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Original Article

Infection Control Inspections at the General, Postpartum and Psychiatric Nursing Facilities, 2014

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Abstract

To improve the healthcare quality and reduce health care-associated infections in nursing facilities, Taiwan Centers for Disease Control established the infection control inspection checklist for general, postpartum and psychiatric nursing facilities and started the first inspection in 2014. The on-site inspections were conducted by infection control experts appointed by local health authorities during April–October, 2014. Total 456 nursing facilities, including 328 general nursing facilities, 111 postpartum nursing facilities and 17 psychiatric nursing facilities were inspected. The criteria require a rating of inspection tasks scored "level C and above" for general nursing facilities, or tasks scored "meet the criteria" should achieve 60 % for both postpartum and psychiatric nursing facilities. Local health authorities assist facilities failing the inspection to correct their flaws and conduct a follow-up inspection.

Overall, 99.8% of the facilities fulfilled the criteria; only one general nursing facility did not pass the inspection. Facilities' performance were weak in several inspection tasks, such as "health examination and vaccination of workers and residents", "pre-employment and on-job infection control training for workers (including kitchen workers and meal-serving staff)", "infection prevention and treatment for residents", "stockpile of personal protective equipment", "setting and using of the isolation area",

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"cleanness of the potable water equipment", and "setting and using of the contaminant handling area". Facilities had corrected their flaws or proposed improvement plans based on experts' recommendations after the inspection. These experiences can be used as reference for formulating and implementing infection control policies and inspection programs of the long-term care facilities.

Keywords: Nursing facility, Long-term care, Infection control, Inspection

Influenza Outbreak in a Long Term Care Facility, Changhua, 2015

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Abstract

In July 2015, an influenza outbreak with an attack rate of 39% occurred in a long term care facility (LTCF) in Changhua. Total 45 residents and 3 health care workers developed respiratory symptoms, including 4 confirmed severe influenza infections (one fatal). Nine of the 12 throat swabs tested were positive for influenza type A (H3N2) virus. The administrator of LTCF should well implement health surveillance and case reporting, comply with infection control measures, and increase the vaccination rate of residents and employees. Moreover, prompt administration of antiviral agents could interrupt the influenza outbreak. It is necessary to have more practices and researches to understand the appropriate criteria of antiviral use in LTCFs. Our report provides the experience of controlling influenza outbreak in an LTCF.

Keywords: Influenza, Outbreak, Long term care facility

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Numbers of New Cases and Cumulative Cases of Notifiable Infectious Diseases (by week of diagnosis)

Case diagnosis week		Week 33		Week 1—33	
Classification	Disease Diagnosed[1]	2016	2015	2016	2015
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	3	0	25	10
	Acute Viral Hepatitis type A	20	1	721	64
	Amoebiasis	4	8	191	236
	Anthrax	0	0	0	0
	Chikungunya Fever	0	0	7	4
	Cholera	1	1	4	5
	Dengue Fever	17	914	654	2196
	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	3	1
	Malaria	0	0	6	7
	Measles	0	0	12	27
	Meningococcal Meningitis	0	0	2	2
	Paratyphoid Fever	1	0	5	3
	Poliomyelitis	0	0	0	0
	Rubella	0	0	4	6
	Shigellosis	6	6	136	117
	Typhoid fever	0	0	3	21
	West Nile Fever	0	0	0	0
Category III	Acute Viral Hepatitis type B	3	2	63	80
	Acute Viral Hepatitis type C[5]	1	3	132	134
	Acute Viral Hepatitis type D	0	0	1	1
	Acute Viral Hepatitis type E	0	1	10	2
	Acute Viral Hepatitis untype	0	0	0	1
	Congential Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	2	0	17	4
	Haemophilus Influenza type b Infection	2	0	12	1
	Japanese Encephalitis	0	1	16	27
	Legionellosis	3	5	68	116
	Mumps[2]	10	14	373	521
	Neonatal Tetanus	0	0	0	0
	Pertussis	1	0	11	64
	Tetanus[2]	0	1	8	7
Category IV	Botulism	0	0	4	2
	Brucellosis	0	1	0	1
	Complicated Influenza	1	3	1856	761
	Complicated Varicella[4]	0	2	25	38
	Endemic Typhus Fever	0	1	11	22
	Herpesvirus B Infection	0	0	0	0
	Invasive Pneumococcal Disease	6	7	391	352
	Leptospirosis	1	6	52	46
	Lyme Disease	0	0	0	2
	Melioidosis	1	3	14	24
	Q Fever	2	0	33	29
	Scrub Typhus	8	7	304	268
	Toxoplasmosis	0	2	7	8
	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[6]	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, Gonorrhea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
2. Reported cases.
3. Since 2014/1/1, "Varicella" was modified to "Complicated Varicella".
4. 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".
5. Since 2014/7/1, various subtypes of human cases of avian influenza are reported as "novel influenza A virus infections", a Category V Notifiable Infectious Disease. The original "H5N1 flu" and "H7N9 flu", which were respectively listed as a Category I Notifiable Infectious Disease and a Category V Notifiable Infectious Disease were removed from the list on the same day.
6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

