



EPIDEMIOLOGICAL BULLETIN: Weekly/Volume 2/Number 12/ Page 1-8 /21-27 March 2016
Abyot Bekele, MPH¹

¹Ethiopian Public Health Institute, Center for Public Health Emergency Management, Telephone 1212761240/1212758631 Tall Free 8335/8665, Fax 1212758634, Email: PHEMcenter@ephi.gov.et, Website: www.ephi.gov.et, PO. Box 1242, Swaziland Street, Addis Ababa

Highlights of the Week:

- ✦ The national Surveillance report completeness rate is 88.9% in week 12 of 2016;
- ✦ The new SAM cases reported in week 12 of 2016 are high comparing with similar week of 2014 and 2015;
- ✦ The number of malaria cases were increasing in 27 woredas while it is decreasing in majority of malaria hotspot woredas;
- ✦ Measles crosses the normal threshold (five suspected cases per month) in 48 woredas;
- ✦ AWD outbreak is being reported in 14 woredas in three regions (Oromia, Somali, SNNP)

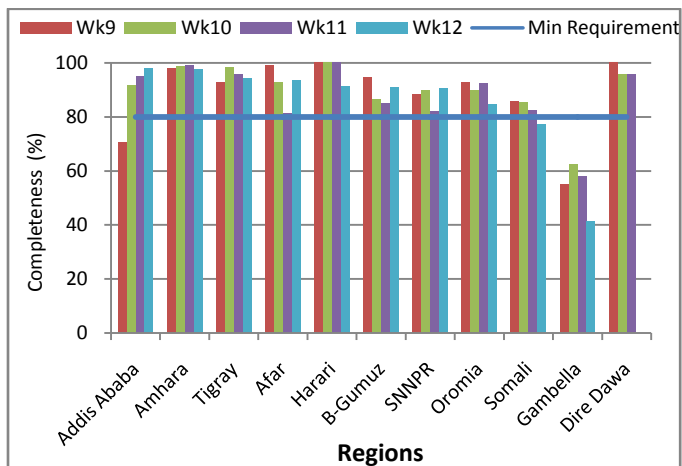


Figure 1: Regional Surveillance Report Completeness, Week 09-12/2016

I. Introduction

This Epidemiological Weekly Bulletin serves to provide key information on public health emergency management activities, and summarizes surveillance data and performance on epidemic prone diseases and other public health emergencies. The bulletin mainly includes surveillance data of week 12 of 2016 and daily phone communication, line list reports of outbreaks for week 12 of 2016. It highlights the surveillance completeness and timeliness across the regions, trends of diseases under surveillance, cluster of cases and events, ongoing outbreaks and responses undertaken at all levels in Ethiopia. The number of disease specific cases indicated in this issue of bulletin are subject to change due to on-going receiving late surveillance data and retrospective verification and investigation of data from outbreak areas.

Timeliness: In week 12, the national surveillance timeliness rate is 89.3% which is above WHO minimum requirement. From the total 11 regional states and city administrations 8 of them achieved more than 80% surveillance report timeliness. Gambella and Somali regions region achieved less than 80% and Dire Dawa Town did not reported within expected time (Figure 2).

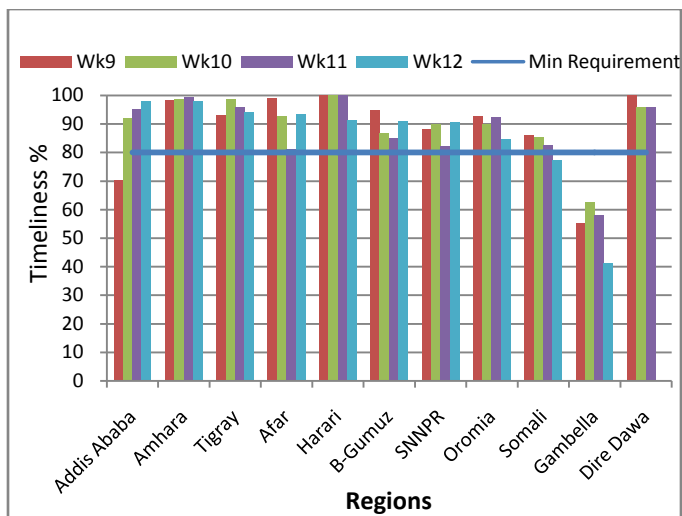


Figure 2: Regional Surveillance Report timeliness, Week 09-12/2016

II. Surveillance report completeness and timeliness

Completeness: In week 12, the national surveillance completeness rate is 88.9% which is above WHO minimum requirement. Comparing with previous week, the national completeness rate increased. Of the 11 regional states and city administrations, 8 of them achieved more than 80%. Harari, Afar, Benishangul Gumuz, Amhara, Oromia, Tigray and Addis Ababa regions achieved more than 90% surveillance completeness. Gambella and Somali regions reported less than 80% while Dire Dawa did not reported for the week. In general nationally the surveillance is in the position of detecting any outbreak (Figure 1).

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III. Diseases and conditions

1) Severe Acute Malnutrition (SAM)

National SAM Trend: In week 12, a total of 4,965 new SAM cases with five deaths were reported to national level through weekly routine surveillance from all regions. Among the new cases 4,456 are outpatient and the rest 399 are inpatient cases. Grossly the trend is increasing but relatively compared to week 11 of 2016 the new SAM cases in week 12 have decreased (from 5,045 to 4,965). The new SAM cases are increased by 56% in week 12 of 2016 compared with the same week of 2014 (from 3,179 to 4,965) and by 44% compared with same week of 2015 (from 3,453 to 4,965) (Figure 3).

