

### I. Key Highlights

- ◆ MoH-Angola, WHO and partners decided to scale up response activities to yellow fever in Angola. This will include ensuring a continued presence in high risk provinces for the duration of the outbreak. Inter-agency planning of scaling up is under way. MOH-Angola is creating a roster of public health and epidemiologist experts to contribute to the scale up of response activities at the province level
- ◆ A process to identify high risk provinces in need of additional support was started at several levels, including risk prioritization performed by IMS team and MoH-Angola in Luanda in combination with risk modelling performed by WHO, Imperial College of London and KEMRI-Oxford University
- ◆ WHO and partners are planning a technical process review mission of the yellow fever response to be conducted in the coming weeks
- ◆ New cases with local transmission were documented in Soyo and Lunda-Norte districts. As a response 243,690 vaccine doses will be sent to border district of Soyo, Zaire Province, for mass vaccination with a multi-agency vaccination team. The mass campaign is planned to start this week
- ◆ Mass vaccination campaigns are underway in the border districts of Chitato and Coango (Lunda Norte). Additional campaigns are being planned across the country
- ◆ 1,036,500 doses of vaccine arrived in country and were designated for Coango, Chitato and Soyo districts

### II. Epidemiological Situation as of 10 June 2016

⇒ In week 23 (04 June to 10 June):

- 182 cases were reported this week of which 13 cases were confirmed by the laboratory as yellow fever. Overall 16 deaths were reported. Most of the cases and deaths reported this week had dates of onset in previous weeks
- Cases were reported from 12 districts in 13 provinces. Zero newly confirmed reported province or district (Figure 1)
- New local transmission was documented in 2 districts: Soyo (Zaire province) and Lunda-Norte (Cunene province), (Table 4.1 & 4.2)

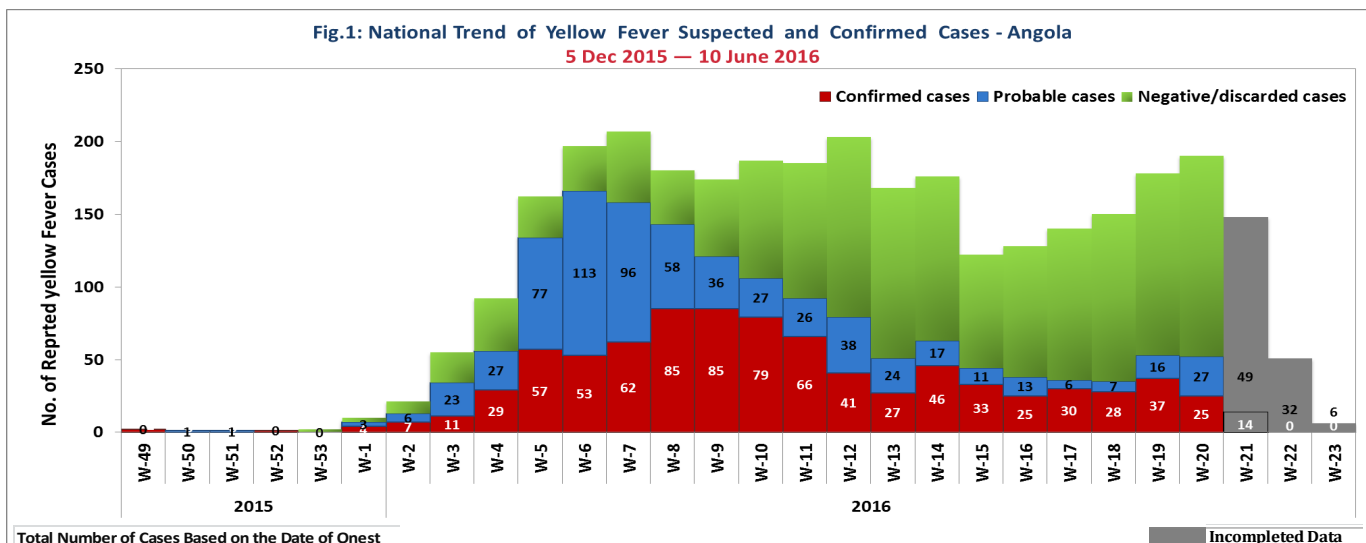
⇒ Cumulative statistics since 05 December:

- A total of 3,137 suspected cases were reported of which 847 were laboratory confirmed. Overall, there has been 345 (CFR 11%) reported deaths among all suspected cases and 112 (CFR 13%) among confirmed cases.
- Laboratory confirmed cases were reported for 16 out of 18 provinces and 78 out of 121 reporting districts (Table 2). Luanda province reported the majority of the confirmed cases 489 (57.7%) (Table.2 & Figure.5)
- Local transmission has been documented in 43 districts in 11 provinces (Table 4.1 & 4.2)
- The majority of the confirmed cases were 15-19 yrs; 209 (21.1%), followed by 20—24 yrs; 168 (16.4%); Most of them were males, (Figure 3).

