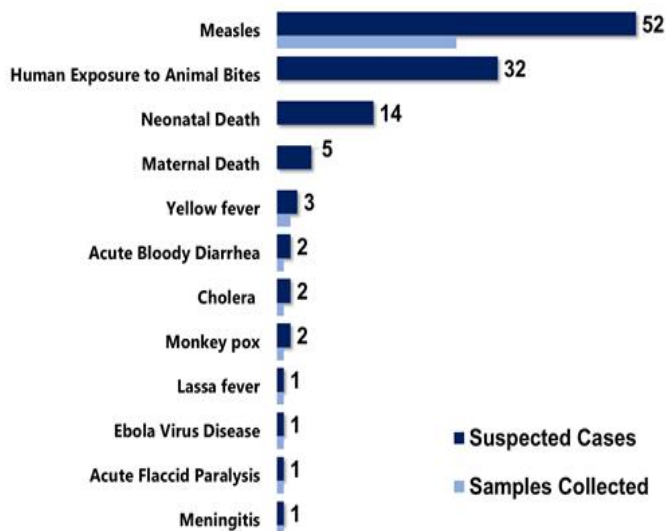


Country Population: 4,433,398 Volume 11, Issue 7, February 11 – 17, 2019 Data Source: CSOs from 15 Counties and Lab

## Highlights

Figure 1. Public Health Events Reported in Epi week 7



## Keynotes and Events of Public Health Significance

- A total of 116 events of public health importance including 19 deaths were reported
- Completeness and timeliness of health facility reports were both 99%
- Ongoing Measles outbreaks in five counties

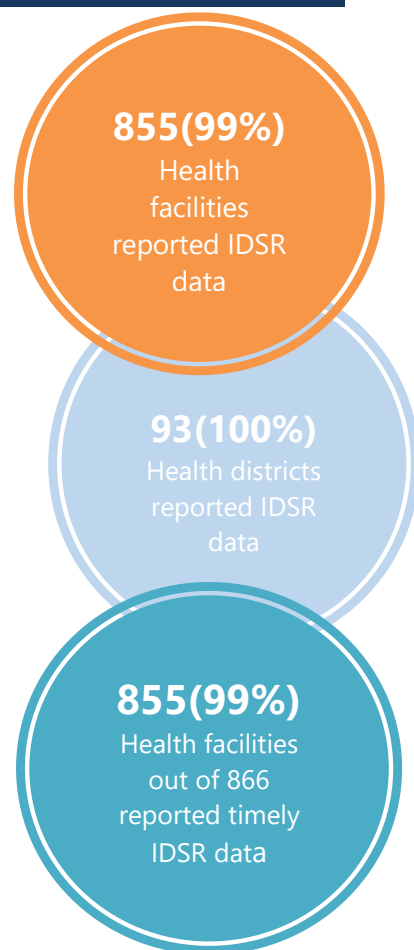
## Reporting Coverage

Table 1. Health Facility Weekly IDSR Reporting Coverage, Liberia, Epi week 7, 2019

County	Number of Expected Report from Health Facility	Number of Reports Received	Number Received on Time	Completeness (%)	Timeliness (%)
Bomi	26	26	26	100	100
Bong	57	57	57	100	100
Gbarpolu	16	16	16	100	100
Grand Bassa	34	34	34	100	100
Grand Cape Mount	34	34	34	100	100
Grand Gedeh	24	24	24	100	100
Grand Kru	19	19	19	100	100
Lofa	59	59	59	100	100
Margibi	59	50	49	85	83
Maryland	26	26	26	100	100
Montserrado	351	349	349	99	99
Nimba	84	84	84	100	100
Rivercess	20	20	20	100	100
River Gee	20	20	20	100	100
Sinoe	37	37	37	100	100
<b>Liberia</b>	<b>866</b>	<b>855</b>	<b>854</b>	<b>99</b>	<b>99</b>

Legend: ≥80 <80

- The national target for weekly IDSR reporting is 80%
- All counties submitted weekly IDSR report on time to national level except Nimba County



