



Morbidity Week 26: January 1 – July 1, 2017

Epidemiology Bureau  
Public Health Surveillance Division

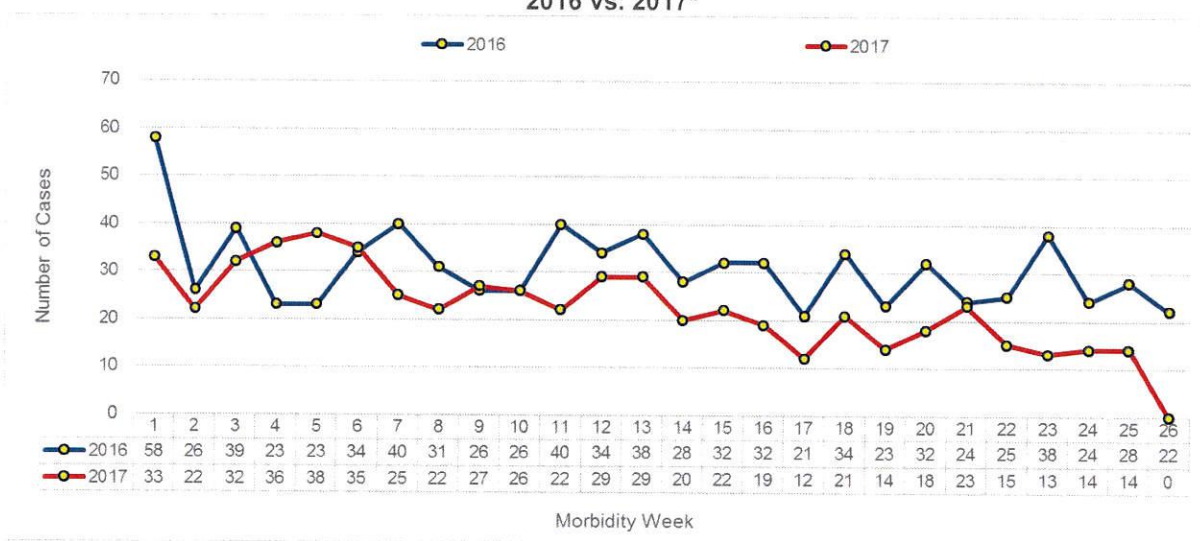
## Introduction

The Acute Meningitis-Encephalitis Syndrome (AMES) Surveillance, established in 2014, aimed for an integrated surveillance for on Acute Encephalitis Syndrome (AES) and Bacterial Meningitis (BM). Currently, there are 9 AMES sentinel sites nationwide (see page 5 for list of sites).

## Trend in the Philippines

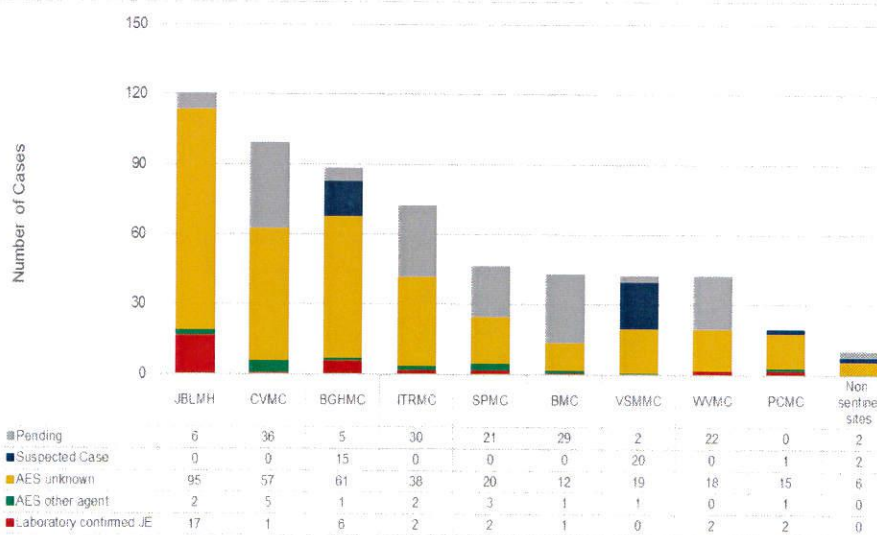
A total of **581** suspected AMES cases were reported from selected sentinel sites from January 1 to July 1, 2017 (Figure 1). This is **27 %** lower compared to the same period last year (501).

