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Trend

A total of 1,902 suspect measles cases were reported nationwide from January 1 to May 23, 2015. Of these, 539 (28.34%) were classified as laboratory confirmed (481) and epi-linked (58) cases (see Table 1). The number of confirmed measles cases decreased significantly in 2015 (97.73%) compared with last year (see Table 2).

Figure 3 shows the distribution of confirmed measles cases by morbidity month. The data includes laboratory confirmed and epi-linked confirmed measles cases.

Geographic distribution

The distribution of confirmed measles cases varied considerably among the regions (see Figure 2). Most of the confirmed cases came from Region XI (20.22%), Region IX (15.21%) and CARAGA (11.13%).

Profile of cases

Fifty two percent of the confirmed measles cases were male. Majority of the confirmed cases belonged to the children less than 9 months old (19.85%). Among the confirmed measles cases, 31% were vaccinated with measles containing vaccine, 58% were not vaccinated and 11% have unknown vaccination status. Two among the confirmed measles cases died (CFR=0.37).

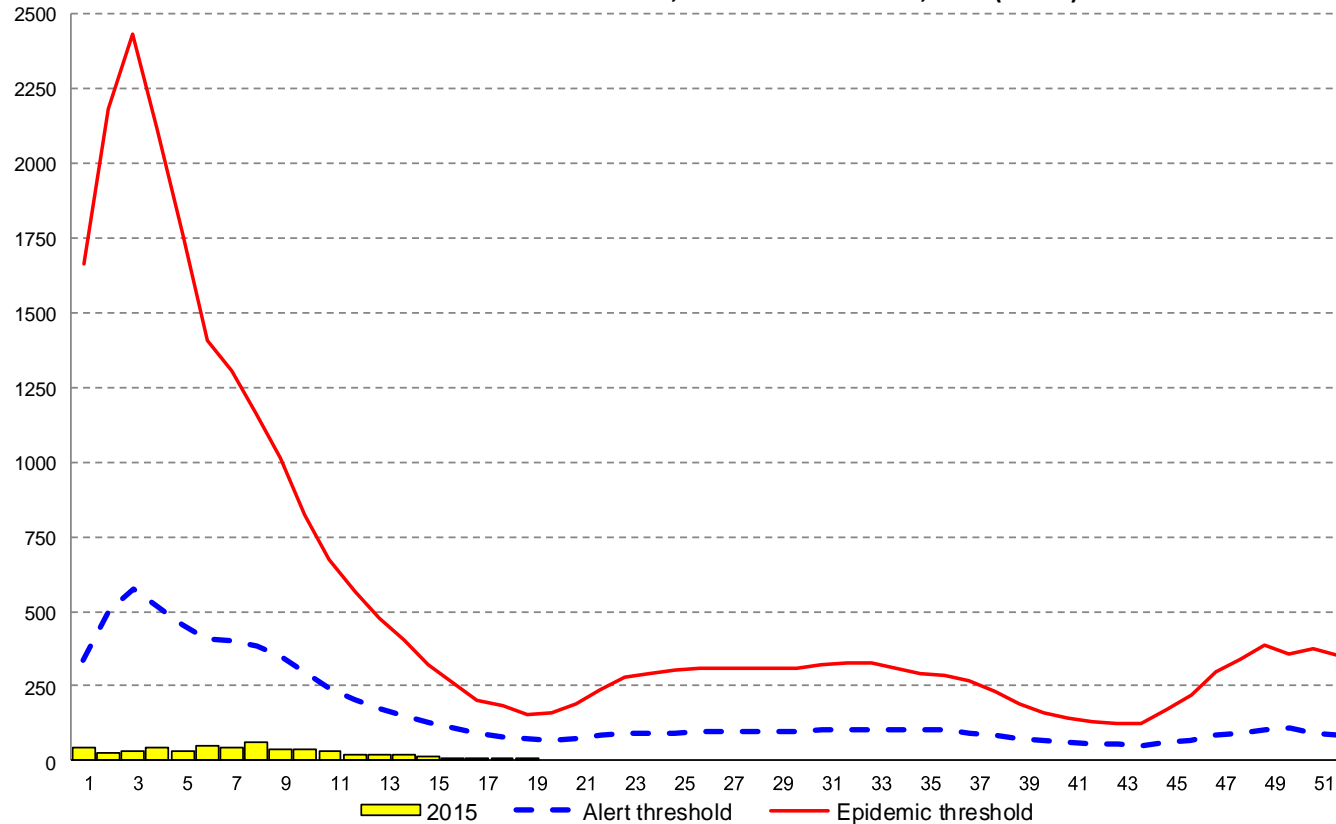
TABLE 1. MEASLES AND RUBELLA CASES BY REGION PHILIPPINES, JANUARY 1 – MAY 23, 2015 (N=1,902)

| REGION | TARGET 2/100K | REPORTED | CONFIRMED MEASLES | | MEASLES COMPATIBLE | CONFIRMED RUBELLA | | DISCARDED AS NON-MEASLES/RUBELLA | PENDING CLASSIFICATION |
|--------|---------------|----------|----------------------|----------------------|--------------------|----------------------|----------------------|----------------------------------|------------------------|
| | | | LABORATORY CONFIRMED | EPI-LINKED CONFIRMED | | LABORATORY CONFIRMED | EPI-LINKED CONFIRMED | | |
| 1 | 101 | 69 | 2 | 0 | 25 | 7 | 0 | 34 | 1 |
| 2 | 69 | 76 | 8 | 0 | 44 | 3 | 0 | 17 | 4 |
| 3 | 226 | 79 | 1 | 0 | 15 | 6 | 0 | 57 | 0 |
| 4A | 294 | 176 | 4 | 0 | 71 | 11 | 0 | 90 | 0 |
| 4B | 60 | 30 | 1 | 0 | 17 | 4 | 0 | 8 | 0 |
| 5 | 117 | 8 | 1 | 0 | 1 | 0 | 0 | 6 | 0 |
| 6 | 152 | 186 | 57 | 0 | 8 | 36 | 0 | 83 | 2 |
| 7 | 149 | 87 | 42 | 0 | 1 | 7 | 0 | 36 | 1 |
| 8 | 88 | 106 | 8 | 5 | 91 | 0 | 0 | 2 | 0 |
| 9 | 75 | 192 | 74 | 8 | 67 | 1 | 0 | 42 | 0 |
| 10 | 95 | 208 | 46 | 9 | 128 | 2 | 0 | 21 | 2 |
| 11 | 99 | 200 | 98 | 11 | 43 | 3 | 0 | 39 | 6 |
| 12 | 93 | 150 | 43 | 6 | 77 | 1 | 0 | 22 | 1 |
| ARMM | 70 | 46 | 5 | 2 | 30 | 0 | 0 | 9 | 0 |
| CAR | 35 | 80 | 34 | 0 | 5 | 1 | 0 | 39 | 1 |
| CRG | 52 | 99 | 44 | 16 | 21 | 1 | 0 | 17 | 0 |
| NCR | 260 | 110 | 13 | 1 | 36 | 8 | 0 | 50 | 2 |
| PHL | 2,035 | 1,902 | 481 | 58 | 680 | 91 | 0 | 572 | 20 |



