

Analysis of Newly Diagnosed Human Immunodeficiency Virus Infected Cases Applying for National Health Service Card and Healthcare Seeking Behavior, Greater Taipei Area, 2016

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Abstract

All the human immunodeficiency virus (HIV) infected cases discovered by medical institutes in Taiwan must be reported according to the Communicable Disease Control Act, and the local public health bureaus then contact the patients to arrange the application of National Health Service Card. With the service card, patients could receive medical subsidies for HIV related medical care at HIV healthcare designated hospitals, so that the patients could have appropriate medical treatment, disease condition under control, and better life quality. We enrolled 953 HIV cases in Greater Taipei Area newly diagnosed in 2016, who have completed the application of National Health Service Card. A total of 645 patients have completed the application of National Health Service Card within 7 days. Among them, 97% had attended the HIV healthcare designated hospital for medical care during January 01, 2016 to June 30, 2017 and 88.8% had sought medical care within 1 month after the diagnosis, while 79.5% of them had received the treatment of HIV drugs. The average time between diagnosis and treatment was 32.8 days. Besides, among the patients who had sought medical care, 89.8% of them had kept seeking for medical care without discontinuation. Comparing

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with patients applying for service card after 7 days, those applying earlier had better healthcare seeking behavior. This indicates that if local public health bureaus could contact newly diagnosed HIV patients earlier for the application of National Health Service Card, these patients would attend medical care earlier, leading to stable and continuous medical care attendance.

Keywords: HIV (human immunodeficiency virus), National Health Service Card, medical care, HAART

Characteristics of Human Immunodeficiency Virus-positive Patients Reported by Blood Centers, Central Taiwan, 2011–2016

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Abstract

From 1984 to 2016, 33,428 human immunodeficiency virus (HIV)-positive patients had been reported to Taiwan CDC, with 1,335 patients (4.0%) screened in blood centers. To investigate the characteristics of these patients, we analyzed 71 patients in central Taiwan from 2011 to 2016.

We collected questionnaire responses by the chronic infectious disease surveillance system from 2011 to 2016. Among 71 patients, 69 (97.2 %) were male, 48 (67.6%) aged between 20–29 years and 39 (54.9%) had bachelor's degree. Twenty-four (33.8%) were working in service industries (sex workers not included) and 20 (28.2%) were in military service. Major risk factor (71.8%) was men who have sex with men (MSM).

All patients did not intend to screen HIV infection or to know their health status through blood donation. However, 68.1% patients did not fulfill the “Criteria for Donor Selection”, including 31.9% patients who did not consider themselves as high-risk groups of acquiring HIV and 40.9% patients who were MSM. Two married woman, who were not sex workers, were infected by their husbands through sexual transmission.

To assure the blood safety, we suggested implementing HIV and blood safety education in schools at all levels. Blood centers also should educate people not to screen for HIV infection through blood donation. We also recommended that people who ever had sexual behavior should screen HIV infection regularly and not to donate blood if they had high-risk behavior.

Keywords: HIV, blood donation

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week 46–47(Nov. 10–Nov. 23, 2019)

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

Case diagnosis year		Week 46★		Week 1–46			
Classification	Disease Diagnosed	2019	2018	2019		2018	
				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	58	1	62	0
	Acute Viral Hepatitis type A	1	1	87	21	77	30
	Amoebiasis	8	9	304	162	288	142
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	2	0	109	88	6	6
	Cholera	0	0	0	0	7	0
	Dengue Fever	13	11	590	490	460	284
	Diphtheria	0	0	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	1	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	1	0	1	0
	Malaria	0	0	7	7	6	6
	Measles	0	0	134	54	36	9
	Meningococcal Meningitis	0	0	6	0	5	1
	Paratyphoid Fever	0	0	7	6	8	7
	Poliomyelitis	0	0	0	0	0	0
	Rubella	1	0	22	17	10	9
	Shigellosis	0	3	121	38	150	49
	Typhoid fever	0	0	23	19	13	10
West Nile Fever	0	0	0	0	0	0	
Zika virus infection	0	0	4	4	2	2	
Category III	Acute Viral Hepatitis type B	3	0	99	3	127	9
	Acute Viral Hepatitis type C	13	12	541	3	416	4
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	0	9	4	6	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	57	1	36	0
	Haemophilus Influenza type b Infection	0	0	2	0	5	0
	Japanese Encephalitis	0	0	21	0	36	0
	Legionellosis	5	4	236	15	184	9
	Mumps	17	11	538	7	543	10
	Neonatal Tetanus	0	0	0	0	0	0
	Pertussis	0	1	25	0	29	2
Tetanus	1	0	4	1	5	0	
Category IV	Botulism	0	0	0	0	0	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	2	1	57	1	52	0
	Endemic Typhus Fever	0	0	28	3	23	1
	Herpesvirus B Infection	0	0	0	0	0	0
	Invasive Pneumococcal Disease	6	7	380	2	409	0
	Leptospirosis	3	3	111	1	89	1
	Listeriosis	1	3	159	1	149	1
	Lyme Disease	0	0	1	1	2	2
	Melioidosis	0	0	43	0	23	1
	Q Fever	0	0	22	5	19	2
	Scrub Typhus	7	9	422	4	330	1
	Severe Complicated Influenza	17	15	1990	8	1090	5
	Toxoplasmosis	0	0	13	2	14	1
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	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
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, Gonorrhea, 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 2018/1/1, "Listeriosis" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Thirty-eight clusters were reported during week 46, including 2 tuberculosis clusters, 12 diarrhea clusters, 4 upper respiratory tract infection clusters, 12 influenza-like illness clusters, 6 varicella clusters, and 2 enterovirus clusters.

