



Morbidity Week 34: January 1 – August 27, 2016

Epidemiology Bureau
Public Health Surveillance Division

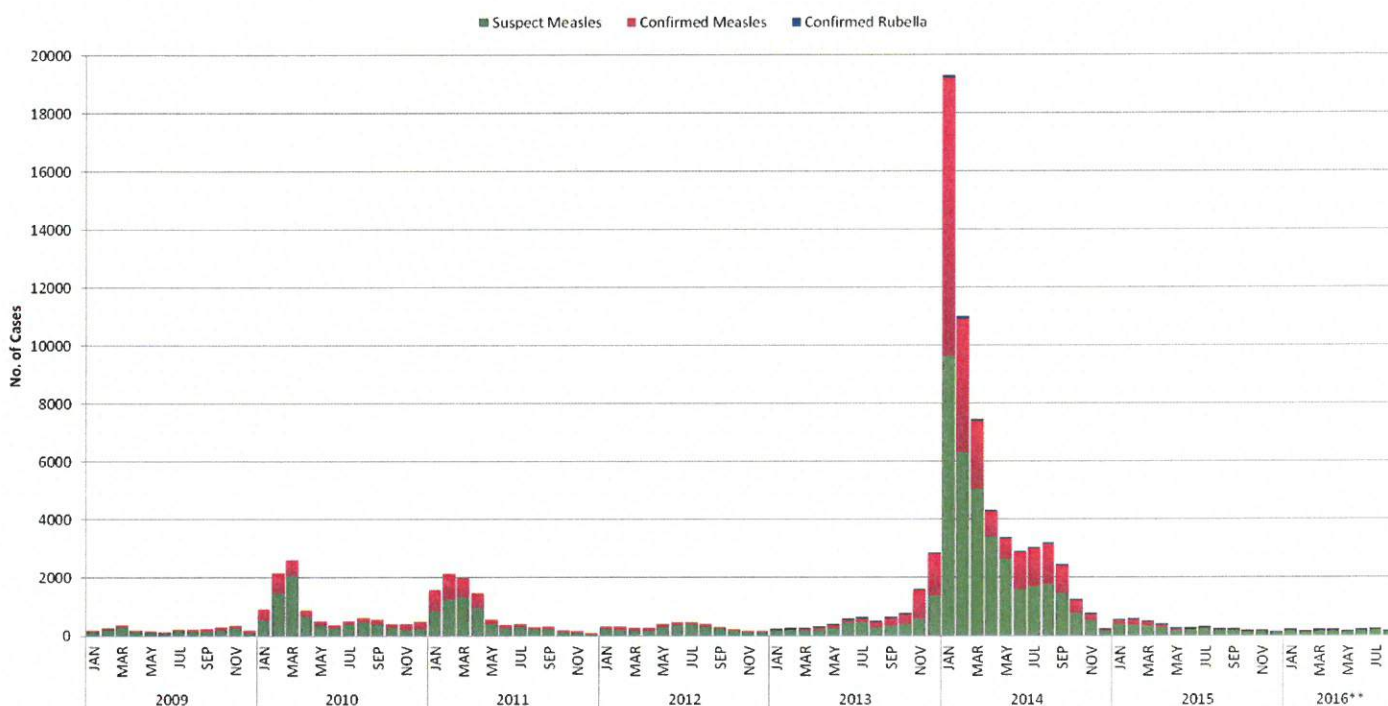
Measles Elimination Goal in the Philippines

Measles elimination goal is the absence of endemic measles virus transmission in a defined geographical area (e.g. region or country) for at least 12 months in the presence of a surveillance system that has been verified to be performing well. It was set in 2005 in the Western Pacific Region. 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 takes part in achieving this goal by closely monitoring the standard surveillance indicators to ensure that the Measles elimination goal will be attained and sustained.

