3	54
Cuango	0	0	0	32	24	8	Y	02-05-16	06-06-16	17-06-16	7	14	25
Cuilo	0	0	0	1	1	0	N	20-05-16	20-05-16	10-06-16	9		42
Lucapa Xa Muteba	0	0	0	1	0	0	N			23-05-16 13-06-16	26 20	39 18	
LUNDA NORTE	11	0	0	67	26	9	Y	02-05-16	06-06-16	28-06-16	9	3	25
Cacolo	1	0	0	2	0	0	N	02 00 10	00 00 10	30-06-16	3		20
Muconda	0	0	0	1	0	0	N			27-05-16	4	35	
Saurimo	0	0	0	7	0	0	N			17-06-16	3	14	
LUNDA SUL Cacuso	1 2	<b>0</b> 1	0	10 5	<b>0</b> 2	0	N Y	21-04-16	09-06-16	30-06-16 26-06-16	3	1 5	22
Cahombo	0	0	0	1	1	1	N	20-03-16	20-03-16	31-03-16	9	92	103
Calandula	0	0	0	4	0	1	N	20 05 10	20 03 10	06-06-16	5	25	103
Cambundi Catembo	0	0	0	1	0	1	N			28-05-16	5	34	
Malange	0	0	0	12	3	0	Y	21-02-16	19-05-16	20-06-16	4	11	43
Marimba	1	0	0	1	0	0	N			30-06-16	0	1	
Quela	0	0	0	1	1	0	N	07-05-16	07-05-16	18-05-16	4	44	55
MALANGE	3	1	0	25	7	3	Y	21-02-16	09-06-16	30-06-16	5	1	22
Cameia	0	0	0	2	0	0	N			16-06-16	8	15	
Leua	0	0	0	1	0	0	N			07-05-16	5	55	
Moxico	0	0	0	2	0	0	N			19-05-16	2	43	
MOXICO Bibala	<b>0</b>	0	<b>0</b>	5 1	0	<b>0</b>	N N			16-06-16 16-06-16	5	15 15	
Namibe	0	0	0	12	2	1	N	17-04-16	14-05-16	16-06-16	5	15	48
NAMIBE	0	0	0	12	2	1	N	17-04-16 17-04-16	14-05-16 14-05-16	16-06-16 16-06-16	5	15	48
Ambuila	0	0	0	5	0	0	N			17-06-16	5	14	
Bembe	0	0	0	3	0	0	N			10-06-16	6	21	
Buengas	0	0	0	1	0	0	N			14-05-16	4	48	
Bungo	0	0	0	1	0	0	N			20-03-16	3	103	
Damba	1	0	0	5	0	0	N			29-06-16	5	2	
Maquela do zombo	0	0	0	1	0	1	N			22-02-16	0	130	
Mucaba	0	0	0	1	0	0	N	02.02.12	15.05.15	21-05-16	4	41	
Negage	1 0	0	0	16	3	0	Y	03-02-16	15-05-16	25-06-16 21-05-16	4	6	47
Puri Quimbele	0	0	0	1 4	0	0	N N	10-05-16	10-05-16	21-05-16 17-06-16	3	41 14	52
Quitexe	0	0	0	4	0	0	N			09-05-16	10	53	
Sanza pombo	1	0	0	2	0	0	N			25-06-16	7	6	
Songo	0	0	0	1	0	0	N			03-06-16	4	28	
Uige	0	0	0	26	5	4	Y	02-02-16	08-05-16	17-06-16	5	14	54
UIGE	3	0	0	68	9	5	Y	02-02-16	15-05-16	29-06-16	5	2	47
Cuimba	0	0	0	2	1	2	N	24-03-16	24-03-16	19-04-16	11	73	99
Mbanza congo	0	0	0	6	0	0	N			23-06-16	11	8	
Noqui	0	0	0	2	0	0	N		05.05.11	14-03-16	16	109	
Nzeto	0	0	0	2	1	0	N	05-02-16	05-02-16	02-03-16	10	121	147
Soyo Tomboco	11 1	1	2	20 2	4	3 0	Y N	10-02-16	22-06-16	27-06-16 27-06-16	4	4	9
ZAIRE	12	1	2	34	6	5	Y	05-02-16	22-06-16	27-06-16 27-06-16	6	4	9
Angola	88	2	2	3552	875	355	Y	05-12-15	22-06-16	01-07-16	4	0	9
* 1. For cases with dat * 2. Y = Yes confirmed	Local Trans				cal Transmis		ed cases in W26		New document			-	