Suspected Clusters

●Eleven clusters were reported, including 5 diarrhea clusters, 3 tuberculosis clusters, 2 upper respiratory tract infection clusters, and 1 influenza-like illness cluster.

Imported Infectious Diseases

●27 confirmed cases were imported from 10 countries during Week 33 of 2016.

Country / Disease	Indonesia	Philippines	Singapore	Cambodia	Thailand	Laos	Malaysia	Maldives	USA	Japan	Total
Dengue Fever	4	7	3	2	1	1	1	1			20
Shigellosis	5										5
Zika virus infection									1		1
Hepatitis A										1	1
Total	9	7	3	2	1	1	1	1	1	1	27

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

●A total of 487 confirmed cases were imported from 34 countries in 2016.

●Top 3 imported diseases：Dengue fever (217), Amoebiasis (87), Hepatitis A (65).

●Top 3 countries responsible for most imported cases：Indonesia (209), Thailand (49), Philippines (48).

Summary of Epidemic

●**Dengue Fever**：The epidemic has increased gradually in Southeast Asian countries. Clusters of imported cases have been reported. The recent high temperatures and occurrence of intermittent rain have still promoted mosquito growths and elevated the risk of dengue transmission. The public is urged to clean up and remove any vector breeding sites and take prevention measures against mosquito bites.

●**Japanese Encephalitis**：Although the number of cases reported has decreased slightly, the epidemic activity remains at its peak. Although the endemic areas primarily include central and southern Taiwan and Hualien County, sporadic cases are expected to be reported in other cities and counties.

●**Scrub Typhus**：Although the number of cases reported has decreased slightly, the epidemic activity remains at its peak. The endemic areas are primarily eastern and outlying islands of Taiwan.

●**Enterovirus**：Coxsackie A virus is currently the dominant strain circulating in the community. Sporadic cases of enterovirus 71 infection have been confirmed recently. This year, a total of 127 cases of enterovirus 71 infection, including 15 severe cases, 108 mild cases and 4 suspected severe cases, have been confirmed. The public is urged to enhance personal hygiene and stay vigilant for suspicious symptoms of enterovirus infection with severe complications in infants.

Numbers of New Cases and Cumulative Cases of Notifiable Infectious Diseases （by week of diagnosis）