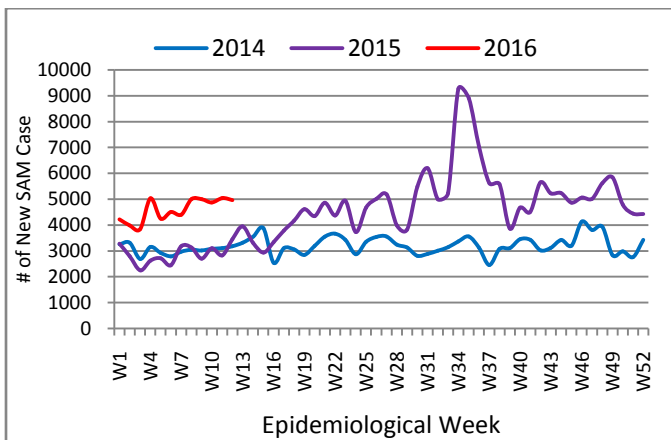


Figure 3: National SAM cases trend, 2014-2016

Regional SAM Trend: Among the 4,965 new SAM cases reported in the week, 1,978 (40%) are reported from Oromia regional state, followed by SNNP and Amhara regions, 1,978 (19%) and 710 (14%) respectively. In Somali region the trend of weekly new SAM cases are seriously increasing from week to week (Figure 4).

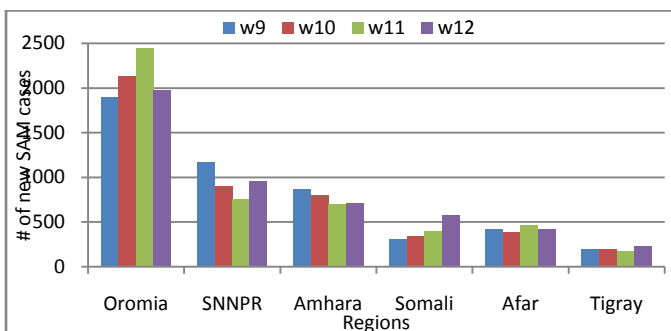


Figure 4: SAM trend by region by week 09-12/2016
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Among the total new SAM cases reported in the week, 399 (8%) are new inpatient cases. Relatively the new inpatient SAM cases are high in Oromia followed by SNNP region (Table 1).

Table 1: New OTP and SC SAM cases and deaths in week 12, 2016

Region	Total SAM	OTP	Inpatient	Death
Addis Ababa	31	31	0	0
Afar	423	408	15	0
Amhara	710	654	56	0
B-Gumuz	27	23	4	0
Gambella	14	12	2	0
Harari	15	5	10	0
Oromia	1978	1812	166	0
SNNPR	956	834	122	1
Somali	583	564	19	0
Tigray	228	223	5	0
Total	4965	4566	399	1
Percent	100	92	8	0.3

Zonal SAM Trend: In week 12, West Hararge, West Arsi, Guji, Shinille, Hadiya, Arsi, Bale, Sidama, South Wollo and North Wollo zones reported the highest number of new SAM cases. Totally, top 15 zones contributed 59% of the national cases reported in the week. Comparing with previous week, the number of new SAM cases relatively increased in West Arsi, Guji, Shinille, Hadiya, Arsi, Bale, North Gonder, Zone 03, East Shea and Jimma zones (Table 2).

Table 2: Top 15 zones reported highest number of new SAM cases in week 12 of 2016

Region	Zone	w9	w10	w11	w12
Oro	W/Arsi	283	367	391	397
Oro	W/Hararge	361	460	397	385
Oro	Guji	168	111	163	232
Som	Shinile	68	59	61	230
SNNP	Hadiya	215	148		219
Oro	Arsi	74	129	84	218
Oro	Bale	158	142	153	206
SNNP	Sidama	240	157	208	185
Amh	S/Wollo	162	186	169	145
Amh	N/Wollo	139	72	66	131
Afar	Zone 02	131	70	163	125
Amh	N/Gondar	127	111	96	114
Afar	Zone 03	103	124	127	112
Oro	E/Shewa	79	84	98	110
Oro	Jimma	98	101	98	110
Sum Top 15 zones		2406	2321	2274	2919
Sum National		5002	4876	5045	4965
Percent top 15 zones		48	48	45	59



Woreda SAM Trend: In week 12, Siraro, Shashemene and Shall woredas of West Arsi zone and Hadhagala woreda of Shinille zone reported the highest number of new SAM cases. Top 15 woredas contributed 21% of the national new SAM cases reported in the week (table 3).

