

Quarantine Operations for Offshore Wind Power in Taichung Port during COVID-19 Pandemic, 2020

Chin-Sheng Chi^{1*}, Yi-Syue Li¹, Shao-Hui Tsai¹, Ching-Fen Ko^{1,2}, Jhy-Wen Wu¹

Abstract

Offshore wind power is an important policy for Taiwan's current energy development. However, the outbreak of the COVID-19 pandemic at the end of 2019 and the rapid spread of the epidemic to countries around the world also affected offshore wind power development plans. To maintain the strict border quarantine measures and the development of offshore wind power plans simultaneously, Taiwan has developed a series of offshore wind power related disease prevention management plans. Taichung Port is an important port for the offshore wind power industry. It also followed border quarantine measures to prepare and implement quarantine work. The preparation works included personnel disembarkation control mechanism, health assessment, evaluation of crew's self-paid COVID-19 test capacity and ship quarantine operations reinforcement. In the implementation of quarantine work, a total of 490 people from foreign offshore wind power vessels entered Taiwan, of which 223 underwent home quarantine, and the other 267 were self-paid COVID-19 tested after entry. The results of 267 self-paid COVID-19 tests were all negative and then they all departed by plane within three days. In addition, two crew members were examined on board by the quarantine officers due to suspected COVID-19 symptoms, and the results of COVID-19 test of them were negative. Since the COVID-19 pandemic is still severe, it is necessary to continue assessing the international epidemic risks and entry management capacity, adjusting border quarantine measures accordingly, and cross-departmental cooperation in port to ensure the prevention of epidemic and development of offshore wind power industry.

Keywords: Taichung Port, offshore wind power, COVID-19

¹Central Regional Center, Centers for Disease Control, Ministry of Health and Welfare, Taiwan

²Department of Public Health, Tzu Chi University, Taiwan
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Corresponding author: Chin-Sheng Chi^{1*}

E-mail: ggsggstw@cdc.gov.tw

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Weekly Data of Notifiable Inases (by week of diagnosis)

| Case diagnosis year | | Week 9★ | | Week 1-9 | | | |
|----------------------|---|---------|------|--------------|----------------|--------------|----------------|