Newly reported districts in W26 Newly districts with confirmed cases in W26

New documented local transmission in W26

### Table:4 Distribution of Yellow Fever Vaccination Coverage in Angola as of 01 July 2016

Province	Target population	Launching date	Population vaccinated	Administrative coverage (%)	IM Percent vaccinated*
Belas	1,071,662	19-Feb-16	1,288,081	120%	88.2%
Cacuaco	887,829	29-Feb-16	772,521	87%	87.8%
Cazenga	867,659	29-Feb-16	819,320	94%	94.3%
Icolo e Bengo	75,103	28-Mar-16	39,135	52%	81.5%
Ingombota	89,556	24-Mar-16	63,271	71%	91.3%
K. Kiaxi	640,006	10-Mar-16	214,693	34%	79.0%
Maianga	660,884	14-Mar-16	486,466	74%	99.8%
Quissama	25,240	28-Mar-16	13,774	55%	91.1%
Rangel	136,031	28-Mar-16	43,366	32%	94.4%
Samba	160,174	24-Mar-16 20-Mar-16	55,358	35%	91.3%
Sambizanga Viana	433,970	02-Feb-16	136,697	31% 138%	79.7% 86.3%
Luanda	1,535,102	02-FED-10	2,124,758 6,057,440	92%	00.370
Baia Farta	6,583,216 103,623	16-May-16	105,116	101%	
Balombo	99,932	16-May-16	101,700	102%	
Benguela	598,902	12-Apr-16	563,250	94%	80%
Bocoio	155,397				
Catumbela	173,601	13-Apr-16	188,421	109%	95%
Chorongoi Cubal	81,977	16-May-16	297,264	103%	94%
Lobito	289,703 335,601	13-Apr-16	356,144	105%	94%
Benguela	1,838,736		1,611,895	88%	
Menongue	308,509		_,,		
Cuango Cubango	308,509				
Ambaca	61,209				
Cazengo	166,860	30-Jun-16	11,031	7%	
		30-301-10		770	
Cuanza Norte	228,069	46.14.46	11,031	0.0%	
Amboim	236,339	16-May-16	228,060	96%	
Cassongue	145,579	16-May-16	135,907	93%	
Ebo	159,024	16-May-16	159,495	100%	
Libolo	85,630	16-May-16	88,897	104%	
Seles	176,058	16-May-16	170,883	97%	
Sumbe	269,341				
Cuanza Sul	1,071,971		783,242	73%	
Cahama	69,519	22-Jun-16	53,419	77%	
Cuanhama	362,710	22-Jun-16	213,701	59%	
Cunene	432,229		267,120	62%	
Bailundo	283,887	16-May-16	270,735	95%	
Caala	268,734	13-Apr-16	222,811	83%	96%
Ekunha	79,334	16-May-16	75,022	95%	
Huambo	689,301	13-Apr-16	558,150	81%	95%
Londuimbali	125,214				
Longonjo	87,329				
Ukuma	42,950	16-May-16	47,348	110%	
Huambo	1,576,749		1,174,066	74%	
Caconda	160,892	16-May-16	167,102	104%	
Gambos	76,456				
Humpata	83,267				
Lubango	736,077				
Quipungo	147,818	16-May-16	168,781	114%	
Huila	1,204,510		335,883	28%	
Chitato	196,869	11-Jun-16	197,117	100%	
Cuango	174,429	27-May-16	175,052	100%	
Cuilo	19,841				
Lunda Norte	391,139		372,169	95%	
Cacuso	71,981				
Malange	489,867				
Malange	561,848				
Negage	136,323	16-May-16	129,732	95%	
Puri	35,710	19-Jun-16	22,806	64%	
Uige	496,567	16-May-16	624,138	126%	
Uige	668,600	10 11/04/10	776,676	116%	
	219,536	16-Jun-16	136,210	62%	
Soyo Zaire	219,536 219,536	10-3011-10	136,210	62%	
			100,210	02/0	
GRAND TOTAL	15,085,112		11,525,732	76%	

\* IM Percent vaccinated calculated using the proportion of people found to be not vaccinated during the Independent Monitoring Survey

ProvinceNeighborhoods with more than 10% non-vaccinated personsInside HouseholdOutside HouseholdLuanda33 out of 104 (31.7%)47 out of 104 (45.2%)Benguela30 out of 82 (36.6%)40 out of 76 (52.6.4%)Huambo6 out of 43 (13.9%)21 out of 44 (47.7%)

