



REPUBLIC OF LIBERIA  
MINISTRY OF HEALTH  
MARGIBI COUNTY HEALTH TEAM  
MARGIBI COUNTY

Date: 23<sup>rd</sup> October 2015

Report Number: Week 31 - 42

Week ending: 18<sup>th</sup> October, 2015

CSO: Leroy S. Maximore

## Expanded Surveillance Report

### Summary

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Margibi County is located in Liberia and bounded on the north by Bong, on the east by Ground Bassa, on the west by Montserrado and on the south by the Atlantic Ocean. Currently has a population of 242,795 with 4 health districts and 42 health facilities. The facilities report to the district and the district in turn reports to the county. All immediately reportable diseases are expected to reach the county level within 24 hours of event. Timeliness and completeness of reporting as well as monitoring trends are key components of surveillance for rapid response and intervention. This report gives an overview of surveillance indicators from epi-week 31 – 42.

A total of 1507 suspected immediately notifiable diseases/events were identified with 127 deaths (.34%) for Epi Week 31--42. Suspected cases of Ebola Virus Disease (EVD) were the highest recorded followed by suspected cases of Acute Watery Diarrhea and Measles as indicated below;

- Ebola Virus Disease (EVD) [Suspected 1073 (Dead = 121, Alive = 952)]
- Acute Watery Diarrhea (AWD) [Suspected 364 (Dead = 0, Alive = 364)]
- Measles [Suspected 66 (Dead = 5, Alive = 61)]
- Rabies (Dog Bite) [Suspected 1 (Dead = 0, Alive = 1)]
- Bloody Diarrhea [Suspected 2 (Dead = 0, Alive = 2)]
- Maternal Death [case 1]

There was no confirmed case of EVD/ VHF during this period.

On an average, timeliness of reporting from all 4 health districts was 67% with 100% completeness of reporting.

Activities carried out during the period under review were;

- Suspected measles outbreak investigation in all four districts
- Roll out of IDSR training in health facilities in the county
- Case investigation of Maternal death
- Follow up on suspected cases of Rabies in Gibi and Mamba Kabah
- Performance feedback to districts and health facilities
- Surveillance review meeting with district health teams, Traditional and spiritual healers

## Reporting Quality

Completeness of reporting indicates whether facilities have reported on the data they are supposed to report on, while timeliness indicates whether these reports were delivered on time. Timeliness is calculated based on whether the reports have been completed within a set number of days after the end of the reporting period.

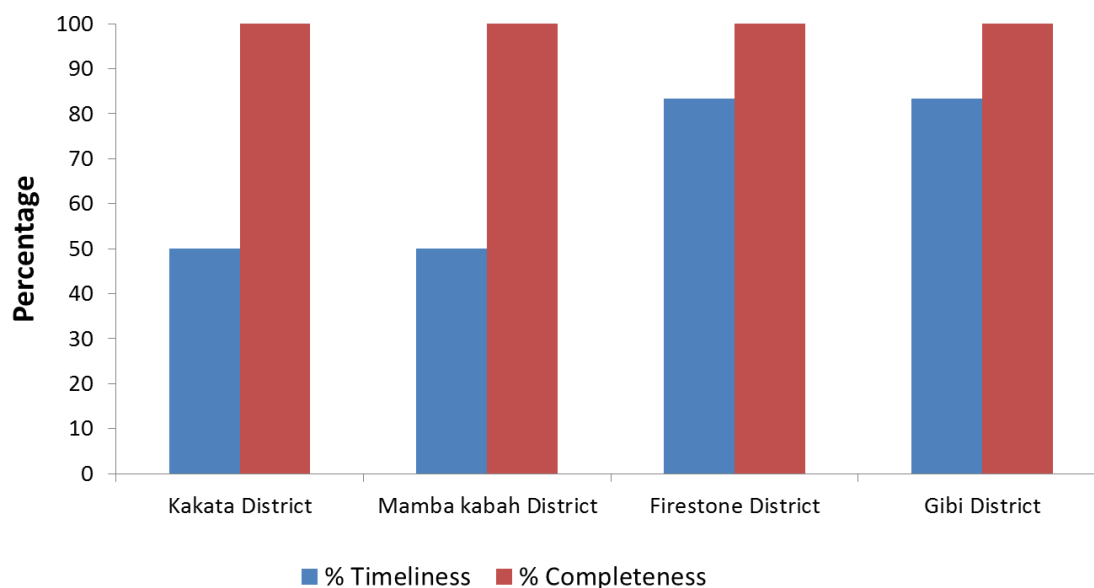
Figure 1: Timeliness and completeness of reporting by district, Margibi County, 2015

