



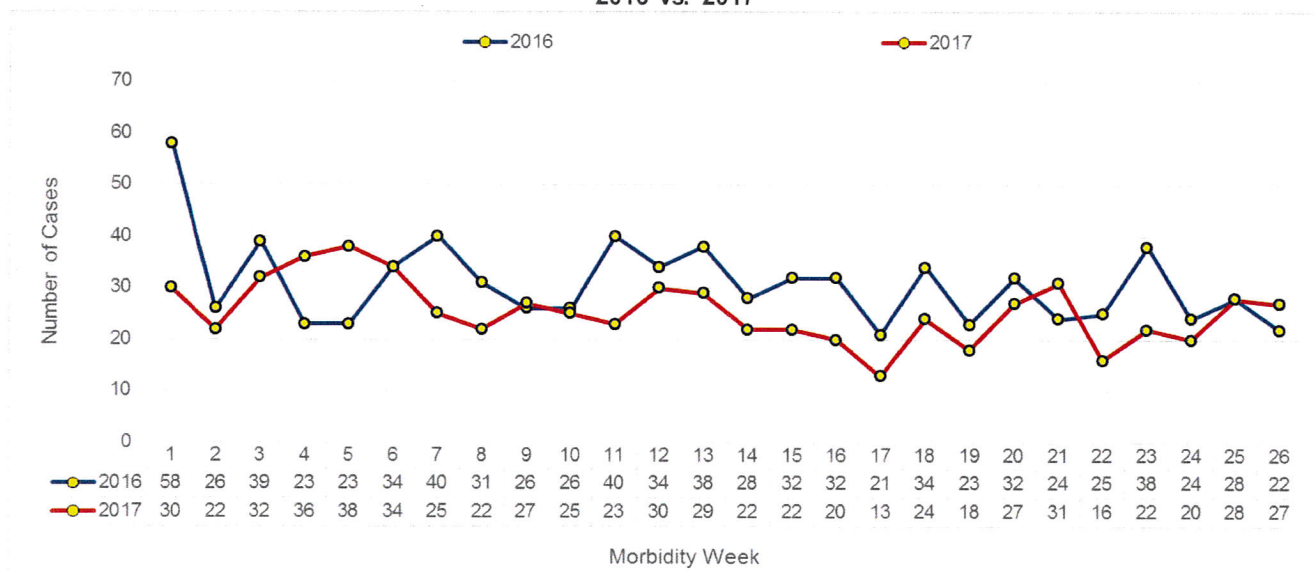
Introduction

Established in 2014, the Acute Meningitis-Encephalitis Syndrome (AMES) Surveillance is an integrated surveillance for Acute Encephalitis Syndrome (AES) and Bacterial Meningitis (BM). Currently, there are 9 AMES sentinel sites nationwide (see Figure 4, page 2)). Its aim is to obtain local data on the epidemiology of Japanese Encephalitis and other agents causing invasive bacterial disease; describe the age, seasonal and geographic patterns of JE among sentinel hospitals and provide complete, accurate, and timely data for dissemination and utilization of health authorities.

