



January 1 – April 1, 2017

Epidemiology Bureau
Public Health Surveillance Division

Classification of Suspect Measles-Rubella Cases

A total of 782 suspect measles-rubella cases were reported nationwide from January 1 to April 1, 2017. Of these, 562 (72%) were tested. Among the suspect cases, 13 cases (1.67%) were classified as **laboratory confirmed or epidemiologically-linked confirmed measles**, while 152 cases (19.43%) were classified as **laboratory confirmed or epidemiologically-linked confirmed rubella**. Measles cases are **58.06% lower** while rubella cases are **181.48% higher** than the previous year of the same time period. Currently, there were no reported deaths among the confirmed measles-rubella cases.

FIGURE 1. CLASSIFICATION OF SUSPECT MEASLES-RUBELLA CASES, PHILIPPINES, JANUARY 1 – APRIL 1, 2017 (N=782)

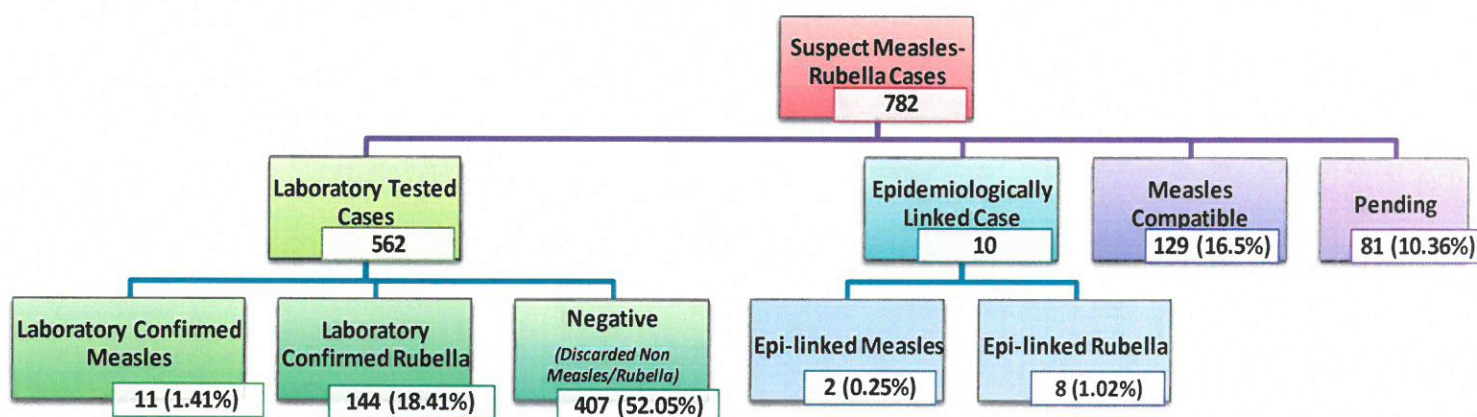


TABLE 1. MEASLES AND RUBELLA CASES BY REGION PHILIPPINES, JANUARY 1 – APRIL 1, 2017 (N=782)

REGION	REPORTED	CONFIRMED MEASLES		MEASLES COMPATIBLE	CONFIRMED RUBELLA		DISCARDED AS NON-MEASLES/RUBELLA	PENDING CLASSIFICATION
		LABORATORY CONFIRMED	EPI-LINKED CONFIRMED		LABORATORY CONFIRMED	EPI-LINKED CONFIRMED		
I	80	1	0	6	16	0	50	7
II	10	0	0	1	0	0	9	0
III	68	1	0	3	17	0	45	2
IVA	198	3	0	37	37	0	93	28
IVB	13	0	0	6	1	0	5	1
V	15	0	0	1	2	0	8	4
VI	29	0	0	0	5	0	21	3
VII	27	0	0	0	4	0	18	5
VIII	71	0	0	12	30	7	6	16
IX	21	2	0	10	2	0	6	1
X	38	1	0	9	3	0	19	6
XI	17	1	0	0	0	0	16	0
XII	20	0	0	1	0	0	19	0
ARMM	5	0	0	3	0	0	1	1
CAR	31	0	1	12	5	0	9	4
CRG	10	0	0	4	0	0	5	1
NCR	129	2	1	24	22	1	77	2
PHL	782	11	2	129	144	8	407	81

see Annex A for confirmed measles cases by barangay



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FIGURE 2. GEOGRAPHICAL DISTRIBUTION OF CONFIRMED CASES*, PHILIPPINES, JANUARY 1 – APRIL 1, 2017

