

### Training of Field Workers for Prevention and Control of Dengue Fever-The Example of “Breeding Site Elimination Mentoring Project”, 2018

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#### Abstract

Taiwan Centers for Disease Control (TCDC) organized the dengue fever working group to control the dengue outbreak in Taichung City in 2018. We planned the “Breeding site elimination mentoring project” to train the public health field workers in the local government. During the outbreak, we planned “Larvae elimination project”, “Infection control of dengue fever in hospital setting”, “Dengue fever elimination project”, and “Prevention and control of mosquitoes at the Flower Expo”. We trained public health workers in the field. A total of 569 workers were qualified. The outbreak ended in December 25, 2018. The qualified worker participated in 175 vector control activities with a total of 7,368 person-times. The most important aspect to control the dengue outbreak is to eliminate the mosquito breeding sites. We trained public health workers in the field and hope that the skillful personnel become the key persons and mentors in dengue vector control.

**Keywords:** Dengue fever, outbreak control, Taichung City

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

Case diagnosis year		Week 22★		Week 1–22			
Classification	Disease Diagnosed	2021	2020	2021		2020	
				Total cases★	Imported cases	Total cases★	Imported cases
Category I	Plague	0	0	0	0	0	0
	Rabies	0	0	0	0	0	0
	SARS	0	0	0	0	0	0
	Smallpox	0	0	0	0	0	0
Category II	Acute Flaccid Paralysis	0	1	12	0	14	0
	Acute Viral Hepatitis type A	3	1	34	0	34	7
	Amoebiasis	3	5	94	33	110	60
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	0	1	1	2	2
	Cholera	0	0	0	0	0	0
	Dengue Fever	0	0	5	5	57	57
	Diphtheria	0	0	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	0	6	0	6	0
	Malaria	0	0	1	1	1	1
	Measles	0	0	0	0	2	2
	Meningococcal Meningitis	0	0	2	0	5	0
	Paratyphoid Fever	0	0	2	0	0	0
	Poliomyelitis	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	
Shigellosis	1	2	74	0	75	21	
Typhoid fever	0	0	1	0	5	3	
West Nile Fever	0	0	0	0	0	0	
Zika virus infection	0	0	0	0	2	2	
Category III	Acute Viral Hepatitis type B	0	1	65	2	40	2
	Acute Viral Hepatitis type C	9	15	254	0	267	2
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	0	5	0	6	0
	Congenital Syphilis	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	1	0	7	0
	Haemophilus Influenza type b Infection	0	0	1	0	3	0
	Japanese Encephalitis	0	0	2	0	0	0
	Legionnaires' Disease	3	2	135	0	101	7
	Mumps	6	11	196	1	204	6
	Neonatal Tetanus	0	0	0	0	0	0
Pertussis	0	0	0	0	8	0	
Tetanus	0	0	2	0	5	0	
Category IV	Botulism	0	0	0	0	0	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	0	0	25	0	23	0
	Endemic Typhus Fever	2	1	13	0	5	0
	Herpesvirus B Infection	0	0	0	0	0	0
	Influenza Case with Severe Complications	0	0	1	0	546	6
	Invasive Pneumococcal Disease	3	2	132	0	144	0
	Leptospirosis	0	1	14	0	18	0
	Listeriosis	8	7	86	0	54	0
	Lyme Disease	0	0	0	0	0	0
	Melioidosis	0	0	7	0	7	1
	Q Fever	0	0	5	0	4	0
	Scrub Typhus	14	12	96	0	103	1
Toxoplasmosis	0	0	7	0	1	0	
Tularemia	0	0	0	0	0	0	
Category V	Ebola Virus Disease	0	0	0	0	0	0
	Lassa Fever	0	0	0	0	0	0
	Marburg Hemorrhagic Fever	0	0	0	0	0	0
	Middle East Respiratory Syndrome	0	0	0	0	0	0
	Coronavirus Infections	0	0	0	0	0	0
	Novel Influenza A Virus Infections	0	0	0	0	0	0
	Rift Valley Fever	0	0	0	0	0	0
Severe Pneumonia with Novel Pathogens	3149	1	10141	446	442	387	
Yellow Fever	0	0	0	0	0	0	

- ★The weekly and cumulative total numbers include indigenous and imported cases of notifiable infectious diseases.
- MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen's Disease and Creutzfeldt-Jakob Disease are excluded from the table.
- Numbers of mumps and tetanus cases are summed up by the week of report.
- Since 2020/1/15, "Severe Pneumonia with Novel Pathogens" was listed as a Notifiable Infectious Disease.

## Suspected Clusters

- Three clusters related to tuberculosis (2) and diarrhea (1) were reported during week 22.

## Imported Infectious Diseases

- There were 9 imported cases from 4 countries during week 22.

Diseases	Countries				Total
	Philippines	Vietnam	Indonesia	India	
Severe Pneumonia with Novel Pathogens	4	2	2	1	9
Total	4	2	2	1	9

- During week 1–22, there were 477 imported cases from 50 countries. The top three countries are the Philippines (153), Indonesia (110), and India (45).
- During week 1–22, the three notifiable diseases with the highest number of imported cases are Severe Pneumonia with Novel Pathogens (435), Amoebiasis (33), and Dengue Fever (5).