| Morbidity Week | 2015 cases | Alert Threshold | Epidemic Threshold |
|----------------|------------|-----------------|--------------------|
| 1 | 44 | 335 | 1,255 |
| 2 | 28 | 502 | 2,795 |
| 3 | 35 | 576 | 2,672 |
| 4 | 42 | 513 | 2,396 |
| 5 | 35 | 456 | 1,637 |
| 6 | 51 | 407 | 1,518 |
| 7 | 43 | 403 | 1,359 |
| 8 | 62 | 384 | 1,299 |
| 9 | 37 | 346 | 1,035 |
| 10 | 37 | 294 | 837 |
| 11 | 31 | 242 | 707 |
| 12 | 19 | 204 | 571 |
| 13 | 20 | 173 | 511 |
| 14 | 20 | 151 | 418 |
| 15 | 14 | 126 | 348 |
| 16 | 7 | 108 | 228 |
| 17 | 6 | 91 | 237 |
| 18 | 5 | 82 | 171 |
| 19 | 3 | 72 | 163 |
| 20 | 0 | 70 | 151 |
| 21 | | 77 | 188 |
| 22 | | 85 | 256 |
| 23 | | 92 | 305 |
| 24 | | 93 | 322 |
| 25 | | 94 | 317 |
| 26 | | 95 | 330 |
| 27 | | 95 | 342 |
| 28 | | 97 | 318 |
| 29 | | 96 | 327 |
| 30 | | 100 | 343 |
| 31 | | 103 | 319 |
| 32 | | 104 | 373 |
| 33 | | 103 | 351 |
| 34 | | 102 | 328 |
| 35 | | 101 | 309 |
| 36 | | 101 | 304 |
| 37 | | 93 | 294 |
| 38 | | 85 | 250 |
| 39 | | 73 | 184 |
| 40 | | 66 | 148 |
| 41 | | 60 | 165 |
| 42 | | 55 | 127 |
| 43 | | 53 | 127 |
| 44 | | 51 | 142 |
| 45 | | 60 | 126 |
| 46 | | 70 | 255 |
| 47 | | 87 | 293 |
| 48 | | 93 | 396 |
| 49 | | 102 | 387 |
| 50 | | 108 | 461 |
| 51 | | 93 | 405 |
| 52 | | 85 | 337 |

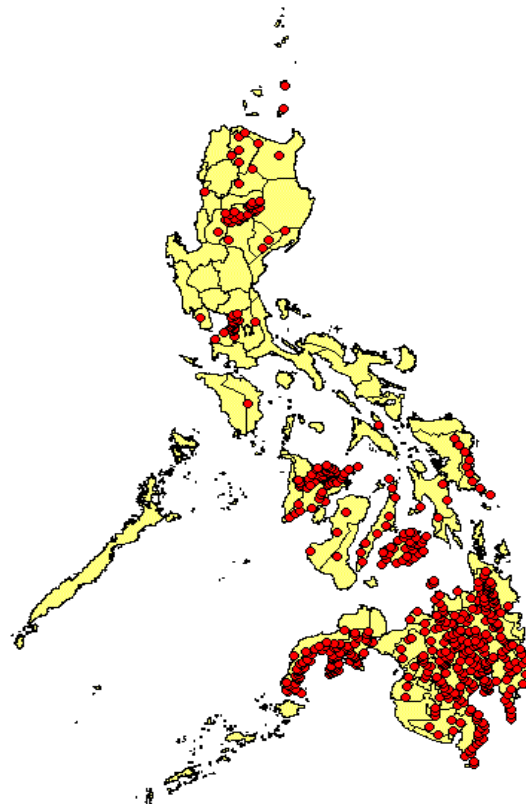
**FIGURE 1. CONFIRMED* MEASLES ALERT AND EPIDEMIC THRESHOLD
PHILIPPINES, JANUARY 1 – MAY 23, 2015 (n=539)**



Confirmed* Measles cases = Laboratory confirmed + Epi-linked confirmed Measles



**FIGURE 2. DISTRIBUTION OF CONFIRMED* MEASLES CASES
PHILIPPINES, JANUARY 1 – MAY 23, 2015 (n=539)**



**TABLE 2. CONFIRMED* MEASLES CASES AND DEATHS BY REGION
PHILIPPINES, 2014 vs. 2015****

| REGION | CASES | | | DEATHS | | | |
|------------|------------|---------------|-----------------|----------|-------------|------------|-------------|
| | 2015 | 2014 | % CHANGE | 2015 | CFR (%) | 2014 | CFR (%) |
| 1 | 2 | 761 | ↓ -99.74 | 0 | 0.00 | 7 | 0.92 |
| 2 | 8 | 667 | ↓ -98.80 | 0 | 0.00 | 1 | 0.15 |
| 3 | 1 | 2,815 | ↓ -99.96 | 0 | 0.00 | 11 | 0.39 |
| 4A | 4 | 4,818 | ↓ -99.92 | 0 | 0.00 | 36 | 0.75 |
| 4B | 1 | 347 | ↓ -99.71 | 0 | 0.00 | 4 | 1.15 |
| 5 | 1 | 663 | ↓ -99.85 | 0 | 0.00 | 5 | 0.75 |
| 6 | 57 | 942 | ↓ -93.95 | 0 | 0.00 | 1 | 0.11 |
| 7 | 42 | 1,143 | ↓ -96.33 | 0 | 0.00 | 3 | 0.26 |
| 8 | 13 | 273 | ↓ -95.24 | 0 | 0.00 | 4 | 1.47 |
| 9 | 82 | 268 | ↓ -69.40 | 0 | 0.00 | 0 | 0.00 |
| 10 | 55 | 925 | ↓ -94.05 | 0 | 0.00 | 3 | 0.32 |
| 11 | 109 | 1,617 | ↓ -93.26 | 2 | 1.83 | 3 | 0.19 |
| 12 | 49 | 1,273 | ↓ -96.15 | 0 | 0.00 | 2 | 0.16 |
| ARMM | 7 | 439 | ↓ -98.41 | 0 | 0.00 | 3 | 0.68 |
| CAR | 34 | 213 | ↓ -84.04 | 0 | 0.00 | 0 | 0.00 |
| CRG | 60 | 756 | ↓ -92.06 | 0 | 0.00 | 2 | 0.26 |
| NCR | 14 | 5,823 | ↓ -99.76 | 0 | 0.00 | 32 | 0.55 |
| PHL | 539 | 23,743 | ↓ -97.73 | 2 | 0.37 | 117 | 0.49 |

2015** = as of May 23, 2015

Confirmed* Measles cases = Laboratory confirmed + Epi-linked confirmed Measles



**FIGURE 3. CONFIRMED* MEASLES CASES BY REGION AND MONTH
PHILIPPINES, 2014 VS. 2015** (n=539)**

 2015 CASES  2014 CASES

FIGURE 3.1.

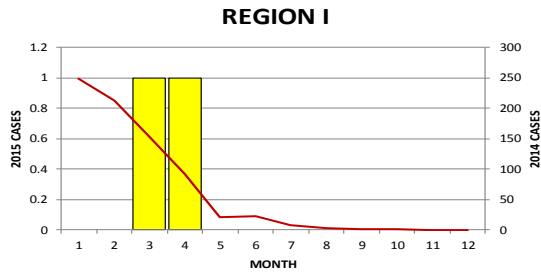


FIGURE 3.2.

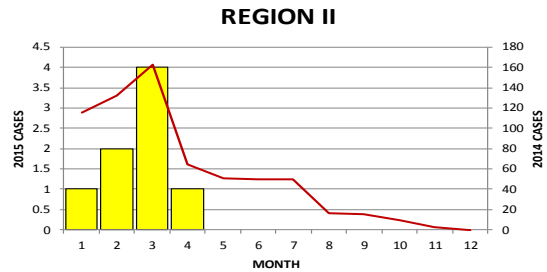


FIGURE 3.3.