Trend in the Philippines

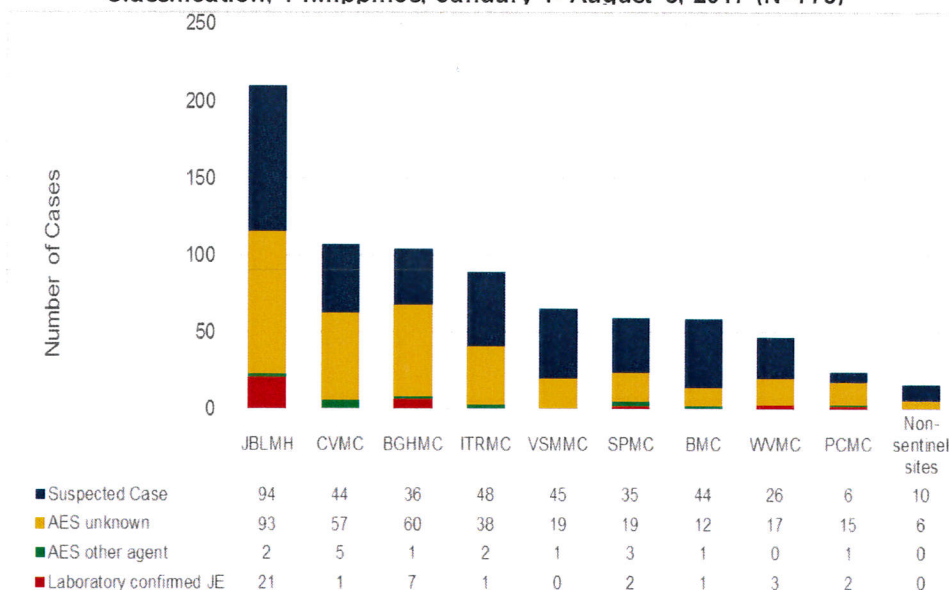
A total of **778** suspected AMES cases were reported from selected sentinel sites from January 1 to August 5, 2017 (Figure 1). This is **20 %** lower compared to the same period last year (967).

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



*data as of August 5, 2017

Figure 2. Reported AMES Cases by Disease Reporting Unit and Classification, Philippines, January 1- August 5, 2017 (N=778)



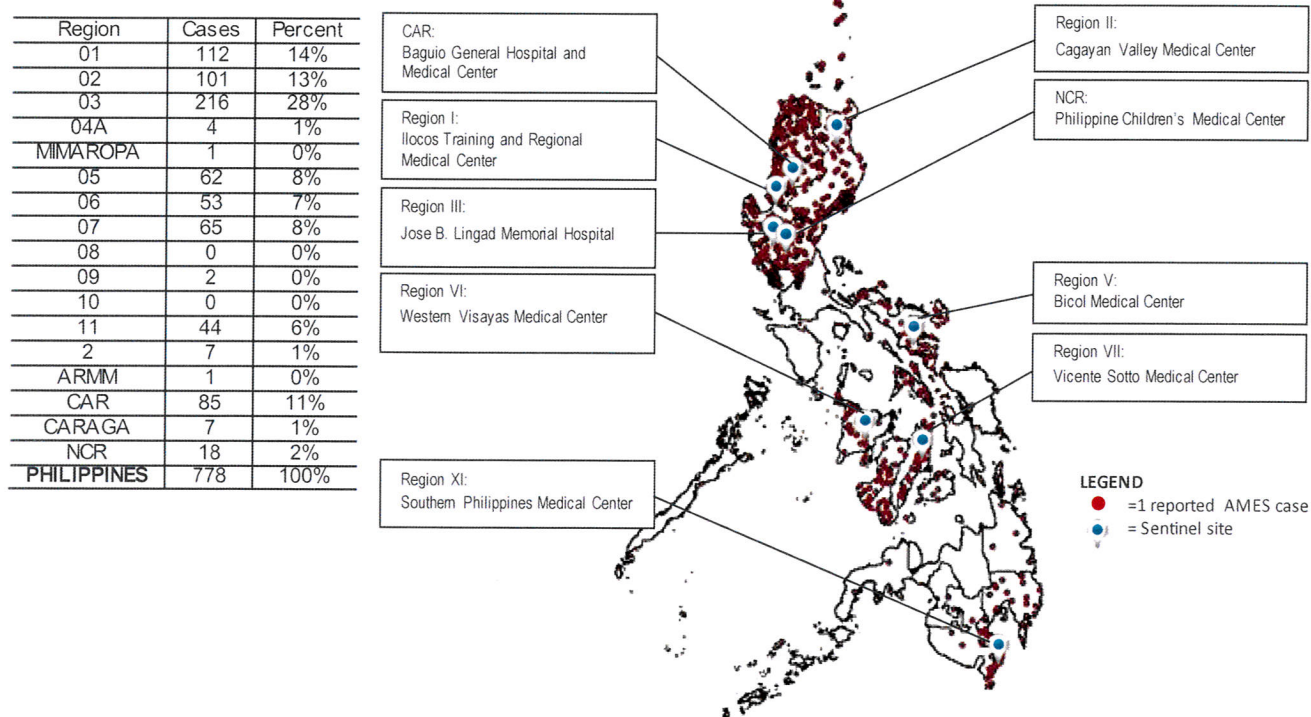
The distribution of suspected AMES cases varied considerably among the sentinel sites (Figure 2). Most (**210, 27%**) of the reported cases were from Jose B. Lingad Memorial Hospital (JBLMH), followed by Cagayan Valley Medical Center (CVMC) (**107, 14%**) and Baguio General Hospital and Medical Center (BGHMC) (**104, 13%**). AMES Cases from non-sentinel sites were also reported comprising (**16, 2%**) of the total cases.