Table 3: Top 15 woredas reported highest number of new SAM cases in week 12 of 2016

Region	Zone	Woreda	w9	w10	w11	w12
Oro	W/Arsi	Siraro	90	105	96	124
Som	Shinile	Hadhagala	18	14	12	98
Oro	W/Arsi	Shashemene	34	93	134	97
Oro	W/Arsi	Shala	103	100	114	96
Som	Shinile	Shinile	12	11	11	94
Afar	Zone 02	Bedu	0		63	71
Oro	W/Hararge	Chiro Z	57	56	53	64
Oro	Guji	Bore	14	15	18	59
Oro	W/Hararge	Gemechis	49	55	58	56
Afar	Zone 03	Gewane	37	49	79	52
SNNP	Hadiya	E/Badawocho	27	27		50
SNNP	Hadiya	Soro	54	36		47
Oro	W/Hararge	Habro	36	52	41	40
Oro	W/Hararge	H/gudina	10	20	11	38
Amh	Waghimra	Abergele	6	5	10	37
Sum Top 15 Woredas			547	638	700	1023
Sum National			5002	4876	5045	4965
Percent top 15 Woredas			11	13	14	21

2) Malaria

National Malaria Trend: Totally 28,069 malaria cases (clinical and Confirmed) were reported to the national level in week 12 of 2016. Comparing with last week data, in week 12 the national malaria cases increased by 4% (26,896 to 28,069). The total malaria cases reported in week 12 of 2016 is decreased by 18% comparing with similar week of 2014 (from 34,027 to 28,069) and increased by 16% comparing with similar week of 2015 (from 24,030 to 28,069) (Figure 5).

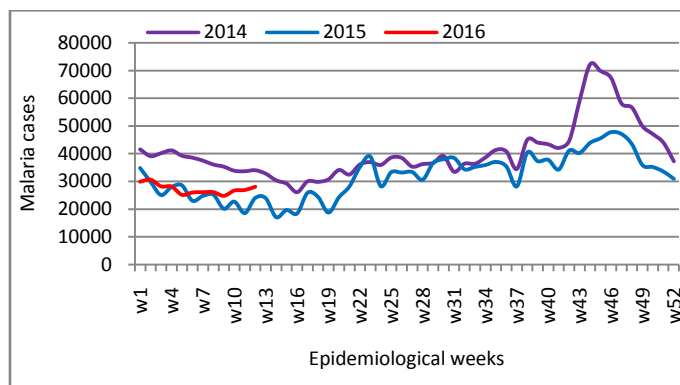


Figure 5: National Malaria cases trend, 2014-2016

Regional Malaria Trend: SNNP region reported the highest number of cases in the week followed by Amhara and Tigray regions. Compared with week 11 of 2016, the malaria cases relatively increased in SNNP and Benishangul Gumuz regions (Figure 6).

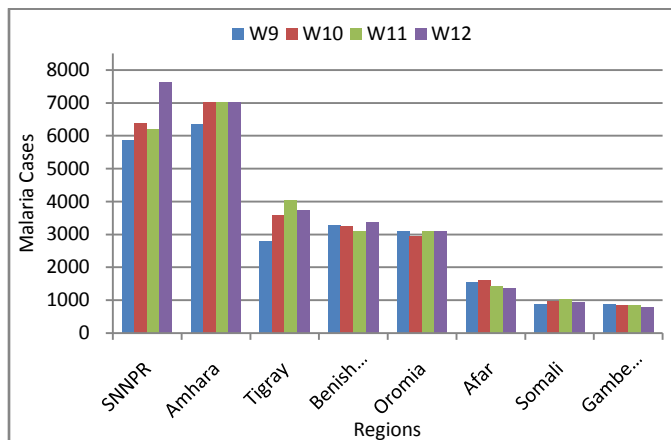


Figure 6: Regional Malaria trend, Week 09-12/2016

In week 12, a total of 138,542 febrile cases suspected for malaria are tested either by microscopy or RDT. Of which 26,816 (19%) are ended positive for malaria parasites. PF contributes 17,381 (62%) while 9,435 (34%) were PV and the rest 1,253 (4%) are clinically diagnosed malaria cases. There are only 209 (0.7%) inpatient cases with five deaths reported in the week (Table 4).

Table 4: Regional Malaria cases by type and region, Week 12, 2016

Region	Tested	Malaria	PF	PV	Inp	Death	MPR
SNNP	38426	7634	4861	2723	84	0	20
Amh	42708	7020	4061	2959	7	0	16
Tig	15256	3743	2375	1308	23	0	24
BG	10559	3374	2286	784	49	1	29
Oro	24726	3097	1824	1251	32	0	12
Afar	3670	1371	1141	229	0	0	37
Som	764	938	247	67	3	0	41
Gam	1728	765	521	31	11	0	32
AA	508	101	26	74	0	4	20
Har	197	26	39	9	0	0	24
Total	138542	28069	17381	9435	209	5	19

Note: Tested-Suspected malaria fever cases examined by microscopy or RDT, PF-Plasmodium falciparum, PV-Plasmodium vivax, Inp-Inpatient malaria cases, MPR, Malaria positivity rate

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Zonal Malaria Trend: Up on disaggregating the data to the zonal level, the total malaria cases have been increased in Central and Western zones of Tigray region, South Gonder of Amhara region, Aossa zone of Benishangul Gumuz region, Nuer zone of Gambella region, Borena, West Wollega and West Arsi zones of Oromia region, Gamo Gofa, Walayita, Hadiya Gurage, South Omo, Gedio and Bench Maji zones of SNNP region (Figure 7.1 & 7.2).