Case diagnosis week		Week 34		Week 1—34	
Classification	Disease Diagnosed[1]	2016	2015	2016	2015
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	2	0	27	10
	Acute Viral Hepatitis type A	25	3	746	67
	Amoebiasis	7	4	198	240
	Anthrax	0	0	0	0
	Chikungunya Fever	1	0	8	4
	Cholera	4	1	8	6
	Dengue Fever	18	1383	672	3579
	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	3	1
	Malaria	0	0	6	7
	Measles	1	0	13	27
	Meningococcal Meningitis	0	0	2	2
	Paratyphoid Fever	0	1	5	4
	Poliomyelitis	0	0	0	0
	Rubella	0	0	4	6
	Shigellosis	1	4	137	121
	Typhoid fever	0	0	3	21
	West Nile Fever	0	0	0	0
Category III	Acute Viral Hepatitis type B	4	3	67	83
	Acute Viral Hepatitis type C[5]	8	5	140	139
	Acute Viral Hepatitis type D	0	0	1	1
	Acute Viral Hepatitis type E	0	0	10	2
	Acute Viral Hepatitis untype	0	0	0	1
	Congential Rubella Syndrome	0	0	0	0
	Enteroviruses Infection with Severe Complications	1	0	18	4
	Haemophilus Influenza type b Infection	1	0	13	1
	Japanese Encephalitis	0	0	16	27
	Legionellosis	2	2	70	118
	Mumps[2]	14	13	387	534
	Neonatal Tetanus	0	0	0	0
	Pertussis	1	1	12	65
	Tetanus[2]	0	0	8	7
Category IV	Botulism	0	0	4	2
	Brucellosis	0	1	0	2
	Complicated Influenza	3	11	1859	772
	Complicated Varicella[4]	0	0	25	38
	Endemic Typhus Fever	0	0	11	22
	Herpesvirus B Infection	0	0	0	0
	Invasive Pneumococcal Disease	10	7	401	359
	Leptospirosis	3	1	55	47
	Lyme Disease	1	0	1	2
	Melioidosis	2	1	16	25
	Q Fever	1	0	34	29
	Scrub Typhus	5	4	309	272
	Toxoplasmosis	0	0	7	8
	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[6]	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, Gonorrhea, HIV Infection, AIDS, Hansen Disease and Creutzfeldt-Jakob Disease.
2. Reported cases.
3. Since 2014/1/1, "Varicella" was modified to "Complicated Varicella".
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6. Since 2016/1/22, "Zika Virus Infection" was listed as a Notifiable Infectious Disease.

Suspected Clusters

●Thirteen clusters were reported, including 5 diarrhea clusters, 4 tuberculosis clusters, 2 upper respiratory tract infection clusters, 1 fever of unknown origin cluster and 1 varicella cluster.

Imported Infectious Diseases

●26 confirmed cases were imported from 10 countries during Week 34 of 2016.

Country / Disease	Philippines	Indonesia	China	Thailand	Vietnam	Cambodia	Sweden	Greece	Papua New Guinea	India	Total
Dengue Fever	5	4		3	1	1			1		15
Hepatitis A			4			1		1			6
Amoebiasis	1	1									2
Lyme Disease							1				1
Chikungunya Fever										1	1
Hepatitis B					1						1
Total	6	5	4	3	2	2	1	1	1	1	26

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

●A total of 512 confirmed cases were imported from 36 countries in 2016.

●Top 3 imported diseases：Dengue fever (232), Amoebiasis (89), Hepatitis A (71).

●Top 3 countries responsible for most imported cases：Indonesia (214), Philippines (54), Thailand (51).

Summary of Epidemic

●**Dengue Fever**：The epidemic has increased gradually in South and Southeast Asian countries. Imported cases have continued to be reported. The recent occurrence of intermittent rain has still promoted mosquito growths and elevated the risk of dengue transmission. The public is urged to clean up and remove any vector breeding sites and take prevention measures against mosquito bites.

●**Japanese Encephalitis**：Although the epidemic activity is no longer at its peak and has continued to slow down, sporadic cases are still expected to be reported.

●**Scrub Typhus**：The number of cases reported has increased slightly, and the epidemic activity remains at its peak. The endemic areas are primarily eastern and outlying islands of Taiwan.

●**Enterovirus**：The epidemic is expected to gradually increase as the new semester starts this week. Coxsackie A virus is currently the dominant strain circulating in the community. Sporadic cases of enterovirus 71 infection have been confirmed recently. This year, a total of 131 cases of enterovirus 71 infection, including 16 severe cases, 111 mild cases and 4 suspected severe cases, have been confirmed. The public is urged to enhance personal hygiene and stay vigilant for suspicious symptoms of enterovirus infection with severe complications in infants.

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