Geographic Distribution

Most of the cases were from the northern part of the country: Region III (28%), Region I (14%), Region II (13%) and CAR (11%) (Figure 4).

**Figure 4. Reported AMES Cases by Region
Philippines, January 1 – August 5, 2017, (N=778)**

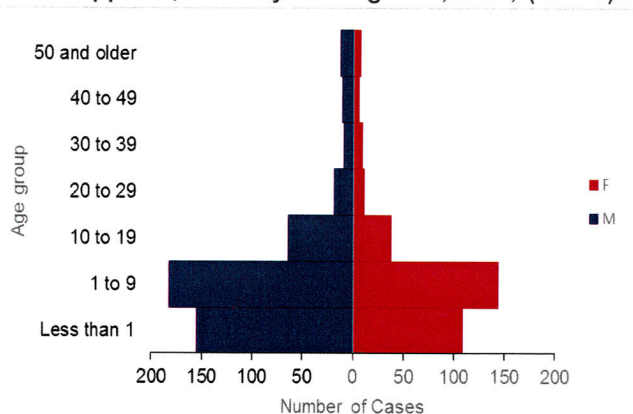


Profile of Cases

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 (58%) cases were males and majority of the cases (42%) were children between ages 1 to 9.

**Figure 5. Reported AMES by Age Group and Sex,
Philippines, January 1 – August 5, 2017, (N=778)**



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.

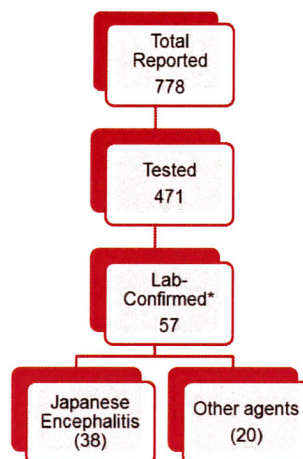


Laboratory confirmation of suspected cases is essential in determining the true etiology of the disease. Collection of CSF through lumbar puncture must be performed during the first contact with the patient. A first serum collection (*Acute Sample*) is also collected upon admission within 5 to 10 days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

**Figure 3. Reported AMES Cases by Pathogen
Philippines, January 1- August 5, 2017 (n=57)**

Of the 778 reported AMES, 471 (61%) cases were tested. Thirty-eight (38, 8.1 %) were laboratory confirmed *Japanese encephalitis* (JE) cases, while others tested positive for other organisms such as:

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



*Multiple response; 1 case both tested positive for JE and Dengue

Collection of CSF and Serum 1 is high among cases reported however, only 26% were collected with second serum. (Table 1)

**Table 1. Completeness of Specimen among Disease Reporting Units
Philippines, January 1- August 5, 2017 (N=778)**

Disease Reporting Units	Total Reported Cases (MW 1 - 31)	With CSF Collection	With Serum 1 Collection	With Serum 2 Collection
AMES Sentinel Sites				
JBLMH	210	45%	99%	20%
CVMC	107	100%	80%	7%
BGHMC	104	99%	94%	67%
ITRMC	89	99%	83%	26%
VSMC	65	98%	74%	0%
SPMC	59	100%	98%	42%
BMC	58	71%	76%	2%
WVMC	46	80%	37%	0%
PCMC	24	96%	54%	4%
Non-sentinel site:	16	81%	56%	13%
Total	778	81%	84%	22%