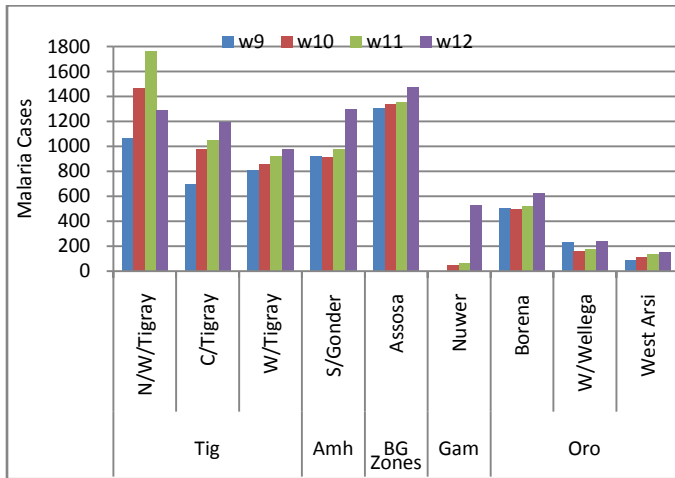


Figure 7.1: Malaria Cases by zones, Week 09-12/2016

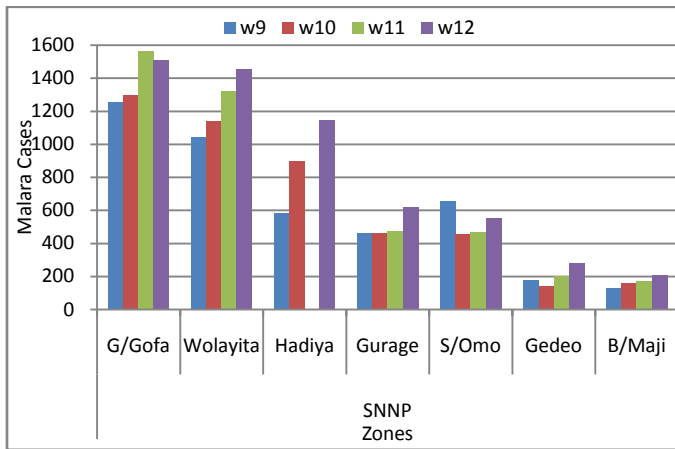


Figure 7.2: Malaria Cases by zones, Week 09-12/2016

Woreda Malaria Trend: Up on disaggregating the data to the woreda level, malaria cases have been increased in the last four weeks (week 09-12) in 21 woredas. Among them malaria cases are seriously increasing for the last four weeks in Amibara woreda of Zone 03 of Afar region, Tach Armachew and Dambia woredas of North Gonder, Easte and Fogera woredas of South Gonder, Jebitenan woreda of West Gojjem, Sherkole, Bambis and Oda Bildangul

woredas of Asossa zone, Kemashi woreda of Kemashi zone, Abeya woreda of Borena zone, Tembaro woreda of Kembata Tembaro zone, Soro woreda of Hadiya zone, Guraferda woreda of Benchi Maji zone, Dilla Town of Gedio zone, Abeshenge woreda of Gurage zone, Selemago woreda of South Omo zone, Offa, Humbo and Damot Gale woredas of Walayita zone, Werelehi, Kolla Temben and Mereb Lehe woredas of central Tigray zone and Tsegede woreda of West Tigray zone (Figure 8.1 & 8.2).

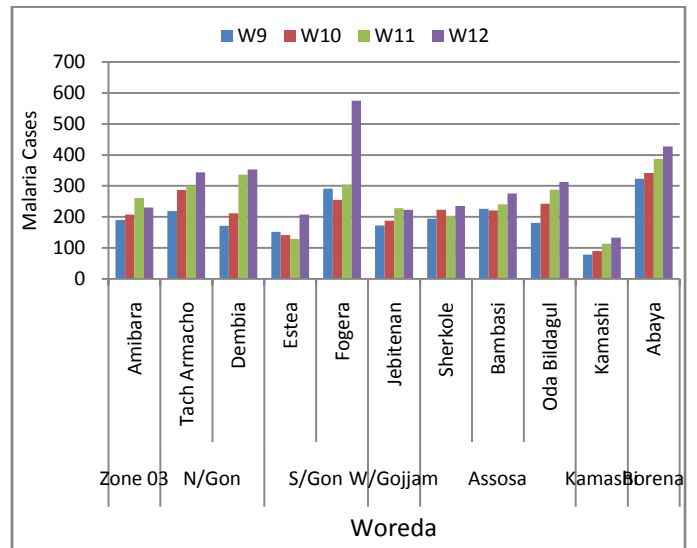


Figure 8.1: Woredas in which malaria cases increasing from week to week, Wk 09-12/2016

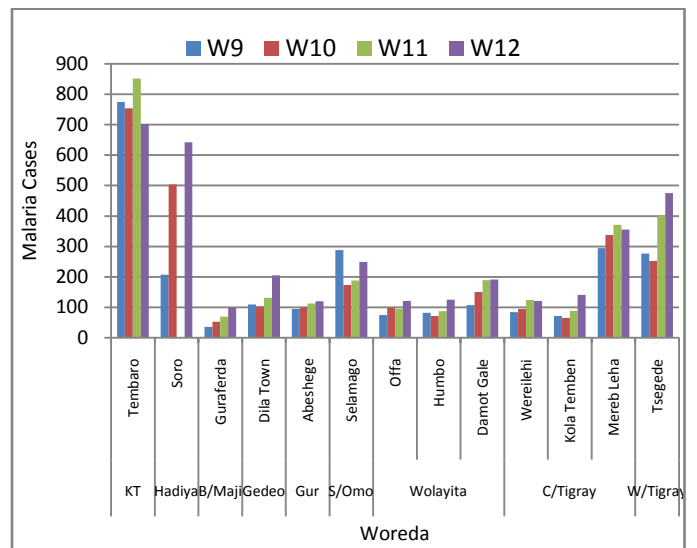


Figure 8.2: Woredas in which malaria cases increasing from week to week, Wk 09-12/2016



3) Rabies:

Nationally, a total of 73 rabies exposure cases with zero death are reported in week 12 of 2016. Majority of the cases reported from Amhara and Tigray regions. Among them 27 (37%) are reported from Gonder Town (Table 5).

