

### Establishing Core Capacities of the Designated Port of Entry for International Health Regulations 2005 at Kaohsiung Port

Tzu-Yi Lee\*、Hui-Chen Lin、Feng-Hui Chang、Chiou-Yueh You、Chao-Ching Chang

#### Abstract

Worldwide trade transportation is both convenient and frequent, yet a public health problem then occurs in a certain corner on the Earth may bring worldwide-scale catastrophe through transportation. To prevent such international-scale public health incidents, the World Health Organization (WHO) has formulated the International Health Code for countries to use in prevention and management, in hopes to protect people from the transmission of international contagious diseases.

Although Taiwan is not a member of WHO, in order to attend world events, we chose Taoyuan International Airport and Kaohsiung Harbor as designated ports according the 2005 International Health Regulations (IHR) to promote the establishment of core capacity requirements at designated airports, ports and ground crossings; apart from self-assessment of designated airports, ports and ground crossings, in August 2011 and March 2013, experts from Japan and Australia were invited to Taiwan to conduct preliminary and secondary assessment of core capacity requirements at designated airports, ports and ground crossings on separate occasions. On both occasions, we received extremely high grades on external assessments, which show that our core capacity requirements at designated airports, ports and ground crossings have exceeded IHR 2005 requirements.

In the future, apart from applying to join WHO, we also hope to invite WHO experts to authenticate our core capacity requirements at designated airports, ports and ground crossings to elevate the international competitiveness of our ports and propagate the establishment experience to other ports in Taiwan to create safe and comfortable port environments.

**Keywords:** World Health Organization, International Health Regulations, core capacity requirements at designated airports, ports and ground crossings

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DOI : 10.6525/TEB.20150127.31(2).001

Received : Jan. 2, 2014  
Accepted : Jan. 14, 2014  
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## Profile of Imported Notifiable Acute Infectious Diseases from China, Hong Kong and Macao in Taiwanese between 2008 and 2013

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### Abstract

On December 15, 2008, the full implementation of direct air and sea transport, namely Major Three Direct Links, between major cities of Mainland China and Taiwan was officially launched. The number of cross-Strait travelers has increased since then. As a result, the number of Taiwanese nationals, who are at risk of infection and may import the infectious diseases to Taiwan also on the rise due to the fact that infectious diseases are easily spread in some areas of Mainland China, where living environments and hygienic conditions are still under improvement.

We analyzed the characteristics and the disease distribution of cases, whose onset dates are between 2008 and 2013, by collecting confirmed cases of Taiwanese travelers with acute infections in Mainland China, Hong Kong and Macao, from the National Notifiable Disease Surveillance System. This study was conducted to evaluate the case numbers, demographic characteristics and travel-related factors of confirmed Taiwanese cases, and the trend in incidence of disease from 2009 to 2013 after the full implementation of Major Three Direct Links.

The results showed that Mainland China was the major area where Taiwanese travelers with notifiable acute infectious disease imported. Food and water-borne diseases were the most common imported infectious diseases. Male travelers among 30-59-year-old group with business purpose were the major population. Nevertheless, no increasing or decreasing trend in disease incidence was observed among Taiwanese travelers visiting Mainland China/Hong Kong/Macao ( $p=.48$ ) and those visiting Mainland China ( $p=.42$ ) during the five years (2009-2013) after full implementation of Major Three Direct Links.

Since travelers may have different accessibilities to information on international epidemic diseases offered by Taiwan CDC due to different travel arrangements, the prospective orientation of travel medicine policy is expected to help travelers be alert to the local disease epidemics and avoid practicing high risk activities by increasing the accessibility on international disease epidemics in different populations.

**Keywords:** China, Three Direct Links, Food-borne, Water-borne, Imported infectious diseases

Division of Quarantine, Centers for Disease Control, Ministry of Health and Welfare, Taiwan  
DOI : 10.6525/TEB.20150127.31(2).002

Received : Apr. 14, 2014  
Accepted : May 9, 2014  
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## The Analysis of Ship Sanitation Certificates Issued at Kaohsiung Port during 2011-2012

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### Abstract

According to the International Health Regulations 2005, all ships on international voyages are required to have a valid ship sanitation certificate for the prevention and control of public health risks on board. The Kaohsiung port with more than 17,000 vessels visiting annually, as the biggest port in Taiwan, is actively promoted by the government as a transshipment shipping center for the Asia Pacific region and as a center for global commercial logistics management and free port. Faced with public health risks which vessels may carry, the good sanitation management from ship owners is more efficient for prevention of public health concerns than just sanitation inspection with health education for certificate renewal.

