疫情報導
TAIWAN EPIDEMIOLOGY BULLETIN
September 28, 2021 Vol.37 No.18
Original Article

The Chikungunya Epidemic Synopsis And Strategies of Prevention And Control, Taiwan, 2019

Yi-Ya Wang[1*], Ya-Tzu Chang[1], Yu-Min Chou[1],
Chin-Hui Yang[1], Yu-Hsuan Lin[2], Li-Li Ho[2]

Abstract

In 2019, the number of imported cases of chikungunya has been the highest during the same period in the past years, since it was listed as a notifiable infectious disease in Taiwan in October 2007, leading to the increase of the domestic epidemic risk. In July 2019, the first indigenous chikungunya case was reported in Taiwan. Then the first local outbreak occurred in Zhonghe District, New Taipei City. Chikungunya and dengue fever, both transmitted by *Aedes aegypti* and *Aedes albopictus*, are community-level, environmental diseases. Therefore, strategies of prevention and control of both diseases are similar, and cannot be achieved by a single organization. The prevention and control require participation of the public and local governments, and the mobilization of the community to clear mosquito breeding sites thoroughly. As the time of chikungunya virus multiplying in the mosquitos is shorter than that of dengue virus, the interventions should be immediate and active.

In response to the epidemic of chikungunya in 2019, Taiwan Centers for Disease Control (TCDC) strengthened border quarantine measures, reminded travelers to affected areas of taking precautions against mosquito bites and enhanced understanding of prevention, awareness of seeking medical attention and disease notification for chikungunya. Such measures not only facilitated prompt diagnosis and case reporting

[1]Division of Acute Infectious Disease, Centers for Disease Control, Ministry of Health and Welfare, Taiwan
[2]Division of Quarantine, Centers for Disease Control, Ministry of Health and Welfare, Taiwan
Corresponding author: Yi-Ya Wang[1*]
E-mail:amy7198132@cdc.gov.tw
Received: Oct. 28, 2019
Accepted: Jun. 24, 2020
DOI: 10.6525/TEB.202109_37(18).0001

but also made timely intervention of prevention and control measures by public health authorities. TCDC continues to support local governments to implement prevention and control programs, strengthen the domestic and border surveillance of chikungunya, and adjust the measures of prevention and control strategies to respond to the emerging epidemic in the future.

Keywords: Chikungunya, imported cases, border quarantine, strategies of prevention and control

week 36–37(Sep. 5–Sep. 18, 2021)

DOI: 10.6525/TEB.202109_37(18).0002

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

Case diagnosis year		Week 36★		Week 1-36			
				2021		2020	
Classification	Disease Diagnosed	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	23	0	19	0
	Acute Viral Hepatitis type A	0	1	50	0	61	7
	Amoebiasis	1	5	141	50	168	97
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	0	1	1	3	3
	Cholera	0	0	0	0	0	0
	Dengue Fever	0	1	7	7	78	63
	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	9	0	8	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	92	0	107	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	2	97	2	69	2
	Acute Viral Hepatitis type C	3	6	396	0	425	4
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	0	5	0	7	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	26	0	21	0
	Legionnaires' Disease	1	4	243	0	194	8
	Mumps	10	11	311	1	338	6
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	0	0	8	0
	Tetanus	0	0	3	0	7	0
Category IV	Botulism	0	0	0	0	1	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	2	0	37	0	30	0
	Endemic Typhus Fever	1	2	26	0	15	0
	Herpesvirus B Infection	0	0	0	0	0	0
	Influenza Case with Severe Complications	0	0	1	0	548	6
	Invasive Pneumococcal Disease	2	4	163	0	179	0
	Leptospirosis	2	3	45	0	40	0
	Listeriosis	1	3	122	0	100	0
	Lyme Disease	0	0	0	0	0	0
	Melioidosis	2	1	15	0	10	1
	Q Fever	0	0	8	0	12	0
	Scrub Typhus	1	6	182	0	273	1
	Toxoplasmosis	0	1	10	0	6	0
	Tularemia	1	0	1	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 Coronavirus Infections	0	0	0	0	0	0
	Novel Influenza A Virus Infections	0	0	1	0	0	0
	Rift Valley Fever	0	0	0	0	0	0
	Severe Pneumonia with Novel Pathogens	69	4	15279	769	492	437
	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, Gonorrhea, 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

●Eleven clusters related to diarrhea (7) and tuberculosis (4) were reported during week 36.

Imported Infectious Diseases

●There were 36 imported cases from 14 countries during week 36.

Severe Pneumonia with Novel Pathogens : 36 (Japan 9, Indonesia 4, UAE 4, Vietnam 3, USA 3, Egypt 3, Malaysia 2, UK 2, Gambia 1, Armenia 1, Lesotho 1, India 1, South Africa 1, Turkey 1).