Table 5: Regional rabies Exposure cases , Week 12, 2016

Region	Zone	Woreda	E-Cases	%	Deaths
Amh	E/Gojjam	D/Markos Hos	3	4	0
Amh	Gonder T	Gonder Town	27	37	0
Amh	N/Shewa	Asagert	2	3	0
Amh	Waghmra	T/Hailu Hos	4	5	0
Oro	Arsi	Amigna	4	5	0
Oro	Arsi	Merti	2	3	0
Oro	Arsi	Munesa	2	3	0
SNNP	Siliti	W/A/ Berbere	2	3	0
Som	Afder	Hargele Hos	2	3	0
Tigr	C/Tigray	Akisum Town	2	3	0
Tigr	C/Tigray	Adwa Town	1	1	0
Tigr	E/Tigray	Adi Girat T	4	5	0
Tigr	E/Tigray	Gulo Meheda	4	5	0
Tigr	Mekele	Mekele	5	7	0
Tigr	S/Tigray	Rya Azebo	9	12	0
Total			73	100	0

4) Meningitis

In week 12 of 2016, a total of 35 suspected meningitis cases are reported to the national level through weekly routine surveillance . Among them 16 (46%) from Amhara, 9 (25%) cases were from Oromia, 6 (17%) were from Somali, 3(8%) from Afar and 1 (3%) from Benishangul Gumuz region. Majority of the cases reported from Hospitals. Up on disaggregating the hospital cases to woreda level, the cases were reported from different woredas (table 6). The Meningitis threshold was not crossed in all reported woredas .

Table 6: Suspected Meningitis Cases in week 12, 2016

Region	Zone	Woreda	Total MM	OP	IP	Death
Afar	Zone 01	Dubti	3	3	0	0
Amh	E/Gojjam	D/Markos Hos	1	0	1	0
Amh	N/Shewa	D/brehan Hos	1	0	1	1
Amh	Waghimra	T/Hailu Hos	3	0	3	0
BG	Metekel	Pawe Hos	1	0	1	0
Oro	Bale	Goba Town	3	0	3	0
Oro	Bale	Robe Town	1	0	1	0
Oro	Borena	Yabelo Hos	1	0	1	0
Oro	I/A/Bor	Chewaqa	3	3	0	0
Oro	W/Hararge	Daro Lebu	1	1	0	0
SNNP	Hawassa T	Hawassa Hos	5	0	5	0
SNNP	Wolayita	Sodo Hos	1	0	1	0
Total			24	7	17	1

5) Measles

National measles trend: Grossly the national measles suspected cases reported through weekly routine surveillance is decreased in week 12 of 2016 compared with similar week of 2014 and 2015 (Figure 12.1). In week 12 of 2016, a total of 339 suspected measles reported from all regions. Majority of cases 168 (50%) were reported from Oromia region followed by Somali region 74 (22%).

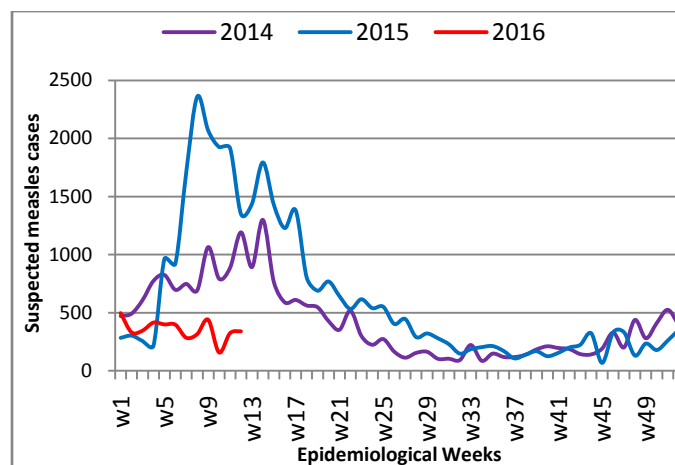


Figure 12.1: National suspected Measles Trend ,2014-2016

In week 12, a total of 62 samples were recieved at national laboratory. Among them 24 were rested positive for Measles IgM while 2 samples were tested positive for Rubella IgM (Figure 12.2).

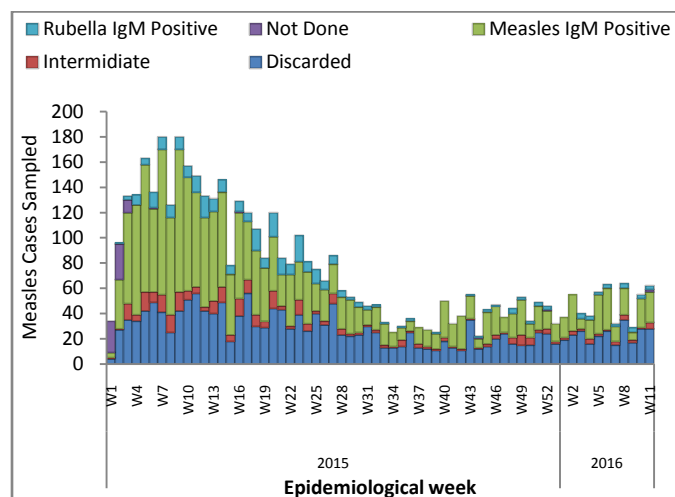


Figure 12.2: National Measles and Rubella laboratory test results , Wk1/2015-Wk12/2016

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Woreda Measles trend: Up on disaggregating suspected measles cases to woreda level, 48 woredas reported five and more suspected cases in the last one month (Week 09-12 of 2016). This shows the woredas are in measles outbreak as per our technical guideline. The suspected measles cases reported from woredas in the outbreak contributed 75% of the national cases reported in week 12 (Table 7).