District	Wk31	Wk32	Wk33	Wk34	Wk35	Wk36	Wk37	Wk38	Wk39	Wk40	Wk41	Wk42	% Timeliness for Epi wk 31--42
Kakata	L	L	T	L	T	T	L	L	L	T	T	T	50%
Mamba Kabah	T	L	T	L	L	L	T	T	L	T	T	L	50%
Firestone	T	L	T	T	T	L	T	T	T	T	T	T	83.3%
Gibi	T	T	T	T	T	T	T	T	T	L	L	T	83.3%
<b>MEANS</b>													<b>66.5%</b>

### Legend

This week	On time T	Late L	No report received NR	% Cumulative	>=80% on time/Complete	>=50-79.9% on time/Complete	<50% on time/Complete
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**Figure 2: Timeliness and completeness of reporting by district, Margibi County, 2015**



## Disease Reports

**Figure 3: Summary of suspected key notifiable diseases by districts, Margibi County, 2015**

Disease	Kakata			Mamba Kabah			Firestone			Gibi District			Cumulative (Wk 31–42)		
	C	D	CFR	C	D	CFR	C	D	CFR	C	D	CFR	C	D	CFR
Acute Watery Diarrhea	135	0	0%	26	0	0%	15	0	0%	188	0	0%	364	0	0%
Acute Bloody Diarrhea (Shigella)	1	0	0%	0	0	0%	0	0	0%	1	0	0%	2	0	0%
AFP Susp	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%
Meningitis	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%
Suspected EVD	719	56	7.78%	214	34	15.8%	12	19	0%	78	12	15.3%	1073	121	11.2%
Susp Rabies (Dog Bite)	0	0	0%	1	0	0%	0	0	0%	0	0	0%	1	0	0%
Yellow Fever	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%
Lassa Fever	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%
Cholera	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%
Measles	17	0	0%	44	5	11.4%	0	0	0%	0	0	0%	66	5	7.6%
Maternal Death	1			0			0			0			1		
Neonatal Death	0			0			0			0			0		

C = Cases; D = Deaths; CFR = Case Fatality Rate

**Comment: for Epi Week 31--42**

The zero reporting requirements were met by all four reporting districts. Classifications of cases identified are as indicated below;

➤ *Classification of cases:*

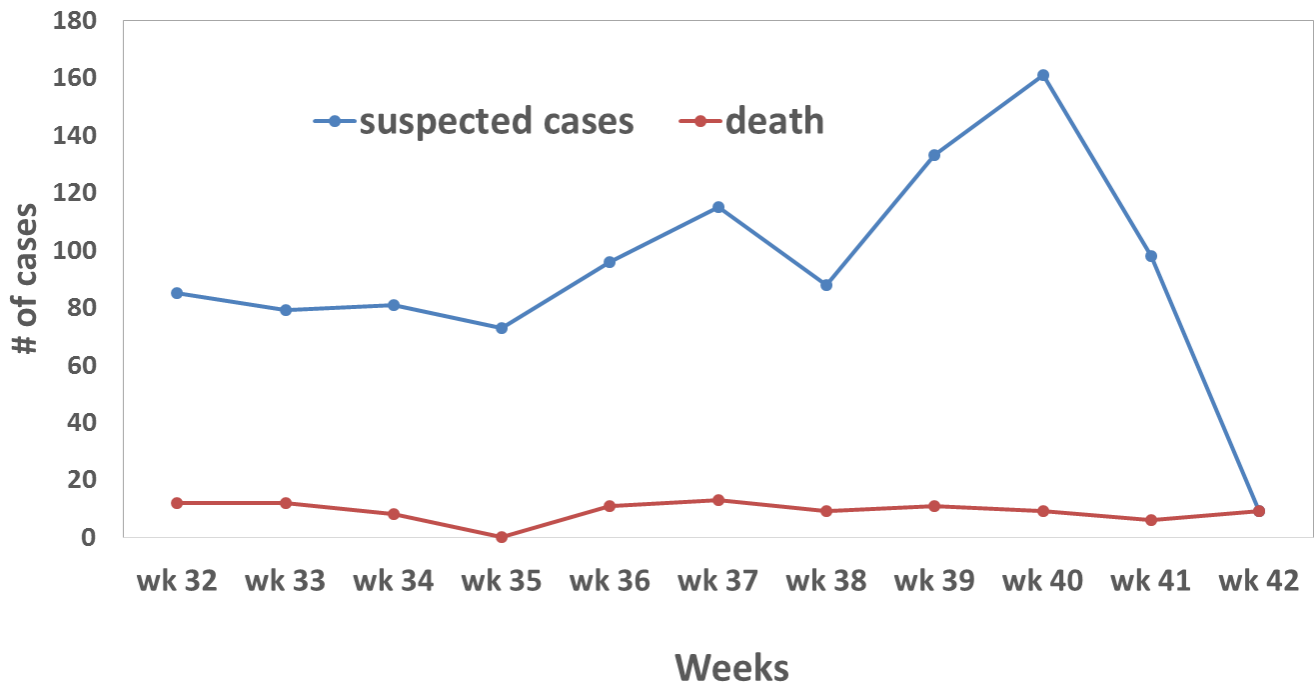
- Measles 66(S), 5(D),3(C)
- EVD 1073 (S), 0(D),0(C)
- RAB (Dog Bite) 1 (S), 0(D),0(C)
- AWD 364(S),0(D),0(C)
- BD 2(S), 0(D),0(C)
- MD 1(D)