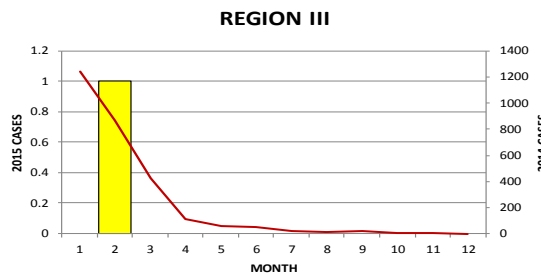


FIGURE 3.5.

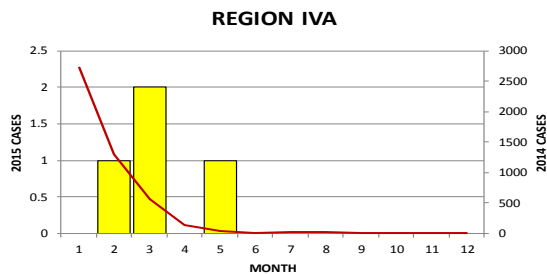


FIGURE 3.6.

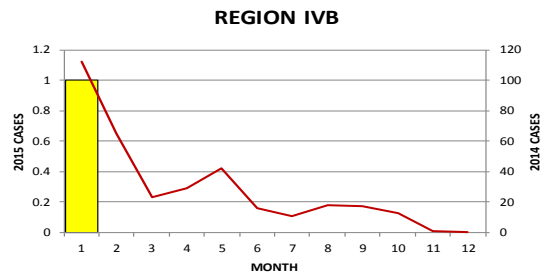


FIGURE 3.7.

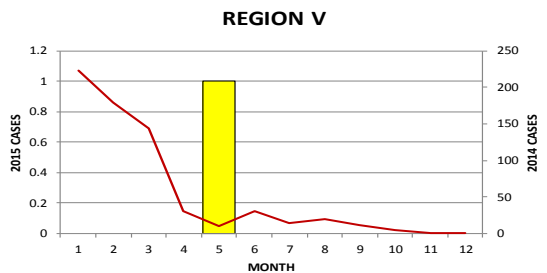


FIGURE 3.8.

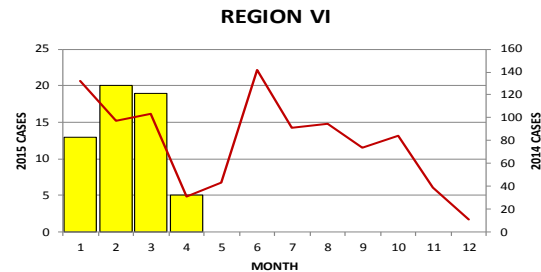


FIGURE 3.9.

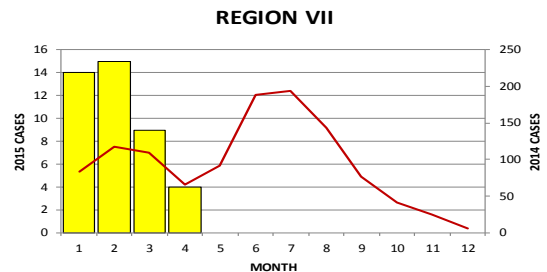


FIGURE 3.10.

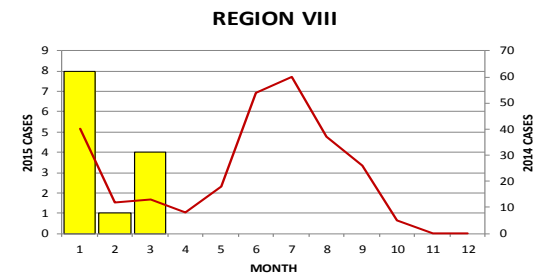


FIGURE 3.11.

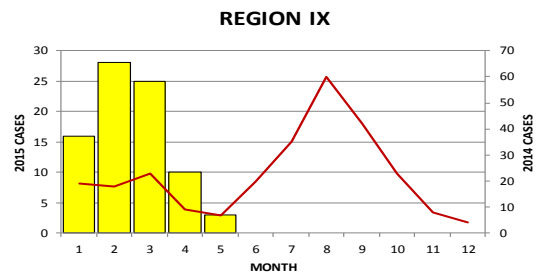




FIGURE 3.12.

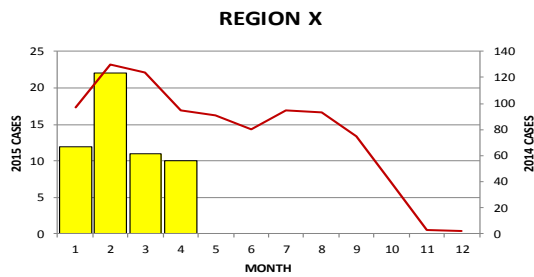


FIGURE 3.13.

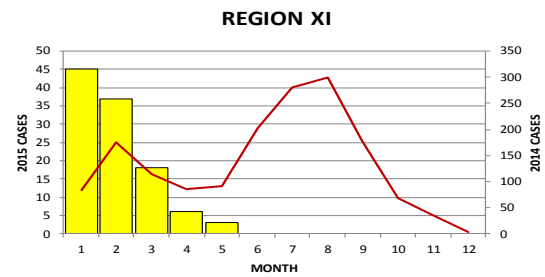


FIGURE 3.14.

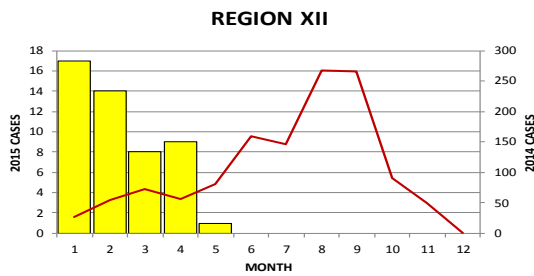


FIGURE 3.15.

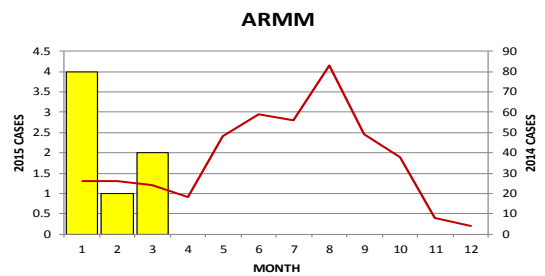


FIGURE 3.16.

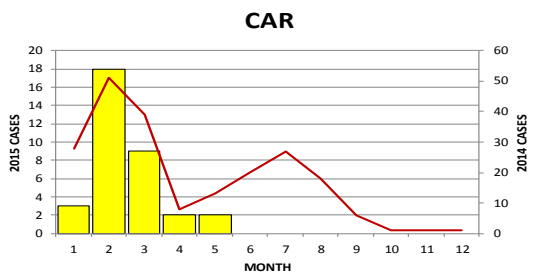


FIGURE 3.17.

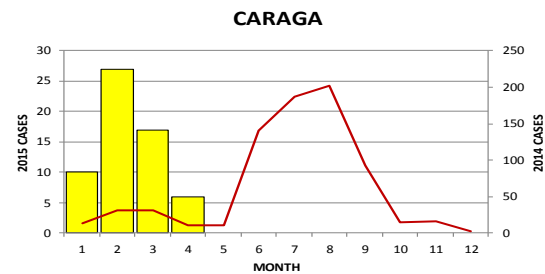


FIGURE 3.18.