Table 1: National Summary of Yellow Fever Outbreak

Yellow Fever Outbreak Summary 04 June — 10 June 2016, (W23)	
Reported cases	182
Samples tested	182
Confirmed cases	13
Total Deaths	16
Total provinces that reported cases	13
New provinces with confirmed cases	0
Total districts with reported cases	12
New districts with confirmed cases	0
New districts with documented local transmission	2
Yellow Fever Outbreak Summary from 5 Dec 2015 — 10 June 2016	
Total cases reported to central level	3,137
Total Samples Tested	2,658
Total confirmed cases	847
Total deaths	345
Total deaths among confirmed cases	112
Total provinces that have reported cases	18
Total provinces with confirmed cases	16
Total districts that have reported cases	121
Total districts with confirmed cases	78
Total provinces with documented local transmission	11
Total districts with documented local transmission	43
Total number of provinces in Angola	18
Total number of districts in Angola	166

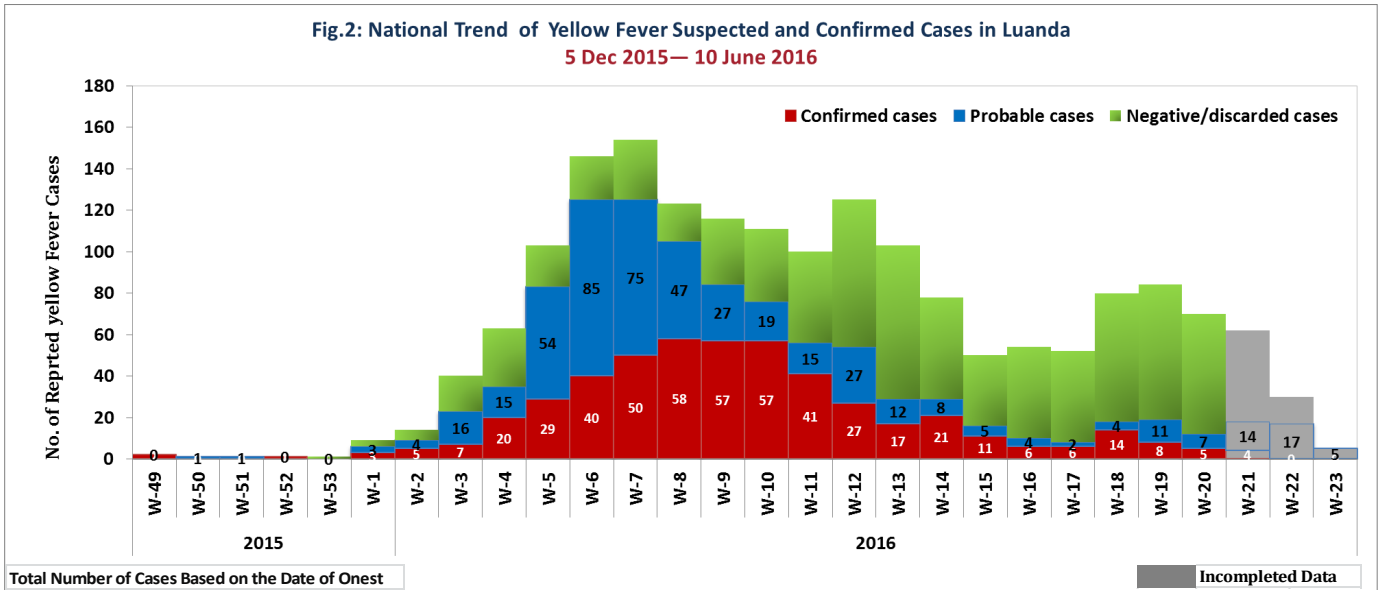
Fig.1: National Trend of Yellow Fever Suspected and Confirmed Cases - Angola  
5 Dec 2015 — 10 June 2016