JAPANESE ENCEPHALITIS CASES IN THE PHILIPPINES

A total of **57** lab-confirmed Japanese Encephalitis (JE) were captured through AMES surveillance and Acute Encephalitis Syndrome (AES) surveillance from January 1 to August 5, 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 August 5, 2017 (n=57)

Laboratory Confirmed JE cases (Morbidity Week 1-31)	2017		2016		Percent difference
	Cases	Deaths	Cases	Deaths	
AMES surveillance	38	0	143	11	↓ 73.43
AES surveillance	19	0	62	2	↓ 69.35
Total	57	0	205	13	↓ 72.20

Geographic Distribution

Most of the cases were found in Pampanga province having the highest incidence of **0.77**, followed by Benguet (**0.36**) and Pangasinan (**0.32**). (Table 3)

Table 3. Incidence of JE Cases,
Philippines, January 1 – August 5, 2017 (n=57)

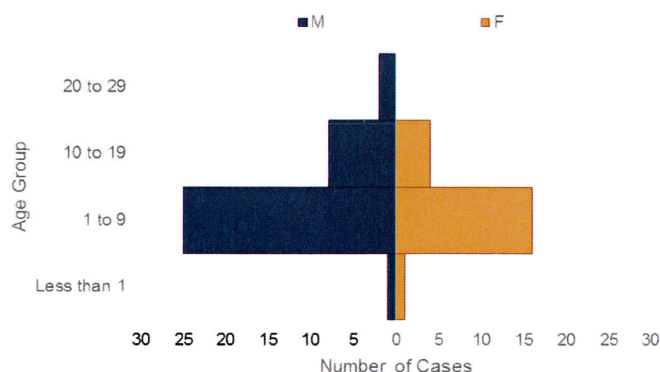
Province	2017 FHSIS Projected Population per Province	Lab-Confirmed JE cases (Jan. 1 - Aug. 5, 2017)	Incidence per 100,00 population
PAMPANGA	2,607,397	20	0.77
BENGUET	824,252	3	0.36
PANGASINAN	3,153,857	10	0.32
OCCIDENTAL MINDORO	533,874	1	0.19
BULACAN	3,404,597	6	0.18
DAVAO ORIENTAL	598,176	1	0.17
TARLAC	1,404,348	2	0.14
LA UNION	806,593	1	0.12
ILOILO	2,465,034	3	0.12
ISABELA	1,656,926	2	0.12
SULTAN KUDARAT	868,777	1	0.12
CAGAYAN	1,236,380	1	0.08
CAMARINES SUR	2,120,318	1	0.05
NUEVA ECIJA	2,151,461	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

Age Group and Sex Distribution

Age of confirmed JE cases ranged from 42 days to 29 years old, (**63%**) cases were males with **72%** of the cases occurring in children between ages 1 to 9. (Figure 6)

Figure 6 . Lab confirmed JE Cases by Age Group and Sex
Philippines, January 1 – August 5, 2017 (n=57)





Morbidity Week 31: January 1 – August 5, 2017

**Epidemiology Bureau
Public Health Surveillance Division**

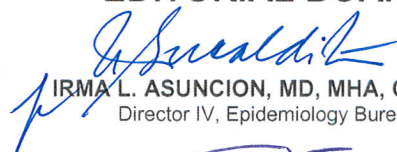
Selected Sentinel Sites of Acute Meningitis-Encephalitis Surveillance (AMES)

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 (VSMMC)
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">•change in mental status (including altered consciousness, confusion, or inability to talk)•new onset of seizures•neck stiffness•other meningeal sign
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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