

The Responding Hospital Infectious Disease Emergency Response Plan of The Communicable Disease Control Medical Network - The Evaluation And Review Report of The 2018 Exercise

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Abstract

The hospital emergency response plan dealing with infectious diseases in the Communicable Disease Control Medical Network is the foundation of its emergency response. Hospitals may evaluate their emergency preparedness by performing exercises. To complete and evaluate the response plan of the responding hospital's contingency planning command system and various processes, the semi-warning "table-top" method was used to conduct exercises in six responding hospitals by Taiwan Centers for Disease Control in 2018. Exercise results showed that simple non-composite professional practices, such as receiving an infectious disease patient, disease notification, handling patient corpse, and post-event recovery, were performed well. But the response practices for patient surge, management of infected medical staffs in the epidemic period, including emptying the whole hospital, recalling hospital staffs, trouble shooting of negative pressure isolation rooms, and setting the response time for manpower, equipment, and materials dispatch during the surge, were not performed well. The operation of the contingency command system, including the duties of the responsible personnel, the mastery of anomalies or emergencies, and the decision-making of the command system, should be strengthened. In the future, to improve the emergency response capacity of the respective hospitals, continuously conducting the auditing exercises to evaluate its infectious disease emergency response plan is necessary.

Keywords: Responding hospital, infectious disease emergency response plan, exercise plan, surge

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

Case diagnosis year		Week 23★		Week 1–23			
Classification	Disease Diagnosed	2020	2019	2020		2019	
				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	15	0	24	0
	Acute Viral Hepatitis type A	1	1	35	7	41	12
	Amoebiasis	1	7	111	57	153	80
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	0	2	2	7	7
	Cholera	0	0	0	0	0	0
	Dengue Fever	0	15	57	57	185	169
	Diphtheria	0	0	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0	1	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	0	0
	Malaria	0	0	1	1	1	1
	Measles	0	2	2	2	100	35
	Meningococcal Meningitis	0	0	5	0	2	0
	Paratyphoid Fever	0	0	0	0	2	1
	Poliomyelitis	0	0	0	0	0	0
	Rubella	0	1	0	0	17	14
	Shigellosis	3	2	78	20	61	20
	Typhoid fever	0	1	5	3	10	10
West Nile Fever	0	0	0	0	0	0	
Zika virus infection	0	0	2	2	1	1	
Category III	Acute Viral Hepatitis type B	2	4	42	2	47	1
	Acute Viral Hepatitis type C	11	11	279	2	261	2
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	1	6	0	7	3
	Congenital Syphilis	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	7	0	12	1
	Haemophilus Influenza type b Infection	0	0	3	0	0	0
	Japanese Encephalitis	0	1	0	0	4	0
	Legionnaires' Disease	7	3	108	7	119	10
	Mumps	6	11	210	6	277	2
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	8	0	19	0
Tetanus	0	0	5	0	0	0	
Category IV	Botulism	0	0	0	0	0	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	0	1	23	0	28	1
	Endemic Typhus Fever	0	0	5	0	3	0
	Herpesvirus B Infection	0	0	0	0	0	0
	Influenza Case with Severe Complications	1	20	547	6	928	5
	Invasive Pneumococcal Disease	0	5	144	0	223	2
	Leptospirosis	1	3	19	0	25	0
	Listeriosis	8	2	62	0	85	0
	Lyme Disease	0	0	0	0	1	1
	Melioidosis	0	0	7	1	4	0
	Q Fever	0	2	4	0	9	2
	Scrub Typhus	7	7	110	1	152	2
Toxoplasmosis	0	0	1	0	7	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	1	-	443	388	-	-	
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

- Eighteen clusters were reported during week 23, including 9 tuberculosis clusters, 6 diarrhea clusters, 1 upper respiratory tract infection cluster, 1 fever of unknown origin cluster, 1 varicella cluster.

Imported Infectious Diseases

- There was 1 imported case from 1 country during week 23 of 2020.