Region	Measles	Rubella
I	1	16
II	0	0
III	1	17
IVA	3	37
IVB	0	1
V	0	2
VI	0	5
VII	0	4
VIII	0	37
IX	2	2
X	1	3
XI	1	0
XII	0	0
ARMM	0	0
CAR	1	5
CRG	0	0
NCR	3	23
PHL	13	152

Legend:
1 dot = 1 case
● Rubella
● Measles

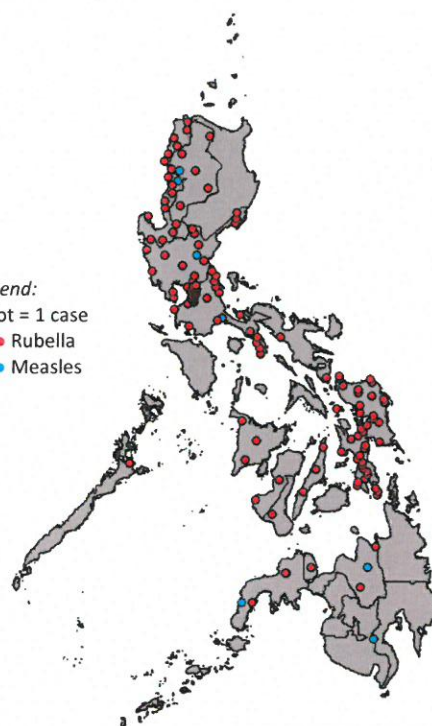


Figure 2 shows the distribution of cases among regions. For confirmed measles, Regions IVA and NCR have the most number of cases with 3 (23.08%) cases per region followed by Region IX with 2 (15.38%) cases.

Meanwhile, confirmed rubella cases in Regions IVA and VIII are the highest in number, with 37 (24.34%) cases per region followed by NCR (23, 15.13%) and Region III (17, 11.18%).

*lab confirmed and epi-linked confirmed cases

TABLE 2. CONFIRMED MEASLES AND RUBELLA CASES BY REGION PHILIPPINES, 2016 vs. 2017

REGION	CONFIRMED MEASLES CASES			CONFIRMED RUBELLA CASES		
	2017	2016	% CHANGE	2017	2016	% CHANGE
I	1	1	→ 0.00	16	0	↑ 1600.00
II	0	0	→ 0.00	0	0	→ 0.00
III	1	1	→ 0.00	17	1	↑ 1600.00
IVA	3	0	↑ 300.00	37	4	↑ 825.00
IVB	0	0	→ 0.00	1	1	→ 0.00
V	0	1	↓ -100.00	2	0	↑ 200.00
VI	0	2	↓ -200.00	5	38	↓ -86.84
VII	0	8	↓ -800.00	4	2	↑ 100.00
VIII	0	2	↓ -200.00	37	1	↑ 900.00
IX	2	10	↓ -80.00	2	0	↑ 200.00
X	1	0	↑ 100.00	3	0	↑ 300.00
XI	1	0	↑ 100.00	0	2	↓ -200.00
XII	0	1	↓ -100.00	0	1	↓ -100.00
ARMM	0	0	→ 0.00	0	0	→ 0.00
CAR	1	2	↓ -50.00	5	0	↑ 500.00
CRG	0	1	↓ -100.00	0	0	→ 0.00
NCR	3	2	↑ 50.00	23	4	↑ 475.00
PHL	13	31	↓ -58.06	152	54	↑ 181.48

The number of confirmed rubella cases increased significantly by **181.48%** while number of measles cases decreased by **58.06%** as of morbidity week 13, compared to the same time period last year (see Table 2).