To realize the probable biological public health risks on board ships visiting the Kaohsiung port, we analyzed the issuance of ship sanitation certificates during 2011-2012 in Kaohsiung port, and found the most ships in worse sanitation conditions were oil tankers, especially those whose gross tonnage below 5000 tons.

We should have a comprehensive criterion in policy and practice to strike the balance between economic development and public health.

**Keywords:** International Health Regulations 2005, Kaohsiung port, ship sanitation certificate

week 1-2 (Jan. 4, 2015 - Jan. 17, 2015) DOI: 10.6525/TEB.20150127.31(2).004

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

Classification	Case diagnosis week Disease Diagnosed <sup>1</sup>	Week 1		Week 1-1	
		2015	2014	2015	2014
Category I	Plague	0	0	0	0
	Rabies	0	0	0	0
	SARS	0	0	0	0
	Smallpox	0	0	0	0
Category II	Acute Flaccid Paralysis	0	2	0	2
	Acute Viral Hepatitis type A	1	3	1	3
	Amoebiasis	9	6	9	6
	Anthrax	0	0	0	0
	Chikungunya Fever	0	0	0	0
	Cholera	0	0	0	0
	Dengue Fever	39	34	39	34
	Dengue Hemorrhagic Fever/Dengue Shock Syndrome	0	4	0	4
	Diphtheria	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	0	0	0
	Malaria	2	2	2	2
	Measles	0	0	0	0
	Meningococcal Meningitis	0	0	0	0
	Paratyphoid Fever	1	0	1	0
	Poliomyelitis	0	0	0	0
	Rubella	0	0	0	0
Shigellosis	5	7	5	7	
Typhoid fever	1	0	1	0	
West Nile Fever	0	0	0	0	
Category III	Acute Viral Hepatitis type B	1	1	1	1
	Acute Viral Hepatitis type C <sup>2</sup>	4	0	4	0
	Acute Viral Hepatitis type D	0	0	0	0
	Acute Viral Hepatitis type E	0	0	0	0
	Acute Viral Hepatitis untype	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	0	0
	Haemophilus Influenza type b Infection	0	0	0	0
	Japanese Encephalitis	0	0	0	0
	Legionellosis	3	1	3	1
	Mumps <sup>2</sup>	16	13	16	13
	Neonatal Tetanus	0	0	0	0
	Pertussis	5	3	5	3
	Tetanus <sup>2</sup>	0	0	0	0
Category IV	Botulism	0	0	0	0
	Brucellosis	0	0	0	0
	Complicated Influenza	3	35	3	35
	Complicated Varicella <sup>4</sup>	1	0	1	0
	Endemic Typhus Fever	0	2	0	2
	Herpesvirus B Infection	0	0	0	0
	Invasive Pneumococcal Disease	21	11	21	11
	Leptospirosis	1	4	1	4
	Lyme Disease	0	0	0	0
	Melioidosis	2	0	2	0
	Q Fever	1	0	1	0
	Scrub Typhus	4	26	4	26
	Toxoplasmosis	0	0	0	0
Tularremia	0	0	0	0	
Category V	Ebola Virus Disease	0	0	0	0
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0
	Novel Influenza A Virus Infections <sup>5</sup>	0	0	0	0
	Lassa Fever	0	0	0	0
	Rift Valley Fever	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus Yellow Fever	0 0	0 0	0 0	0 0

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.  
 2. Reported cases.  
 3. The epidemiological week calendar established by the World Health Organization is adopted for calculating each week's cumulative total.  
 4. Since 2014/1/1, "Varicella" was modified to "Complicated Varicella".  
 5. Since 2014/3/6, the case definition for confirmed Acute hepatitis C was changed from "meet the clinical **and** laboratory conditions" to "meet the clinical **or** laboratory conditions".  
 6. Since 2014/7/1, various subtypes of human cases of avian influenza changed to the fifth class of infectious diseases "novel influenza A virus infections". The original "H5N1 flu" and "H7N9 flu" were removed on the same day.