Trend in the Philippines

FIGURE 1. TREND OF MEASLES AND RUBELLA* CASES, PHILIPPINES, 2009-2016**

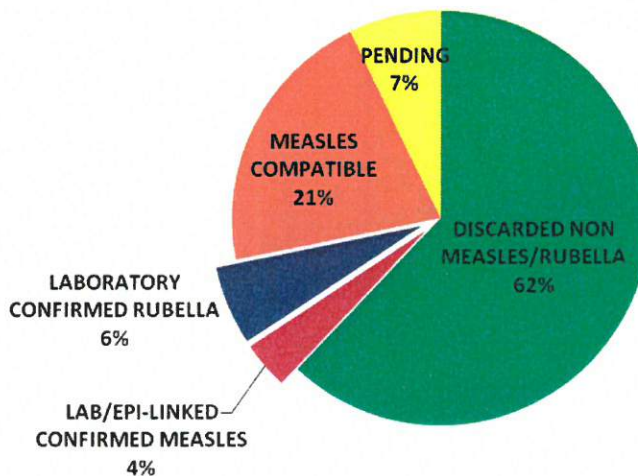


For the past years, the trend of measles and rubella has been very dynamic. Figure 1 presents the periods wherein measles outbreaks have been experienced. To date, there is still continuous transmission of the virus in the country and efforts are still to be made in order to achieve the elimination goal.

Currently, the Philippines has an incidence rate of **0.72** per 1,000,000 population. Still, sustenance of the elimination goal of <1/1million population until the end of the year remains to be a challenge.

A total of 1,383 suspect measles-rubella cases were reported nationwide from January 1 to August 27, 2016. Of these, 998 were tested. Among the suspect cases, 50 (4%) were classified as confirmed measles (laboratory or epi-linked confirmed measles). Eighty five cases (6%) were classified as laboratory confirmed rubella. Currently, there were no reported deaths among the confirmed measles-rubella cases.

FIGURE 2. DISTRIBUTION OF REPORTED MEASLES-RUBELLA CASES, PHILIPPINES, JANUARY 1 - AUGUST 27, 2016 (N=1,383)





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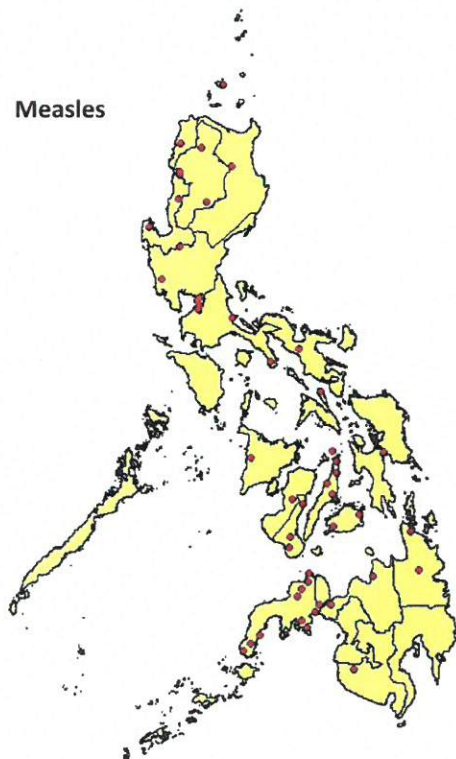
TABLE 1. MEASLES AND RUBELLA CASES BY REGION
PHILIPPINES, JANUARY 1 – AUGUST 27, 2016 (N=1,383)

REGION	TARGET 2/100K	REPORTED	CONFIRMED MEASLES		MEASLES COMPATIBLE	LABORATORY CONFIRMED RUBELLA	DISCARDED AS NON- MEASLES/RUBELLA	PENDING CLASSIFICATION
			LABORATORY CONFIRMED	EPI-LINKED CONFIRMED				
1	102	103	4	0	46	3	46	4
2	70	44	2	0	5	0	31	6
3	231	84	2	0	9	5	64	4
4A	303	137	3	1	27	6	90	10
4B	61	41	0	0	16	1	22	2
5	118	21	2	0	1	1	17	0
6	154	234	2	0	8	45	172	7
7	151	73	10	0	2	3	56	2
8	89	47	1	0	39	2	2	3
9	76	59	10	1	15	0	23	10
10	97	194	2	0	68	2	86	36
11	101	70	0	0	6	5	54	5
12	95	51	1	0	5	1	42	2
ARMM	71	6	0	0	2	0	1	3
CAR	36	59	3	0	8	2	46	0
CRG	53	26	2	0	11	0	13	0
NCR	264	134	4	0	23	9	93	5
PHL	2,074	1,383	48	2	291	85	858	99