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**FIGURE 3. CONFIRMED RUBELLA ALERT AND EPIDEMIC THRESHOLD
PHILIPPINES, JANUARY 1 – APRIL 1, 2017 (n=152)**

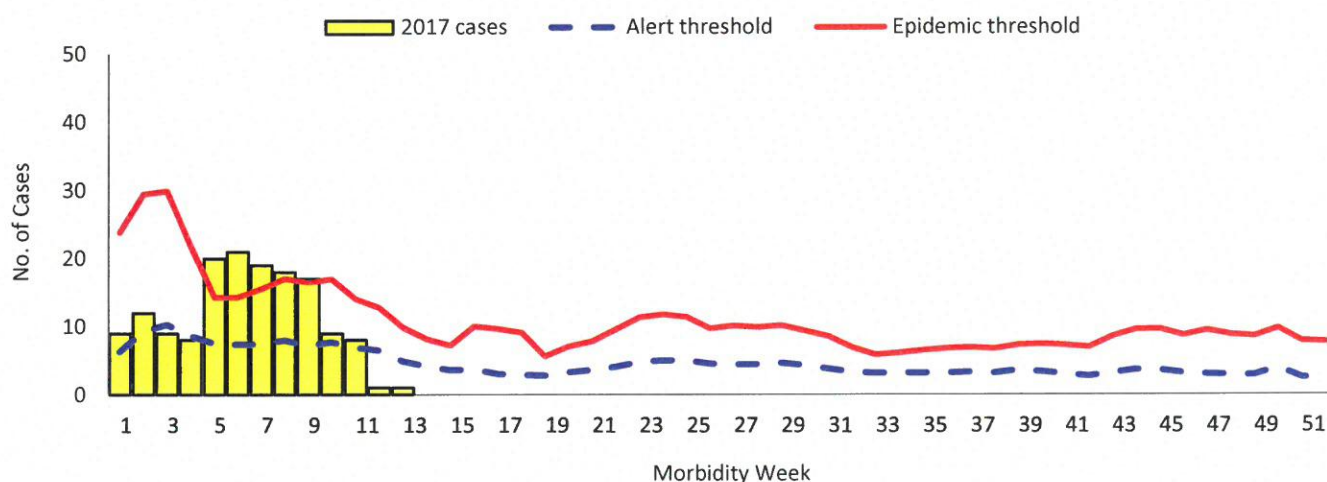


Figure 3 reflects the confirmed rubella cases in relation with the rubella alert and epidemic thresholds. It can be noted that the weekly number of rubella cases have continuously exceeded the alert threshold from weeks 1 to 11. It reached the epidemic threshold in morbidity weeks 5 to 9. As of morbidity week 13, rubella incidence rate is 1.45 per 1,000,000 population.

The current number of confirmed measles cases is still way below the alert threshold. Measles incidence rate is 0.12 per 1,000,000 population.

**Note: Target incidence rate for measles and rubella elimination is <1 per 1,000,000 population*

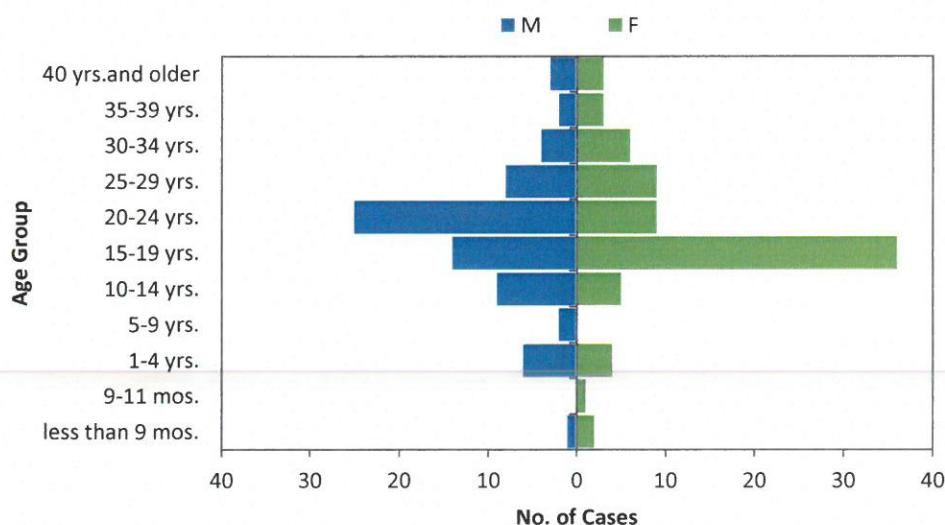
Virus Isolation and Genotyping

There were 22 oropharyngeal/nasopharyngeal swab samples submitted since January 2017. Among these, only 1 tested positive for rubella virus. Genotype identified for the case was 2B. None of the samples tested positive for measles virus.

