

Execution of Disciplinary Actions in Response to the COVID-19 Epidemic – An Example of a Sanctioned Ship, Taiwan, 2022

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Abstract

In response to the COVID-19 epidemic, Taiwan quickly initiated border quarantine measures which were followed by the Central Epidemic Command Center for rolling corrections and contingency preparations. From May 4, 2020, ships entering Taiwan from overseas should provide a statement of COVID-19 Health Status Declaration of Crew Members on Board in addition to the Maritime Declaration of Health when arriving at the port. If the staff on board had suspected symptoms of COVID-19, the captain must immediately notify relevant departments such as Taiwan Centers for Disease Control (Taiwan CDC). In this article, we described a case of a ship that was sanctioned by the Taiwan CDC at Taichung Port failed to notify and violated the border quarantine measures and regulations when suspected cases of COVID-19 occurred on board. This is the first time that Taiwan CDC imposed sanctions on ships at international ports for violating the Communicable Disease Control Act. After the outbreak investigation, Taiwan CDC identified 7 confirmed cases. Because the captain of the ship did not report the health status of the staff on board accurately, Taiwan CDC issued penalties in accordance with the violation of the Communicable Disease Control Act and Regulations Governing Quarantine at Ports. Later, the punished captain and his ship company actively cooperated with the quarantine department and paid the fine. After the event, no further cases occurred on the ship. This event provided experience and an example in the face of violation of infectious disease prevention and control

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measures and regulations. We hope that the exercise of public powers cooperating with border quarantine policies would reduce the risk of disease transmission and ensure the health of the public.

Keywords: COVID-19 health status declaration of crew members on board, Communicable Disease Control Act, COVID-19, quarantine

Interventions in a COVID-19 Outbreak in a Regional Hospital During The Early Stage of Level 3 Epidemic Alert, Taoyuan, Taiwan, 2021

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Abstract

Coronavirus disease 2019 (COVID-19) was first reported in China and subsequently caused a global pandemic. Taiwan experienced the first wave of large-scale community transmissions of COVID-19 in mid-May 2021. The Central Epidemic Command Center maintained the zero-COVID strategy and announced the nationwide level 3 epidemic alert for COVID-19 on May 19, 2021. We described the investigation and response to the largest nosocomial COVID-19 outbreak in a regional hospital (Hospital A) in northern Taiwan during the early stage of level 3 alert.

The index case was a nurse without known contact history. Confirmed cases were individuals with PCR-confirmed SARS-CoV-2 infection epidemiologically linked to outbreak cases. The transmission period ranged from 3 days before the onset to the day of isolation. Close contacts were individuals having face-to-face contact with confirmed cases during the transmission period. Persons at risk were individuals who had stayed in the same hospital unit with the confirmed cases for more than 8 hours during the transmission period. All confirmed cases were interviewed to trace contacts and determine the possible route of transmission. All contacts and persons at risk were tested for SARS-CoV-2. Close contacts were quarantined until 14 days after the last contact with confirmed cases. The in- and outpatient services of Hospital A were restricted for outbreak control.

We found 391 healthcare-related and 58 community-related contacts. A total of 9,837 of SARS-CoV-2 tests were performed and 36 confirmed cases involving 4 hospital units were identified, comprising of 3 nurses, 12 caretakers, 15 patients, and 6 family members of patients. Delayed reporting of symptoms and COVID-19 testing of infected healthcare workers hindered early detection of the outbreak. Cross-ward and

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cross-unit interactions between patients and caretakers in the hospital further increased the extent of nosocomial transmission. Visitors who violated the access control of Hospital A increased the possibility of transmission to the community.

This nosocomial COVID-19 outbreak occurred in 4 units of a regional hospital, affecting healthcare workers, patients, and community contacts. Strengthening of symptoms surveillance, periodic testing, segregation and flow control measure of healthcare workers, and access control of visitors facilitate early detection of outbreaks and prevent the nosocomial transmission of COVID-19.