## Vaccine Preventable Diseases

### Measles

- Fifty-two (52) suspected cases were reported from Gbarpolu (9), Grand Bassa (8), Montserrado (8), Grand Kru (6), Bomi (3), Rivercess (3), Grand Gedeh (3), Sinoe (3), Nimba (3), River Gee (3), Lofa (2) and Margibi (1)
- Twenty-three (23) specimens were collected and tested by the National Public Health Reference Laboratory
  - Two lab-confirmed (positive): Montserrado and Grand Bassa Counties; Twenty-one (21) negative
- Tchien District in Grand Gedeh, Bokomu in Gbarpolu, Commonwealth District, Montserrado, Trehn District, Grand Kru and Jorquelleh District, Bong Counties are currently in outbreak phase
- Vaccination status:
  - Among suspected cases: 21 (40%) vaccinated, 16 (31%) not vaccinated and 15 (29%) unknown
  - Among confirmed cases: 2 (100%) not vaccinated
- Age distribution
  - Among suspected cases: <1 year: 6 (12%), 1 – 4 years: 10 (19%) and ≥5 years: 36 (69%)
  - Among confirmed cases: ≥5 years: 2 (100%)
- Cumulatively, since Epi-week one, 304 suspected cases have been reported. Of these, 177 have been tested by the laboratory and results showed 41 positive, 132 tested negative and 4 indeterminate
- Epi-classification is as follows: 168 (55.3%) confirmed cases (lab confirmed 41, clinically confirmed 73, epi-linked 54), 4 (1.3%) indeterminate and 132 (43.4%) Negative. *See table 2*
- Of the 132 specimen tested negative for Measles, 122 tested specimens were tested for Rubella; 56 tested positive, 56 negative and 10 indeterminate for Rubella

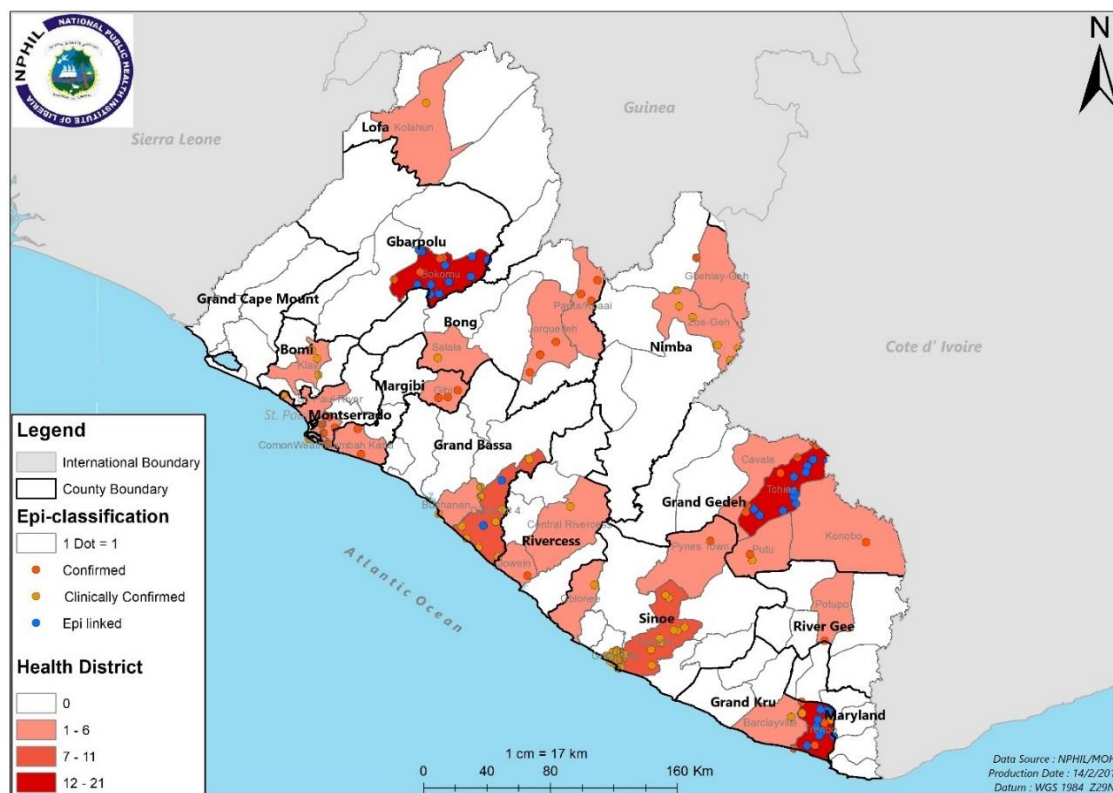
### Public Health Action

- Active case search, health education, and community engagement are ongoing in districts that reported

