

Infection Control Inspection Report of Long-Term Care Institutions, 2016

Yu-Yen Shih^{*}, Yu-Fen Ke, Shu-Hui Tseng

Abstract

In order to enhance the quality of care services in long-term care institutions and reduce the incidences of healthcare-associated infections, Taiwan Centers for Disease Control conducted an inspection for the infection control in long-term care institutions in 2016. The local government invited infection control experts to participate in inspections for veterans' homes, psychiatric rehabilitation institutions, and disabled welfare institutions from June to October. A total of 297 institutions were inspected, including 16 veterans' homes, 113 psychiatric rehabilitation institutions and 168 disabled welfare institutions. For veterans' homes and psychiatric rehabilitation institutions, more than 60% of inspection items better than or equal to "C" (A, B, and C) was considered qualified. For disabled welfare institutions, more than 60% of inspection items better than or equal to "2" (2, 3, and 4) was considered qualified. Local health authorities provided assistance in and conducted follow-up inspections in institutions that were not qualified. The qualification percentage in total was 99.3%, and 2 psychiatric rehabilitation institutions failed to meet the criteria. Inspection items that were not fulfilled were "environmental hygiene (34.0%)", followed by "establishment of procedure for dealing with suspected patients of infectious disease (22.0%)" and

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“response and its improvement to infection control related deficient items from previous assessment (10.0%)”. The institutions had made improvement according to the recommendations. The results of this inspection and recommendations would be the reference for the Taiwan Centers of Disease Control and the competent authorities in policy formulation in the future.

Keywords : veterans’ homes, psychiatric rehabilitation institutions, disabled welfare institutions, infection control inspections

A Shigellosis Outbreak in a Long-term Mental Health Treatment Center — Hualien County, 2016.

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Abstract

On February 23rd and 26th, 2016, two shigellosis cases were reported from a long-term mental health treatment center in Hualien, respectively. Bacterial cultures from both cases, who lived in the same room, yielded *Shigella dysenteriae* serotype 3. The Pulsed Field Gel Electrophoresis (PFGE) of bacterial isolates revealed 100% identical pattern, suggesting the same infection source. A shigellosis outbreak was thus confirmed. An outbreak could easily spread among residents and workers when it occurred in populous institutions. The public health authority and the institution promptly reported and monitored the event, conducted contact tracing, implemented standard precautions, and enhanced environmental and hand hygiene. In addition, the stool samples were also collected from every contacts on the first day and the fourth day after symptom onset to facilitate case finding and early diagnosis. No further cases were found after February 26th after the implementation of control measures.

Keywords: shigellosis, long-term psychiatric institution, outbreak

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

Case diagnosis year		Week 6★		Week 1–6			
Classification	Disease Diagnosed	2018	2017	2018		2017	
				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	2	0	15	0	4	0
	Acute Viral Hepatitis type A	1	16	10	3	86	6
	Amoebiasis	8	3	33	9	33	21
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	1	1	1	1	1
	Cholera	0	0	0	0	0	0
	Dengue Fever	2	6	8	8	39	39
	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	0	0	1	0
	Malaria	0	0	0	0	0	0
	Measles	0	0	1	0	0	0
	Meningococcal Meningitis	0	0	1	0	1	0
	Paratyphoid Fever	0	0	0	0	1	1
	Poliomyelitis	0	0	0	0	0	0
	Rubella	0	0	0	0	0	0
Shigellosis	1	4	16	3	23	8	
Typhoid fever	1	0	2	2	2	2	
West Nile Fever	0	0	0	0	0	0	
Category III	Acute Viral Hepatitis type B	1	3	12	1	23	2
	Acute Viral Hepatitis type C	8	6	45	1	23	0
	Acute Viral Hepatitis type D	0	0	0	0	1	0
	Acute Viral Hepatitis type E	0	0	2	0	3	1
	Acute Viral Hepatitis untype	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	5	0	0	0
	Haemophilus Influenza type b Infection	0	1	0	0	1	0
	Japanese Encephalitis	0	0	0	0	0	0
	Legionellosis	4	2	25	0	9	1
	Mumps	7	15	57	2	74	1
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	2	1	0	2	0
	Tetanus	0	0	1	0	2	0
	Category IV	Botulism	0	0	0	0	0
Brucellosis		0	0	0	0	0	0
Complicated Influenza		53	16	269	2	69	0
Complicated Varicella		0	0	2	0	1	0
Endemic Typhus Fever		1	0	3	0	0	0
Herpesvirus B Infection		0	0	0	0	0	0
Invasive Pneumococcal Disease		13	25	63	0	84	1
Leptospirosis		1	1	8	0	12	0
Lyme Disease		2	0	10	0	0	0
Melioidosis		0	0	0	0	0	0
Q Fever		0	2	3	0	5	0
Scrub Typhus		0	0	1	0	1	0
Toxoplasmosis		6	15	58	0	43	0
Tularremia		0	0	3	0	0	0
Category V	Ebola Virus Disease	0	0	0	0	0	0
	Marburg Hemorrhagic Fever	0	0	0	0	0	0
	Novel Influenza A Virus Infections	0	0	0	0	0	0
	Lassa Fever	0	0	0	0	0	0
	Rift Valley Fever	0	0	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	1	0	0	1	1
	Yellow Fever	0	0	0	0	0	0
	Zika Virus Infection	0	0	0	0	0	0