Keywords: COVID-19, healthcare-associated infection, outbreak

week 14–week 15, 2023 (Apr. 2, 2023–Apr.15, 2023)

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Case diagnosis year-week		Week 14★		Week 1–14			
Classification	Disease Diagnosed	2023	2022	2023		2022	
				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
	Acute Flaccid Paralysis	1	1	14	0	7	0
Category II	Acute Viral Hepatitis type A	0	0	31	1	79	0
	Amoebiasis	1	2	73	27	54	15
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	0	2	2	0	0
	Cholera	0	0	0	0	0	0
	Dengue Fever	6	0	25	25	0	0
	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 syndrome	0	0	2	0	1	0
	Malaria	0	0	1	1	1	1
	Measles	0	0	0	0	0	0
	Meningococcal Meningitis	0	0	0	0	0	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	15	5	24	0
	Typhoid fever	0	0	0	0	1	0
	West Nile Fever	0	0	0	0	0	0
	Zika virus infection	0	0	0	0	0	0
	Mpox	1	-	20	3	-	-
Category III	Acute Viral Hepatitis type B	1	0	39	2	37	0
	Acute Viral Hepatitis type C	5	10	153	0	130	1
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	1	0	4	1	4	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	4	0	0	0
	Haemophilus Influenza type b Infection	0	0	0	0	1	0
	Japanese Encephalitis	0	0	0	0	0	0
	Legionnaires' Disease	2	3	63	1	95	0
	Mumps	6	6	68	2	63	0
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	0	0	0	0
Tetanus	0	0	2	0	1	0	
Category IV	Botulism	0	0	0	0	0	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	1	1	12	0	8	0
	Endemic Typhus Fever	0	0	3	0	0	0
	Herpesvirus B Infection	0	0	0	0	0	0
	Influenza Case with Severe Complications	5	0	54	1	0	0
	Invasive Pneumococcal Disease	4	3	90	1	50	0
	Leptospirosis	0	1	9	0	9	0
	Listeriosis	1	3	54	0	34	0
	Lyme Disease	0	0	0	0	1	1
	Melioidosis	0	0	5	0	0	0
	Q Fever	0	0	1	0	2	0
	Scrub Typhus	0	0	28	0	35	0
Toxoplasmosis	0	0	8	0	10	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 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	2,980	1,367,195	18,080	10,164	6,329
	Severe Pneumonia with Novel Pathogens (with complications)	584	-	1,838	3	-	-
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 June 23, 2022, "Mpox" has been listed as a Notifiable Infectious Disease.
- Since March 20, 2023, "Severe Pneumonia with Novel Pathogens" has been adjusted to be notifiable only for complications.

Suspected Clusters

- Seventeen clusters related to Diarrhea (9), Tuberculosis (4), Enterovirus (2), Upper respiratory tract infection (1) and Varicella (1) were reported during week 14.

Imported Infectious Diseases

- There were 7 imported cases from at least 4 countries/areas during week 14.
Dengue Fever: 6 cases from Thailand (3), Malaysia (2) and Vietnam (1).
Shigellosis: 1 case from USA.
- During week 1–14, there were 18,155 imported cases of notifiable diseases. The top three were Severe Pneumonia with Novel Pathogens (18,080), Amoebiasis (27) and Dengue Fever (25).
- During week 1–14, imported cases of notifiable diseases were from at least 45 countries/areas. The top three were China (3,151), Japan (705) and Korea (180).

Summary of Epidemic

- **Severe Pneumonia with Novel Pathogens (with complications):** The epidemic keeps stable.
- **Mpox:** Cases with unknown sources of infection are still increasing, and the risk of domestic transmission remains.
- **Influenza:** The epidemic may increase.
- **Enterovirus:** The epidemic is rising.