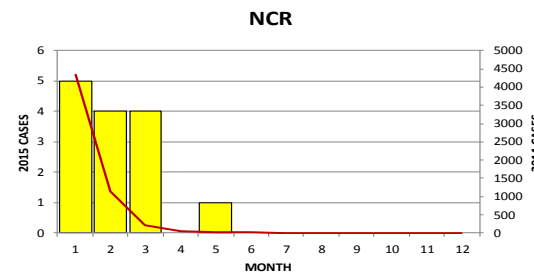
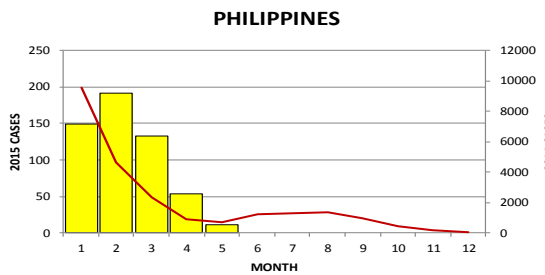


FIGURE 3.19.



2015** = as of May 23, 2015

Confirmed* Measles cases = Laboratory confirmed + Epi-linked confirmed Measles



**FIGURE 4. IMMUNIZATION STATUS OF CONFIRMED* MEASLES CASES BY AGE GROUP
PHILIPPINES, JANUARY 1 – MAY 23, 2015 (n=539)**

■ VACCINATED ■ NOT VACCINATED ■ UNKNOWN

FIGURE 4.1.

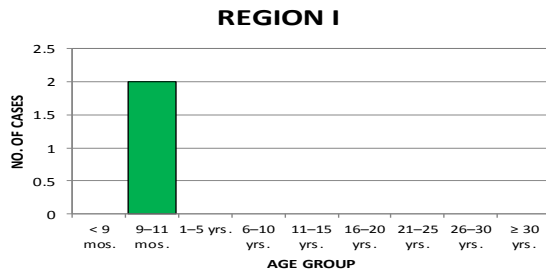


FIGURE 4.2.

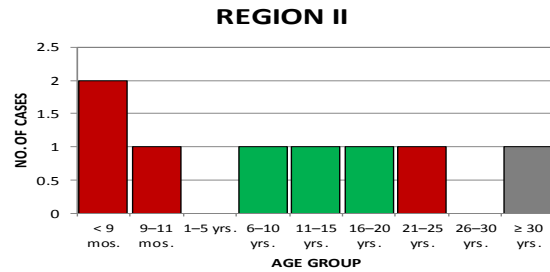


FIGURE 4.3.

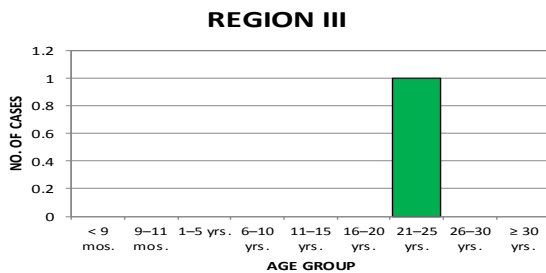


FIGURE 4.4.

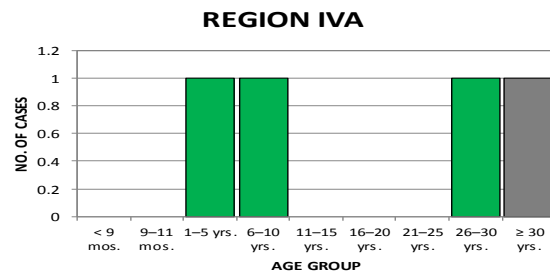


FIGURE 4.5.

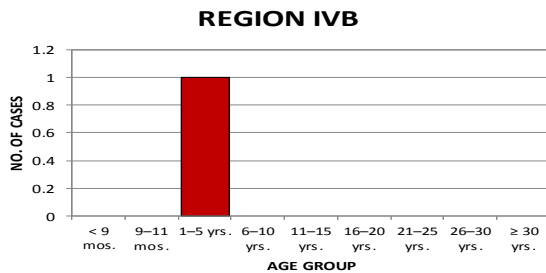


FIGURE 4.6.

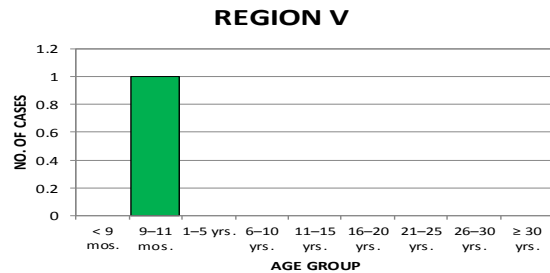


FIGURE 4.7.

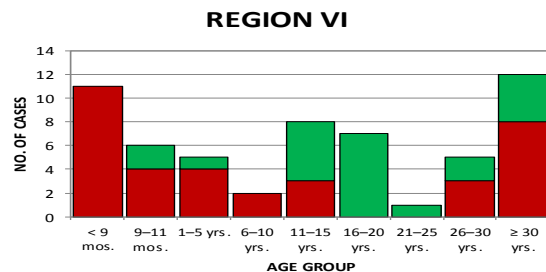


FIGURE 4.8.

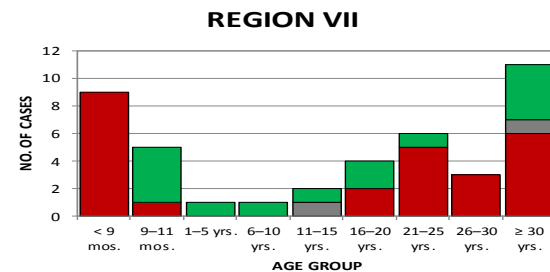


FIGURE 4.9.

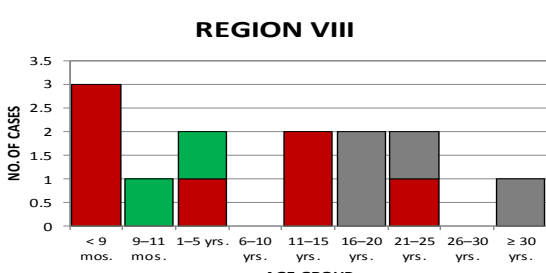


FIGURE 4.10.

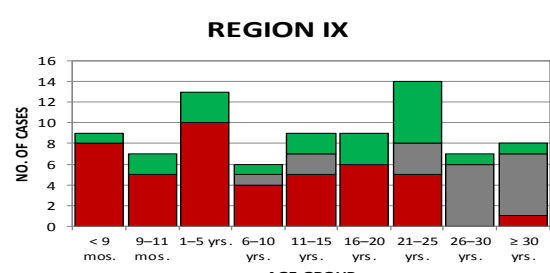




FIGURE 4.11.

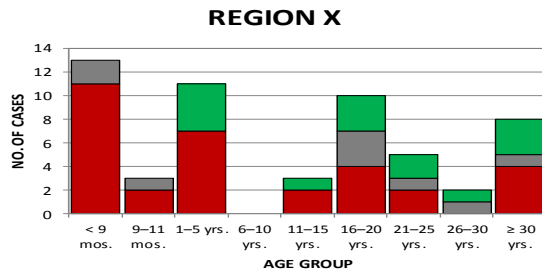


FIGURE 4.12.