Two outbreaks were logged and investigated in county ( from Kakata and Mamba kabah District).

- Lab results for suspected measles cases are pending
- All samples of suspected EVD tested came out negative and reclassified as non-cases.

\*S = Suspected Case; C = Confirmed case; D=Death

**Figure 4: Trend of suspected EVD, Margibi County, Epi week 31-42, 2015**



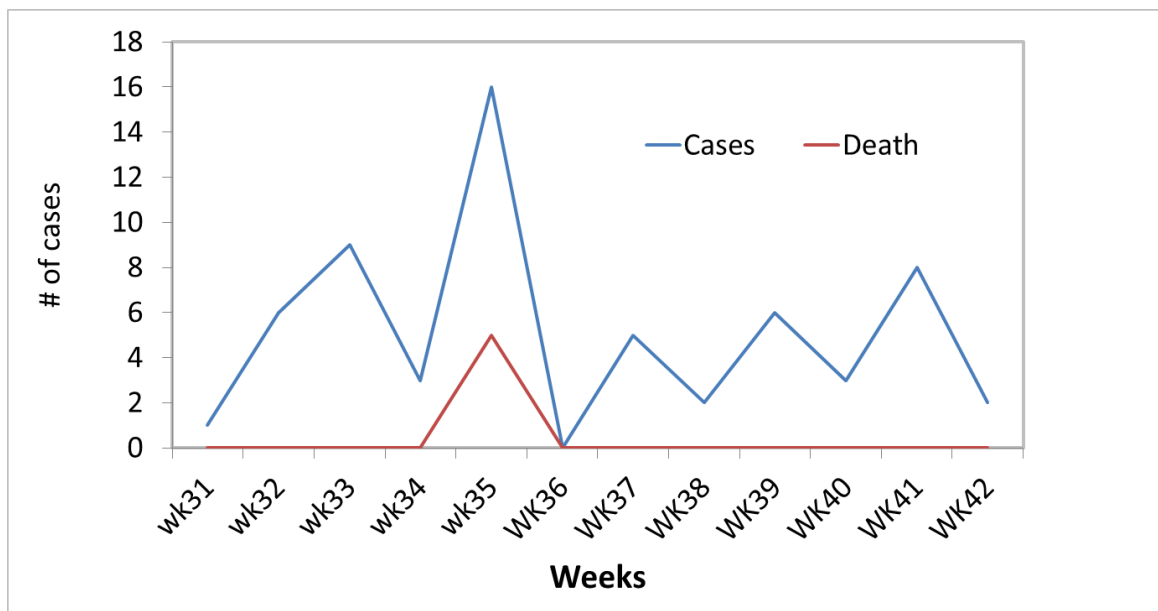
**Comment:**

- From epi week 31 to 42 (July 13 to August 23, 2015) there has been no new associated EVD deaths.
- All suspected cases were tested negative and reclassified as non-case

**Public health action:**

Active case search, Blood samples collection and case investigation of all suspected EVD related cases are ongoing throughout the county. We are also ensuring swap collection from all dead bodies at funeral homes, Health facilities and at community levels. Also ensuring safe and dignified burial in all communities in Margibi. Gate screening continues at all points of entry.