| Classification | Disease Diagnosed | 2022 | 2021 | 2022 | | 2021 | |
| | | | | 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 | 4 | 0 | 5 | 0 |
| | Acute Viral Hepatitis type A | 0 | 1 | 58 | 0 | 13 | 0 |
| | Amoebiasis | 4 | 1 | 39 | 3 | 29 | 13 |
| | Anthrax | 0 | 0 | 0 | 0 | 0 | 0 |
| | Chikungunya Fever | 0 | 0 | 0 | 0 | 0 | 0 |
| | Cholera | 0 | 0 | 0 | 0 | 0 | 0 |
| | Dengue Fever | 0 | 0 | 0 | 0 | 3 | 3 |
| | 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 | 0 | 0 | 3 | 0 |
| | Malaria | 0 | 0 | 0 | 0 | 1 | 1 |
| | Measles | 0 | 0 | 0 | 0 | 0 | 0 |
| | Meningococcal Meningitis | 0 | 0 | 0 | 0 | 0 | 0 |
| | Paratyphoid Fever | 0 | 0 | 0 | 0 | 0 | 0 |
| | Poliomyelitis | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rubella | 0 | 0 | 0 | 0 | 0 | 0 |
| Shigellosis | 2 | 5 | 18 | 0 | 30 | 0 | |
| Typhoid fever | 0 | 1 | 0 | 0 | 1 | 0 | |
| West Nile Fever | 0 | 0 | 0 | 0 | 0 | 0 | |
| Zika virus infection | 0 | 0 | 0 | 0 | 0 | 0 | |
| Category III | Acute Viral Hepatitis type B | 2 | 0 | 22 | 0 | 15 | 0 |
| | Acute Viral Hepatitis type C | 16 | 13 | 70 | 0 | 110 | 0 |
| | Acute Viral Hepatitis type D | 0 | 0 | 0 | 0 | 0 | 0 |
| | Acute Viral Hepatitis type E | 0 | 0 | 2 | 0 | 1 | 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 | 0 | 0 | 1 | 0 |
| | Haemophilus Influenza type b Infection | 0 | 0 | 0 | 0 | 0 | 0 |
| | Japanese Encephalitis | 0 | 0 | 0 | 0 | 0 | 0 |
| | Legionnaires' Disease | 5 | 5 | 60 | 0 | 65 | 0 |
| | Mumps | 9 | 10 | 43 | 0 | 90 | 1 |
| | Neonatal Tetanus | 0 | 0 | 0 | 0 | 0 | 0 |
| | Pertussis | 0 | 0 | 0 | 0 | 0 | 0 |
| Tetanus | 0 | 0 | 1 | 0 | 1 | 0 | |
| Category IV | Botulism | 0 | 0 | 0 | 0 | 0 | 0 |
| | Brucellosis | 0 | 0 | 0 | 0 | 0 | 0 |
| | Complicated Varicella | 2 | 0 | 6 | 0 | 10 | 0 |
| | Endemic Typhus Fever | 0 | 1 | 0 | 0 | 5 | 0 |
| | Herpesvirus B Infection | 0 | 0 | 0 | 0 | 0 | 0 |
| | Influenza Case with Severe Complications | 0 | 0 | 0 | 0 | 0 | 0 |
| | Invasive Pneumococcal Disease | 4 | 9 | 28 | 0 | 65 | 0 |
| | Leptospirosis | 1 | 0 | 6 | 0 | 8 | 0 |
| | Listeriosis | 2 | 0 | 19 | 0 | 24 | 0 |
| | Lyme Disease | 0 | 0 | 1 | 1 | 0 | 0 |
| | Melioidosis | 0 | 0 | 0 | 0 | 5 | 0 |
| | Q Fever | 0 | 0 | 2 | 0 | 0 | 0 |
| | Scrub Typhus | 8 | 0 | 29 | 0 | 46 | 0 |
| Toxoplasmosis | 0 | 0 | 4 | 0 | 2 | 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 | 423 | 13 | 3762 | 2905 | 159 | 138 |
| 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