Table 7: Suspected measles cases from Wk 09-12/2016

Region	Zone	Woreda	w9	w10	w11	w12	Total
Afar	Zone 03	B/Modayitu	0	3	14	3	20
Amh	Bahirdar T	Bahirdar T	1	0	2	2	5
Amh	N/Gondar	Alefa	0	0	0	20	20
Amh	N/Shewa	Gishe	5	0	0	0	5
Amh	S/Gonder	Estea	0	0	0	37	37
Amh	W/Gojjam	N/Achefer	1	0	6	0	7
Gam	Agnuwak	Dima	0	13	1		14
Oro	Arsi	Guna	0	4	1	4	9
Oro	Bale	Goro	0		8	0	8
Oro	Borena	Bule Hora	2	1	5	1	9
Oro	E/Shewa	Bora	11	0	0	0	11
Oro	E/Shewa	Adami Tulu	0	5	0	0	5
Oro	Guji	Girja	34	0	3	30	67
Oro	Guji	Shakiso T	10	4	14	12	40
Oro	Guji	H/Wamena	0	4	0	14	18
Oro	Guji	O/Shakiso	6	3	6	0	15
Oro	Guji	A/Reda	1	0	6	0	7
Oro	Guji	Qercha	4	0	1	0	5
Oro	H/G/Welega	A/Chomen	0	0	46	18	64
Oro	H/G/Welega	J/Geneti	4	1	0	0	5
Oro	I/A/Bor	Darimu	5	0	0	0	5
Oro	Jimma	Agaro	0	0	6	7	13
Oro	Jimma	Sigmo	9	3	0		12
Oro	Jimma T	Jimma T	3	2	1	1	7
Oro	Q/Welega	D/Wabera	15	12	13	2	42
Oro	Q/Welega	H/Gelan	3	0	0	6	9
Oro	Q/Welega	Gidami	3	0	2	0	5
Oro	W/Hararge	Anchar	0	0	0	22	22
Oro	W/Hararge	Gemechis	11	1	6	0	18
Oro	W/Shewa	I/Galan	13	0	0	0	13
SNNP	B/Maji	Maji		8	3	0	11
SNNP	Gedeo	Kochore	0	0	18	0	18
SNNP	K/Tembaro	Anigacha	101	0	0	0	101
SNNP	Kefa	Chena	90	0	0	0	90
SNNP	Kefa	Cheta	11	0	36	8	55
SNNP	Konta T	Konta T	8	0		0	8
SNNP	Sidama	Chire	0	0	8	0	8
SNNP	Sidama	Bensa	0	0	2	4	6
Som	Afder	ElKare	20	6	0	0	26
Som	Degehabur	Gunagado	0	0	5	14	19
Som	Degehabur	Dagahbur T	0	2	2	2	6
Som	Degehabur	Dagahbur R	0	4	0	2	6
Som	Degehabur	Ararso	0	0	5	0	5
Som	Jijiga	Kabribayah	0	0	0	19	19

Region	Zone	Woreda	w9	w10	w11	w12	Total
Som	Jijiga	Babile	0	0	0	15	15
Som	Liben	Hudat	0	0	12	0	12
Som	Shinile	Erar	0	4	6	4	14
Som	Warder	Warder	0		1	6	7
Sub-total			371	80	239	253	943
Total cases per week			439	158	323	339	1259
Percent			85	51	74	75	75

6) Anthrax

In week 12, a total of 14 suspected Anthrax cases with no death reported to the national level from Amhara and Tigray regions. Ferta woreda of South Gonder and Zikwala woreda of Waghimra zone reported majority of the cases.

Table 9: Suspected Anthrax cases reported in Week 12, 2016)

Region	Zone	Woreda	Cases	Deaths
Amhara	South Gonder	Farta	4	0
Amhara	Wag Himra	Zikwala	4	0
Amhara	Wag Himra	Abergele	2	0
Tigray	Central Tigray	Wereilehi	2	0
Amhara	Wag Himra	Sekota	1	0
Tigray	Eastern Tigray	Erop	1	0
Grand Total			14	0

7) Maternal Death

Since maternal death is integrated in PHEM surveillance system a number of deaths were reported to national level both through weekly report and MDRF. This week a total of 14 maternal deaths were reported to national level through routine surveillance (Table 8).

Table 8: Maternal Deaths report by Woreda, Week 12, 2016)

Region	Zone	Woreda	Deaths
Amhara	South Gonder	Ebinat	2
Oromia	East Shewa	Batu	2
Oromia	West Arsi	Gambo Hospital	2
Oromia	West Arsi	Nensebo	2
Afar	Zone 05	Dewe	1
Amhara	East Gojjam	Debre Markos Hospital	1
Oromia	Arsi	Ludehetosa	1
Oromia	West Arsi	Kofele	1
Oromia	West Arsi	Kore	1
Oromia	West Wellega	Lalo Asabi	1
Grand Total			14

8) Suspected AWD Cases:

The Moyale AWD outbreak is further expanding to other woredas. So far, 14 woredas were reported suspected AWD cases in three regions (Oromia, Somali and SNNP regions) (Map 1). Nationally as of 02 April 2016, about 1244 suspected AWD cases with 160 confirmed cases were reported from 14 woredas in three regions (table 9). Suspected cases were linked with laboratory confirmed cases.