**Table 2. Cumulative Measles Cases Reported by County and Epi-classification, Liberia, Epi-week 1 - 7, 2019**

Reporting County	Epi-classification					Total	Annualized Non-Measles Febrile Rash Illness Rate
	Lab confirmed	Epi-linked	Clinically confirmed	Indeterminate (Equivocal)	Discarded (Negative)		
Bomi	0	0	3	0	3	6	21.1
Bong	6	0	1	1	11	19	18.7
Gbarpolu	4	21	0	0	0	25	0.0
Grand Bassa	2	2	12	0	11	27	29.3
Grand Cape Mount	0	0	0	0	4	4	18.6
Grand Gedeh	8	14	2	0	10	34	47.2
Grand Kru	5	17	3	0	7	32	71.4
Lofa	0	0	3	1	1	5	2.1
Margibi	5	0	0	1	7	13	19.7
Maryland	0	0	0	0	0	0	0.0
Montserrado	7	0	2	1	39	49	19.9
Nimba	1	0	9	0	12	22	15.4
River Gee	1	0	1	0	14	16	123.9
Rivercess	1	0	1	0	10	12	82.7
Sinoe	1	0	36	0	3	40	17.3
<b>Liberia</b>	<b>41</b>	<b>54</b>	<b>73</b>	<b>4</b>	<b>132</b>	<b>304</b>	<b>22.1</b>
Target Achieved	>=2		Below Target	<2			

Figure 2. Confirmed Measles Cases Reported by Health District, Liberia, Epi-week 1 - 7, 2019



### Acute Flaccid Paralysis (Suspected Polio)

- One case reported from Montserrado County
- Specimen was collected, pending shipment
- Three specimens were tested negative
- Cumulatively, since Epi week one, 7 cases have been reported, 3 pending laboratory confirmation

Table 3. Non-polio AFP rate per 100,000 population less than 15 years, Liberia, Epi-week 1 - 7, 2019

County	< 15 years pop	# of AFP Cases Reported	# of Cases with Lab Result	Non-Polio AFP Rate	# of cases <14 days specimen collected	% of stool <14days	# of NPENTs	% of NPENT
Bomi	47576	0	0	0.0	0	0%	0	0%
Bong	196480	0	0	0.0	0	0%	0	0%
Gbarpolu	47163	0	0	0.0	0	0%	0	0%
Grand Bassa	125386	1	0	5.9	1	100%	0	0%
Grand Cape Mount	71872	1	1	10.3	1	100%	0	0%
Grand Gedeh	70844	0	0	0.0	0	0%	0	0%
Grand Kru	32755	0	0	0.0	0	0%	0	0%
Lofa	156050	0	0	0.0	0	0%	0	0%
Margibi	118729	1	1	6.3	1	100%	0	0%
Maryland	76884	0	0	0.0	0	0%	0	0%
Montserrado	653849	2	0	2.3	2	100%	0	0%
Nimba	261314	1	1	2.8	1	100%	0	0%
Rivercess	40444	0	0	0.0	0	0%	0	0%
River Gee	37775	0	0	0.0	0	0%	0	0%
Sinoe	57910	1	1	12.8	1	100%	0	0%
<b>Liberia</b>	<b>1995031</b>	<b>7</b>	<b>4</b>	<b>2.6</b>	<b>7</b>	<b>100%</b>	<b>0</b>	<b>0%</b>
<b>Non-Polio AFP Rate</b>	<b>&lt;2</b>			<b>&lt;80%</b>	<b>Non-Polio Enterovirus</b>	<b>&lt;10%</b>		<b>Silent</b>
	<b>≥ 2</b>			<b>≥80%</b>		<b>≥10%</b>		



# Liberia IDSR Epidemiology Bulletin

2019 Epi Week 7 (Feb 11 – 17, 2019)



## Neonatal Tetanus

- Zero cases reported
- Cumulatively, since Epi-week one, 1 clinically diagnosed case has been reported