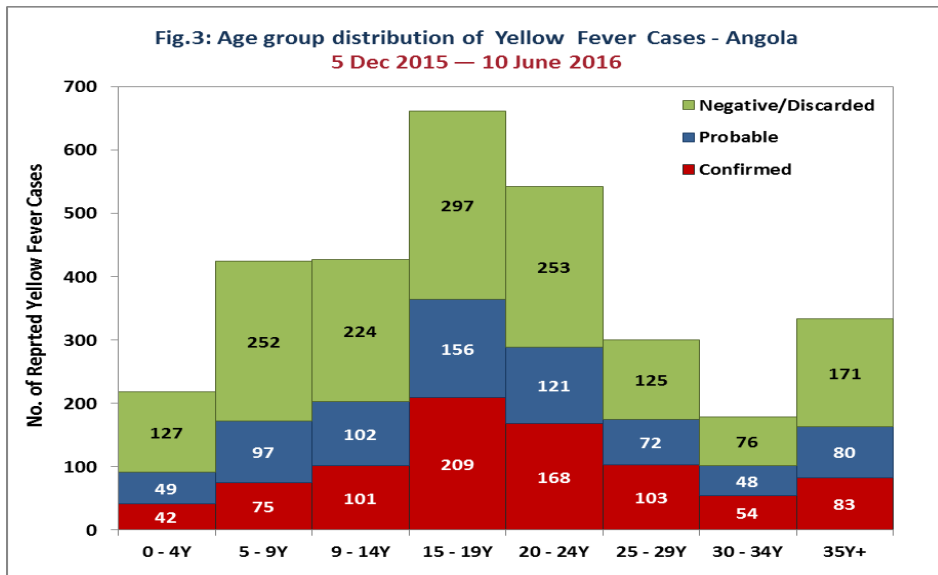
Source: MOH, Angola

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

**Fig.2: National Trend of Yellow Fever Suspected and Confirmed Cases in Luanda**  
5 Dec 2015— 10 June 2016



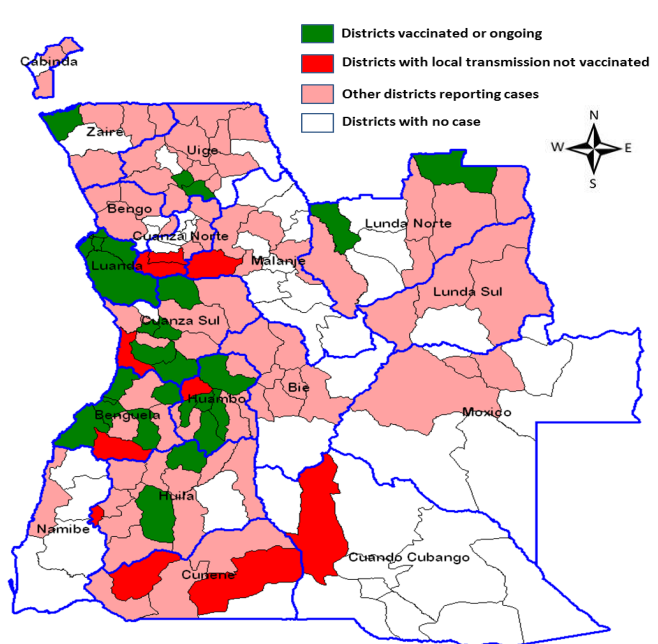
**Fig.3: Age group distribution of Yellow Fever Cases - Angola**  
5 Dec 2015 — 10 June 2016



**Table.2: Angola Provinces with Laboratory Confirmation of Yellow Fever as of 10 June, 2016**

Province	Cumulative (5 Dec 2015— 10 June 2016)					Discarded, Lab with Vacc. History
	Notified Cases	Tested		Confirmed		
		No	%	No	%	
Bengo	21	21	100	6	29	0
Benguela	291	278	96	105	36	11
Bie	30	28	93	16	53	0
Cabinda	31	25	81	1	3	0
Cuando Cubango	6	5	83	1	17	0
Cuanza Norte	48	39	81	5	10	0
Cuanza Sul	99	95	96	16	16	0
Cunene	48	48	100	14	29	0
Huambo	508	452	89	126	25	15
Huila	135	88	65	33	24	0
Luanda	1778	1442	81	489	28	70
Lunda Norte	33	32	97	14	42	0
Lunda Sul	7	6	86	0	0	0
Malange	21	21	100	6	29	0
Moxico	4	4	100	0	0	0
Namibe	10	10	100	2	20	0
Uige	54	53	98	9	17	0
Zaire	13	11	85	4	31	0
<b>TOTAL</b>	<b>3137</b>	<b>2658</b>	<b>85</b>	<b>847</b>	<b>27</b>	<b>96</b>

**Fig.4: Yellow Fever Cases with Local Transmission and Vaccination in Angola Province and District**  
5 Dec 2015– 10 June 2016



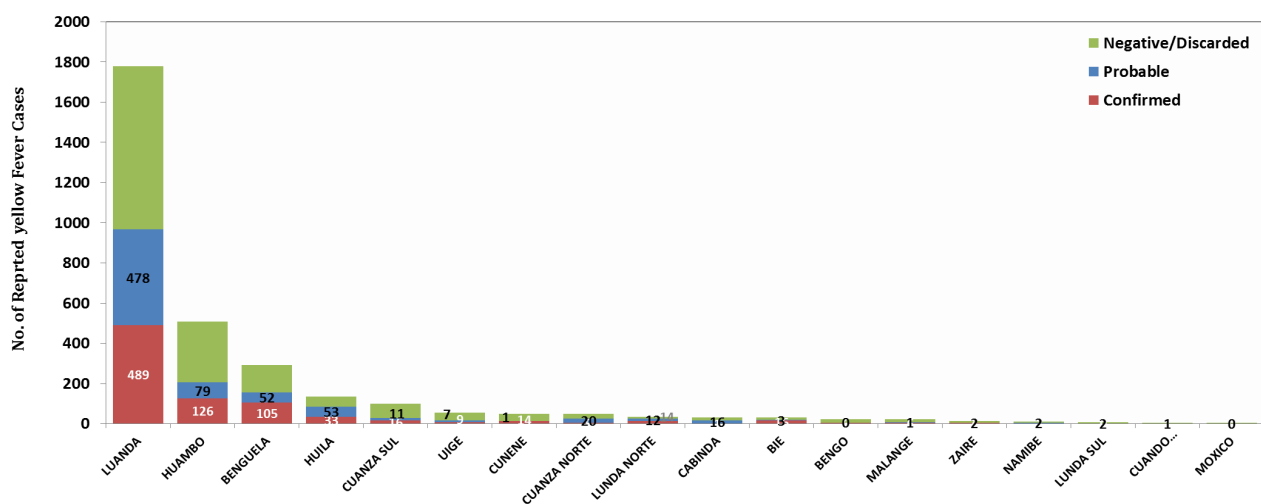
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Table:3 Distribution of Yellow Fever Vaccination Coverage in Angola as of 10 June 2016