# **III.** Response Interventions

### IM/Coordination

- ♦ A Process Review Mission is scheduled for Luanda from 4<sup>th</sup>—15<sup>th</sup> July, to conduct an operational review of the YF response measures
- The Angola Health Minister called a National Meeting on Yellow Fever to review the status of the outbreak response, on 7<sup>th</sup> and 8<sup>th</sup> of July. Participants will include provincial and districts health authorities, MoH staff involved in the response and national and international partners. Main objectives include sharing of experience and review the status of the implementation of the national response and present updated guidelines for implementation for its improvement at district and province level
- A review of the National Strategy for Yellow Fever is underway, as part of the preparation of MoH's National Meeting on Yellow Fever
- IMS partners and MoH developed and updated analysis of current outbreak trends, at the request of the Health Minister
- ◆ A ICG request for vaccines is under discussion to implement reactive vaccination in districts with local transmission as well as pre-emptive vaccination in high risk areas
- Scaled up province support is ongoing in Benguela, Lunda Norte, Uige, Malange, Cuanza Norte provinces, will follow next in Cunene, and Cuanza Sul. Priority for scale up was in line with high-risk areas identified by MoH and IMS partenrs, based on analysis by Imperial College, WHO HQ, AFRO, UNICEF, MSF and other partners

### Surveillance, Laboratory and Data management

- The negativity rate of laboratory tests is up to 90% (77/86), from 70% earlier in the outbreak. The number of positive cases has decreased country wide. This trend needs to consolidate over time, and quality of reporting investigated, before and actual reduction of cases can be confirmed
- Benguela continues showing long delays in reporting. The cause for delays has been identified and is being addressed
- One case from Ambaca (Uige) and one from Cambambe (Cuanza Sul) are being investigated as potential local transmission cases
- DRC districts adjacent to Maquela de Zombo (Uige) and Cahungula (Lunda Norte) are currently being vaccinated
- Laboratory has stock out of IgM ELISA for YF. This week only PCR testing will be performed
- ◆ A capacity building training session was performed with data-management personnel from MOH
- ◆ Harmonization of provincial and central level databases was completed for main areas of yellow fever transmission

### Vaccination

- Eleven reactive and pre-emptive mass vaccination campaigns are ongoing in Capenda Camulemba, Caungula, Cuilo (Lunda Norte), Maquela do Zombo (Uige), Gambos, Humpata (Huila), Cazengo (Cuanza Norte), Bocoio, Chongoroi (Benguela), Londuimbale, Longonjo (Huambo) and Sumbe (Cuanza Sul). Six other mass vaccination campaigns are in the process of being completed and implementing mop-up campaigns in Chitato, Cuango (Lunda Norte), Soyo (Zaire), Cahama, Cuanhama (Cunene) and Puri (Uige)
- Some challenges to vaccination activities were reported; delay of the scheduled vaccination in some provinces due to shortage of vaccination syringes
- Additional districts will start vaccinating this week, as soon as syringes and other materials arrive in country (vaccine is already in country). This will include Cacuso, Malage, Marimba (Malange province), Milunga, Quimbele (Uige), Cuima and Mbanza Congo (Zaire)
- The start of the final campaign in Luanda (focused mop-up for remaining pockets) may be delayed, on request of MoH, but micro plans and strategies have been prepared based on analysis of independent monitoring and new cases data, with support from IMS partners
- Main results of the independent monitoring exercise suggest that coverage is more homogenous across the province than suggested by administrative coverage figures, although a number of unvaccinated pockets have been identified. It also suggests that the population in the province is likely to be larger than what is recorded in census data

### Logistics

- ◆ 1.1 million doses of vaccines arrived from Chumakov Laboratory in two deliveries received in 25 June (0.5 M) and 27 June (0.6 M)
- Dry vaccination materials (syringes, safety boxes, etc.) to accompany the request above are expected to arrive this week
- 3 million yellow fever vaccination cards were received from South Africa and appropriate amounts were delivered to the provinces

### **Border Health**

- Border health assessments were completed in Chiluage and Cassai (Lunda Sul) and Soyo (Zaire) as well as in Lunda Norte and Moxico. Preliminary conclusions included the lack of adequate control of travellers, lack of access to vaccination services, no control of YF card at transit population and insufficient training of health and migration personnel
- All assessments highlighted the need for cross-border cooperation, harmonization and sharing of information and coordination of vaccination policies
- Border health procedures were assessed at the international railway "Caminho de Ferro de Benguela" departure station in Lobito (Benguela), as well as in the final station in the DRC border in Luau (Moxico)
- Vaccination activities in border cities in Lunda Norte raised concern, due the willingness of citizens of the DRC side of being vaccinated but fear that they will not be accepted by the Angola vaccination teams. It was clarified that all residents in the Angola side will be vaccinated, regardless of their nationality but residents of the DRC side will be vaccinated when the DRC campaign is organized in the coming days/weeks
- The Health Minister agreed to strengthen cross-border collaboration with his peers in neighbouring countries. The IMS is supporting provincial and national authorities to facilitate collaboration, share surveillance procedures and strengthen communication.
- A new focal point for border health from CDC started working in new Standard Operation Procedures for border health assessment in collaboration with MoH
- Concerns were raised with lack of checks of yellow fever cards on airport exit from the country. Similar concerns are raised for lack of checks of yellow fever cards on arrival to countries receiving direct flights from Angola