**Figure 1. Reported AMES Cases by Morbidity Week, Philippines  
2016 vs. 2017\***



\*data as of July 1, 2017

**Figure 2. Reported AMES Cases by Disease Reporting Unit and Classification, Philippines, January 1- July 1, 2017 (N=581)**



The distribution of suspected AMES cases varied considerably among the sentinel sites (Figure 2). Most (**119, 24%**) of the reported cases were from Jose B. Lingad Memorial Hospital (JBLMH), followed by Cagayan Valley Medical Center (CVMC) (**78, 16%**) and Baguio General Hospital and Medical Center (BGHMC) (**77, 15%**). AMES Cases from non-sentinel sites were also reported comprising (**10, 2%**) of the total cases.



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Laboratory confirmation of suspected cases is essential in determining the true etiology of the disease. Collection of CSF through lumbar puncture must be performed during the first contact with the patient. A first serum collection (*Acute Sample*) is also collected upon admission within 5 to 10 days after onset of illness. The second blood sample (*Convalescent sample*) is collected 7 days after the first blood collection or upon discharge.

Collection of CSF is high among cases reported (**91%**), while **84%** of the cases were collected with the first serum and only **26%** were collected with second serum. (Table 1)

**Table 1. Completeness of Specimen among Disease Reporting Units**  
 Philippines, January 1- July 1, 2017 (N=581)

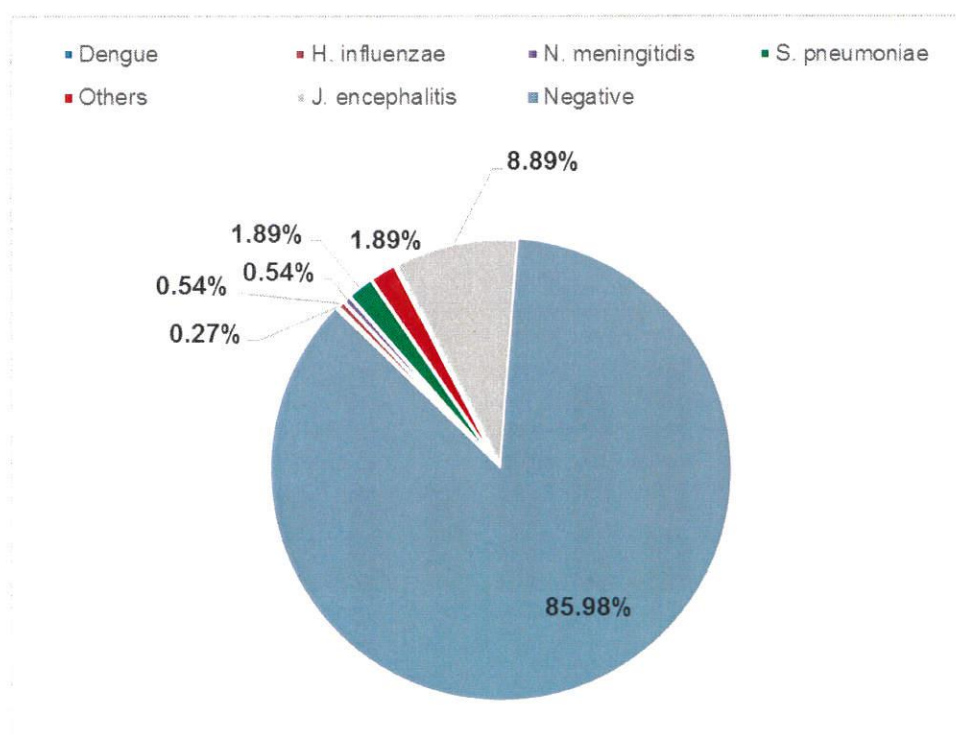
Disease Reporting Units	Total Reported Cases (MW 1 - 26)	With CSF Collection	With Serum 1 Collection	With Serum 2 Collection
<b>AMES Sentinel Sites</b>				
JBLMH	120	76%	99%	29%
CVMC	99	100%	81%	8%
BGHMC	88	99%	93%	69%
ITRMC	72	99%	82%	26%
SPMC	46	100%	98%	50%
BMC	43	72%	88%	2%
VSMC	42	100%	71%	0%
WVMC	42	79%	33%	0%
PCMC	19	95%	68%	5%
<b>Non-sentinel site:</b>	10	90%	60%	20%
<b>Total</b>	<b>581</b>	<b>91%</b>	<b>84%</b>	<b>26%</b>

**Figure 3. Reported AMES Cases by Laboratory Result**  
 Philippines, January 1- July 1, 2017 (n=371)

Among 371 reported cases with specimen collected and tested (Figure 3), **33 (8.89%)** were laboratory confirmed *Japanese encephalitis* (JE) cases, while others tested positive for other organisms such as:

*S. pneumoniae* (7); *Micrococcus* (3); *N. meningitidis* (2); *S. epidermis* (1); *H. influenzae* (2); *S. agalactiae* (1); *Psuedomonas* (1); *E. coli* (1) and Dengue (1).