Province	Target population	Launching date	Population vaccinated	Administrative coverage (%)	IM Percent vaccinated*
Belas	1,071,662	19-Feb-16	1,287,998	120%	88.2%
Cacuaco	887,829	29-Feb-16	770,260	87%	87.8%
Cazenga	867,659	29-Feb-16	819,000	94%	94.3%
Icolo e Bengo	75,103	28-Mar-16	38,446	51%	81.5%
Ingombota	89,556	24-Mar-16	61,342	68%	91.3%
K. Kiaxi	640,006	10-Mar-16	213,263	33%	79.0%
Maianga	660,884	14-Mar-16	485,645	73%	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	55,358	35%	91.3%
Sambizanga	433,970	20-Mar-16	136,689	31%	79.7%
Viana	1,535,102	2-Feb-16	2,124,190	138%	86.3%
<b>Luanda</b>	<b>6,583,216</b>		<b>6,049,331</b>	<b>92%</b>	
Baia Farta	103,623	16-May-16	105,116	101%	
Balombo	99,932	16-May-16	101,700	102%	
Benguela	531,744	12-Apr-16	489,449	92%	
Catumbela	173,601	13-Apr-16	188,421	109%	
Cubal	289,703	16-May-16	297,264	103%	
Lobito	335,601	13-Apr-16	356,144	106%	
Chorongoi	81,977				
<b>Benguela</b>	<b>1,534,204</b>		<b>1,538,094</b>		
Menongue	308,509				
<b>Cuango Cubango</b>	<b>308,509</b>				
Ambaca	61,209				
Cazengo	166,860				
<b>Cuanza Norte</b>	<b>228,069</b>				
Amboim	236,339	16-May-16	216,637	92%	
Cassongue	145,579	16-May-16	119,946	82%	
Ebo	159,024	16-May-16	151,891	96%	
Libolo	85,630	16-May-16	58,283	68%	
Seles	176,058	16-May-16	159,999	91%	
Sumbe	269,341				
<b>Cuanza Sul</b>	<b>1,071,971</b>		<b>706,756</b>		
Bailundo	283,887	16-May-16	270,735	95%	
Caala	268,734	13-Apr-16	222,811	83%	
Ekunha	79,334	16-May-16	75,022	95%	
Huambo	689,301	13-Apr-16	558,150	81%	
Ukuma	42,950	16-May-16	47,348	110%	
<b>Huambo</b>	<b>1,364,206</b>		<b>1,174,066</b>		
Caconda	160,892	16-May-16	167,102	104%	
Lubango	736,077	16-May-16	14,938	2%	
Quipungo	147,818	16-May-16	168,781	114%	
Humpata	83,267				
<b>Huila</b>	<b>1,128,054</b>		<b>350,821</b>		
Cuango	174,429	27-May-16	68,271	39%	
Chitato	196,869				
<b>Lunda Norte</b>	<b>196,869</b>		<b>68,271</b>		
Malange	489,867				
<b>Malange</b>	<b>489,867</b>				
Negage	136,323	16-May-16	129,732	95%	
Uige	496,567	16-May-16	624,138	126%	
<b>Uige</b>	<b>632,890</b>		<b>753,870</b>	<b>119%</b>	
Soyo	219,536				
<b>Zaire</b>	<b>219,536</b>				
<b>GRAND TOTAL</b>	<b>13,309,786</b>		<b>10,641,209</b>		
Vaccination ongoing or about to start					

\*IM Percent vaccinated estimated from Post-vaccination Independent Monitoring

Fig.5: National Trend of Yellow Fever Suspected and Confirmed Cases per Angola Provinces  
5 Dec 2015 – 10 June 2016



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

**Table 4.1: Yellow Fever Reported and Confirmed Cases per Angola Provinces and Districts, 2016  
5 Dec 2015— 10 June 2016**