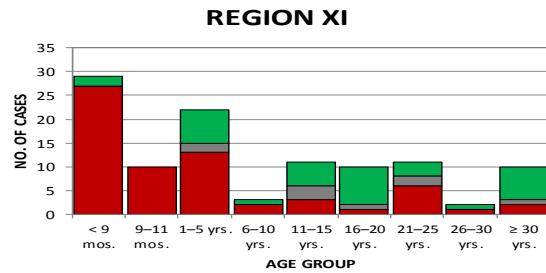


FIGURE 4.13.

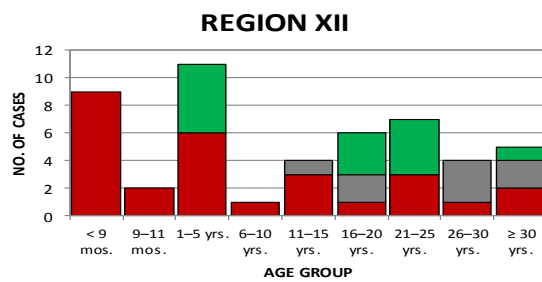


FIGURE 4.14.

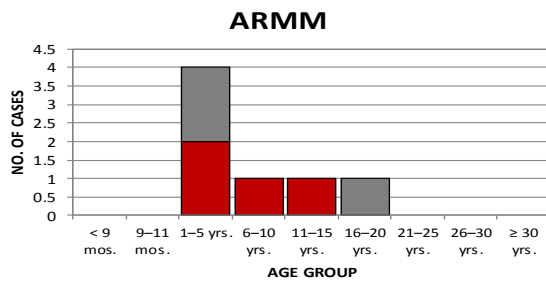


FIGURE 4.15.

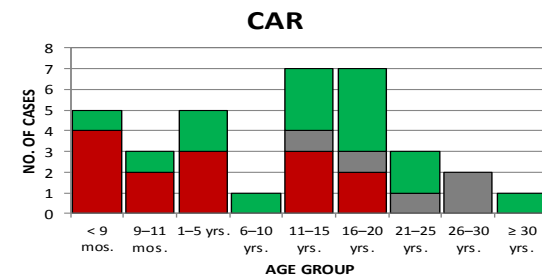


FIGURE 4.16.

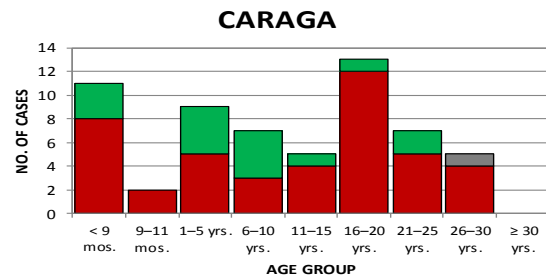


FIGURE 4.17.

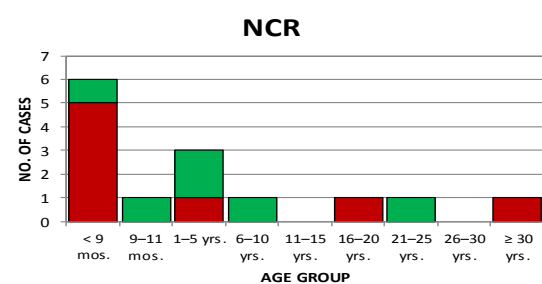
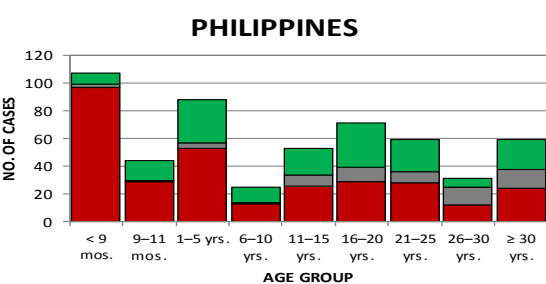


FIGURE 4.18.



Confirmed* Measles cases = Laboratory confirmed + Epi-linked confirmed Measles



**FIGURE 5. CONFIRMED* MEASLES CASES BY AGE GROUP AND SEX
PHILIPPINES, JANUARY 1 – MAY 23, 2015 (n=539)**

MALE FEMALE

FIGURE 5.1.

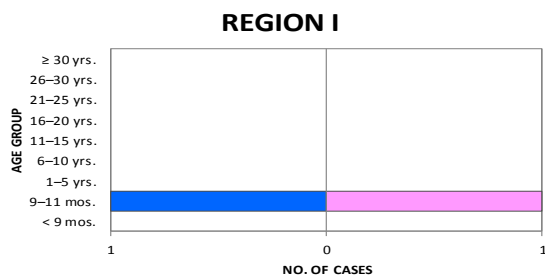


FIGURE 5.2.

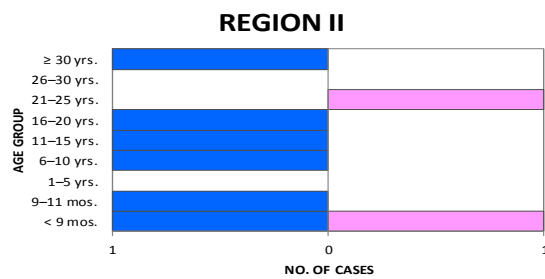


FIGURE 5.3.

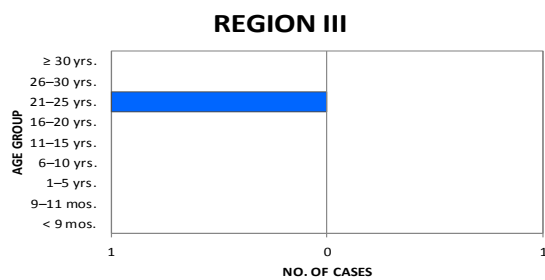


FIGURE 5.4.

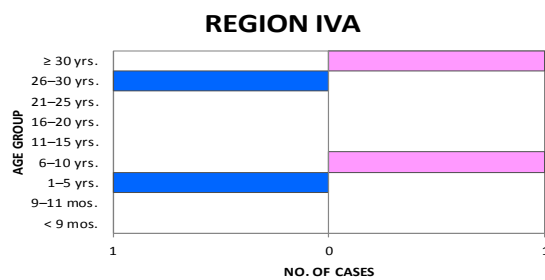


FIGURE 5.5.

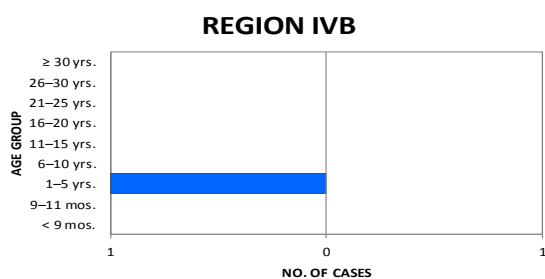


FIGURE 5.6.

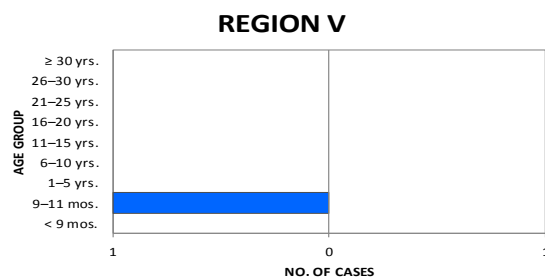


FIGURE 5.7.