## Viral Hemorrhagic Diseases

### Ebola Virus Disease (EVD)

- One alert reported from Gbarpolu County
  - Specimen was collected and tested negative
- Cumulatively, since Epi-week one, 7 EVD alerts have been reported and tested negative

### Lassa fever

- Zero suspected cases reported
- Cumulatively, since Epi week one, 18 suspected cases have been reported
  - Of these, eight have been tested by the laboratory. Epi-classification is as follows: 2 lab-confirmed, 6 not a case and 10 pending laboratory confirmation

### Yellow fever

- Three (3) suspected cases were reported from Rivercess, River Gee and Grand Cape Mount Counties
  - Specimens were collected and tested negative including one specimen from Epi week 6
- Cumulatively, since Epi-week one, 14 suspected cases have been reported; all tested negative

### Monkeypox

- Two (2) cases were reported from Lofa County
  - Specimen collected for one
- Incomplete<sup>1</sup> (only blood) specimen were collected
- Cumulatively, since Epi-week one, 9 suspected cases have been reported, shipment pending sample completion

### Meningitis

- One (1) suspected case was reported from Maryland County
- Specimen was collected and tested negative
- Cumulatively, since Epi-week one, 8 suspected cases have been reported, 7 tested negative and 1 pending laboratory confirmation

## Events of Public Health Importance

### Maternal Mortality

- Five (5) deaths were reported from Montserrado, Maryland, Margibi, Nimba, and Grand Gedeh Counties
- Reported causes of deaths were:
  - Postpartum hemorrhage (3), Anemia (1) and Ruptured uterus (1)
- All deaths were reported to have occurred in health facilities
- Cumulatively, since Epi-week one, 31 maternal deaths have been reported (*See Table 4*)

<sup>1</sup>Incomplete: At least one of these requirements (blood, swab, crust, photo, case-based form, and CDC form) missing.

**Table 4. Annualized and Cumulative Maternal Deaths Reported by Counties, Liberia, Epi-week 1 - 7, 2019**

County	Estimated Annual Live birth (4.3%)	Current week	Cumulative	% of Cumulative Maternal deaths	Annualized Maternal Mortality Ratio/100,000
Grand Gedeh	6770	1	3	10	461
Maryland	7347	1	3	10	425
Margibi	11345	1	3	10	275
Rivercess	3865	0	1	3	269
Grand Bassa	11981	0	3	10	260
Gbarpolu	4507	0	1	3	231
Nimba	24970	1	4	13	167
Bong	18775	0	3	10	166
Montserrado	62479	1	9	29	150
Lofa	14911	0	1	3	70
Bomi	4546	0	0	0	0
Grand Cape Mount	6868	0	0	0	0
Grand Kru	3130	0	0	0	0
River Gee	3610	0	0	0	0
Sinoe	5534	0	0	0	0
<b>Liberia (National)</b>	<b>190636</b>	<b>5</b>	<b>31</b>	<b>100</b>	<b>131</b>

## Neonatal Mortality

- Fourteen (14) deaths were reported from Montserrado (4), Bong (3), Lofa (3), Margibi (2), Grand Gedeh (1) and Maryland (1) Counties
- Reported causes of deaths: Asphyxia (9), Sepsis (4), Multiple congenital abnormalities (Pending investigation)
- All deaths were reported to have occurred in health facilities
- Cumulatively, since Epi-week one, 72 neonatal deaths have been reported (*See Table 5*)

**Table 5. Annualized and Cumulative Neonatal Deaths Reported by Counties, Liberia, Epi-week 1 - 7, 2019**

County	Estimated Annual Live birth (4.3%)	Current Week	Cumulative	% of Cumulative Neonatal deaths	Annualized Neonatal Mortality Rate/1000
Grand Kru	3130	0	4	5.6	9.5
Maryland	7347	1	5	6.9	5.1
Lofa	14911	3	9	12.5	4.5
River Gee	3610	0	2	2.8	4.1
Margibi	11345	2	6	8.3	3.9
Montserrado	62479	4	32	44.4	3.8
Grand Gedeh	6770	1	3	4.2	3.3
Bong	18775	3	8	11.1	3.2
Bomi	4546	0	1	1.4	1.6
Grand Bassa	11981	0	2	2.8	1.2
Gbarpolu	4507	0	0	0.0	0.0
Grand Cape Mount	6868	0	0	0.0	0.0
Nimba	24970	0	0	0.0	0.0
Rivercess	3865	0	0	0.0	0.0
Sinoe	5534	0	0	0.0	0.0
<b>Liberia (National)</b>	<b>190636</b>	<b>14</b>	<b>72</b>	<b>100</b>	<b>2.9</b>