Case diagnosis year-week		Week 15★		Week 1–15			
Classification	Disease Diagnosed	2023	2022	2023		2022	
				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	14	0	8	0
	Acute Viral Hepatitis type A	0	2	31	1	81	0
	Amoebiasis	5	4	78	27	58	17
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	1	0	3	3	0	0
	Cholera	0	0	0	0	0	0
	Dengue Fever	5	0	30	30	0	0
	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 syndrome	0	0	2	0	1	0
	Malaria	0	0	1	1	1	1
	Measles	1	0	1	1	0	0
	Meningococcal Meningitis	0	0	0	0	0	0
	Paratyphoid Fever	0	0	2	0	0	0
	Poliomyelitis	0	0	0	0	0	0
	Rubella	0	0	0	0	0	0
	Shigellosis	0	1	15	5	25	0
	Typhoid fever	0	0	0	0	1	0
	West Nile Fever	0	0	0	0	0	0
Zika virus infection	0	0	0	0	0	0	
Mpox	11	-	31	5	-	-	
Category III	Acute Viral Hepatitis type B	0	1	39	2	38	0
	Acute Viral Hepatitis type C	11	9	164	0	139	1
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	0	4	1	4	0
	Congenital Syphilis	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	1	0	5	0	0	0
	Haemophilus Influenza type b Infection	0	0	0	0	1	0
	Japanese Encephalitis	0	0	0	0	0	0
	Legionnaires' Disease	10	10	73	1	105	0
	Mumps	7	7	75	2	70	0
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	0	0	0	0
Tetanus	0	0	2	0	1	0	
Category IV	Botulism	0	0	0	0	0	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	1	2	13	0	10	0
	Endemic Typhus Fever	0	0	3	0	0	0
	Herpesvirus B Infection	0	0	0	0	0	0
	Influenza Case with Severe Complications	14	0	68	2	0	0
	Invasive Pneumococcal Disease	2	0	92	1	50	0
	Leptospirosis	1	2	10	0	11	0
	Listeriosis	5	2	59	0	36	0
	Lyme Disease	0	0	0	0	1	1
	Melioidosis	0	0	5	0	0	0
	Q Fever	0	0	1	0	2	0
	Scrub Typhus	0	0	28	0	35	0
Toxoplasmosis	0	1	8	0	11	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 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	7,113	1,367,195	18,080	17,277	7,262
	Severe Pneumonia with Novel Pathogens (with complications)	591	-	2,428	7	-	-
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 June 23, 2022, "Mpox" has been listed as a Notifiable Infectious Disease.
5. Since March 20, 2023, "Severe Pneumonia with Novel Pathogens" has been adjusted to be notifiable only for complications.

Suspected Clusters

- Forty-one clusters related to Upper respiratory tract infection (19), Diarrhea (10), Tuberculosis (6), Enterovirus (5) and Varicella (1) were reported during week 15.

Imported Infectious Diseases

- There were 13 imported cases from at least 10 countries/areas during week 15.
 - Dengue Fever:** 5 cases from Indonesia (2), Vietnam (2) and Thailand (1).
 - Severe Pneumonia with Novel Pathogens (with complications):** 3 cases from Hong Kong (1), Singapore (1) and Spain (1).
 - Mpox:** 2 cases from Malaysia (1) and Japan (1).
 - Chikungunya Fever:** 1 case from Paraguay.
 - Influenza Case with Severe Complications:** 1 case from China.
 - Measles:** 1 case from Thailand.

- During week 1–15, there were 18,169 imported cases of notifiable diseases. The top three were Severe Pneumonia with Novel Pathogens (18,080), Dengue Fever (30) and Amoebiasis (27).
- During week 1–15, imported cases of notifiable diseases were from at least 45 countries/areas. The top three were China (3,152), Japan (707) and Korea (180).

Summary of Epidemic

- **Severe Pneumonia with Novel Pathogens (with complications):** The epidemic keeps stable.
- **Mpox:** Cases with unknown sources of infection are still increasing, raising the risk of domestic transmission.
- **Influenza:** The epidemic remains high during the 2022-2023 flu season.
- **Enterovirus:** It's currently in the epidemic period, the risk of transmission is raising.

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