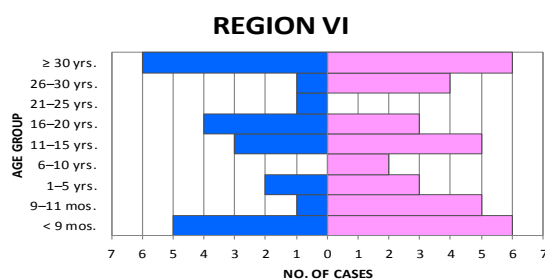


FIGURE 5.8.

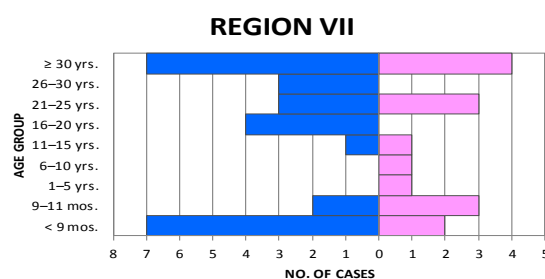


FIGURE 5.9.

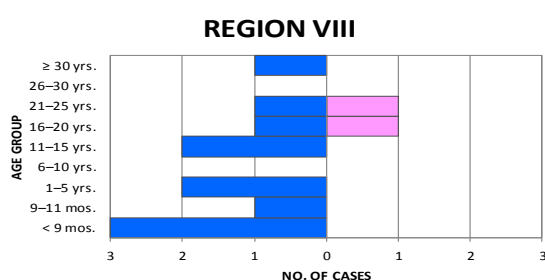


FIGURE 5.10.

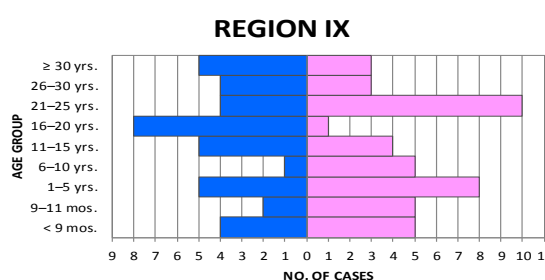




FIGURE 5.11.

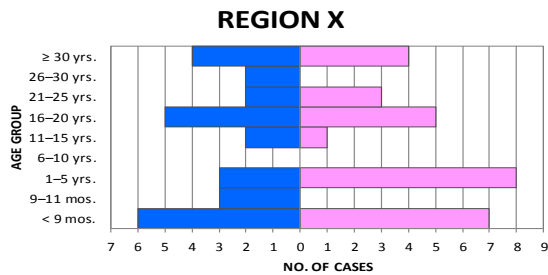


FIGURE 5.12.

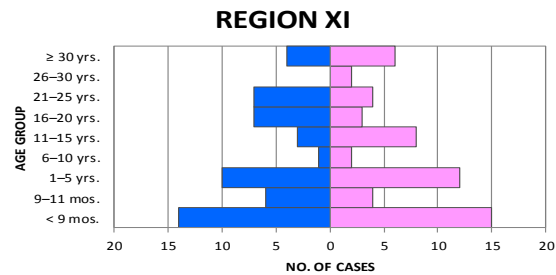


FIGURE 5.13.

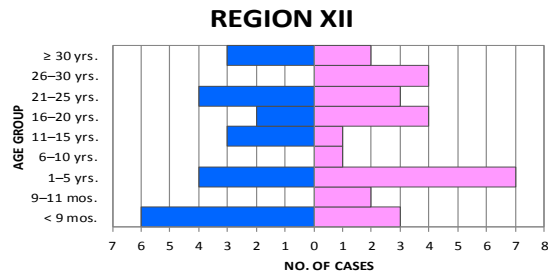


FIGURE 5.14.

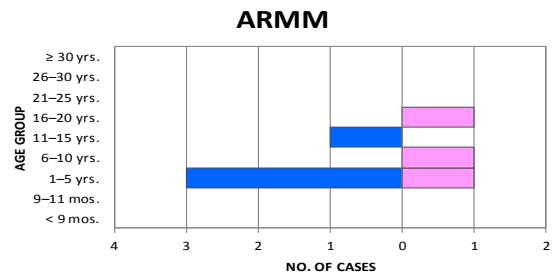


FIGURE 5.15.

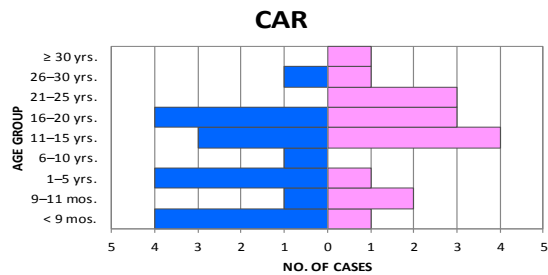


FIGURE 5.16.

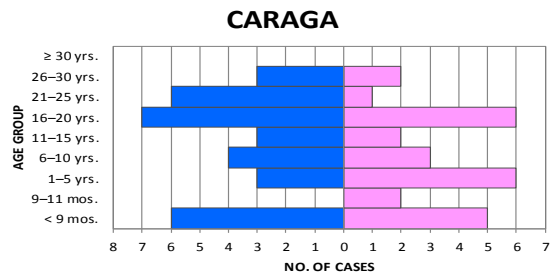


FIGURE 5.17.

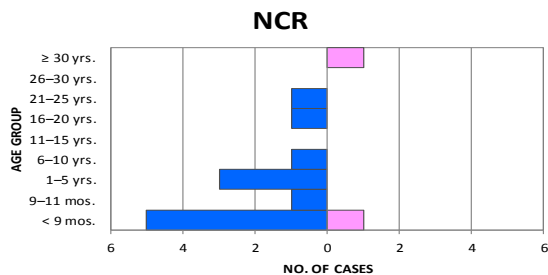
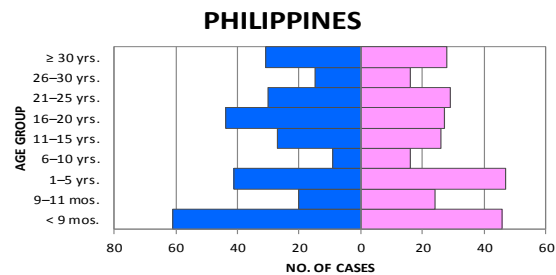


FIGURE 5.18.



Confirmed* Measles cases = Laboratory confirmed + Epi-linked confirmed Measles



**FIGURE 6. CASE FATALITY RATIO AMONG CONFIRMED* MEASLES CASES BY AGE GROUP
PHILIPPINES, JANUARY 1 – MAY 23, 2015 (n=2)**

FIGURE 6.1.

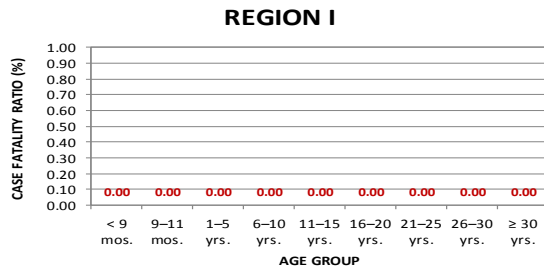


FIGURE 6.2.