Imported Infectious Diseases

- There were 27 imported cases from 10 countries during week 46 of 2019.

Countries Diseases	Vietnam	Indonesia	Philippines	China	Singapore	Thailand	Myanmar	Japan	Malaysia	Cambodia	Total
Dengue Fever	7		1	1	2	1			1	1	14
Amoebiasis		6	3								9
Chikungunya Fever						1	1				2
Acute Hepatitis C								1			1
Leptospirosis				1							1
Total	7	6	4	2	2	2	1	1	1	1	27

Note: The table summarized the number of imported cases that were either **confirmed** or **updated** in the given week.

- There are 961 imported cases from 40 different countries in 2019. The top 3 countries are Indonesia (255), Vietnam (152), and the Philippines (115).
- Top 3 imported diseases are Dengue Fever (490), Amoebiasis (162), and Chikungunya Fever (88).

Summary of Epidemic

- There are 961 imported cases from 40 different countries in 2019. The top 3 countries are Indonesia (255), Vietnam (152), and the Philippines (115).
- Top 3 imported diseases are Dengue Fever (490), Amoebiasis (162), and Chikungunya Fever (88).

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

Case diagnosis year		Week 47★		Week 1-47			
Classification	Disease Diagnosed	2019	2018	2019		2018	
				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	2	59	1	64	0
	Acute Viral Hepatitis type A	4	2	91	21	79	30
	Amoebiasis	6	8	310	162	296	147
	Anthrax	0	0	0	0	0	0
	Chikungunya Fever	1	0	110	89	6	6
	Cholera	0	0	0	0	7	0
	Dengue Fever	16	10	606	506	470	290
	Diphtheria	0	0	0	0	0	0
	Enterohemorrhagic E. coli Infection	0	0	1	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	1	0	2	0	1	0
	Malaria	0	0	7	7	6	6
	Measles	0	0	134	54	36	9
	Meningococcal Meningitis	0	0	6	0	5	1
	Paratyphoid Fever	0	0	7	6	8	7
	Poliomyelitis	0	0	0	0	0	0
	Rubella	0	0	22	17	10	9
	Shigellosis	7	5	128	39	155	49
Typhoid fever	0	0	23	19	13	10	
West Nile Fever	0	0	0	0	0	0	
Zika virus infection	0	0	4	4	2	2	
Category III	Acute Viral Hepatitis type B	4	3	103	4	130	10
	Acute Viral Hepatitis type C	13	5	553	3	421	4
	Acute Viral Hepatitis type D	0	0	0	0	0	0
	Acute Viral Hepatitis type E	0	1	9	4	7	0
	Congenital Syphilis	0	0	0	0	0	0
	Congenital Rubella Syndrome	0	0	0	0	0	0
	Enteroviruses Infection with Severe Complications	4	1	61	1	37	0
	Haemophilus Influenza type b Infection	0	0	2	0	5	0
	Japanese Encephalitis	0	0	21	0	36	0
	Legionellosis	4	3	240	15	187	9
	Mumps	3	9	541	7	552	10
	Neonatal Tetanus	0	0	0	0	0	0
Pertussis	0	1	25	0	30	2	
Tetanus	0	0	4	1	5	0	
Category IV	Botulism	0	0	0	0	0	0
	Brucellosis	0	0	0	0	0	0
	Complicated Varicella	0	0	57	1	52	0
	Endemic Typhus Fever	0	0	28	3	23	1
	Herpesvirus B Infection	0	0	0	0	0	0
	Invasive Pneumococcal Disease	12	8	392	2	417	0
	Leptospirosis	0	0	111	1	89	1
	Listeriosis	2	3	161	1	152	1
	Lyme Disease	0	0	1	1	2	2
	Melioidosis	1	0	44	1	23	1
	Q Fever	1	0	23	5	19	2
	Scrub Typhus	7	10	429	6	340	2
	Severe Complicated Influenza	32	8	2022	8	1098	5
	Toxoplasmosis	2	0	15	3	14	1
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	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
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 2018/1/1, "Listeriosis" was listed as a Notifiable Infectious Disease.

Suspected Clusters

- Thirty-nine clusters were reported during week 47, including 13 tuberculosis clusters, 8 diarrhea clusters, 3 upper respiratory tract infection clusters, 10 influenza-like illness clusters, 4 varicella clusters, and 1 enterovirus cluster.

Imported Infectious Diseases

- There were 23 imported cases from 11 countries during week 47 of 2019.

Diseases	Countries											Total
	Vietnam	Maldives	Cambodia	Thailand	China	Myanmar	Singapore	Indonesia	India	USA	Philippines	
Dengue Fever	6	3	2	2			1		1		1	16
Scrub Typhus	1				1							2
Melioidosis					1							1
Chikungunya Fever						1						1
Toxoplasmosis	1											1
Shigellosis								1				1
Acute Hepatitis B										1		1
Total	8	3	2	2	2	1	1	1	1	1	1	23

Note: The table summarized the number of imported cases that were either **confirmed** or **updated** in the given week.

- There are 984 imported cases from 40 different countries in 2019. The top 3 countries are Indonesia (256), Vietnam (160), and the Philippines (116).
- Top 3 imported diseases are Dengue Fever (506), Amoebiasis (162), and Chikungunya Fever (89).

Summary of Epidemic

- **Enterovirus** : The epidemic is below the national baseline. However, cases of enterovirus infection with severe complications are likely to occur sporadically.
- **Dengue** : The epidemic in Kaohsiung City is expected to end next week. However, the risk of imported epidemic still exists.

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