## Other Reportable Diseases

### Animal Bites (Human Exposure to Rabies)

- Thirty-two (32) cases were reported from Nimba (9), Margibi (6), Grand Bassa (3), Lofa (3), Maryland (3), Grand Gedeh (2), Grand Kru (2), Rivercess (1), Bong(1), Gbarpolu (1), and River Gee (1) Counties
- Cumulatively, since Epi-week one, 227 suspected cases of animal bites have been reported in human

### Acute Bloody Diarrhea (Suspected Shigellosis)

- Two (2) suspected cases were reported from Grand Gedeh and River Gee Counties
- Specimens were collected pending arrival at the National Public Health Reference Laboratory (NPHRL)
- Cumulatively, since Epi-week one, 27 acute bloody diarrhea cases have been reported with 19 stool specimens collected; 15 reached NPHRL. Of these, 2 tested positive and 13 negative. Four specimens pending arrival at NPHRL and 8 specimens not collected

### Severe Acute Watery Diarrhea (Cholera)

- Two suspected cases were reported from Bomi and Rivercess Counties
- One specimen collected from Bomi County pending arrival at NPHRL
- Cumulatively, since Epi-week one, 15 suspected cases have been reported with 13 specimens collected. Of these, 11 reached NPHRL and all tested negative. Two specimens pending arrival at NPHRL while 2 not collected

### Unexplained Cluster of Health Events

- Zero cases reported
- Cumulatively, since Epi-week one, one case of unexplained death has been reported.

## Points of Entry

- Zero IDSR alert detected and verified
- A total of 4555 travelers were recorded for the week (See Table 6)

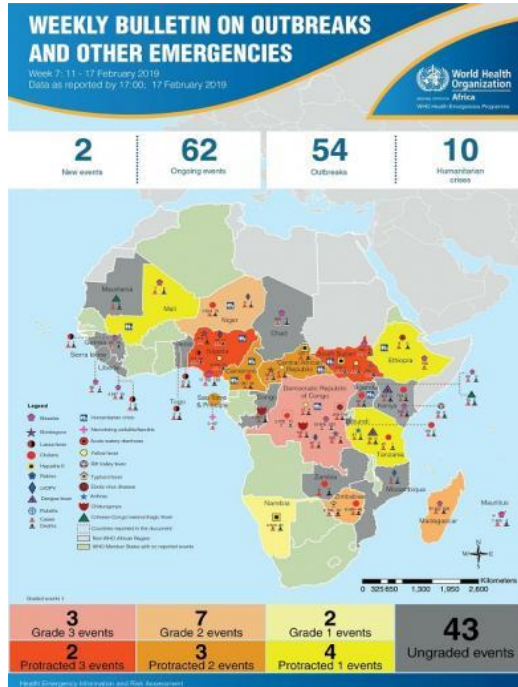
**Table 6. Total Travelers, IDSR Alerts Detected and Verified at Points of Entry, Liberia, Epi-week 7, 2019**

Type of Ports	Point of Entry	Weekly total	Arrival	Departure	Yellow Book Issued	Yellow Book Damage/Card Replaced	Travelers Vaccinated	IDSR Alerts	Alerts Verified
Airport	James S. Paynes	72	44	28	0	0	0	0	0
	Robert International Airport	3165	1548	1617	0	0	0	0	0
Seaport	Freeport of Monrovia	132	66	66	0	0	0	0	0
	Buchanan Port	0	0	0	0	0	0	0	0
Ground Crossing	Bo Water Side	477	139	338	50	33	17	0	0
	Ganta	259	117	142	29	0	29	0	0
	Yekepa	86	45	41	0	0	0	0	0
	Loguatu	202	77	125	6	6	0	0	0
	Nursing Division	162	118	44	162	77	85	0	0
<b>Total Traveler for the Week</b>		<b>4555</b>	<b>2154</b>	<b>2401</b>	<b>247</b>	<b>116</b>	<b>131</b>	<b>0</b>	<b>0</b>