### Social Mobilization, Risk Communication and Media

- IMS partners provided support to provincial and municipal health departments for the preparation of the next vaccination campaign in the province
  of Luanda
- IMS partners provided support to vaccination and community engagement activities in the provinces of Uige and Cuanza Sul
- The social mobilization team provided technical support for the preparation of the National Conference on yellow Fever to be held by the MoH 7-8 July
- IMS partners provided support to MoH for the elaboration of TV spots and music's on yellow fever to increase community awareness and prevention. In addition to preparation of Video packages on the yellow fever outbreak in Angola to be disseminated though social media
- In Dundo, Lunda Norte, Social Mobilization teams were successful at convincing some religious groups that had previously refused vaccination against yellow fever on religious grounds
- UNICEF deployed 4 Social Mobilization experts to support the Provincial Health Directions of Huila, Kwanza Norte, Ouige and Malange respectively.

### **Case Management**

- The two consultants in case management completed the rapid assessment visit in Luanda and Benguela yellow fever referral hospitals. Their visit highlighted low demand for yellow fever inpatient services in both locations, in line with observations from MSF. The conclusions of the visit are being reviewed by WHO HQ IMS team, and include improvements in differential diagnosis, access to clinical tests and adaptations to national guidelines, among others
- The subcommittee for clinical and case management is moving forward with adaptations to guidelines drafted by WHO HQ, based on recommendations from national clinicians, MSF and other IMS partners and the clinical management consultants. The subcommittee recommended updating Angola Yellow Fever guidelines to adapt them to facilities with poor diagnostics capacity
- MSF decided to scale down their support to the Huambo, Benguela and Kapalanga (Luanda) Hospitals' Treatment Units due to reduced demand for yellow fever services

### **Vector Control**

- A entomology mission to Lunda Norte, Lunda Sul and Malange reported low larval and adult density. It also reported many extra-domiciliary breeding sites which are currently dry (mainly bottles) but represent high risk of becoming breeding sites in the next rainy season (expected in September)
- ♦ An entomology mission to Moxico confirmed the presence of Aedes aegypti in the neighbourhood of the Hospital of Luena. Until this assessment, Moxico was considered the only province in Angola where this vector was not present (based on 2012 national assessment). However the density was found to be low and the vector was not detected in Luau city
- The dry season is favouring a low density of the vector in extra-domiciliary settings, however transmission at domiciliary level is still possible as shown by the results of the most recent Luanda entomologic monitoring

#### Special Studies and Assessments

- ◆ A field pilot test to use ovitraps for monitoring entomologic risk started in Lunda Norte with technical assistance of WHO and Cuban Cooperation entomologists
- 1000 rapid test for leptospirosis provided by CDC will be available this week to start the differential diagnosis tests of suspected cases. One CDC epidemiologist will coordinate the study
- CDC deployed one full time epidemiologist to coordinate independent monitoring of coverage studies in vaccinated areas

## V. Key challenges

- Benguela province, and in particular the cities of Benguela and Lobito, have become of particular concern as continuous focus of new cases. They also show poor surveillance indicators and delayed reporting. The IMS has made Benguela province its top priority for deployment of staff
- All border health aspects need to be strengthened in land, railway and air borders. This includes ensuring the systematic checking of yellow cards, control of travellers, training of border officials and harmonization of surveillance
- The strategy for vector control must be re-assessed and its implementation accelerated to focus on eliminating gathering places and adult vectors
- Delays in reporting from some healthcare facilities in Benguela are cause for concern
- The number of cases reported in province-level line lists does not always match the number of cases in the central database. Harmonization efforts are being addressed with the DNSP. This sitrep only reports data from the central database
- Continuous strengthening of case investigation and surveillance activities is necessary and ongoing in all provinces
- Clinical case management activities require additional refinement and follow up
- ◆ As the scale up of the response at the province level is ongoing, response activities still require further support
- Late arrival of syringes and other vaccination material to the country may jeopardize the implementation of vaccination activities at the district level
- National stocks of vaccination material from routine programs has been exhausted. Routine vaccination programs may be suffering as a result
- Lack of reagents for IGM testing at the laboratory may halt the implementation of this test temporarily

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