Province	Cases notified during the period (4 June — 10 June 2016)			Cumulative Cases (5 Dec 2015— 10 June 2016)			Documented Local Transmission*	Date of onset of first confirmed case*	Date of onset of last confirmed case*	Average days of reporting delay	Days since last case reported to central level	Days since last confirmed case
	Reported	Confirmed	Deaths	Reported	Confirmed	Deaths						
Belas	7	0	1	188	54	25	Y	15/01/16	26/05/16	3	0	14
Cacuaco	2	0	0	216	78	22	Y	28/01/16	12/05/16	2	0	29
Cazenga	20	0	0	390	109	33	Y	18/01/16	27/05/16	2	0	14
Icolo e Bengo	0	0	0	5	1	0	Y	08/03/16	08/03/16	3	11	94
Ingombota	0	0	0	16	4	0	Y	01/02/16	15/03/16	1	7	87
Kilamba xiayi	10	0	0	222	68	18	Y	06/12/15	18/05/16	2	0	23
Maianga	3	0	2	113	28	11	Y	08/02/16	26/05/16	2	0	15
Quissama	0	0	0	1	1	0	N	24/04/16	24/04/16	1	44	47
Rangel	2	0	0	44	15	2	Y	29/01/16	02/05/16	3	0	39
Samba	1	0	0	24	5	2	Y	10/02/16	11/05/16	2	0	30
Sambizanga	3	0	0	85	30	13	Y	23/01/16	21/05/16	3	0	20
Viana	9	0	0	474	96	85	Y	05/12/15	14/05/16	2	0	27
<b>LUANDA</b>	<b>57</b>	<b>0</b>	<b>3</b>	<b>1778</b>	<b>489</b>	<b>211</b>	<b>Y</b>	<b>05/12/15</b>	<b>27/05/16</b>	<b>2</b>	<b>0</b>	<b>14</b>
Ambriz	0	0	0	3	1	0	N	04/04/16	04/04/16	3	24	67
Bula Atumba	0	0	0	1	0	0	N			3	88	
Dande	0	0	0	11	5	0	N	05/02/16	19/05/16	4	10	22
Namuangongo	0	0	0	6	0	0	N			6	10	
<b>BENGO</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>6</b>	<b>0</b>	<b>N</b>	<b>05/02/16</b>	<b>19/05/16</b>	<b>4</b>	<b>10</b>	<b>22</b>
Baia Farta	2	0	1	13	9	3	Y	08/04/16	12/05/16	6	5	29
Balombo	10	0	0	30	6	2	Y	22/04/16	14/05/16	10	0	27
Benguela	30	5	5	128	57	13	Y	15/02/16	27/05/16	7	0	14
Bocoio	0	0	0	5	1	0	N	02/05/16	02/05/16	8	20	39
Caimbambo	0	0	0	5	1	0	N	26/02/16	26/02/16	4	32	105
Catumbela	4	1	1	33	6	1	Y	15/04/16	22/05/16	9	0	19
Chongoroi	1	1	1	6	5	1	Y	26/02/16	25/05/16	6	5	16
Cubal	0	0	0	6	3	1	Y	05/02/16	10/03/16	3	52	92
Ganda	0	0	0	5	3	0	N	10/02/16	28/02/16	5	85	103
Lobito	8	1	1	60	14	4	Y	22/01/16	19/05/16	6	0	22
<b>BENGUELA</b>	<b>55</b>	<b>8</b>	<b>9</b>	<b>291</b>	<b>105</b>	<b>25</b>	<b>Y</b>	<b>22/01/16</b>	<b>27/05/16</b>	<b>7</b>	<b>0</b>	<b>14</b>
Andulo	4	0	0	13	6	1	N	14/02/16	27/03/16	7	5	75
Camacupa	0	0	0	1	1	0	N	19/03/16	19/03/16	0	71	83
Catabola	1	0	0	1	0	0				3	5	
Chinguar	0	0	0	6	3	0	N	02/02/16	22/05/16	3	13	19
Cuito	0	0	0	5	4	1	N	30/01/16	18/04/16	5	32	53
Cunhinga	0	0	0	3	1	0	N	01/03/16	01/03/16	6	55	101
Nharea	0	0	0	1	1	0	N	22/02/16	22/02/16	11	98	109
<b>BIE</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>16</b>	<b>2</b>	<b>N</b>	<b>30/01/16</b>	<b>22/05/16</b>	<b>6</b>	<b>5</b>	<b>19</b>
Belize	1	0	0	1	0	0	N			4		
Bucu Zau	0	0	0	1	0	0	N			3	132	
Cabinda	3	0	0	29	1	1	N	25/01/16	25/01/16	7	0	137
<b>CABINDA</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>31</b>	<b>1</b>	<b>1</b>	<b>N</b>	<b>25/01/16</b>	<b>25/01/16</b>	<b>7</b>	<b>0</b>	<b>137</b>
Menongue	2	0	0	6	1	1	Y	18/04/16	18/04/16	8	5	53
<b>CUANDO CUBANGO</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>Y</b>	<b>18/04/16</b>	<b>18/04/16</b>	<b>8</b>	<b>5</b>	<b>53</b>
Ambaca	10	0	0	21	1	0	N	21/03/16	21/03/16	9	0	81
Cambambe	3	0	0	5	0	0	N			4	0	
Cazengo	2	1	1	20	4	7	Y	23/02/16	24/05/16	23	5	17
Lucala	0	0	0	1	0	0	N			46	70	
Samba Caju	1	0	0	1	0	0	N			0	1	
<b>CUANZA NORTE</b>	<b>16</b>	<b>1</b>	<b>1</b>	<b>48</b>	<b>5</b>	<b>7</b>	<b>Y</b>	<b>23/02/16</b>	<b>24/05/16</b>	<b>15</b>	<b>0</b>	<b>17</b>
Amboim	2	0	0	7	2	1	Y	23/01/16	05/04/16	6	5	66
Cassongue	0	0	0	2	2	0	Y	02/02/16	02/02/16	19	94	129
Cela	0	0	0	7	1	0	N	04/02/16	04/02/16	5	45	127
Conda	1	0	0	2	0	0	N			6	5	
Ebo	4	0	0	34	4	1	Y	17/01/16	16/04/16	7	0	55
Libolo	0	0	0	4	1	1	Y	05/04/16	05/04/16	6	21	66
Mussende	0	0	0	2	0	0	N			4	43	
Porto amboim	0	0	0	5	0	2	N			2	14	
Quibala	0	0	0	1	0	0	N			8	52	
Quilenda	3	0	0	5	0	0	N			6	0	
Seles	0	0	0	21	5	2	Y	05/02/16	11/05/16	6	14	30
Sumbe	0	0	0	9	1	2	Y	02/03/16	02/03/16	3	21	100
<b>CUANZA SUL</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>99</b>	<b>16</b>	<b>9</b>	<b>Y</b>	<b>17/01/16</b>	<b>11/05/16</b>	<b>6</b>	<b>0</b>	<b>30</b>
Cahama	2	0	0	16	5	0	Y	28/02/16	13/05/16	8	3	28
Cuanhama	1	0	0	16	4	1	Y	24/02/16	15/05/16	17	3	26
Curoca	0	0	0	3	0	0	N			12	16	
Cuvelai	0	0	0	2	0	0	N			7	16	
Ombadja	1	0	0	11	5	1	N	01/02/16	17/04/16	6	3	54
<b>CUNENE</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>48</b>	<b>14</b>	<b>2</b>	<b>Y</b>	<b>01/02/16</b>	<b>15/05/16</b>	<b>11</b>	<b>3</b>	<b>26</b>

**Average days of reporting delay:** average of difference between date of receipt of case report at national level and date of case notification  
**Days since last case reported to central level:** difference between last day of reporting period (10/06/2016) and date of receipt at national level of report of last suspected case  
**Days since last confirmed case:** difference between last day of reporting period (10/06/2016) and date of onset of last confirmed case.