- ★ The weekly and cumulative total numbers include indigenous and imported cases of notifiable infectious diseases.
- The following chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
- Numbers of mumps, neonatal tetanus and tetanus cases are summed up by the week of report.
- Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.
- Since 2018/1/1, "Listeriosis" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Twenty-two clusters were reported, including 7 tuberculosis clusters, 8 diarrhea clusters, 2 upper respiratory tract infection clusters and 5 influenza-like illness clusters.

Imported Infectious Diseases .

Country Disease	India	China	Korea	Philippines	Vietnam	Total
DF				1	1	2
FluSC		1	1			2
Typhoid fever	1					1
Amoebiasis		1				1
Shigellosis	1					1
Total	2	2	1	1	1	7

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

- 7 confirmed cases were imported from 5 countries during Week 6 of 2018.
- A total of 30 confirmed cases were imported from 8 countries in 2018, the top 3 countries are : Indonesia (9), Philippines (6), Cambodia (3).
- Top 3 imported diseases : Amoebiasis (9), Dengue Fever (8), Acute Hepatitis A (3)

Summary of Epidemic

- **Influenza** : Due to the impact of cold waves, the recent temperature has remained low. In addition, people gather together during the Chinese New Year holiday, influenza activity is expected to increase slightly.

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

Case diagnosis year		Week 7★		Week 1-7			
Classification	Disease Diagnosed	2018	2017	2018		2017	
				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	2	0	17	0	4	0
	Acute Viral Hepatitis type A	1	19	11	3	105	6
	Amoebiasis	6	8	39	11	41	26
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	0	1	1	1	1
	Cholera	0	0	0	0	0	0
	Dengue Fever	4	8	12	12	47	47
	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	0	0	1	0
	Malaria	0	0	0	0	0	0
	Measles	0	0	1	0	0	0
	Meningococcal Meningitis	0	0	1	0	1	0
	Paratyphoid Fever	0	0	0	0	1	1
	Poliomyelitis	0	0	0	0	0	0
	Rubella	0	0	0	0	0	0
	Shigellosis	3	8	19	3	31	10
	Typhoid fever	2	0	4	2	2	2
West Nile Fever	0	0	0	0	0	0	
Category III	Acute Viral Hepatitis type B	2	2	14	1	25	2
	Acute Viral Hepatitis type C	7	8	52	1	31	0
	Acute Viral Hepatitis type D	0	0	0	0	1	0
	Acute Viral Hepatitis type E	0	1	2	0	4	1
	Acute Viral Hepatitis untype	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	0	0	5	0	0	0
	Haemophilus Influenza type b Infection	0	0	0	0	1	0
	Japanese Encephalitis	0	0	0	0	0	0
	Legionellosis	2	3	26	0	12	2
	Mumps	6	11	63	2	85	1
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	1	0	2	0
	Tetanus	1	0	2	0	2	0
	Category IV	Botulism	0	0	0	0	0
Brucellosis		0	0	0	0	0	0
Complicated Influenza		1	0	3	0	1	0
Complicated Varicella		0	0	3	0	0	0
Endemic Typhus Fever		0	0	0	0	0	0
Herpesvirus B Infection		8	11	71	0	95	1
Invasive Pneumococcal Disease		1	0	9	0	12	0
Leptospirosis		0	0	10	0	0	0
Lyme Disease		0	0	0	0	0	0
Melioidosis		0	0	3	0	5	0
Q Fever		0	0	1	0	1	0
Scrub Typhus		9	13	67	0	56	0
Toxoplasmosis		47	12	316	3	81	0
Tularremia		0	0	3	0	0	0
Category V	Ebola Virus Disease	0	0	0	0	0	0
	Marburg Hemorrhagic Fever	0	0	0	0	0	0
	Novel Influenza A Virus Infections	0	0	0	0	0	0
	Lassa Fever	0	0	0	0	0	0
	Rift Valley Fever	0	0	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0	1	1
	Yellow Fever	0	0	0	0	0	0
Zika Virus Infection	0	0	0	0	0	0	

1. ★The weekly and cumulative total numbers include indigenous and imported cases of notifiable infectious diseases.
2. The following chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
3. Numbers of mumps, neonatal tetanus and tetanus cases are summed up by the week of report.
4. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.
5. Since 2018/1/1, "Listeriosis" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Seventeen clusters were reported, including 3 tuberculosis clusters, 10 diarrhea clusters, 2 upper respiratory tract infection clusters and 2 influenza-like illness clusters.