From last month's surveillance report, 6 additional cases were confirmed as measles through serum testing. Rubella cases increased also from 75 to 85 cases for the current month. Measles compatible cases increased by 17% from the July case counts which implies decreased compliance in serum collection for laboratory confirmation.

Geographical Distribution of Confirmed Cases,
Philippines, January 1 – August 27, 2016

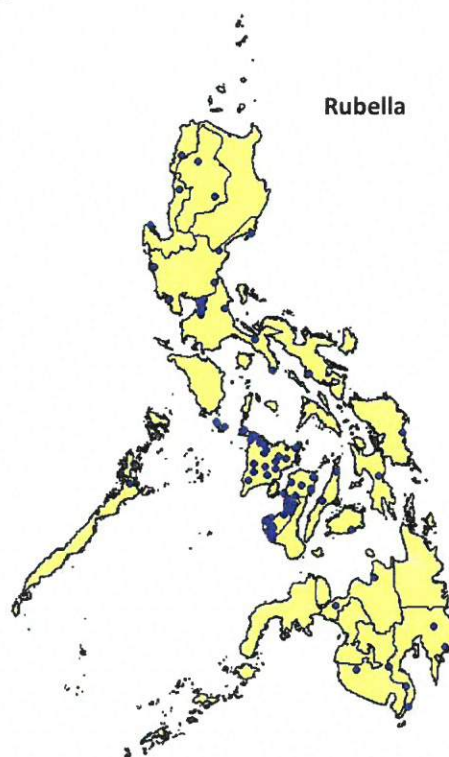
Measles



Measles	Region	Rubella
4	I	3
2	II	0
2	III	5
4	IVA	6
0	IVB	1
2	V	1
2	VI	45
10	VII	3
1	VIII	2
11	IX	0
2	X	2
0	XI	5
1	XII	1
0	ARMM	0
3	CAR	2
2	CARAGA	0
4	NCR	9
50	PHL	85

Legend
1 DOT = 1 Case

Rubella





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The maps show the distribution of cases among regions. Twenty two percent (22%) of the confirmed measles cases came from Region IX (11 cases) while 53% of the confirmed rubella cases were from Region VI (45 cases). Places of transmission for these regions have been identified which determined target population for mop-up immunization.

Newly Confirmed Cases

Region	Measles	Rubella
I	1	0
II	1	0
III	0	2
IVA	0	1
V	0	1
VI	0	1
VII	1	1
VIII	1	2
X	1	0
XI	0	1
NCR	1	1
PHL	6	10

Identified Clusters of Confirmed Measles and Rubella Among Regions

MW	Disease	Region	Province	Muncity	Barangay	Place of Transmission	No. of Cases
12	Measles	IX	Zamboanga del Norte	Kalawit	Palalian	Community	6
2-5	Rubella	VI	Antique	Tobias Fornier	-	School	13
9-13							7

Two new rubella cases from Region 3 came from different provinces. For Region 8, 2 confirmed rubella cases occurred in different morbidity weeks and different provinces also.

No new clusters identified after last week's report. Above is the list of clusters identified since January 2016.