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Table 4.2: Yellow Fever Reported and Confirmed Cases per Angola Provinces and Districts, 2016  
5 Dec 2015— 10 June 2016

Province	Cases notified during the period (4 June — 10 June 2016)			Cumulative Cases (5 Dec 2015— 10 June 2016)			Documented Local Transmission*	Date of onset of first confirmed case*	Date of onset of last confirmed case*	Average days of reporting delay	Days since last case reported to central level	Days since last confirmed case
	Reported	Confirmed	Deaths	Reported	Confirmed	Deaths						
Bailundo	2	0	0	84	11	4	Y	05/02/16	24/03/16	5	5	78
Caala	0	0	0	85	25	7	Y	28/01/16	16/05/16	4	13	25
Catchiungo	2	0	0	31	2	0	N	18/03/16	29/04/16	5	5	42
Ecunha	0	0	0	71	20	4	Y	17/01/16	24/05/16	4	9	17
Huambo	5	0	0	143	41	12	Y	20/01/16	25/05/16	4	5	16
Londumbale	0	0	0	27	7	7	Y	17/02/16	27/04/16	4	9	44
Longonjo	0	0	0	24	10	4	N	09/02/16	15/04/16	7	10	56
Mungo	0	0	0	14	2	2	N	06/02/16	01/03/16	4	20	101
Tchikala tchologanga	1	0	0	11	3	0	N	16/03/16	07/04/16	3	5	64
Tchinjenje	0	0	0	3	1	0	N	01/04/16	01/04/16	5	22	70
Ukuma	0	0	0	15	4	4	Y	22/02/16	19/04/16	4	34	52
<b>HUAMBO</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>508</b>	<b>126</b>	<b>44</b>	<b>Y</b>	<b>17/01/16</b>	<b>25/05/16</b>	<b>4</b>	<b>5</b>	<b>16</b>
Caconda	0	0	0	28	10	4	Y	05/01/16	30/03/16	10	13	72
Caçula	0	0	0	8	4	1	N	23/02/16	15/05/16	6	13	26
Caluquembe	0	0	0	10	2	6	N	04/03/16	21/03/16	4	72	81
Chibia	0	0	0	2	1	0	N	08/02/16	08/02/16	1	112	123
Chicomba	0	0	0	11	1	0	N	02/02/16	02/02/16	5	9	129
Chipindo	0	0	0	1	0	0	N			5	45	
Cuvango	0	0	0	2	0	0	N			4	53	
Gambos	0	0	0	5	1	1	N	24/02/16	24/02/16	3	91	107
Humpata	0	0	0	11	3	0	Y	09/02/16	28/04/16	5	30	43
Lubango	0	0	0	14	4	4	N	30/01/16	05/02/16	1	43	126
Matala	0	0	0	2	0	1	N			4	81	
Quilengues	0	0	0	10	4	2	N	21/02/16	10/03/16	2	83	92
Quipungo	0	0	0	31	3	3	Y	02/02/16	05/02/16	4	7	126
<b>HUILA</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>135</b>	<b>33</b>	<b>22</b>	<b>Y</b>	<b>05/01/16</b>	<b>15/05/16</b>	<b>5</b>	<b>7</b>	<b>26</b>
Cambulo	0	0	0	1	0	0	N			34	58	
Chitato	0	0	0	6	1	1	N	08/05/16	08/05/16	9	18	33
Cuango	13	4	3	22	13	8	Y	02/05/16	28/05/16	6	0	13
Cuilo	1	0	0	1	0	0	N			9		
Lucapa	0	0	0	1	0	0	N			26	18	
Xa Muteba	1	0	0	2	0	0	N			28	0	
<b>LUNDA NORTE</b>	<b>15</b>	<b>4</b>	<b>3</b>	<b>33</b>	<b>14</b>	<b>9</b>	<b>Y</b>	<b>02/05/16</b>	<b>28/05/16</b>	<b>10</b>	<b>0</b>	<b>13</b>
Cacolo	1	0	0	1	0	0	N			1		
Muconda	0	0	0	1	0	0	N			4	14	
Saurimo	0	0	0	5	0	0	N			1	37	
<b>LUNDA SUL</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>N</b>			<b>2</b>	<b>2</b>	
Cacuso	1	0	0	3	1	0	Y	21/04/16	21/04/16	9	4	50
Cahombo	0	0	0	1	1	1	N	20/03/16	20/03/16	9	71	82
Calandula	1	0	0	4	0	1	N			5	4	
Cambundi Catembo	0	0	0	1	0	1	N			5	13	
Malange	0	0	0	11	3	0	Y	21/02/16	19/05/16	3	11	22
Quela	0	0	0	1	1	0	N	07/05/16	07/05/16	4	23	34
<b>MALANGE</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>6</b>	<b>3</b>	<b>Y</b>	<b>21/02/16</b>	<b>19/05/16</b>	<b>5</b>	<b>4</b>	<b>22</b>
Cameia	0	0	0	1	0	0	N			7	53	
Leua	0	0	0	1	0	0	N			5	34	
Moxico	0	0	0	2	0	0	N			3	22	
<b>MOXICO</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>N</b>			<b>4</b>	<b>22</b>	
Namibe	0	0	0	10	2	1	N	17/04/16	14/05/16	5	12	27
<b>NAMIBE</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>N</b>	<b>17/04/16</b>	<b>14/05/16</b>	<b>5</b>	<b>12</b>	<b>27</b>
Ambuila	0	0	0	4	0	0	N			5	7	
Bembe	1	0	0	3	0	0	N			7	0	
Buengas	0	0	0	1	0	0	N			4	27	
Bungo	0	0	0	1	0	0	N			3	82	
Damba	0	0	0	2	0	0	N			4	52	
Maquela zombo	0	0	0	1	0	1	N			0	109	
Mucaba	0	0	0	1	0	0	N			4	20	
Negage	0	0	0	12	3	0	Y	03/02/16	15/05/16	4	7	26
Puri	0	0	0	1	1	0	N	10/05/16	10/05/16	3	20	31
Quimbele	0	0	0	3	0	0	N			6	17	
Quitexe	0	0	0	1	0	0	N			10	32	
Sanza pombo	0	0	0	1	0	0	N			4	27	
Songo	0	0	0	1	0	0	N			4	7	
Uige	0	0	0	22	5	4	Y	02/02/16	08/05/16	5	17	33
<b>UIGE</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>54</b>	<b>9</b>	<b>5</b>	<b>Y</b>	<b>02/02/16</b>	<b>15/05/16</b>	<b>5</b>	<b>0</b>	<b>26</b>
Cuimba	0	0	0	2	1	2	N	24/03/16	24/03/16	11	52	78
Mbanza congo	0	0	0	4	0	0	N			9	73	
Noqui	0	0	0	2	0	0	N			16	88	
Nzeto	0	0	0	2	1	0	N	05/02/16	05/02/16	10	100	126
Soyo	0	0	0	3	2	1	Y	10/02/16	15/05/16	2	13	26
<b>ZAIRE</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>4</b>	<b>3</b>	<b>Y</b>	<b>05/02/16</b>	<b>15/05/16</b>	<b>9</b>	<b>13</b>	<b>26</b>
<b>Angola</b>	<b>182</b>	<b>13</b>	<b>16</b>	<b>3137</b>	<b>847</b>	<b>345</b>	<b>Y</b>	<b>05/12/15</b>	<b>28/05/16</b>	<b>4</b>	<b>0</b>	<b>13</b>