RUBELLA

Profile of Cases

**FIGURE 4. CONFIRMED RUBELLA CASES BY AGE GROUP AND SEX
PHILIPPINES, JANUARY 1- APRIL 1, 2017 (n=152)**



Of the confirmed rubella cases, 51.32% were female (78 cases). Majority of the confirmed rubella cases belonged to the 15-19 year old age group (32.89%) followed by the 20-24 year old age group (22.37%) as shown in Figure 4.

Two (2) confirmed rubella cases reported in January and February were pregnant. One is on her 36th week and the other on her 19th week. Both cases are currently being monitored by their respective Epidemiology and Surveillance Units (ESUs) Maternal, Newborn and Child Health and Nutrition (MNCHN) program managers.



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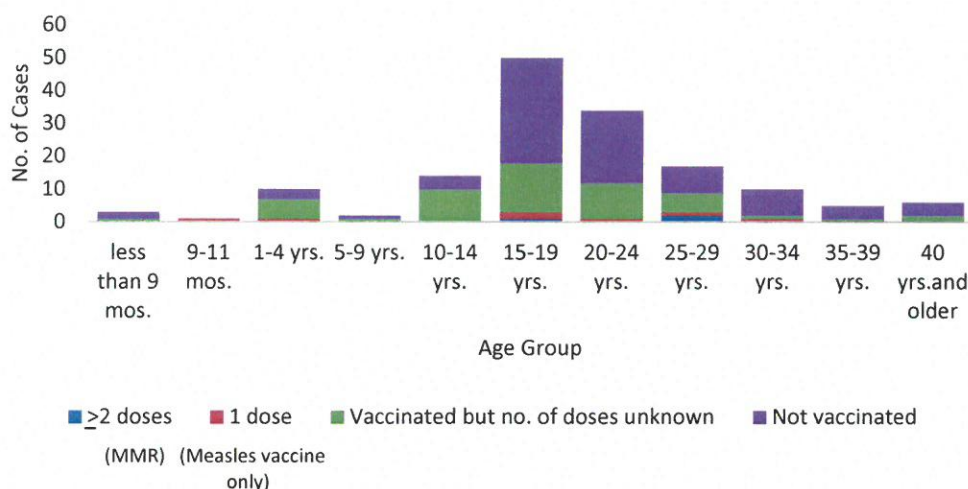
Immunization Status

Basis for the immunization status among confirmed rubella cases is the measles vaccination status. Sixty four (42.11%) were vaccinated and 88 (57.89%) were not vaccinated. (Figure 5)

Analysis on MMR vaccination and doses are limited due to incomplete data on the current surveillance database. Among the 64 vaccinated cases, only 3 specified receiving MMR doses and 1 receiving a n MR dose.

FIGURE 5. IMMUNIZATION STATUS OF CONFIRMED RUBELLA CASES BY AGE GROUP

PHILIPPINES, JANUARY 1- APRIL 1, 2017 (n=152)



Rubella Clusters

MW	Region	Province	Muncity	Barangay	Place of Transmission	No. of Confirmed Cases	No. of Suspect Cases
3	V	Camarines Norte	Labo	Malatap	Home/ Dormitory	2	0
3-7	NCR	Metro Manila	San Juan City	West Crame	Barangay/ Community	4	0
5-6	IVA	Batangas	Batangas City	Pinamucan Ibaba	Home/ Dormitory	2	0
5-11	VIII	Northern Samar	San Antonio	Dalupirit Manraya Pilar San Nicolas Vinitahan	School	35	19
9	III	Pampanga	Mabalacat	Airforce City	Unknown	3	0
9-10	NCR	Metro Manila	Quezon City	Project 4	Unknown	2	0

Six rubella clusters have been identified for year 2017. These cases are related in place of residences and onset of symptoms, located in the same barangay or identified place of transmission (e.g. school in Northern Samar) and occurred within 4 consecutive weeks.