●During week 1-36, there were 831 imported cases from 73 countries. The top three countries are the Philippines (169), Indonesia (169), and USA (107).

●During week 1-36, the three notifiable diseases with the highest number of imported cases are Severe Pneumonia with Novel Pathogens (769), Amoebiasis (50), and Dengue Fever (7).

Summary of Epidemic

●**Severe Pneumonia with Novel Pathogens**：There have been new cases linked to the SARS-COV-2 Delta variant cluster in Taiwan, the risk of locally-acquired cases is expected to increase.

●**Japanese Encephalitis :** Taiwan is in the midst of Japanese Encephalitis season. Individuals living in all counties/cities in Taiwan are at risk of infection.

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

Case diagnosis year		Week 37★		Week 1-37			
				2021		2020	
Classification	Disease Diagnosed	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	23	0	20	0
	Acute Viral Hepatitis type A	1	0	51	0	61	7
	Amoebiasis	5	3	146	50	171	98
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	0	1	1	3	3
	Cholera	0	1	0	0	1	0
	Dengue Fever	1	1	8	8	79	63
	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	1	9	0	9	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	3	3	95	0	110	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	97	2	70	2
	Acute Viral Hepatitis type C	3	13	399	0	438	4
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	0	5	0	7	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	26	0	21	0
	Legionnaires' Disease	10	8	253	0	202	8
	Mumps	8	14	319	1	352	6
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	0	0	8	0
	Tetanus	0	0	3	0	7	0
Category IV	Botulism	0	0	0	0	1	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	0	0	37	0	30	0
	Endemic Typhus Fever	0	0	26	0	15	0
	Herpesvirus B Infection	0	0	0	0	0	0
	Influenza Case with Severe Complications	0	0	1	0	548	6
	Invasive Pneumococcal Disease	2	4	166	0	183	0
	Leptospirosis	1	9	46	0	49	0
	Listeriosis	2	3	124	0	103	0
	Lyme Disease	0	0	0	0	0	0
	Melioidosis	1	3	16	0	13	1
	Q Fever	0	0	8	0	12	0
	Scrub Typhus	6	6	188	0	279	1
	Toxoplasmosis	0	0	10	0	6	0
	Tularemia	0	0	1	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 Coronavirus Infections	0	0	0	0	0	0
	Novel Influenza A Virus Infections	0	0	1	0	0	0
	Rift Valley Fever	0	0	0	0	0	0
	Severe Pneumonia with Novel Pathogens	53	6	15332	812	498	443
	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, Gonorrhea, 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

●Seven clusters related to diarrhea (6) and tuberculosis (1) were reported during week 37.

Imported Infectious Diseases

●There were 43 imported cases from 18 countries during week 37.

Severe Pneumonia with Novel Pathogens : 43 (USA 13, Indonesia 7, South Africa 3, Japan 3, Philippines 3, Cambodia 2, Poland 1, France 1, Russia 1, India 1, UAE 1, Canada 1, Czech Republic 1, Myanmar 1, Malaysia 1, Lithuania 1, Honduras 1, Bangladesh 1).

●During week 1-37, there were 875 imported cases from 74 countries. The top three countries are the Philippines (176), Indonesia (172), and USA (120).

●During week 1-37, the three notifiable diseases with the highest number of imported cases are Severe Pneumonia with Novel Pathogens (812), Amoebiasis (50), and Dengue Fever (8).

Summary of Epidemic

●**Severe Pneumonia with Novel Pathogens**： The movement of people across counties and cities increased uring the Mid-Autumn Festival, and there have been cases linked to the SARS-COV-2 Delta variant in the community, the risk of locally-acquired cases is expected to increase.

●**Japanese Encephalitis :** Taiwan is in the midst of Japanese Encephalitis season. Individuals living in all counties/cities in Taiwan are at risk of infection.

The Taiwan Epidemiology Bulletin series of publications is published by Centers for Disease Control, Ministry of Health and Welfare, Taiwan (R.O.C.) since Dec. 15, 1984.
Publisher: Jih-Haw Chou
Editor-in-Chief: Yung-Ching Lin
Executive Editor: Hsueh-Ju Chen, Hsin-Lun Lee
Address: No.6, Linsen S. Rd, Jhongjheng District, Taipei City 10050, Taiwan (R.O.C.)
Telephone No: +886-2-2395-9825 **Website:** https://www.cdc.gov.tw/En
Suggested Citation:
[Author].[Article title].Taiwan Epidemiol Bull 2021;37:[inclusive page numbers]. [DOI]