## Suspected Clusters

- Thirteen outbreak events were reported, including 6 tuberculosis clusters, 3 diarrhea clusters, 1 varicella cluster, 1 influenza-like illness cluster, 1 upper respiratory tract infection cluster, and 1 pertussis cluster.

## Imported Infectious Diseases

- 18 confirmed cases were imported from 8 countries during week 1 of 2015.

Disease \ Country	Country								Total
	Indonesia	Thailand	Vietnam	Germany	Ghana	India	Cambodia	Malaysia	
Amoebiasis	6		1						7
Dengue Fever	2							1	3
Shigellosis	2						1		3
Malaria		1			1				2
Pertussis				1					1
Hepatitis A		1							1
Paratyphoid Fever						1			1
Total	10	2	1	1	1	1	1	1	18

Note: The statistics listed in this table include imported cases that were either confirmed or updated\* in the previous week.

- A total of 18 confirmed cases were imported from 8 countries in 2015.
- Top 3 imported diseases : Amoebiasis (6), Dengue fever (4), Shigellosis (3).
- Top 3 countries responsible for most imported cases : Indonesia (9), Thailand (2), Vietnam (2).

## Summary of Epidemic

- **Dengue fever** : A downward trend has been observed in the overall epidemic. The outbreak in Kaohsiung City is expected to gradually slow down and new sporadic cases have been reported in Pingtung County, Tainan City and Taitung County. The public is once again urged to clean up and remove any vector breeding sites and take personal precautions against mosquito bites.
- **Influenza** : The influenza epidemic season has approached. 3 cases of severe complicated influenza (H3N2) were confirmed. H3N2 is currently the dominant strain circulating in the community.
- **Avian influenza** : Avian influenza outbreaks recently occurred in poultry. Taiwan CDC will continue to monitor the health status of the workers who were exposed to the viruses.

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

Classification	Case diagnosis week Disease Diagnosed <sup>1</sup>	Week 2		Week 1–2	
		2015	2014	2015	2014
Category I	Plague	0	0	0	0
	Rabies	0	0	0	0
	SARS	0	0	0	0
	Smallpox	0	0	0	0
Category II	Acute Flaccid Paralysis	0	2	1	2
	Acute Viral Hepatitis type A	1	3	5	5
	Amoebiasis	9	6	14	8
	Anthrax	0	0	0	0
	Chikungunya Fever	0	0	0	1
	Cholera	0	0	0	0
	Dengue Fever	39	34	63	52
	Dengue Hemorrhagic Fever/Dengue Shock Syndrome	0	4	0	4
	Diphtheria	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	0	0
	Epidemic Typhus Fever	0	0	0	0
	Hantavirus Pulmonary Syndrome	0	0	0	0
	Hemorrhagic Fever with Renal Syndrome	0	0	0	0
	Malaria	2	2	2	2
	Measles	0	0	0	1
	Meningococcal Meningitis	0	0	0	0
	Paratyphoid Fever	1	0	1	0
	Poliomyelitis	0	0	0	0
	Rubella	0	0	0	0
	Shigellosis	5	7	9	11
Typhoid fever	1	0	3	1	
West Nile Fever	0	0	0	0	
Category III	Acute Viral Hepatitis type B	1	1	4	1
	Acute Viral Hepatitis type C <sup>5</sup>	4	0	7	0
	Acute Viral Hepatitis type D	0	0	0	0
	Acute Viral Hepatitis type E	0	0	0	1
	Acute Viral Hepatitis untype	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	0	1
	Haemophilus Influenza type b Infection	0	0	1	0
	Japanese Encephalitis	0	0	0	0
	Legionellosis	3	1	8	6
	Mumps <sup>2</sup>	16	13	23	20
	Neonatal Tetanus	0	0	0	0
	Pertussis	5	3	6	3
	Tetanus <sup>2</sup>	0	0	0	0
	Category IV	Botulism	0	0	0
Brucellosis		0	0	0	0
Complicated Influenza		3	35	14	110
Complicated Varicella <sup>4</sup>		1	0	1	4
Endemic Typhus Fever		0	2	0	4
Herpesvirus B Infection		0	0	0	0
Invasive Pneumococcal Disease		21	11	40	31
Leptospirosis		1	4	2	4
Lyme Disease		0	0	0	0
Melioidosis		2	0	2	0
Q Fever		1	0	1	6
Scrub Typhus		4	26	12	32
Toxoplasmosis		0	0	0	0
Tularremia	0	0	0	0	
Category V	Ebola Virus Disease	0	0	0	0
	Ebola-Marburg Hemorrhagic Fever	0	0	0	0
	Novel Influenza A Virus Infections <sup>6</sup>	0	0	0	0
	Lassa Fever	0	0	0	0
	Rift Valley Fever	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0
Yellow Fever	0	0	0	0	