MEASLES

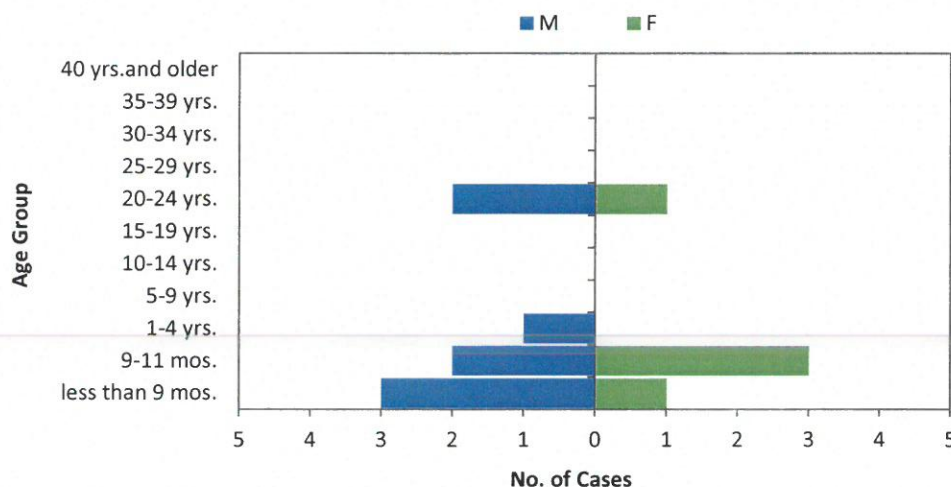
Profile of Cases

Sixty one percent (61%) of the confirmed measles cases were male. Majority of the confirmed cases belonged to children aged 9 to 11 months old (38.46%) as shown in Figure 6.

Immunization Status

Among the confirmed measles cases, 8 (61.54%) were vaccinated and 5 (38.46%) were not vaccinated. Only 2 vaccinated cases specified receipt of 1 measles-containing vaccine. (Figure 7)

FIGURE 6. CONFIRMED MEASLES CASES BY AGE GROUP AND SEX
PHILIPPINES, JANUARY 1- APRIL 1, 2017 (n=13)

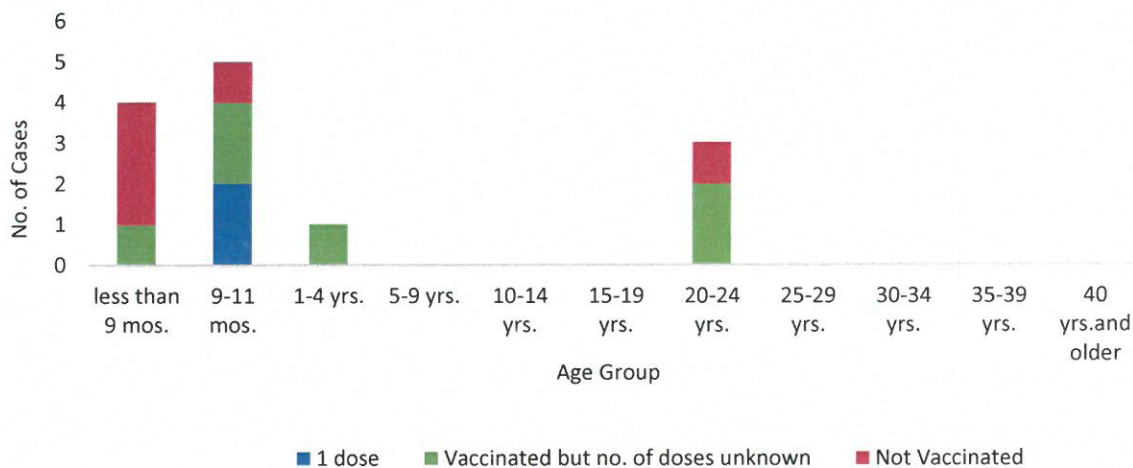




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**FIGURE 7. IMMUNIZATION STATUS OF CONFIRMED MEASLES CASES BY AGE GROUP
PHILIPPINES, JANUARY 1- APRIL 1, 2017 (n=13)**



Measles Clusters

MW	Region	Province	Muncity	Barangay	Place of Transmission	No. of Confirmed Cases	No. of Suspect Cases
7-10	NCR	Metro Manila	Manila City	Tondo	Barangay/Community	2	0

Actions Taken for Measles-Rubella Clusters and Cases:

1. Initial Coordination and Feedback Meetings
 - a. Had a number of meetings with Family Health Office (FHO) to discuss the increasing cases of vaccine preventable disease (VPD) cases in the country
2. DOH Coordination Meeting
 - a. Had a DOH coordination meeting between FHO, Epidemiology Bureau (EB), Health Promotion and Communication Services (HPCS) and RITM to discuss the VPD data, response to outbreaks (FHO and IDO), preventive measures and next steps
 - b. Field response and case investigation of laboratory confirmed VPD cases were discussed
 - c. Other agreements:
 - Regularly check vaccine coverage to identify the at-risk areas for VPDs.
 - Development of guidelines on VPD cases, outbreaks and complications including clinical management.
 - Enhancement of vaccination coverage and health promotion interventions.
 - Enhancement of surveillance: inclusion of maternal vaccination history

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Annex A. Confirmed Measles and Rubella Cases by Barangay

CONFIRMED MEASLES CASES PHILIPPINES, JANUARY 1 - APRIL 1, 2017 (n=13)				
REGION	PROVINCE	MUNCITY	BARANGAY	NO. OF CASES
01	PANGASINAN	DAGUPAN CITY	MAYOMBO	1
03	PAMPANGA	LUBAO	SANTA CRUZ	1
04A	CAVITE	DASMARIÑAS CITY	BUROL I	1
		TANZA	SANJA MAYOR	1
	RIZAL	ANTIPOLO CITY	SAN JOSE	1
09	ZAMBOANGA DEL SUR	ZAMBOANGA CITY	AYALA	1
			TUMAGA	1
10	MISAMIS ORIENTAL	MANTICAO	POBLACION	1
11	DAVAO DEL NORTE	ISLAND GARDEN CITY OF SAMAL	SAN ISIDRO (BABAK)	1
CAR	BENGUET	BAGUIO CITY	CABINET HILL-TEACHER'S CAMP	1
NCR	METRO MANILA	CALOOCAN CITY	BAGONG BARRIO	1
		MANILA CITY	TONDO	2
PHILIPPINES				13



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CONFIRMED RUBELLA CASES PHILIPPINES, JANUARY 1 - APRIL 1, 2017 (n=152)				
REGION	PROVINCE	MUNCITY	BARANGAY	NO. OF CASES
01	ILOCOS SUR	SAN VICENTE	SAN SEBASTIAN	1
		VIGAN CITY	NAGSANGALAN	1
	LA UNION	ARINGAY	SANTA RITA EAST	1
		BANGAR	CADAPLI	1
		BAUANG	PAYOCPOC NORTE ESTE	1
			PAYOCPOC SUR	1
		SAN FERNANDO CITY	BARANGAY I (POB.)	1
			LINGSAT	1
	PANGASINAN	DAGUPAN CITY	BONUAN BOQUIG	1
			LUCAO	1
			MANGIN	1
			NAGUILAYAN	1
		MANAOAG	BABASIT	1
		MANGATAREM	MACARANG	1
		SANTA BARBARA	TULIAO	1
		URDANETA CITY	NANCAMALIRAN WEST	1
03	BATAAN	MARIVELES	BALON-ANITO	1
			CAMAYA	2
		ORION	GENERAL LIM (KAPUT)	1
	BULACAN	BALIUAG	SABANG	1
		MARILAO	CAMANSI PRENZA III	1
		SAN MIGUEL	BANTOG	1
	PAMPANGA	MABALACAT CITY	AIRFORCE CITY	3
		SANTA ANA	SANTA MARIA	1
		SASMUAN	SAN PEDRO	1
	TARLAC	LA PAZ	DUMARAIS	1
	ZAMBALES	BOTOLAN	PORAC	1
		IBA	PALANGINAN	1
04A	BATANGAS	BATANGAS CITY	TINGA LABAK	1
			BARANGAY 18 (POB.)	1
			BARANGAY 19	1
			CONCEPCION	1
			KUMINTANG ILAYA	1
			PALLOCAN KANLURAN	1
			PINAMUCAN IBABA	2
			SAN ISIDRO	1
			SAN MIGUEL	1
			SANTO DOMINGO	1
			TABANGAO DAO	1