Diseases	Countries	USA
Severe Pneumonia with Novel Pathogens		1
Total		1

- As of week 23 in 2020, there were 558 imported cases from 45 different countries. The top 3 countries are Indonesia (97), USA (92), UK (72).
- The three notifiable diseases with the highest number of imported cases are Severe Pneumonia with Novel Pathogens (388), Dengue Fever (57), Amoebiasis (57).

Summary of Epidemic

- **Severe Pneumonia with Novel Pathogens** : The risk of acquiring SARS-CoV-2 infection in Taiwan is low. However, due to the severe international epidemic, the sporadic imported cases are expected.

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

Case diagnosis year		Week 24★		Week 1–24			
Classification	Disease Diagnosed	2020	2019	2020		2019	
				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	2	15	0	26	0
	Acute Viral Hepatitis type A	3	0	38	7	41	12
	Amoebiasis	2	7	113	62	160	84
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	1	0	3	3	7	7
	Cholera	0	0	0	0	0	0
	Dengue Fever	3	12	60	60	197	177
	Diphtheria	0	0	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0	1	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	0	0
	Malaria	0	0	1	1	1	1
	Measles	0	1	2	2	101	36
	Meningococcal Meningitis	0	0	5	0	2	0
	Paratyphoid Fever	0	0	0	0	2	1
	Poliomyelitis	0	0	0	0	0	0
	Rubella	0	0	0	0	17	14
	Shigellosis	1	2	79	20	63	21
Typhoid fever	0	1	5	3	11	11	
West Nile Fever	0	0	0	0	0	0	
Zika virus infection	0	0	2	2	1	1	
Category III	Acute Viral Hepatitis type B	2	2	44	2	49	1
	Acute Viral Hepatitis type C	9	24	287	2	285	2
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	0	6	0	7	3
	Congenital Syphilis	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	7	0	12	1
	Haemophilus Influenza type b Infection	0	0	3	0	0	0
	Japanese Encephalitis	0	2	0	0	6	0
	Legionnaires' Disease	11	3	119	7	122	10
	Mumps	6	14	216	6	291	2
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	8	0	19	0
Tetanus	1	0	6	0	0	0	
Category IV	Botulism	0	0	0	0	0	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	0	0	23	0	28	1
	Endemic Typhus Fever	0	0	5	0	3	0
	Herpesvirus B Infection	0	0	0	0	0	0
	Influenza Case with Severe Complications	0	45	547	6	973	6
	Invasive Pneumococcal Disease	1	4	145	0	227	2
	Leptospirosis	0	0	19	0	25	0
	Listeriosis	0	9	62	0	94	0
	Lyme Disease	0	0	0	0	1	1
	Melioidosis	0	0	7	1	4	0
	Q Fever	1	0	5	0	9	2
	Scrub Typhus	6	5	116	1	157	2
Toxoplasmosis	1	0	2	0	7	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	0	-	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

- Fifteen clusters were reported during week 24, including 4 tuberculosis clusters, 8 diarrhea clusters, 2 upper respiratory tract infection clusters, 1 influenza-like illness cluster.

Imported Infectious Diseases

- There were 9 imported cases from 4 countries during week 24 of 2020.

Diseases	Countries				Total
	Indonesia	Cambodia	The Philippines	Japan	
Amoebiasis	3		1	1	5
Dengue Fever	2	1			3
Chikungunya Fever	1				1
Total	6	1	1	1	9

- As of week 24 in 2020, there were 567 imported cases from 45 different countries. The top 3 countries are Indonesia (103), USA (92), UK (72).
- The three notifiable diseases with the highest number of imported cases are Severe Pneumonia with Novel Pathogens (388), Amoebiasis (62), Dengue Fever (60).

Summary of Epidemic

- **Severe Pneumonia with Novel Pathogens** : The risk of acquiring SARS-CoV-2 infection in Taiwan is low. However, due to the severe international epidemic, the sporadic imported cases are expected.

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