**TABLE 2. CONFIRMED MEASLES CASES AND DEATHS BY REGION
PHILIPPINES, 2015 vs. 2016***

REGION	CASES			DEATHS			
	2016	2015	% CHANGE	2016	CFR (%)	2015	CFR (%)
1	4	6	↓ -33.33	0	0.00	0	0.00
2	2	14	↓ -85.71	0	0.00	0	0.00
3	2	6	↓ -66.67	0	0.00	0	0.00
4A	4	14	↓ -71.43	0	0.00	0	0.00
4B	0	2	↓ -100.00	0	0.00	0	0.00
5	2	1	↑ 100.00	0	0.00	0	0.00
6	2	63	↓ -96.83	0	0.00	0	0.00
7	10	45	↓ -77.78	0	0.00	0	0.00
8	1	20	↓ -95.00	0	0.00	0	0.00
9	11	103	↓ -89.32	0	0.00	0	0.00
10	2	63	↓ -96.83	0	0.00	0	0.00
11	0	122	↓ -100.00	0	0.00	2	1.64
12	1	76	↓ -98.68	0	0.00	0	0.00
ARMM	0	16	↓ -100.00	0	0.00	1	6.25
CAR	3	37	↓ -91.89	0	0.00	0	0.00
CRG	2	63	↓ -96.83	0	0.00	0	0.00
NCR	4	16	↓ -75.00	0	0.00	0	0.00
PHL	50	667	↓ -92.50	0	0.00	3	0.45

* as of August 27, 2016

*NOTE: Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.

The number of confirmed measles cases decreased significantly in 2016 (92.50%) compared to last year's cases of the same time period (see Table 2).



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**FIGURE 3. CONFIRMED MEASLES ALERT AND EPIDEMIC THRESHOLD
PHILIPPINES, JANUARY 1 – AUGUST 27, 2016* (n=50)**

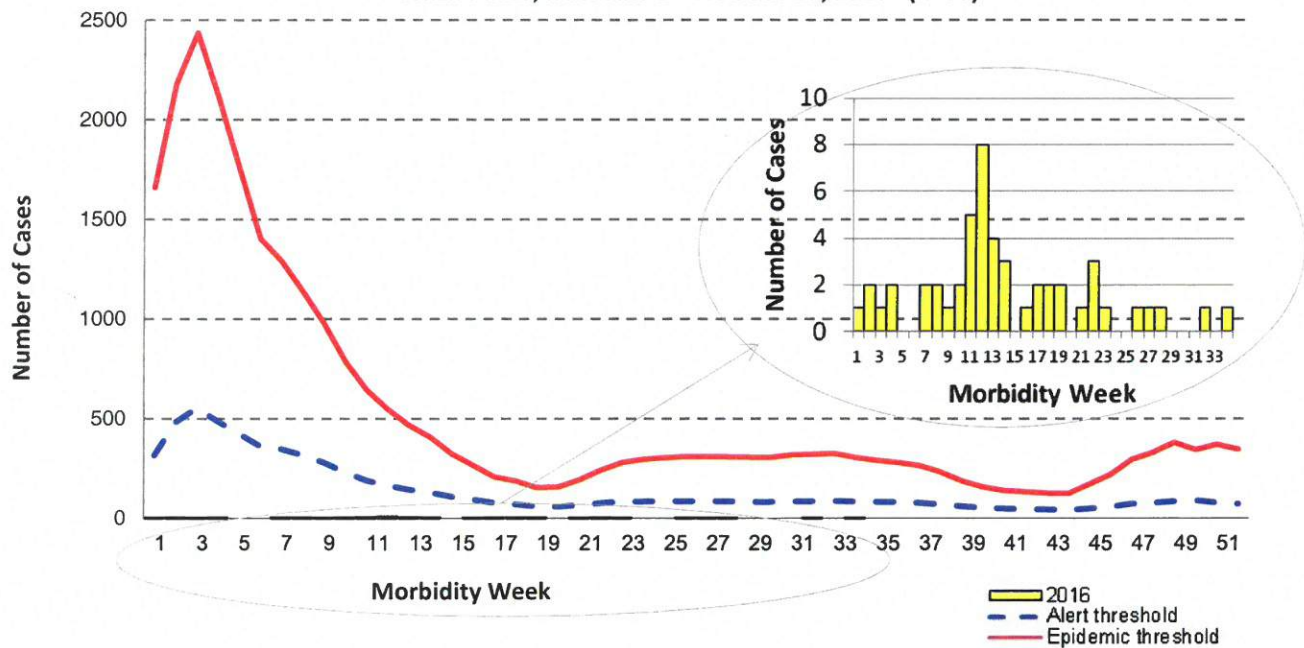


Figure 3 reflects the current number of confirmed measles cases in relation with the measles alert and epidemic threshold. It can be noted that the number of measles cases is still way below the threshold.