- Forty-one clusters related to diarrhea (37), tuberculosis (3) and upper respiratory tract infection (1) were reported during week 9.

Imported Infectious Diseases

- There were 377 imported cases from 42 countries during week 9.
Severe Pneumonia with Novel Pathogens : 377 cases from Vietnam 62, Indonesia 52, the Philippines 50, USA 43, India 20, Hong Kong 18, Canada 12, Malaysia 10, UK 10, and the remaining 33 countries have less than 10 cases.
- During week 1-9, there were 2909 imported cases from 100 countries. The top three countries are USA (931), Indonesia (191), and the Philippines (188).
- During week 1-9, the notifiable diseases with the highest number of imported cases are Severe Pneumonia with Novel Pathogens (2905).

Summary of Epidemic

- Severe Pneumonia with Novel Pathogens** : The COVID-19 pandemic remaining serious globally and the risk of imported cases exists. In addition, there have been new cluster without known source of infection are under investigation, the risk of locally-acquired infection in Taiwan continues.

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

| Case diagnosis year | | Week 10★ | | Week 1-10 | | | |
|----------------------|---|----------|------|--------------|----------------|--------------|----------------|
| Classification | Disease Diagnosed | 2022 | 2021 | 2022 | | 2021 | |
| | | | | 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 | 0 | 5 | 0 | 5 | 0 |
| | Acute Viral Hepatitis type A | 6 | 2 | 64 | 0 | 15 | 0 |
| | Amoebiasis | 3 | 8 | 42 | 5 | 37 | 18 |
| | Anthrax | 0 | 0 | 0 | 0 | 0 | 0 |
| | Chikungunya Fever | 0 | 0 | 0 | 0 | 0 | 0 |
| | Cholera | 0 | 0 | 0 | 0 | 0 | 0 |
| | Dengue Fever | 0 | 0 | 0 | 0 | 3 | 3 |
| | 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 | 0 | 0 | 3 | 0 |
| | Malaria | 0 | 0 | 0 | 0 | 1 | 1 |
| | Measles | 0 | 0 | 0 | 0 | 0 | 0 |
| | Meningococcal Meningitis | 0 | 0 | 0 | 0 | 0 | 0 |
| | Paratyphoid Fever | 0 | 0 | 0 | 0 | 0 | 0 |
| | Poliomyelitis | 0 | 0 | 0 | 0 | 0 | 0 |
| | Rubella | 0 | 0 | 0 | 0 | 0 | 0 |
| Shigellosis | 0 | 2 | 18 | 0 | 32 | 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 | |
| Category III | Acute Viral Hepatitis type B | 3 | 2 | 25 | 0 | 17 | 0 |
| | Acute Viral Hepatitis type C | 4 | 16 | 74 | 0 | 126 | 0 |
| | Acute Viral Hepatitis type D | 0 | 0 | 0 | 0 | 0 | 0 |
| | Acute Viral Hepatitis type E | 0 | 2 | 2 | 0 | 3 | 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 | 0 | 0 | 1 | 0 |
| | Haemophilus Influenza type b Infection | 0 | 0 | 0 | 0 | 0 | 0 |
| | Japanese Encephalitis | 0 | 0 | 0 | 0 | 0 | 0 |
| | Legionnaires' Disease | 11 | 3 | 71 | 0 | 68 | 0 |
| | Mumps | 2 | 7 | 45 | 0 | 97 | 1 |
| | Neonatal Tetanus | 0 | 0 | 0 | 0 | 0 | 0 |
| | Pertussis | 0 | 0 | 0 | 0 | 0 | 0 |
| Tetanus | 0 | 0 | 1 | 0 | 1 | 0 | |
| Category IV | Botulism | 0 | 0 | 0 | 0 | 0 | 0 |
| | Brucellosis | 0 | 0 | 0 | 0 | 0 | 0 |
| | Complicated Varicella | 0 | 1 | 6 | 0 | 11 | 0 |
| | Endemic Typhus Fever | 0 | 0 | 0 | 0 | 5 | 0 |
| | Herpesvirus B Infection | 0 | 0 | 0 | 0 | 0 | 0 |
| | Influenza Case with Severe Complications | 0 | 0 | 0 | 0 | 0 | 0 |
| | Invasive Pneumococcal Disease | 0 | 8 | 28 | 0 | 73 | 0 |
| | Leptospirosis | 1 | 1 | 7 | 0 | 9 | 0 |
| | Listeriosis | 4 | 7 | 23 | 0 | 31 | 0 |
| | Lyme Disease | 0 | 0 | 1 | 1 | 0 | 0 |
| | Melioidosis | 0 | 0 | 0 | 0 | 5 | 0 |
| | Q Fever | 0 | 0 | 2 | 0 | 0 | 0 |
| | Scrub Typhus | 3 | 1 | 32 | 0 | 47 | 0 |
| Toxoplasmosis | 1 | 0 | 5 | 0 | 2 | 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 | 436 | 17 | 4198 | 3314 | 176 | 155 |
| 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

- Fifty-nine clusters related to diarrhea (47), tuberculosis (5), upper respiratory tract infection (4) and varicella (3) were reported during week 10.

Imported Infectious Diseases

- There were 410 imported cases from 42 countries during week 10.
 - Severe Pneumonia with Novel Pathogens** : 409 cases from Vietnam 126, Indonesia 74, Thailand 24, USA 20, Singapore 15, Hong Kong 14, India 12, Malaysia 11, UK 10, the Philippines 10 and the remaining 32 countries have less than 10 cases.
 - Amoebiasis** : 1 under investigation.
- During week 1-10, there were 3320 imported cases from 104 countries. The top three countries are USA (951), Vietnam (313), and Indonesia (266).
- During week 1-10, the notifiable diseases with the highest number of imported cases are Severe Pneumonia with Novel Pathogens (3314).

Summary of Epidemic

- **Severe Pneumonia with Novel Pathogens** : The COVID-19 pandemic remaining serious globally and the risk of imported cases exists. In addition, there have been new cluster without known source of infection are under investigation, the risk of locally-acquired infection in Taiwan continues.

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