1. The following 8 chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.  
2. Reported cases.  
3. The epidemiological week calendar established by the World Health Organization is adopted for calculating each week's cumulative total.  
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6. Since 2014/7/1, various subtypes of human cases of avian influenza changed to the fifth class of infectious diseases "novel influenza A virus infections". The original "H5N1 flu" and "H7N9 flu" were removed on the same day.

### Suspected Clusters

- Seventeen clusters were reported, including 8 diarrhea clusters, 3 tuberculosis clusters, 3 upper respiratory tract infection clusters, 2 varicella clusters, and 1 influenza-like illness cluster.

### Imported Infectious Diseases

- 23 confirmed cases were imported from 7 countries during week 2 of 2015.

Country \ Disease	Indonesia	Vietnam	Philippines	Nigeria	Myanmar	Cambodia	Thailand	Total
Amoebiasis	11		1					12
Shigellosis	3	1				1		5
Dengue Fever	1	1						2
Malaria				1				1
Typhoid fever	1							1
Hepatitis A					1			1
Legionellosis							1	1
Total	16	2	1	1	1	1	1	23

Note: The statistics listed in this table include imported cases that were either confirmed or updated\* in the previous week.

- A total of 37 confirmed cases were imported from 11 countries in 2015.
- Top 3 imported diseases : Amoebiasis (14), Shigellosis (8), Dengue fever (6).
- Top 3 countries responsible for most imported cases : Indonesia (21), Vietnam (4), Thailand (3).

### Summary of Epidemic

- **Dengue fever** : A downward trend has been observed in the overall epidemic. The outbreak in Kaohsiung City is expected to gradually slow down and new sporadic cases have been reported in Pingtung County, Taitung County, Tainan City and Taipei City. The public is once again urged to clean up and remove any vector breeding sites and take personal precautions against mosquito bites.

● **Influenza** : The influenza epidemic has not fluctuated. During week 2, 11 cases of severe complicated influenza were confirmed, including 9 cases infected by H3N2, 1 case infected by untyped A and 1 case infected by influenza B. Beside, 1 death was caused by infection with H3N2. Since August 1, 2014, a total number of 69 cases of severe complicated influenza have been confirmed, including 33 cases infected by H1N1, 20 cases infected by H3N2, 3 cases infected by untyped influenza A and 13 cases infected by influenza B. Of these cases, 15 died.

● **Novel Influenza A Virus Infections** : As the number of novel influenza A(H7N9) infections has increased in China, Taiwan CDC urges travelers visiting endemic areas to avoid not only smuggling poultry and birds, but direct contact with them, and practice good personal hygiene such as washing hands frequently to ward off 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.

**Address** : No.6, Linshen S. Road, Taipei, Taiwan 100 (R.O.C.) **Telephone No** : (02) 2395-9825

**Publisher** : Hsu-Sung Kuo

**Editor-in-Chief** : Tsuey-Fong Lee

**Executive Editor** : Chien-Chun Chen, Hsiu-Lan Liu

**Website** : <http://www.cdc.gov.tw/>

**Suggested Citation** :

[Author].[Article title].Taiwan Epidemiol Bull 2015;31:[inclusive page numbers]. [DOI]