\* 1. For cases with date of onset

\* 2. Y = Yes confirmed Local Transmission, N = Not Confirmed Local Transmission

Newly affected districts in      Newly districts with confirmed cases in W23      New documented local transmission in W23



### III. Response Interventions

#### Coordination

- ◆ WHO decided to scale up response activities to yellow fever in Angola. This will include ensuring a permanent presence in high risk provinces. Inter-agency planning of scaling up is under way. MOH-Angola is creating a roster of public health and epidemiologist experts as well as social mobilizers to contribute to the scale up of response activities at the province level
- ◆ WHO conducted a coordination meeting with UNICEF to discuss the roles and work integration mechanisms after scaling up the response
- ◆ UNICEF is recruiting 3 epidemiologists to support coordination of vaccination activities at province level. It is expected their work to be integrated within the IM response.
- ◆ WHO and partners are updating a Yellow Fever Strategic Framework for yellow fever in high risk countries as Angola and DRC
- ◆ IOM and UNHCR were briefed by yellow fever partners in relation with the observation of possible refugee and immigrant movements among the borders of Lunda Norte province, mainly at Cafunfu (Coango) and Chitato border districts. Both organizations will join the partners meeting weekly
- ◆ A plan for vaccination in border and high risk areas is under development by WHO HQ, AFRO and CO, and will be proposed to MoH-Angola
- ◆ From the start of the response, more than 70 people are present at provincial level and Luanda in continued positions (including 25 WHO surveillance officers) Over 50 individual field visits have been performed (less than 2 weeks each) . This includes MoH-central staff as well as MOH identified MPH and Epidemiology trainees supported by WHO, WHO CO staff, WHO expatriates from AFRO and HQ, GOARN, CDC staff, IPD, Cuban Cooperation, MSF, MdM, IFRC and other partners working under IMS

#### Surveillance, Laboratory and Data management

- ◆ New local transmission was documented in **Soyo**, Zaire, and **Londumbale**, Huambo
- ◆ Inter-agency surveillance assessment missions were completed in **Cunene**, **Cabinda**, **Lunda Norte** and **Malange last week**, reports were completed
- ◆ Similar visits this week to **Lunda Sul**, **Namibe**, **Quando Cubango**, **Moxico** involved 12 epidemiologists and entomologists
- ◆ Surveillance evaluation tools were implemented in all provinces assessed. Reports from the assessment at the provinces are being compiled and translated for distribution
- ◆ Data cleaning, consistency checks and re-analysis process were completed. Routine data cleaning and consistency checks, continues
- ◆ The data management team compiled line-lists of suspected yellow fever cases from provinces and estimated under-reporting rates
- ◆ A recruitment for support in management of sample transport and custody and provision of feedback was launched in Luanda
- ◆ Case investigations of all PCR+ cases reported in Luanda was started with the objective to understand the profile of cases and factors affecting persistent transmission of YF, and identify potential adverse effects and/or inefficient vaccination