Three-hundred nineteen (319) cases yielded negative results, while 210 cases still pending laboratory results.







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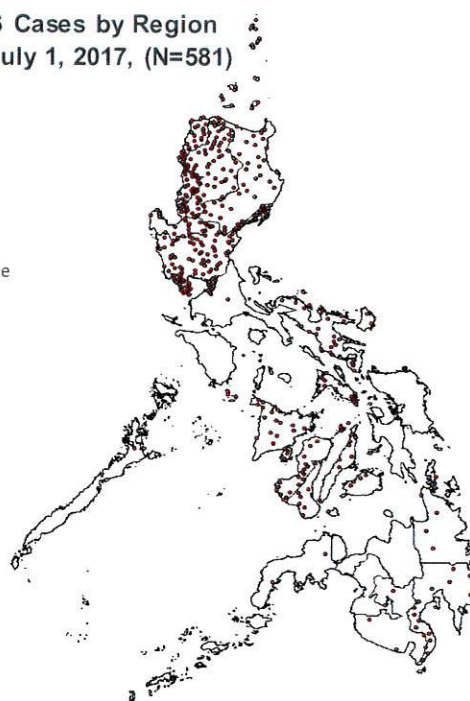
### Geographic Distribution

Most of the cases were from the following regions: Region III (25%), Region I (15%), Region II (14%) and CAR (14%). (Figure 4)

Figure 4. Reported AMES Cases by Region  
Philippines, January 1 – July 1, 2017, (N=581)

Region	Cases	Percent
01	85	15%
02	94	16%
03	127	22%
04A	4	1%
MIMAROPA	1	0%
05	44	8%
06	47	8%
07	42	7%
08	0	0%
09	2	0%
10	0	0%
11	33	6%
12	6	1%
ARMM	1	0%
CAR	76	13%
CARAGA	6	1%
NCR	13	2%
PHILIPPINES	581	100%

LEGEND  
1 Dot = 1 Case

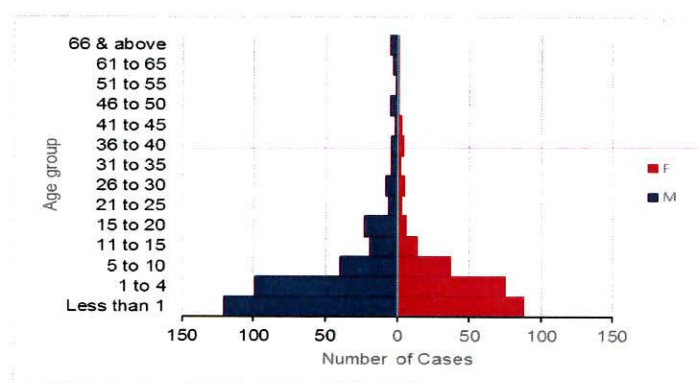


### Profile of Cases

#### Age Group and Sex Distribution

Age of cases ranged from 2 days old to 77 years old, median of 1 year old (Figure 5). Most (59%) cases were males and majority (36%) were below 1 year old.

Figure 5. Reported AMES by Age Group and Sex,  
Philippines, January 1 – July 1, 2017, (N=581)



#### Vaccination Status of Reported AMES Case

A portion of AMES cases have received vaccination against meningitis-encephalitis causing disease: Measles vaccine (12%); *Haemophilus influenza* (Hib) Type B (12%); Measles-Mumps Rubella (9.46%), and Pneumococcal Conjugate Vaccine 10 & 13 (both 1 %). None of the reported AMES cases received vaccination for *Japanese encephalitis* and Meningococcal Disease.



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## JAPANESE ENCEPHALITIS CASES IN THE PHILIPPINES

A total of **51** lab-confirmed Japanese Encephalitis (JE) were captured through AMES surveillance and Acute Encephalitis Syndrome surveillance from January 1 to July 1, 2017. This is lower compared to the same time period last year (Table 2).