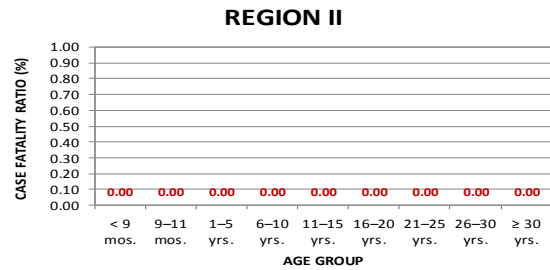


FIGURE 6.3.

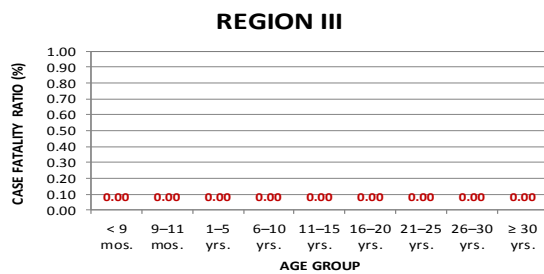


FIGURE 6.4.

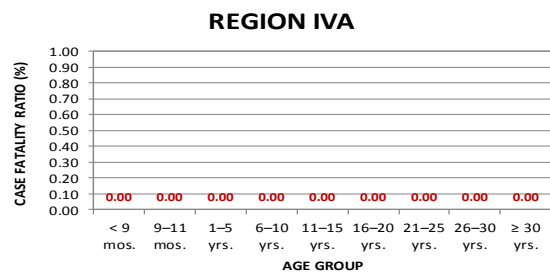


FIGURE 6.5.

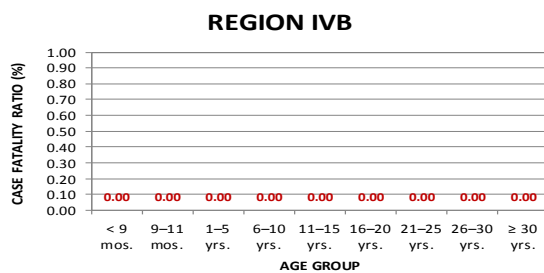


FIGURE 6.6.

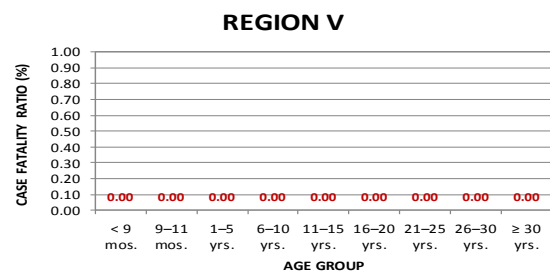


FIGURE 6.7.

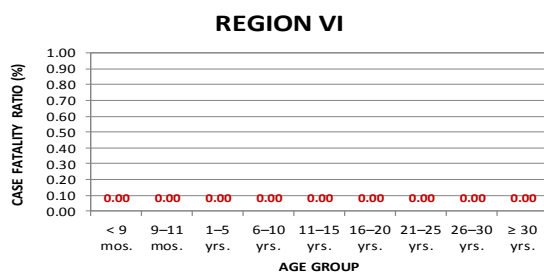


FIGURE 6.8.

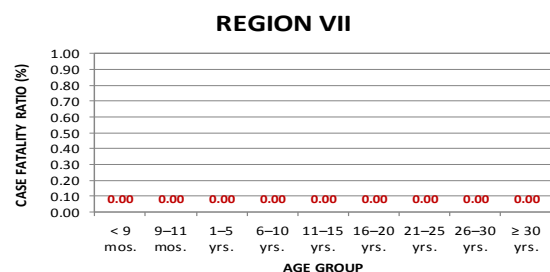


FIGURE 6.9.

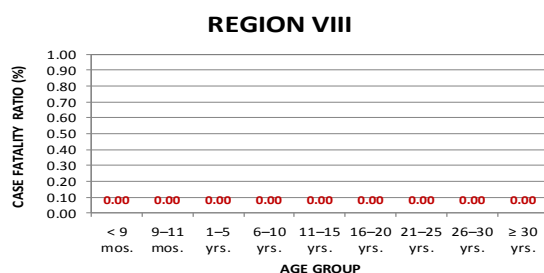


FIGURE 6.10.

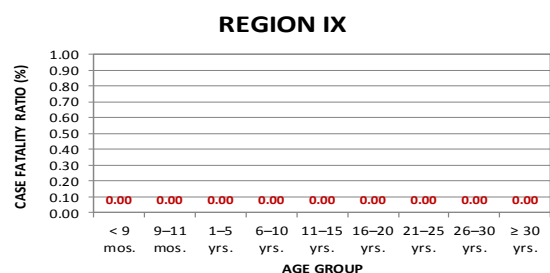




FIGURE 6.11.

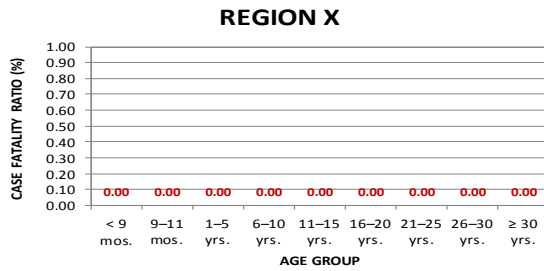


FIGURE 6.12.

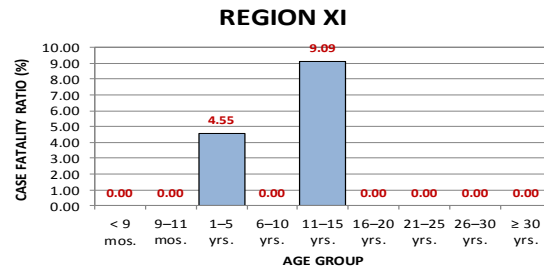


FIGURE 6.13.

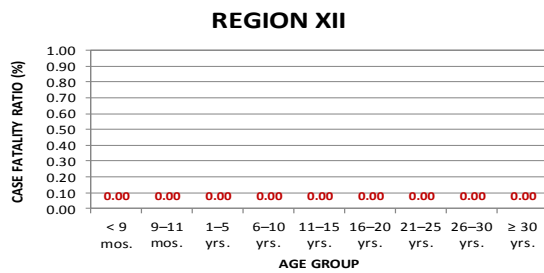


FIGURE 6.14.

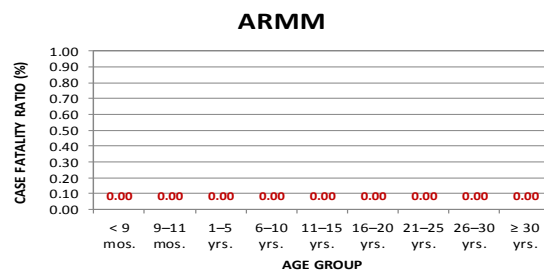


FIGURE 6.15.

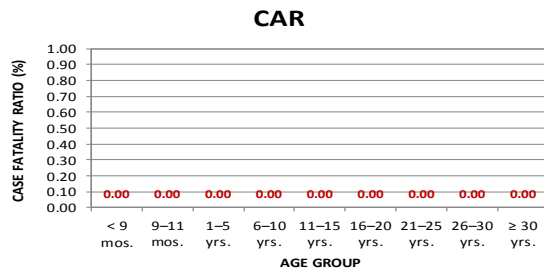


FIGURE 6.16.