#### Vaccination

- ◆ Mass vaccination campaigns are underway in the border districts of **Chitato** and **Coango** (Lunda Norte). Additional campaigns are being planned across the country
- ◆ A vaccination campaign was organized in **Soyo**, Zaire, and is planned to start on current week
- ◆ A focused mop-up campaign in Luanda is being planned by MoH and WHO, based on the results of Independent Monitoring exercise implemented by Grupo Core and CDC. Main results of the independent monitoring exercise suggest that coverage is more homogenous across the province than anticipated (based on administrative coverage figures). It also suggests that the population in the province is likely to be 1 or 2 million people bigger than what is recorded in census data
- ◆ Post-campaign independent monitoring of coverage was completed in Benguela and Huambo by Grupo Core. Reports are pending

#### Logistics

- ◆ 1,036,500 doses of vaccine arrived in country and were designated for Coango, Chitato and Soyo districts
- ◆ Distribution of vaccines to the provinces was challenged by transportation problems. MoH-Angola is committed to renew the contract with the transportation company
- ◆ The balance of Yellow Fever vaccine at central level store after recent arrivals and distribution to the provinces is **739,370 doses**, out of this stock **243,690** will be sent to Soyo - Zaire province immediately
- ◆ Additional 3 million yellow cards were ordered to a local print in Luanda
- ◆ The WHO logistics team worked with province partners to address storage challenges in Soyo and Chitato
- ◆ A preliminary assessment of the quality of cold chain in border provinces identified problems in Cuando Cubango. WHO is addressing in collaboration with Province Direction of Health and MoH
- ◆ The stocks of syringes and safety box in country remains low. Future delivery of vaccine should ensure that these materials are delivered at the same time than the vaccine

#### Border Health

- ◆ UNCHR and IOM will participate in partners coordination meetings, to provide guidance on displaced and immigrant populations and border issues
- ◆ Scale up surveillance and response activities at border provinces is ongoing. A CDC epidemiologist was identified to lead border health activities
- ◆ Multiple reports of availability of yellow fever cards for sale in the streets and around airports are being investigated
- ◆ A circular letter from the Minister of Health regulating border control of vaccination is expected to be signed shortly

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

- ◆ UNICEF is supporting Social Mobilization in the provinces of Luanda, Huila, Cunene, Cuanza Sul, Lunda Norte, Lunda Sul and Benguela
- ◆ A media expert joined the team to support media communication and social mobilization activities
- ◆ IM social mobilization team is providing technical support to vaccination activities in new vaccination round in Luanda, Cuanza-Sul, Lunda-Norte and Zaire provinces
- ◆ Dissemination of the IEC message through national and international media is ongoing (National Radio, National TV, Provincial Radios, Reuters agency and the Washington Post Journal)
- ◆ The need to strengthen Social Mobilization at the municipal level was identified by several visits to the provinces during vaccination campaigns. This could include additional microplanning with local partners and strengthened supervision and support

### **Case Management**

- ◆ WHO selected two persons to support case management, to be deployed to Luanda shortly
- ◆ WHO developed new case management guidelines. These will be shared with partners for review
- ◆ MSF and MdM activities continued support of case management in hospital and health centers in Luanda, Huambo, Huila, Benguela and Cuanza Norte continued.
- ◆ Médicos del Mundo (MDM) in Cuanza Norte in coordination with the Province Health Office has completed a training in the 10 districts of the province. The training included 267 health professionals targeting, prevention, identification, differential diagnosis, case management, epidemiological surveillance and vaccination of Yellow Fever.

### **Vector Control**

- ◆ WHO vector control team lead started an assessment of the strategy and way forward to scale up vector control activities
- ◆ Translation and adaptation of the entomological SOPs for YF entomological investigations are under process
- ◆ The need to produce more and robust entomological data is highly recommended to guide vector control efforts
- ◆ IM vector control expert and the head of NMCP conducted several meetings discussing the current situation and set a comprehensive entomological response and capacity building plan
- ◆ Cuban Cooperation continue to support vector control activities in districts in Luanda and across the country. Routine entomological assessment and vector control is ongoing in affected provinces
- ◆ Vector control experts joined each of the vaccination teams assessing surveillance systems across the country, to perform case investigations and assessment of local transmission

### **Special Studies and Assessments**

- ◆ CDC with INSP/MOH and IPD follow-up the proposed differential diagnosis protocol of Leptospira and HEV for implementation at the central level.
- ◆ CDC provides support to Grupo Core on independent monitoring assessment
- ◆ A proposal for Differential Diagnosis of cases negative to YF or co-infected was prepared by CDC. Rapid tests for Leptospirosis and Hepatitis E are being sourced for start of activity later this month
- ◆ CDC and MoH implemented a preliminary assessment of cases with positive PCR and history of vaccination. Serum samples of some of these cases were sent to the Institut Pasteur Dakar and CDC Fort Collins for genotyping (i.e. differentiate between vaccine type virus and wild type virus)

## **V. Key challenges**

- ◆ New cases are reported weekly in Luanda and Benguela despite high reported levels of vaccination, indicating continued transmission and pockets of unvaccinated population
- ◆ Need to accelerate and re-assess the strategy for vector control to focus on gathering places and adult vector
- ◆ Under-reporting from all facilities in Luanda, Benguela and Huambo, has been confirmed. Impact in the epidemic interpretation and remedial actions are being discussed based on assessment of under-reporting performed by WHO and CDC
- ◆ Issues of transportation of vaccines from central stores to provinces
- ◆ Need for coordination of clinical case management activities
- ◆ Need to strengthen all response activities at the province level will require administrative and structural changes in the organization of the Incident Management System

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