Table 9: AWD cases by Woreda, Week 12, 2016)

Region	Zone	Woreda	First case	T.Cases	Confirmed
Oromia	Borena	Muyale	12/6/2015	283	53
Oromia	Borena	Gelana	3/3/2016	51	5
Oromia	Borena	Dehas	3/12/16	14	0
Oromia	Borena	Yaebello	1/22/2016	6	0
Oromia	Borena	Abeya	3/31/2016	2	0
Oromia	Guji	Liben	NA	1	0
Oromia	W/Arsi	Shashemene	4/1/2016	3	0
Somali	Liben	Muyale	12/21/2015	216	84
Somali	Liben	Hudet	2/23/2016	276	14
SNNP	G/Gofa	A/minch T	3/5/2016	288	2
SNNP	G/Gofa	A/minch R	3/5/2016	64	0
SNNP	G/Gofa	Bonke	3/12/2016	3	0
SNNP	G/Gofa	Kucha	3/22/2016	28	0
SNNP	Amaro	Amaro	3/10/2016	9	2
Total				1244	160

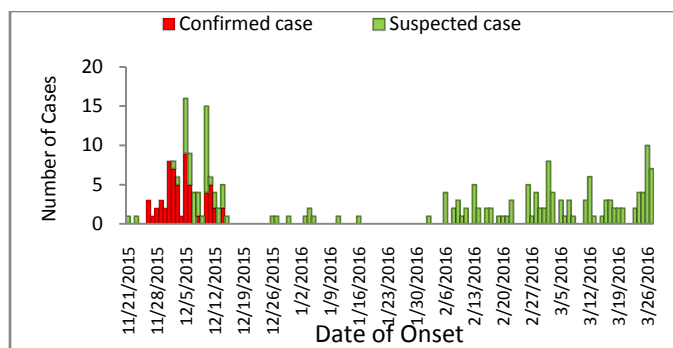


Figure 12.2: AWD Outbreak trend by date of onset, Moyale, Somali, 2016, N=226 (84 positive, 5 on Culture).

Hudet Woreda AWD Outbreak: The index case was reported on March 23, 2016. As of 02 April 2016, a total of 276 suspected cases and 14 confirmed cases were reported. Among them samples collected eight were tested positive at national laboratory. Currently the trend is sharply decreasing and zero report for the last three days (Figure 14).

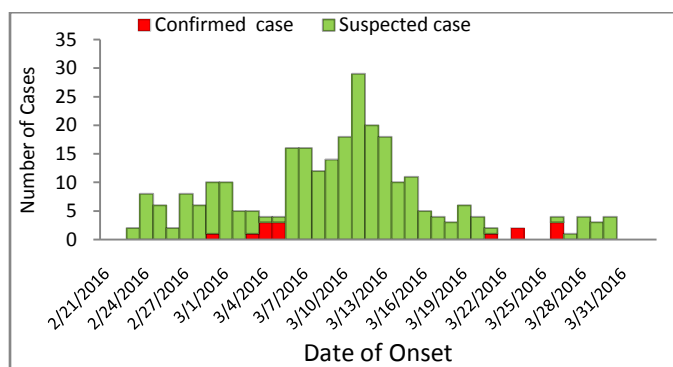
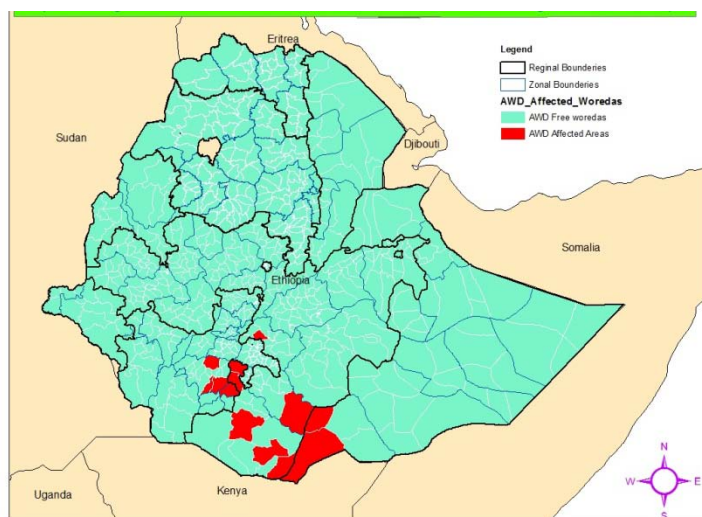


Figure 13: AWD Outbreak trend by date of onset, Hudet, Liben, Somali, 2016, N=276 (14 positive by Culture)



Map 1: AWD Affected Woredas, 02 April 2016

Moyale (Oromia and Somali): The first case was reported on 6 Nov 2015 (Four Months) . Since then a total of 509 suspected cases were reported from the town as of 27 March 2016. Currently the trend is decreasing (Figure 12.1 & 12.2).