**Note: Yellow book issue for both arrival and departure; Vaccination coverage for both arrival and departure**

## AFRO Public Health Events

The National Public Health Institute of Liberia continues to monitor acute public health emergencies and outbreaks occurring in the African Region in order to ensure preparedness and preventive measures are implemented



During this week, 64 events are being monitored through WHO Health Emergencies Program in the African Region. Key events highlighted during the week include the following:

- Chikungunya in the Republic of Congo
- Cholera in Uganda
- Ebola virus disease in the Democratic Republic of the Congo
- Cholera in the Democratic Republic of the Congo

Source: WHO Week 7 Bulletin on Outbreaks and Other Emergencies

## Outbreaks

### Bokomu District, Gbarpolu County: Measles

- Reported 9 new suspected cases
- A total of 55 suspected cases have been reported from Epi week 4-7
- Vaccination coverage for two years for Bokomu District were: 2017 -50% and 2018-48.7%
- Active case search and daily follow up continues

### Commonwealth District, Montserrado County: Measles

- Reported 8 new suspected cases
- All reported cases were treated symptomatically
- As of January 31, 2019 a total of 21 suspected cases have been reported
- 10 contacts line lasted are being follow up by District Health Team
- Outreach team is conducting outreach in affected and surrounding communities
- Active case search and health education ongoing

### Trehn District, Grand Kru County: Measles

- Reported 6 new suspected cases
- A total of 20 suspected cases have been reported from epi week 4 – 7
- Suspected cases were treated and doing well
- Vitamin A stock out in county
- Active case search and daily follow up continues
- Community engagement is ongoing

### Jorquelleh District, Bong County: Measles

- No new suspected cases reported
- One-week outreach ongoing in the four affected and surrounding communities, targeting 6-59 months
- Vaccinated 41 children < 5 years
- Active case search and health education ongoing
- County Health Team continues to respond to the outbreak



# Liberia IDSR Epidemiology Bulletin

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## Public Health Measures

### National level

- Providing technical remote support to Counties
  - Heighten surveillance in affected and surrounding communities

### County level

- Case management for all reported cases ongoing
- Active case search ongoing in affected communities for Measles and Lassa fever

## Notes

- *Completeness* refers to the proportion of expected weekly IDSR reports received (target:  $\geq 80\%$ )
- *Timeliness* refers to the proportion of expected weekly IDSR reports received by the next level on time (target:  $\geq 80\%$ ). Time requirement for weekly IDSR reports:
  - Health facility - required on or before 5:00pm every Saturday to the district level
  - Health district - required on or before 5: 00 pm every Sunday to the county level
  - County - required on or before 5: 00 pm every Monday to the national level
- *Non-polio AFP rate* is the proportion of non-polio AFP cases per 100,000 among the estimated population under 15 years of age in 2017 (annual target:  $\geq 2/100,000$ )
- *Non-measles febrile rash illness rate* refers to the proportion of Negative measles cases per 100,000 population
- *Annualized maternal mortality rate* refers to the maternal mortality rate of a given period less than one year and it is the number of maternal deaths per 100,000 live births
- *Annualized neonatal mortality rate* refers to the neonatal mortality ratio of a given period less than one year and it is the number of maternal deaths per 1,000 live births
- *Epi-linked* refers to any suspected case that has not had a specimen taken for serologic confirmation but is linked to a laboratory confirmed case
- *Confirmed case* refers to a case whose specimen has tested positive or reactive upon laboratory testing, or has been classified as confirmed by either epidemiologic linkage with a confirmed case, or clinical compatibility with the disease or condition
- *Case Fatality Rate (CFR)* is the proportion of deaths among confirmed cases





## **National Public Health Institute of Liberia (NPHIL)**

### **OUR MISSION**

To prevent and control public health threats by promoting healthy outcomes and serving as a source of knowledge and expertise.

### **GOALS**

Contribute to the development and sustainability of the public health workforce

Develop, enhance, and expand the surveillance and response platform

Develop and strengthen the laboratory system and public health diagnostics

Develop, enhance, and expand process and structures to protect environmental and occupation health

Expand, conduct, and coordinate public health and medical research to inform Liberian public health policies

Ensure sustainable financing and operations of the NPHIL

Epidemiological bulletin published with support of WHO and CDC

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