Imported Infectious Diseases

Disease \ Country	Philippines	Malaysia	China	Indonesia	Total
DF	2	2			4
Amoebiasis	1			1	2
FluSC			1		1
Total	3	2	1	1	7

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

- 7 confirmed cases were imported from 4 countries during Week 7 of 2018.
- A total of 37 confirmed cases were imported from 9 countries in 2018, the top 3 countries are : Indonesia (10), Philippines (9), China (4).
- Top 3 imported diseases : Dengue Fever (12), Amoebiasis (11), Acute Hepatitis A (3)

Summary of Epidemic

- **Influenza** : As schools have started a new semester and most companies have resumed operations after the Lunar New Year holiday, it's easy to spread influenza by close contact. In addition, hospitals and clinics have subsequently recommenced normal business hours. As a result, influenza activity is expected to slightly increase.

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

Case diagnosis year		Week 8★		Week 1-8			
Classification	Disease Diagnosed	2018	2017	2018		2017	
				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	2	0	19	0	4	0
	Acute Viral Hepatitis type A	0	14	11	3	119	7
	Amoebiasis	4	9	43	12	50	32
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	0	0	1	1	1	1
	Cholera	0	0	0	0	0	0
	Dengue Fever	2	6	14	14	53	53
	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	0	0	1	0
	Malaria	0	0	0	0	0	0
	Measles	0	0	1	0	0	0
	Meningococcal Meningitis	0	0	1	0	1	0
	Paratyphoid Fever	0	1	0	0	2	2
	Poliomyelitis	0	0	0	0	0	0
	Rubella	0	0	0	0	0	0
	Shigellosis	3	3	22	4	34	13
	Typhoid fever	0	1	4	2	3	3
West Nile Fever	0	0	0	0	0	0	
Category III	Acute Viral Hepatitis type B	2	3	16	1	28	2
	Acute Viral Hepatitis type C	6	6	58	1	37	0
	Acute Viral Hepatitis type D	0	0	0	0	1	0
	Acute Viral Hepatitis type E	0	0	2	0	4	1
	Acute Viral Hepatitis untype	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	1	0	6	0	0	0
	Haemophilus Influenza type b Infection	0	0	0	0	1	0
	Japanese Encephalitis	0	0	0	0	0	0
	Legionellosis	7	2	33	0	14	3
	Mumps	7	12	70	2	97	1
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	0	1	0	2	0
	Tetanus	0	0	2	0	2	0
	Category IV	Botulism	0	0	0	0	0
Brucellosis		0	0	0	0	0	0
Complicated Influenza		1	0	4	0	1	0
Complicated Varicella		0	0	3	0	0	0
Endemic Typhus Fever		0	0	0	0	0	0
Herpesvirus B Infection		23	10	94	0	105	1
Invasive Pneumococcal Disease		0	1	9	0	13	0
Leptospirosis		1	0	11	0	0	0
Lyme Disease		0	0	0	0	0	0
Melioidosis		0	0	3	0	5	0
Q Fever		0	0	1	0	1	0
Scrub Typhus		5	12	72	0	68	0
Toxoplasmosis		67	11	383	3	92	0
Tularremia		2	1	5	0	1	0
Category V	Ebola Virus Disease	0	0	0	0	0	0
	Marburg Hemorrhagic Fever	0	0	0	0	0	0
	Novel Influenza A Virus Infections	0	0	0	0	0	0
	Lassa Fever	0	0	0	0	0	0
	Rift Valley Fever	0	0	0	0	0	0
	Middle East Respiratory Syndrome Coronavirus	0	0	0	0	1	1
	Yellow Fever	0	0	0	0	0	0
Zika Virus Infection	0	0	0	0	0	0	

1. ★The weekly and cumulative total numbers include indigenous and imported cases of notifiable infectious diseases.
2. The following chronic diseases are excluded from the table: MDR-TB, Tuberculosis, Syphilis, Gonorrhoea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
3. Numbers of mumps, neonatal tetanus and tetanus cases are summed up by the week of report.
4. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.
5. Since 2018/1/1, "Listeriosis" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Twenty-three clusters were reported, including 3 tuberculosis clusters, 15 diarrhea clusters, 3 upper respiratory tract infection clusters and 2 influenza-like illness clusters.

Imported Infectious Diseases

Disease \ Country	Indonesia	Malaysia	Total
DF	1	1	2
Shigellosis	1		1
Amoebiasis	1		1
Total	3	1	4

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

- 4 confirmed cases were imported from 2 countries during Week 8 of 2018.
- A total of 41 confirmed cases were imported from 9 countries in 2018, the top 3 countries are : Indonesia (13), Philippines (9), Malaysia (5).
- Top 3 imported diseases : Dengue Fever (14), Amoebiasis (12), Shigellosis (4)

Summary of Epidemic

- **Influenza** : On top of the recent wild temperature fluctuations, schools started a new semester and most companies resumed normal business hours after the Lunar New Year holidays. Hence, influenza activity is expected to slightly increase.

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