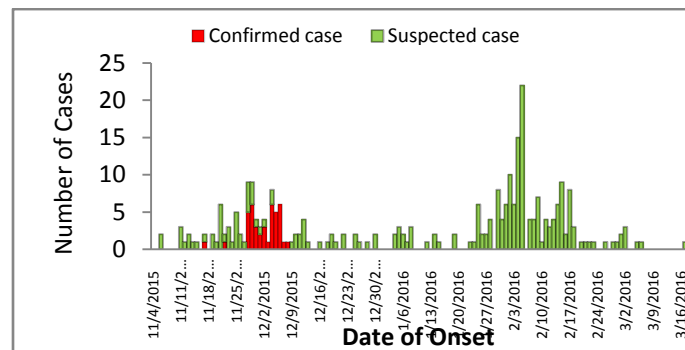


Figure 12.1: AWD Outbreak trend by date of onset, Moyale, Oromia, 2016, N=283 (53 positive, 12 on culture)

Gelana Woreda AWD Outbreak: The index case was travel to Arbamich and returned back with the diseases on March 4, 2016. Three samples collected and tested at Arbaminch sub regional lab and turned positive. As of 02 April 2016, a total of 51 cases were reported. No new case for the last 13 days (Figure 15).

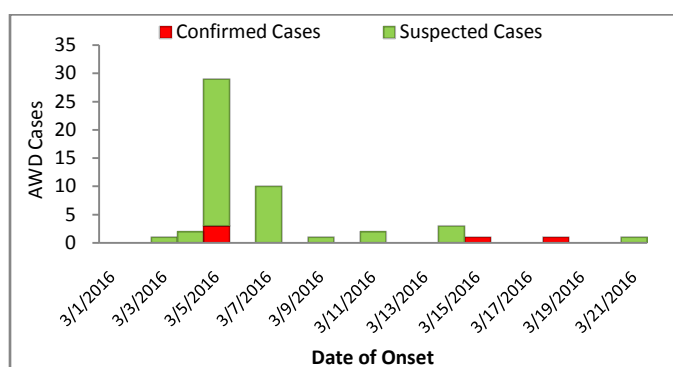


Figure 14: AWD Outbreak trend by date of onset, Gelana, Borena, Oromia, 2016, N=51 (4 were confirmed)

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Gamogofa AWD Outbreak: As of 02 April 2016, a total of 355 cases were reported from Arbamich Town, Arbaminch Zuria and Bonke wredas of the zone. Majority of the cases 288 (81%) were reported from Arbamich town followed by Arbaminch zuria 64 (18) and 3 (1%) were reported from Bonke wereda. Samples collected and tested at regional laboratory and turned positive. Currently the trend is sharply decreasing and (Figure 16).

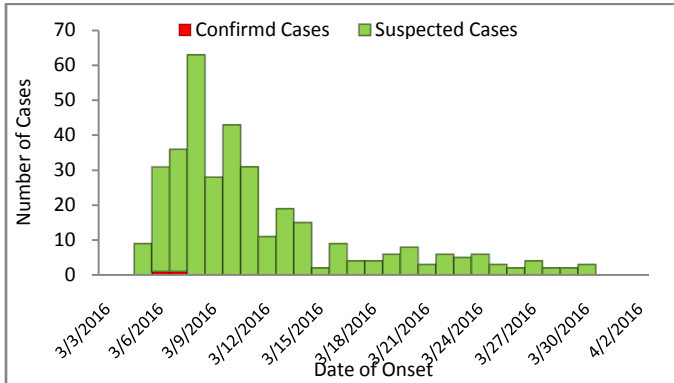


Figure 15: AWD Outbreak trend by date of onset, Arbaminch, Liben, Somali, 2016, N=355 (2 positive by Culture)

Amaro Woreda Suspected AWD Outbreak: There is also suspected AWD Outbreak in Amaro woreda. So far nine suspected cases were reported.

9) Influenza Sentinel Surveillance

In week 12 of 2016, a total of 28 samples were collected from patients with Influnza like illness or SARI at predesignated influenza sentinel sites. Among them 6 were tested positive for Influnza A H1N1 (2009Pandemic) and 2 were positive for seasonal influenza A (H3N2). Starting from week 49 of 2015

the positivity rate of Pandemic Influnza H1N1 is relatively increasing.

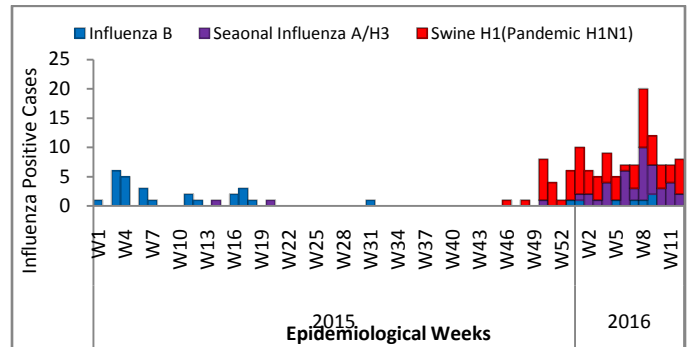


Figure 14: Influnza cases by suptype, Sentinel Surveillance, 2015-2016

IV. Response

Measles: Five different teams (FETP residents) from St. Paul Hospital Millennium Medical college were deployed to Keffa, Horo Guduru and Kelem Wollega to support measles outbreak investigation and response in different woredas.

Suspected AWD:

- a. **Moyale Town:** Different teams from regional health burea, Ethiopian Public Health Institutes and partners have been supporting all AWD affected woredas. Case management, Contact trasing and follow up, infection prevention and control, health education and social mobilization activities, distributing of water treatment chemicals, detail case investigation is undertaking in all affected woredas.