Virus Isolation and Genotyping

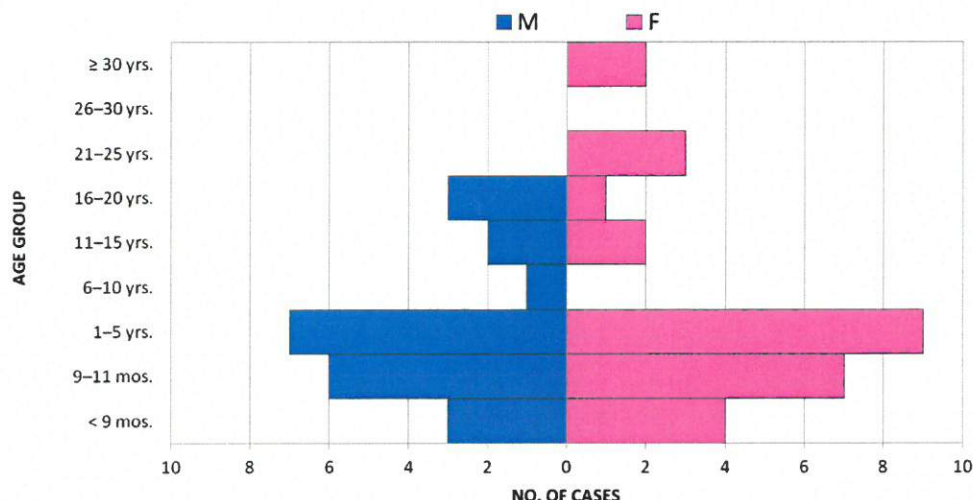
There were 38 oropharyngeal/nasopharyngeal swab samples submitted since January 2016. Among these, 6 have tested positive for rubella virus. Genotype identified for all the cases was 2B. None of the samples tested positive for measles virus.

Profile of Cases

Measles

Fifty six percent (56%) of the confirmed measles cases were female. Majority of the confirmed cases belonged to children aged 1 to 5 years old (32%) as shown in Figure 4. Among the confirmed measles cases, 24 (48%) were not vaccinated, 22 (44%) were vaccinated and 4 (8%) have an unknown vaccination status (Figure 5).

