

The Report of First Imported Measles Case in 2016

Chien-Yu Chou*, Yu-Fang Tsai, Hsiao-Ping Tung, Jer-Jea Yen

Abstract

As international travel become more frequent, many diseases spread transnationally due to traveling, business trip, visiting relatives and other activities. Measles is one of the highly contagious diseases, which leads to endemic clusters easily by imported cases. Taipei Regional Center of Centers for Disease Control confirmed the first imported measles case in 2016, who often goes abroad for business. She went to Beijing in early March, 2016, and developed fever, cough and skin rashes after coming back to Taiwan. The health authority implemented a number of preventive measures immediately after being notified. To monitor the conditions of contacts, follow-up mechanisms were activated in other cities and counties. No new measles cases or outbreaks were identified after the maximum incubation period. People who plan for a trip to high risk areas and those who frequently contact foreigners because of work should receive additional Measles, mumps, and rubella (MMR) vaccine at their own expense in order to prevent the risk of infection. Enhancing the alertness on measles to health care workers could effectively reduce the number of contacts and consumption of resources.

Keywords: Measles, Imported case, Contact tracing, MMR vaccine, Resource consumption

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A Measles Cluster in Taipei Song Shan Airport, 2016

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Abstract

The Taiwan Centers for Disease Control (Taiwan CDC) was notified of two suspected measles cases by the local hospitals on July 31, 2016. During the exposure periods, both cases had been to Taipei Song Shan Airport on July 15. Additional suspected measles case working in the airport was discovered on August 3. These three cases had visited the lobby area at the domestic terminal around the same time on July 15. The measles genotypes of the specimens collected from the three cases are identical (H1). The measles cluster was confirmed based on laboratory results and cases' exposure history. Local health authority implemented prevention measures and monitored 612 contacts. None of the contacts developed symptoms by August 21. We recommend that people working at airport should consider receiving Measles, mumps, and rubella (MMR) vaccine to prevent measles and rubella infections.

Keywords: Measles, Clustered cases, MMR vaccine

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Weekly Data of Notifiable Infectious Diseases (by week of diagnosis)

Case diagnosis week		Week14		Week 1 – 14	
Classification	Disease Diagnosed ¹	2017	2016	2017	2016
Category I	Plague	0	0	0	0
	Rabies	0	0	0	0
	SARS	0	0	0	0
	Smallpox	0	0	0	0
Category II	Acute Flaccid Paralysis	2	0	12	9
	Acute Viral Hepatitis type A	12	17	198	166
	Amoebiasis	3	3	97	72
	Anthrax	0	0	0	0
	Chikungunya Fever	2	0	5	3
	Cholera	0	0	0	0
	Dengue Fever	1	2	70	508
	Diphtheria	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	0	1	2
	Malaria	0	1	0	4
	Measles	0	0	3	1
	Meningococcal Meningitis	1	0	5	2
	Paratyphoid Fever	0	0	3	0
	Poliomyelitis	0	0	0	0
	Rubella	0	0	0	3
	Shigellosis	2	8	54	58
Typhoid fever	1	0	7	1	
West Nile Fever	0	0	0	0	
Category III	Acute Viral Hepatitis type B	0	2	47	23
	Acute Viral Hepatitis type C ⁵	3	3	66	48
	Acute Viral Hepatitis type D	0	0	1	1
	Acute Viral Hepatitis type E	0	0	5	4
	Acute Viral Hepatitis untype	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	1	2
	Haemophilus Influenza type b Infection	0	0	2	2
	Japanese Encephalitis	0	0	0	0
	Legionellosis	2	1	30	29
	Mumps ²	16	13	163	150
	Neonatal Tetanus	0	0	0	0
	Pertussis	1	0	6	2
	Tetanus ²	0	0	2	2
Category IV	Botulism	0	0	0	1
	Brucellosis	0	0	0	0
	Complicated Influenza	9	23	157	1752
	Complicated Varicella ⁴	0	1	6	12
	Endemic Typhus Fever	1	0	6	3
	Herpesvirus B Infection	0	0	0	0
	Invasive Pneumococcal Disease	13	10	169	229
	Leptospirosis	4	1	23	12
	Lyme Disease	0	0	0	0
	Melioidosis	0	0	6	3
	Q Fever	0	0	2	8
	Scrub Typhus	2	0	88	70
	Toxoplasmosis	1	0	6	3
Tularremia	0	0	0	0	
Category V	Ebola Virus Disease	0	0	0	0
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0
	Novel Influenza A Virus Infections ⁶	0	0	1	0
	Lassa Fever	0	0	0	0
	Rift Valley Fever	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0
Yellow Fever	0	0	0	0	

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
2. Reported cases.
3. Since 2014/1/1, "Varicella" was modified to "Complicated Varicella".
4. Since 2014/3/6, the case definition for confirmed Acute hepatitis C was changed from "meet the clinical and laboratory conditions" to "meet the clinical or laboratory conditions".
5. Since 2014/7/1, various subtypes of human cases of avian influenza are reported as "novel influenza A virus infections", a Category V Notifiable Infectious Disease. The original "H5N1 flu" and "H7N9 flu", which were respectively listed as a Category I Notifiable Infectious Disease and a Category V Notifiable Infectious Disease were removed from the list on the same day.
6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Twenty-four clusters were reported, including 6 tuberculosis clusters, 10 diarrhea clusters, 6 upper respiratory tract infection clusters, 1 influenza-like illness cluster and 1 varicella cluster.