**Figure 5: Trend of suspected measles, Margibi County, Epi week 31-42, 2015**



**Comment:**

- In epi week 35(August 23-30, 2015), there were sixteen new measles cases with five associated death, six samples were collected, three of the six were confirmed, All of those cases were reported from Mamba kabah district,( Konewein town, Zoqueine Town and Dwahzon Town).
- There was no case reported in epi week 36.In epi week 37 there were five new cases reported, two were from Kakata district, one from mamba kabah, one from firestone and one from Gibi district.
- In epi week 39 there were six cases reported, all from Mamba kabah.
- In epi week 40 there were three cases of measles were reported, all of those came from Kakata district.
- In epi week 41 there were eight cases from Kakata district at Larkay Ta Health Center precisely kollieken town which I was able to investigate and report based on the training from the FETP.

**Public health action:**

- The County Health Team isolated and managed all affected measles cases based on WHO Guidelines. All critically ill children were referred to the nearby health facilities.
- County Health Team Involved Community members in the social Mobilization involving Superintendent, commissioner and traditional Leaders.
- Mini Immunization campaign conducted in Mamba kabah District;
  - From 6-11 months 143 children vaccinated,
  - From 12-59 months 1125 children vaccinated.
- The total of 1,268 children was vaccinated for measles in the mamba kabah district during campaign.
- Regular supportive supervision and meetings with general Communities Health Volunteers (gCHVs) and communities dwelling.

**Challenges**

- Several activities at the same time in county
- Poor or limited network coverage causing delay in reporting from health facilities
- Bad road network

## Measles outbreak investigation, Kollieken Town, Margibi County, October, 2015

<b>Date:</b> October 18, 2015	
<b>From:</b> Leroy S. Maximore, CSO--Margibi	<b>To:</b> MoH, FETP-Liberia, CHO, CHDD
<b>Location:</b> Kollieken Town, Margibi County	<b>Subject:</b> Measles outbreak Investigation

**Introduction:** Measles is a very contagious disease that can spread through contact with infected mucus and saliva. Although it's vaccine preventable, about 352 cases with a case fatality rate of 2% were reported in Margibi County in the first 9 months of 2015. In the week of 5th October, 2015, Margibi County recorded 8 suspected cases of measles from Katakata district which was in excess of the alert threshold of measles cases per week in the county.

The initial report from the District Surveillance Officer (DSO) indicated that, the general Community Health Volunteer (gCHV) for Kollieken Town reported a suspected outbreak of measles to the Larkay – Ta health facility in Katakata Health District on the 7<sup>th</sup> October, 2015. Upon receiving the information from the health facility, the DSO informed the County Surveillance Officer (CSO) for prompt action. On the 8<sup>th</sup> October, 2015, a team of investigators were dispatched from the county to support the district to conduct further investigation into the outbreak with the objectives of verifying the outbreak, determining the source of the outbreak, implement control and preventive measures.

**Methods:** The team reviewed the medical records at the facility, patient folders and charts. We interviewed the Health care workers in Larkay – Ta clinic, visited the affected village, met with the chief of the town, visited affected household and interviewed parents and guardians of the affected children. We conducted an active case search in the community and assessed the vaccination status of the cases. Suspected cases were captured into a line list.

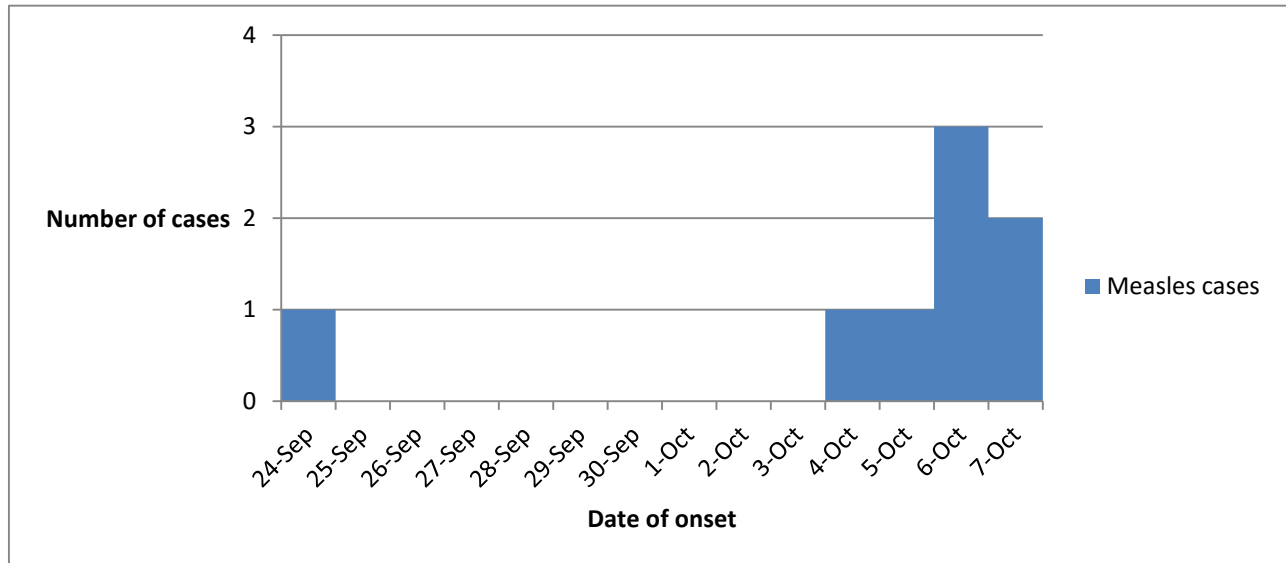
Clinical samples were collected from 5 of the suspected cases for laboratory confirmation. A case was defined as a resident of Kollieken Town with generalized rash and fever plus one of the following cough, coryza (running nose) or conjunctivitis (red eyes) or any resident suspected of having measles by the clinician between the periods of 3<sup>rd</sup> September, 2015 to 28<sup>th</sup> October, 2015. Data was analyzed using Microsoft excel version 2010.