**Table 2. Confirmed JE Cases 2016 vs. 2017**  
Philippines, January 1 to July 1, 2017 (n=51)

### Geographic Distribution

Laboratory Confirmed JE cases (Morbidity Week 1-22)	2017		2016		Percent difference
	Cases	Deaths	Cases	Deaths	
AMES surveillance	33	0	98	8	↓66.33
AES surveillance	18	0	48	2	↓62.50
<b>Total</b>	<b>51</b>	<b>0</b>	<b>146</b>	<b>10</b>	↓65.07

Most of the cases were found in Pampanga province having the highest incidence of **0.69**, followed by Pangasinan (**0.32**) and Benguet (**0.24**). (Table 3)

**Table 3. Incidence of JE Cases,**  
Philippines, January 1 – July 1, 2017 (n=51)

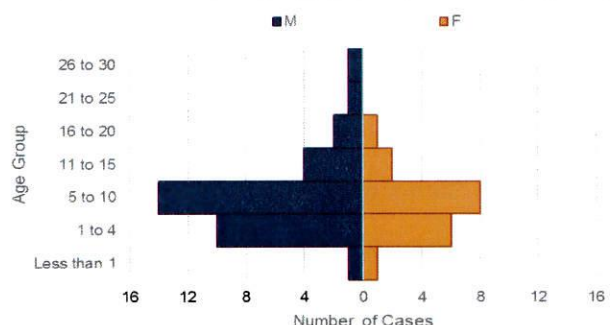
Province	2017 FHSIS Projected Population per Province	Lab-Confirmed JE cases (Jan. 1 - Jun. 3, 2017)	Incidence per 100,00 population
PAMPANGA	2,607,397	18	0.69
PANGASINAN	3,153,857	10	0.32
BENGUET	824,252	2	0.24
OCCIDENTAL MINDORO	533,874	1	0.19
DAVAO ORIENTAL	598,176	1	0.17
BULACAN	3,404,597	5	0.15
ILOCOS SUR	706,604	1	0.14
LA UNION	806,593	1	0.12
ISABELA	1,656,926	2	0.12
SULTAN KUDARAT	868,777	1	0.12
ILOILO	2,465,034	2	0.08
CAGAYAN	1,236,380	1	0.08
TARLAC	1,404,348	1	0.07
CAMARINES SUR	2,120,318	1	0.05
BATANGAS	2,681,315	1	0.04
RIZAL	2,967,960	1	0.03
METRO MANILA	12,918,977	2	0.02

### Profile of JE Cases

**Figure 6 . Lab confirmed JE Cases by Age Group and Sex Philippines, January 1 – July 1, 2017 (n=51)**

### Age Group and Sex Distribution

Age of confirmed JE cases ranged from 42 days to 29 years old, (**65%**) cases were males with **43%** of the cases belonging to the age group of 5 to 10 years. (Figure 6)







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Selected Sentinel Sites of Acute Meningitis-Encephalitis Surveillance (AMES)

Region I	Ilocos Training Regional Medical Center (ITRMC)
Region II	Cagayan Valley Medical Center (CVMC)
Region III	Jose B. Lingad Memorial Regional Hospital (JBLMH)
Region V	Bicol Medical Center (BMC)
Region VI	Western Visayas Medical Center (WVMC)
Region VII	Vicente Sotto Memorial Medical Center (VSMC)
Region XI	Southern Philippines Medical Center (SPMC)
Region NCR	Philippine Children's Medical Center (PCMC)

DEFINITION OF TERMS:

Suspect Acute Meningitis Encephalitis Syndrome	a person of any age, WITH a sudden onset of fever, plus one of the following: <ul style="list-style-type: none"><li>• change in mental status (including altered consciousness, confusion, or inability to talk)</li><li>• new onset of seizures</li><li>• neck stiffness</li><li>• other meningeal sign</li></ul>
Laboratory-confirmed Japanese Encephalitis	An AES case that has been laboratory-confirmed as JE
Probable JE	An AES case that occurs in close geographical and temporal relationship to a laboratory-confirmed case of JE, in the context of an outbreak.
AES – other agent	An AES case in which diagnostic testing is performed and an etiologic agent other than JE virus is identified
AES – unknown	An AES case in which diagnostic testing is not performed or testing was performed but no etiologic agent was identified or in which the test results were indeterminate

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