Imported Infectious Diseases

- 20 confirmed cases were imported from 8 countries during Week 14 of 2017.

Country Disease	Indonesia	Philippines	Cambodia	China	Malaysia	Swaziland	Thailand	Vietnam	Total
Amoebiasis	5	2					1		8
Hepatitis A			2					1	3
Shigellosis	2		1						3
Chikungunya Fever	1	1							2
DF	1				1				2
Legionellosis				1					1
Endemic Typhus Fever						1			1
Total	9	3	3	1	1	1	1	1	20

Note: The statistics listed in this table include imported cases that were either confirmed or updated* in the previous week.

- A total of 195 confirmed cases were imported from 18 countries in 2017.
- Top 3 imported diseases : Dengue fever (71), Amoebiasis (53), Shigellosis (20).
- Top 3 countries responsible for most imported cases : Indonesia (82), Vietnam (22), Malaysia (20).

Summary of Epidemic

- **Diarrhea** : The epidemic activity is expected to decrease gradually.
- **Influenza** : According to the weather forecast, the diurnal temperature variation across Taiwan has remained pronounced. The influenza activity remained similar to that last week. H3N2 is currently the dominant strain circulating in the community.
- **Scrub Typhus** : The scrub typhus epidemic season has begun. The affected areas primarily include Hualien County and Taitung County.

Weekly Data of Notifiable Infectious Diseases (by week of diagnosis)

Case diagnosis week		Week15		Week 1—15	
Classification	Disease Diagnosed ¹	2017	2016	2017	2016
Category I	Plague	0	0	0	0
	Rabies	0	0	0	0
	SARS	0	0	0	0
	Smallpox	0	0	0	0
Category II	Acute Flaccid Paralysis	1	0	13	9
	Acute Viral Hepatitis type A	14	23	212	189
	Amoebiasis	7	4	104	76
	Anthrax	0	0	0	0
	Chikungunya Fever	0	0	5	3
	Cholera	0	0	0	0
	Dengue Fever	2	7	72	515
	Diphtheria	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	0	1	2
	Malaria	0	0	0	4
	Measles	2	0	5	1
	Meningococcal Meningitis	0	0	5	2
	Paratyphoid Fever	0	0	3	0
	Poliomyelitis	0	0	0	0
	Rubella	0	0	0	3
	Shigellosis	7	3	61	61
	Typhoid fever	0	0	7	1
West Nile Fever	0	0	0	0	
Category III	Acute Viral Hepatitis type B	3	2	50	25
	Acute Viral Hepatitis type C ⁵	4	4	70	52
	Acute Viral Hepatitis type D	0	0	1	1
	Acute Viral Hepatitis type E	2	0	7	4
	Acute Viral Hepatitis untype	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	1	1	3
	Haemophilus Influenza type b Infection	0	0	2	2
	Japanese Encephalitis	0	0	0	0
	Legionellosis	2	2	32	31
	Mumps ²	15	5	178	155
	Neonatal Tetanus	0	0	0	0
	Pertussis	1	0	7	2
	Tetanus ²	0	0	2	2
	Category IV	Botulism	0	0	0
Brucellosis		0	0	0	0
Complicated Influenza		10	23	167	1775
Complicated Varicella ⁴		0	1	6	13
Endemic Typhus Fever		0	0	6	3
Herpesvirus B Infection		0	0	0	0
Invasive Pneumococcal Disease		16	14	185	243
Leptospirosis		1	0	24	12
Lyme Disease		0	0	0	0
Melioidosis		1	1	7	4
Q Fever		3	0	5	8
Scrub Typhus		5	0	93	70
Toxoplasmosis		0	2	6	5
Tularremia	0	0	0	0	
Category V	Ebola Virus Disease	0	0	0	0
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0
	Novel Influenza A Virus Infections ⁶	0	0	1	0
	Lassa Fever	0	0	0	0
	Rift Valley Fever	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0
Yellow Fever	0	0	0	0	

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
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6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Twenty-five clusters were reported, including 5 tuberculosis clusters, 13 diarrhea clusters, 3 upper respiratory tract infection clusters, 2 influenza-like illness clusters and 2 varicella clusters.

Imported Infectious Diseases

- 10 confirmed cases were imported from 5 countries during Week 15 of 2017.

Disease \ Country	Indonesia	Thailand	Korea	Angola	Philippines	Total
Hepatitis A		1	1			2
DF	2					2
Amoebiasis	1				1	2
Shigellosis	2					2
Zika				1		1
Measles		1				1
Total	5	2	1	1	1	10

Note: The statistics listed in this table include imported cases that were either confirmed or updated* in the previous week.

- A total of 203 confirmed cases were imported from 20 countries in 2017.
- Top 3 imported diseases : Dengue fever (72), Amoebiasis (55), Shigellosis (22).
- Top 3 countries responsible for most imported cases : Indonesia (86), Vietnam (22), Malaysia (20).

Summary of Epidemic

- **Diarrhea** : The epidemic activity is expected to decrease gradually.
- **Influenza** : The influenza activity is expected to decrease gradually.
- **Scrub Typhus** : The scrub typhus epidemic season has begun. The affected areas primarily include Hualien County and Taitung County.

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