**Results:** The index case was a 16 years old male who travelled to Monderrado County to spend time with some family members from the 4<sup>th</sup> – 18<sup>th</sup> September, 2015. On the 24<sup>th</sup> September, 2015, he came down with skin rashes, red eyes, fever and running nose. The patient was sent to Larkay-ta clinic on the 4<sup>th</sup> October 2015 where the clinician diagnosed him of Measles.

A total of 7 additional cases were identified with an age range of 5 – 18 years (median age of 9 years). Females accounted for 63% (5/8) of the total number of cases. The attack rate was 1 per

1000 cases with no deaths. One out of the 8 cases was vaccinated. All the cases were above the recommended age for vaccination in Liberia which is 0 – 5 years. Laboratory results for 5 samples collected are still pending.

### Epidemic curve: Suspected Measles outbreak, Kolliekin Town, from September – October, 2015



The additional cases identified were friends of index case who were in the same school and did a lot of activities such as playing, bathing and eating together. Figure 1: Suspected cases of Measles by date of onset in Kollielin Town, from September – October, 2015.

- The index case presented with signs and symptoms on September 24, 2015.
- The rest of the cases started presenting with signs and symptoms from 4<sup>th</sup> to 7<sup>th</sup> of October, 2015.

**Discussion:** From our investigation, we concluded that an outbreak of measles occurred in Kollieken town. Likely source of infection was contact with the index case taking into consideration that their date of onset was around the same time period. Seven out of 8 cases were not vaccinated. Which might have contributed to the spread of the disease. All cases were treated with vitamin A, antibiotics, calamine lotion and tetracycline eye ointment. Affected homes were supplied with rice and beans to keep them in isolation for treatment of cases.

We educated the community on measles symptoms and advised them to immediately isolate and inform their assigned gCHVs of anyone that they suspect of having measles. Parents and guardians were advised on the importance of measles immunization and encouraged to vaccinate their children under five against measles.



## Appendix 1:



Picture 1 – The investigation team interviewing family of suspected cases and collect sample

## Appendix 2:

Line list of suspected cases

SN	Village/Town	Sex	Age	Date seen	Date of onset	vaccine status	out come	County	DISTRICT	TEST RESULT
001	Kollieken Town	F	8yrs	8-Oct-15	6-Oct-15	Unknown	Alive	Margibi	Kakata	No sample collected
002	Kollieken Town	F	5yrs	8-Oct-15	7-Oct-15	Unknown	Alive	Margibi	Kakata	No sample collected
003	Kollieken Town	M	18yrs	8-Oct-15	5-Oct-15	Unknown	Alive	Margibi	Kakata	Pending
004	Kollieken Town	F	7yrs	7-Oct-15	4-Oct-15	Unknown	Alive	Margibi	Kakata	No sample collected

005	Kollieken Town	F	10yrs	8-Oct-16	6-Oct-16	Unknown	Alive	Margibi	Kakata	Pending
006	Kollieken Town	M	16yrs	4-Oct-15	24-Sep-15	Unknown	Alive	Margibi	Kakata	Pending
007	Kollieken Town	F	7yrs	8-Oct-15	6-Oct-15	Unknown	Alive	Margibi	Kakata	Pending
008	Kollieken Town	M	11yrs	8-Oct-15	7-Oct-15	Unknown	Alive	Margibi	Kakata	Pending