**FIGURE 4. CONFIRMED MEASLES CASES BY AGE GROUP AND SEX
PHILIPPINES, JANUARY 1- AUGUST 27, 2016 (n=50)**

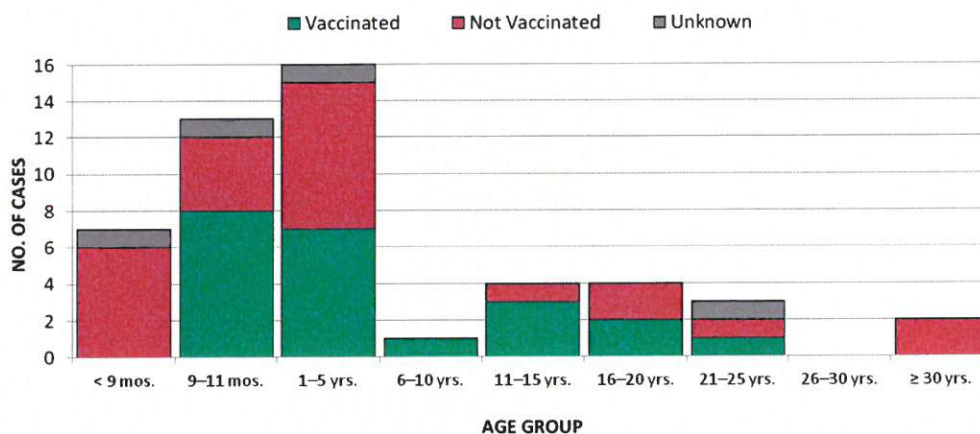




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FIGURE 5. IMMUNIZATION STATUS OF CONFIRMED MEASLES CASES BY AGE GROUP
PHILIPPINES, JANUARY 1 AUGUST 27, 2016 (n=50)

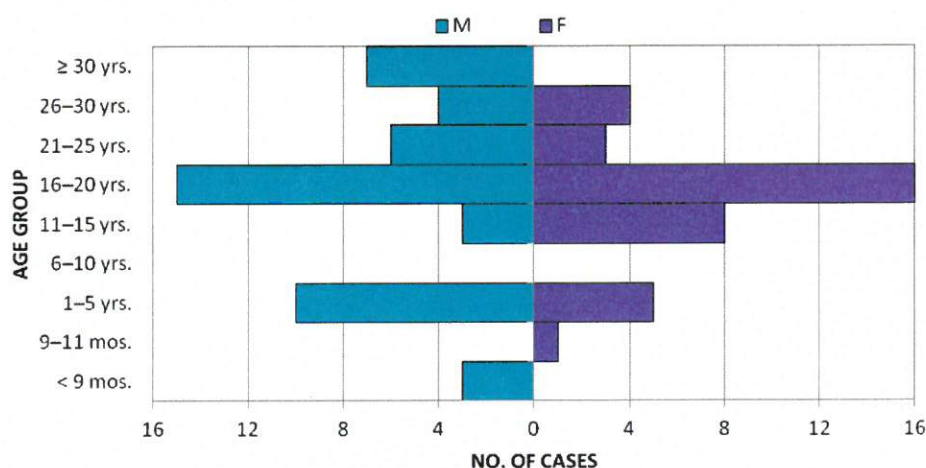


NOTE: Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.

Rubella

Fifty six percent (56%) of the confirmed rubella cases were male. Majority of the confirmed cases belonged to the young adult age group ranging from 16 to 20 years old (39%) as shown in Figure 6. Among the female suspect measles-rubella cases, there were 13 pregnant cases, 2 tested positive for measles but negative for rubella and all the rest tested negative for both measles and rubella IgM. (Pregnancy data source: CIF encoded by RITM)

FIGURE 6. CONFIRMED RUBELLA CASES BY AGE GROUP AND SEX
PHILIPPINES, JANUARY 1- AUGUST 27, 2016 (n=85)



NOTE: Case counts reported here do NOT represent the final number and are subject to change after inclusion of delayed reports and review of cases.



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Measles Surveillance Performance Indicators