## Summary of Epidemic

- **Severe Pneumonia with Novel Pathogens**: Taiwan is in the community transmission stage of COVID-19. Widespread community outbreak occurred, especially in Taipei City and New Taipei City. The number of cases and those with severe illness might continue to increase recently.

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

Case diagnosis year		Week 23★		Week 1–23			
Classification	Disease Diagnosed	2021	2020	2021		2020	
				Total cases★	Imported cases	Total cases★	Imported cases
Category I	Plague	0	0	0	0	0	0
	Rabies	0	0	0	0	0	0
	SARS	0	0	0	0	0	0
	Smallpox	0	0	0	0	0	0
Category II	Acute Flaccid Paralysis	1	1	13	0	15	0
	Acute Viral Hepatitis type A	2	1	36	0	35	7
	Amoebiasis	1	1	95	33	111	61
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	0	1	1	2	2
	Cholera	0	0	0	0	0	0
	Dengue Fever	0	0	5	5	57	57
	Diphtheria	0	0	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	1	0	7	0	6	0
	Malaria	0	0	1	1	1	1
	Measles	0	0	0	0	2	2
	Meningococcal Meningitis	0	0	2	0	5	0
	Paratyphoid Fever	0	0	2	0	0	0
	Poliomyelitis	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	
Shigellosis	1	3	75	0	78	21	
Typhoid fever	0	0	1	0	5	3	
West Nile Fever	0	0	0	0	0	0	
Zika virus infection	0	0	0	0	2	2	
Category III	Acute Viral Hepatitis type B	1	2	66	2	42	2
	Acute Viral Hepatitis type C	7	10	261	0	277	2
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	0	5	0	6	0
	Congenital Syphilis	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	1	0	7	0
	Haemophilus Influenza type b Infection	0	0	1	0	3	0
	Japanese Encephalitis	2	0	4	0	0	0
	Legionnaires' Disease	5	7	140	0	108	7
	Mumps	6	6	202	1	210	6
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	0	0	8	0
Tetanus	0	0	2	0	5	0	
Category IV	Botulism	0	0	0	0	0	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	2	0	27	0	23	0
	Endemic Typhus Fever	2	0	15	0	5	0
	Herpesvirus B Infection	0	0	0	0	0	0
	Influenza Case with Severe Complications	0	1	1	0	547	6
	Invasive Pneumococcal Disease	2	0	134	0	144	0
	Leptospirosis	0	1	14	0	19	0
	Listeriosis	0	8	86	0	62	0
	Lyme Disease	0	0	0	0	0	0
	Melioidosis	1	0	8	0	7	1
	Q Fever	1	0	6	0	4	0
	Scrub Typhus	9	7	105	0	110	1
Toxoplasmosis	0	0	7	0	1	0	
Tularemia	0	0	0	0	0	0	
Category V	Ebola Virus Disease	0	0	0	0	0	0
	Lassa Fever	0	0	0	0	0	0
	Marburg Hemorrhagic Fever	0	0	0	0	0	0
	Middle East Respiratory Syndrome	0	0	0	0	0	0
	Coronavirus Infections	0	0	0	0	0	0
	Novel Influenza A Virus Infections	1	0	1	0	0	0
	Rift Valley Fever	0	0	0	0	0	0
Severe Pneumonia with Novel Pathogens	1820	1	11938	455	443	388	
Yellow Fever	0	0	0	0	0	0	

1. ★The weekly and cumulative total numbers include indigenous and imported cases of notifiable infectious diseases.  
2. MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen's Disease and Creutzfeldt-Jakob Disease are excluded from the table.  
3. Numbers of mumps and tetanus cases are summed up by the week of report.  
4. Since 2020/1/15, "Severe Pneumonia with Novel Pathogens" was listed as a Notifiable Infectious Disease.

## Suspected Clusters

- Three clusters related to tuberculosis (3) were reported during week 23.

## Imported Infectious Diseases

- There were 7 imported cases from 5 countries during week 23.

Diseases	Countries					Total
	India	USA	China	Thailand	Nigeria	
Severe Pneumonia with Novel Pathogens	2	2	1	1	1	7
Total	2	2	1	1	1	7

- During week 1–23, there were 484 imported cases from 50 countries. The top three countries are the Philippines (153), Indonesia (110), and India (47).
- During week 1–23, the three notifiable diseases with the highest number of imported cases are Severe Pneumonia with Novel Pathogens (442), Amoebiasis (33), and Dengue Fever (5).

## Summary of Epidemic

- **Severe Pneumonia with Novel Pathogens** : Taiwan is in the stage of community transmission of COVID-19. The impact of the movement of people across counties and cities may appear 1–2 week after the Dragon Boat Festival.
- **Japanese Encephalitis** : Taiwan is in the wide of Japanese Encephalitis season. Every county in Taiwan is at risk of infection.

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