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CONFIRMED RUBELLA CASES PHILIPPINES, JANUARY 1 - APRIL 1, 2017 (n=152)				
REGION	PROVINCE	MUNCITY	BARANGAY	NO. OF CASES
04A	BATANGAS	TAYSAN	MABAYABAS	1
		LIPA CITY	MUNTING PULO	1
		SAN JOSE	CALANSAYAN	1
	CAVITE	BACOR CITY	MOLINO III	1
		DASMARIÑAS CITY	BUROL I	1
			H-2	1
			SALAWAG	1
			SAN ANTONIO DE PADUA I	1
			SAN FRANCISCO I	1
			SAN JUAN (SAN JUAN I)	1
			SAN LORENZO RUIZ II	1
			SAN LUIS II	1
			SAN NICOLAS I	1
			SAN NICOLAS IV	1
			SANTA LUCIA (SAN JUAN II)	1
			SANTA MARIA (BARANGAY 20)	1
			VICTORIA REYES	1
		IMUS CITY	ANABU II	1
			TANZANG LUMA II	1
		TANZA	BIWAS	1
	LAGUNA	SAN PEDRO	SAN VICENTE	1
	QUEZON	LOPEZ	UNSPECIFIED	1
04B	RIZAL	ANTIPOLO CITY	DELA PAZ (POB.)	1
		TAYTAY	SAN JUAN	1
		TERESA	PRINZA	1
	PALAWAN	PUERTO PRINCESA CITY	SAN MIGUEL	1
05	CAMARINES NORTE	LABO	MALATAP	2
06	CAPIZ	TAPAZ	POBLACION	1
	ILOILO	PASSI CITY	MAN-IT	1
		SAN ENRIQUE	CAMIRI	1
	NEGROS OCCIDENTAL	ENRIQUE B. MAGALONA	POBLACION II (BARANGAY 2)	1
		VALLADOLID	DOLDOL	1
07	CEBU	CEBU CITY	PARI-AN	1
			PUNTA PRINCESA	1
		COMPOSTELA	LUPA	1
		MANDAUE CITY	TABOK	1



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CONFIRMED RUBELLA CASES PHILIPPINES, JANUARY 1 - APRIL 1, 2017 (n=152)						
REGION	PROVINCE	MUNCITY	BARANGAY	NO. OF CASES		
08	NORTHERN SAMAR	SAN ANTONIO	DALUPIRIT	18		
			MANRAYA	7		
			PILAR	5		
			SAN NICOLAS	4		
			VINISITAHAN	2		
	SAMAR	CATBALOGAN	MAULONG	1		
09	ZAMBOANGA DEL SUR	ZAMBOANGA CITY	BALIWASAN	1		
			TALON-TALON	1		
10	MISAMIS OCCIDENTAL	OZAMIS CITY	MALAUANG	1		
		TANGUB CITY	BARANGAY VII - UPPER POLAO (POB.)	1		
	MISAMIS ORIENTAL	CAGAYAN DE ORO CITY	PATAG	1		
CAR	BENGUET	ATOK	ABIANG	1		
		BAGUIO CITY	CAMP 7	1		
			CAMP ALLEN	1		
			SANITARY CAMP, NORTH	1		
			LA TRINIDAD	PICO	1	
		NCR	METRO MANILA	CALOOCAN CITY	BARANGAY 170	1
BARANGAY 179	1					
MAKATI CITY	PITOGO			1		
MALABON CITY	TONSUYA			1		
MANDALUYONG CITY	PAG-ASA			1		
	BARANGAY 399			1		
	BINONDO			1		
	BRGY. 33			1		
	OLD SITE BASECO			1		
	PACO			1		
	SAMPALOC			1		
	SANTA CRUZ			1		
PARAÑAQUE CITY	DON GALO			1		
	SAN DIONISIO			1		
PASAY CITY	BRGY. 145			1		
QUEZON CITY	MARIANA			1		
	PROJECT 4			2		
SAN JUAN CITY	ONSE			1		
	WEST CRAME			4		
PHILIPPINES				152		



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Annex B. 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
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 non-measles/rubella	☞ A case that meets the clinical case definition for measles and tested negative for both measles and rubella testing.
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.
Cluster of cases	☞ 2 or more cases with temporal (occurring in a span of 4 weeks) and geographical association (within the same barangay)