TABLE 3. MEASLES SURVEILLANCE PERFORMANCE INDICATORS* BY REGION
PHILIPPINES, 2015 vs. 2016**

REGION	POPULATION 2016	ANNUALIZED MEASLES INCIDENCE RATE		BLOOD ADEQUACY RATE		SUSPECT MEASLES CASES ADEQUATELY INVESTIGATED		ANNUALIZED SUSPECT MEASLES REPORTING RATE		ANNUALIZED 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%	
		2015	2016	2015	2016	2015	2016	2015	2016	2015	2016	2015	2016
1	5,113,827	1.58	1.17	76	53	66	49	3.27	3.02	1.96	1.35	30	45
2	3,510,762	4.04	0.85	73	82	70	80	3.61	1.88	1.33	1.32	49	11
3	11,534,111	0.71	0.26	85	86	80	76	1.40	1.09	1.00	0.83	18	11
4A	15,172,632	1.29	0.40	64	76	57	64	2.41	1.35	1.17	0.89	40	20
4B	3,057,039	1.00	0.00	47	51	38	49	2.83	2.01	0.93	1.08	55	39
5	5,920,478	0.17	0.51	96	100	92	100	0.41	0.53	0.33	0.43	13	5
6	7,703,570	8.29	0.39	97	95	89	88	5.10	4.56	3.12	3.35	7	3
7	7,565,674	6.86	1.98	98	97	86	93	2.14	1.45	1.14	1.11	5	3
8	4,430,334	4.80	0.34	20	17	16	15	4.59	1.59	0.11	0.07	87	83
9	3,814,158	28.04	4.33	70	62	62	56	10.81	2.32	4.03	0.90	35	25
10	4,865,413	13.42	0.62	43	62	42	55	6.94	5.98	0.78	2.65	69	35
11	5,033,163	25.12	0.00	92	93	87	89	6.04	2.09	2.15	1.61	20	9
12	4,768,455	17.40	0.31	60	88	57	82	8.12	1.60	2.94	1.32	42	10
ARMM	3,566,757	4.55	0.00	47	67	46	67	2.33	0.25	0.34	0.04	66	33
CAR	1,792,078	21.56	2.51	90	81	87	80	9.02	4.94	5.45	3.85	14	14
CRG	2,657,380	24.05	1.13	74	58	64	58	6.07	1.47	1.79	0.73	30	42
NCR	13,205,216	1.39	0.45	60	78	50	73	1.82	1.52	0.87	1.06	39	17
PHL	103,711,049	6.85	0.72	70	76	64	70	3.64	2.00	1.48	1.24	36	21
LEGEND:		<1	≥1	≥80%	<80%	≥80%	<80%	≥2/100,000 Pop.	<2/100,000 Pop.	≥2/100,000 Pop.	<2/100,000 Pop.	<10%	>50%

*see Annex B

** as of August 27, 2016

Table 3 presents the current surveillance performance of regions based on the indicators for measles surveillance. Countrywide incidence rate of 0.72 per 1,000,000 population has been achieved, reaching the target of <1 per 1,000,000 population. Regions I, VII, IX, CAR and CARAGA did not meet the target which implies increased occurrence of measles in these regions.

These surveillance indicators gauges the capacity of the country in achieving the measles elimination goal. Analyzing the overall performance of all the surveillance indicators, the country needs a joint effort among regions in order to cope up with these targets. Intensification of active surveillance should be initiated across the country in order to reach the targets towards measles elimination.

Annex A. 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

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

Confirmed Measles cases

Laboratory confirmed + Epidemiologically-linked measles cases



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**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.

Annex B. Measles Surveillance Indicators Targets

Measles incidence rate*, target: <1/ 1,000,000 of the total population. It measures the progress of a country towards measles elimination. High incidence rate indicates persistence of measles transmission in some areas.

Suspect Measles Reporting Rate (or Measles Rate)*, target: ≥2 per 100,000 of the total population. It measures the ability to detect suspect measles cases. Reporting an adequate number of suspected cases provides confidence that the system is sensitive to detect measles cases.

Non-Measles Reporting Rate*, target: ≥2 per 100,000 of the total population. If non-measles reporting rate is equal or proportion to the number of suspected measles cases in all regions, it gives us higher chance in attaining our goal of measles elimination.

Adequacy of blood specimen (blood adequacy rate), target: ≥80% adequate specimen collection rate. This will facilitate the specificity (ability to determine measles virus as the cause of illness) of reported measles cases. With adequate specimen collection there will be an access to identify the circulating measles virus in the community.

Timeliness and adequacy of investigation, provides venue to prevent further transmission of measles cases in the community, furthermore, provides immediate response to prevent potential outbreaks. Its target rate is ≥80% of cases were investigated within 48 hours of notification.

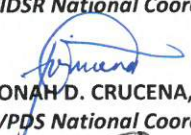
*Annualized rate, measures the incidence or reporting in a period of 1 year. This is computed by the number of specific measles cases over the target measles cases divided by 12 months then multiplied by the number of months to be analyzed.

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