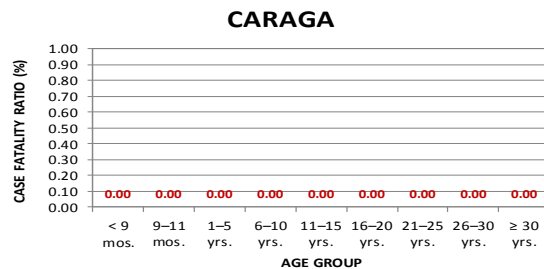


FIGURE 6.17.

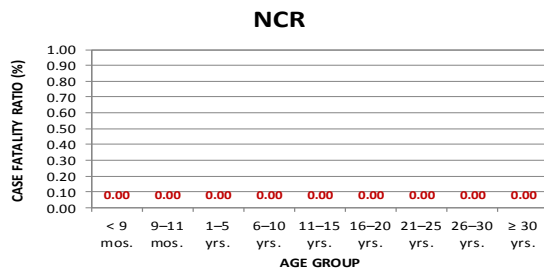
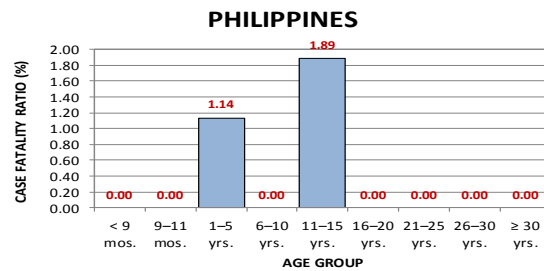


FIGURE 6.18.



Confirmed* Measles cases = Laboratory confirmed + Epi-linked confirmed Measles



Measles Elimination in the Philippines

The goal for Measles elimination in the Western Pacific Region was set in 2005. In September 2012, the Regional Committee for the Western Pacific Region encouraged its member states to undertake the challenges for Measles elimination.

The Department of Health through the Epidemiology Bureau take part in achieving this goal by closely monitoring the standard surveillance indicators to ensure that the Measles elimination goal will be attained and sustained. Currently, the Philippines has exceeded the low incidence target rate of <1/1million population (12.71/1,000,000 population), illustrating that the country needs to exert more efforts in attaining the elimination goal.

**TABLE 3. MEASLES SURVEILLANCE INDICATORS BY REGION
PHILIPPINES, JANUARY 1 – MAY 23, 2015**

| REGION | MEASLES INCIDENCE RATE | | BLOOD ADEQUACY RATE | | SUSPECT MEASLES CASES ADEQUATELY INVESTIGATED | | SUSPECT MEASLES REPORTING RATE | | NON-MEASLES/ NON-RUBELLA RATE | | MEASLES COMPATIBLE % | |
|--------|---------------------------|-------|---------------------|------|---|------|--------------------------------|-------|-------------------------------|-------|----------------------|------|
| | Target: <1/1,000,000 Pop. | | Target: ≥80% | | Target: ≥80% | | Target: ≥2/100,000 Pop. | | Target: ≥2/100,000 Pop. | | Target: <10% | |
| | 2014 | 2015* | 2014 | 2015 | 2014 | 2015 | 2014 | 2015* | 2014 | 2015* | 2014 | 2015 |
| 1 | 152.42 | 0.95 | 91 | 78 | 80 | 48 | 48.23 | 3.28 | 3.89 | 1.61 | 59 | 36 |
| 2 | 195.19 | 5.54 | 65 | 72 | 53 | 49 | 60.25 | 5.27 | 2.19 | 1.18 | 64 | 58 |
| 3 | 254.46 | 0.21 | 79 | 94 | 59 | 47 | 58.94 | 1.68 | 4.10 | 1.21 | 49 | 19 |
| 4A | 337.15 | 0.65 | 72 | 68 | 33 | 29 | 64.92 | 2.87 | 4.21 | 1.47 | 41 | 40 |
| 4B | 117.53 | 0.80 | 43 | 50 | 27 | 23 | 62.90 | 2.40 | 2.17 | 0.64 | 77 | 57 |
| 5 | 115.22 | 0.41 | 71 | 100 | 60 | 88 | 35.12 | 0.33 | 2.10 | 0.25 | 61 | 13 |
| 6 | 125.53 | 17.99 | 96 | 96 | 52 | 65 | 33.69 | 5.87 | 7.45 | 2.62 | 38 | 4 |
| 7 | 156.38 | 13.56 | 90 | 98 | 66 | 83 | 29.72 | 2.81 | 3.89 | 1.16 | 33 | 1 |
| 8 | 63.18 | 7.13 | 24 | 21 | 15 | 15 | 32.44 | 5.81 | 1.94 | 0.11 | 74 | 86 |
| 9 | 72.87 | 52.55 | 65 | 67 | 52 | 50 | 21.07 | 12.30 | 1.50 | 2.69 | 58 | 35 |
| 10 | 197.91 | 27.68 | 63 | 53 | 52 | 42 | 54.09 | 10.47 | 3.51 | 1.06 | 57 | 62 |
| 11 | 333.87 | 52.99 | 84 | 93 | 73 | 56 | 69.64 | 9.72 | 6.71 | 1.90 | 42 | 22 |
| 12 | 280.13 | 25.26 | 50 | 55 | 39 | 41 | 93.65 | 7.73 | 4.40 | 1.13 | 65 | 51 |
| ARMM | 126.76 | 4.78 | 46 | 41 | 33 | 17 | 45.13 | 3.14 | 1.24 | 0.61 | 69 | 65 |
| CAR | 122.88 | 46.30 | 96 | 95 | 86 | 70 | 37.73 | 10.89 | 5.13 | 5.31 | 51 | 6 |
| CRG | 292.86 | 54.98 | 78 | 82 | 70 | 32 | 76.82 | 9.07 | 5.58 | 1.56 | 54 | 21 |
| NCR | 456.60 | 2.59 | 71 | 69 | 41 | 17 | 108.33 | 2.03 | 5.37 | 0.92 | 53 | 33 |
| PHL | 237.73 | 12.71 | 71 | 72 | 48 | 45 | 59.27 | 4.49 | 4.15 | 1.35 | 52 | 36 |

2015* - Annualized rate

Definition of Terms:

Laboratory confirmed measles case – A suspect measles case with a positive laboratory test result for measles-specific IgM antibodies or other approved laboratory test method

Laboratory confirmed rubella case – A suspect measles case with a positive laboratory test result for rubella-specific IgM antibodies or other approved laboratory test method

Clinically measles compatible case – A case that meets the suspect case definition for measles but for which no adequate blood specimen was taken and which has not been linked epidemiologically to another case positive for measles IgM or another laboratory-confirmed communicable disease

Epidemiologically-linked measles (or rubella) case – A suspect measles case that has not been confirmed by laboratory but that is geographically AND temporally related (with dates of rash onset occurring between 7 and 21 days apart) to a laboratory-confirmed case or (in the event of an outbreak) to another epidemiologically confirmed measles case.

Discarded as non-measles/non-rubella – A case that meets the clinical case definition for measles and discarded as non-measles/rubella case.

Pending Classification - Cases with blood specimen collected and pending laboratory results.

Alert threshold – Refers to the level of occurrence of disease that serves as an early warning for epidemics. An increase in the number of cases above the threshold level should trigger an investigation, epidemic preparedness and implement appropriate prevention and control measures.

Epidemic threshold – Refers to the level of occurrence of disease above which an urgent response is required. The threshold is specific to each disease and depends on the infectiousness, other determinants of transmission and local endemicity levels.